

T.C.
YEDİTEPE UNIVERSITY
INSTITUTE OF HEALTH SCIENCES
DEPARMENT OF NUTRITION AND DIETEICS



**INVESTIGATION OF THE EFFECTS OF THE NIGHT SHIFT PROCEDURE
SYSTEM ON NUTRITIONAL HABITS AMONG HEALTH PROFESSIONALS
(NURSE / DOCTOR) WORKING IN A SPECIAL HOSPITAL.**

MASTER THESIS

DAMLA KAYA ERDOĞAN

İSTANBUL-2017

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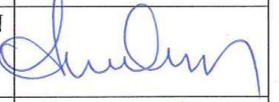
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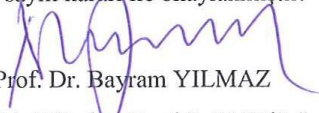
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ONAY

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DECLARATION

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

24.10.2017

Signature

Damla KAYA ERDOĞAN

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LIST OF SYMBOLS AND ABBREVIATIONS

Avg	: Average
BeBİS	: Nutrition Information System
BMI	: Body Mass Index
DM	: Diabetes Mellitus (Diabet)
EU	: European Union
FAO	: Food and Agriculture Organization
Max	: The Maximum Number
Min	: The Minimum Number
n	: Sample Number
p	: Difference Value
SD	: Standard Deviation
TSI	: Turkish Statistical Institute
UN	: United Nations
WHO	: World Health Organization

ÖZET

Kaya Erdoğan, D. (2017). Özel Bir Hastanede Çalışan Sağlık Profesyonellerinde (Hemşire/Doktor) Nöbet Usulü Çalışma Sisteminin Beslenme Alışkanlıklarına Etkisinin İncelenmesi. Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü, Beslenme ve Diyetetik ABD. Master Tezi. İstanbul.

Bu çalışma, İstanbul il merkezindeki seçilmiş özel hastanelerde görev yapmakta olan hekim, hemşire ve ebelerde nöbet usulü çalışma durumunun beslenme alışkanlıklarına etkisi ve ortaya çıkabilecek beslenme sorunlarının saptanması amacıyla yapılmıştır. İstanbul Özel Bölge Hastanesi'nde çalışmaya katılmayı kabul eden yaşları 20 ile 61 arasında, yaş ortalaması 36 olan 63 hekim, 61 hemşire ve 6 ebe olmak üzere toplam 130 kişi ile gerçekleştirilen araştırmada anket yöntemi veri toplama aracı olarak kullanılmıştır. Bu anketle çalışmaya katılanların sosyodemografik özellikleri (yaş, cinsiyet, meslek, medeni durum, eğitim durumu, meslek süreleri, statüleri, sigara ve alkol tüketimi) tespit edilmiş, beslenme alışkanlıkları (diyet, kronik bir hastalığın varlığı, ek vitamin mineral kullanımı, bir günlük nöbetteki besin tüketim kaydı ve bir günlük nöbet dışındaki besin tüketim kaydı ile almış oldukları kalori hesaplaması, egzersiz yapma durumu) belirlenmiş ve antropometrik ölçümleri (bel çevresi, BKİ, kalça çevresi ve bel/kalça oranı) yapılmıştır. Katılımcıların beden kitle indeksi ortalamaları $25,28 \pm 4,51$ 'dir ve %51,5'inin BKİ değerleri 25 ve üzerindedir. Sigara kullanım oranı %46,2; alkol kullanım oranı %40'tır. Düzenli olarak spor yapma oranı %23,1'dir. Katılımcıların %66,9'u öğün atlamaktadır. Ayrıca, katılımcıların aldıkları enerji, su, karbonhidrat, lif ortalamaları nöbetteyken yükselmektedir. Protein, yağ, C vitamini ortalamaları ise nöbetteyken düşmektedir. Dolayısıyla, nöbet usulü çalışma sisteminin sağlık profesyonellerinin beslenme alışkanlıklarını etkilediği söylenebilir. Sonuç olarak; sağlık profesyonelleri ile yürütülen bu çalışma göstermiştir ki, kişilerin sağlık konusunda yeteli bilgiye sahip olmaları sağlıklı davranış göstermeleri için yeterli olmamaktadır. Bu sonuca bakarak, eğitimle edinilen bilgilerin sağlıklı yaşam için uygulanması konusunda yeni stratejiler geliştirilmesi de önerilebilir.

Anahtar Kelimeler:Beslenme, BKİ, Nöbet, Sağlık, Doktor, Hemşire, Gece Nöbet

SUMMARY

Kaya Erdoğan, D. (2017). Investigation of the Effects of the Night Shift Procedure System on Nutritional Habits among Health Professionals (Nurse / Doctor) Working in a Special Hospital. Yeditepe University, Institute of Health Science, Department of Nutrition and Dietetics, MSc Thesis, İstanbul.

This study was carried out in order to determine the effects of the night shift procedure system on the nutritional habits in health professionals such as doctors and nurses who are working in selected private hospital in Istanbul city center. The study was conducted in Istanbul Private Regional Hospital, with a total of 130 participant including 63 physicians, 61 nurses and 6 midwives, aged between 20 and 61, and who agreed to participate in the study. And, a questionnaire form was used as a collection tool. The sociodemographic characteristics (age, gender, occupation, marital status, educational status, occupational status, statutory status, smoking and alcohol consumption) of the participants participating in this survey were determined and nutritional habits (diet, presence of a chronic illness, use of supplemental vitamin minerals, calorie calculation, exercise status) were recorded and anthropometric measurements (waist circumference, BMI, and waist / hip ratio) were calculated. The mean BMI of the participants was 25.28 ± 4.51 and 51.5% had BMI values of 25 and above. Smoking rate was 46.2%; alcohol use rate was 40%. And, the rate of doing regular sports was 23.1%. 66.9% of the participants wereskipping meal. In addition, the energy, water, carbohydrate and fiber intakes of the participants were increasing on duty. On the contrary, protein, fat, and vitamin C were decreasing while on duty. Therefore, the night shift working system affects the nutritional habits of health professionals. As a result; studies conducted on health personnel have shown that people who have the right information do not have enough to show healthy behavior. Due to this cause, there is a need for new strategies to be developed in order to achieve healthy behavior.

Key words: Nutrition, BMI, Shift, Health, Doctors, Nurses, Night Shift

1. INTRODUCTION and AIM

Nutrition is defined as a process (2) that nutrients to be taken and used (1) in a balanced manner and or a process involving taking, digesting and absorbing and metabolizing food items necessary for living beings to be able to continue their lives and to be able to do the movements and tasks they need and as it is a process that is necessary for the individual to continue his life. (4). For this reason, it provides nutrients and energy needed according to the age of the individual, sex and physiological environment, and the size, variety and quality of the energy required, economically and regularly and consistently to the body. In this way, feeding is called adequate and balanced nutrition (8)

One of the issues that need to be considered for healthy and balanced nutrition is the meals and meals taken during the day. The number of main meals and snacks, time intervals, and content of food items in the body are of great importance for providing adequate and balanced nutrition (9, 17). When not take in to account “An inadequate and unbalanced nutrition (13) “defined as the energy required by the body and the absence of nutrients in the required quantity, quantity and type of body required by the body” occurs. many metabolic disorders such as diabetes, hypertension, obesity, cardiovascular diseases, hypertension, osteoporosis and diabetes occurs (7,14) and human health is negatively affected as a whole (15,16).

It is therefore important to assess the nutritional status of individuals in order to protect themselves from metabolic disorders caused by inadequate and unbalanced nutrition. In order to assess the nutritional status of individuals, it is necessary to compare their body weights with physical measures. For this purpose, a number of different methods have been introduced. Among these, anthropometric methods are often used because they are simple, reliable, non-destructive, inexpensive, can be done by anyone, easy to apply. Some of the methods called anthropometric methods are measurements of body mass index (BMI), body weight, bioelectrical impedance (BIA), diameter and circumference measurements (flare length, waist circumference, waist / hip ratio, hip circumference, body length, skin fold thickness, body fat percentage and lean body mass (48).

One of the most important roles of the society in raising awareness about healthy nutrition falls to health professionals such as nurses and doctors. Because the working principles of the body, the things to be done in order to protect the general health condition health professionals, and are much more aware of the consequences of failure to maintain health compared to individuals in different parts of the society. Therefore, it is expected that health professionals will pay more attention to health and therefore healthy nutrition. However, working conditions etc. health workers are also affected negatively on healthy eating habits as well as in other parts of the society for various reasons. In particular, the healthcare professionals' seizure mode of operation may have an effect that disturbs the meal pattern due to features such as night work and daytime sleep during the seizure. Thus, the effect of the seizure-based working system on health professionals' nutritional habits is a subject matter that must be studied.

In this study, it was aimed to investigate the effect of seizure system on eating habits and obesity frequency in health Professionals. For this purpose, a survey was conducted on the sample of nurses and doctors working in a private hospital. The study's research questions are:

1. How are health professionals the pattern of meals and the eating habits at meals?
2. Are the eating habits of health professionals affected by the seizure mode of operation?
3. How are the anthropometric measurements of health professionals?
4. What is the level of obesity in health professionals?

2. GENERAL INFORMATION

2.1. Nutrition and Importance

The meaning of nutrition is the intake of nutrients necessary for the body (5). In scientific sources, various definitions are made which are similar to each other but draw attention to different aspects of nutrition. Some of these nutrition is defined as to take and use nutrients in the most economical way, without destroying health and without losing nutritional value (6), the period during which nutrients can be taken and used (3) and the taking and use of the nutrients that people need for their long life, productive and healthy growth and development.

In addition, nutrition is defined by Gürman (1), “for the survival of the living beings, to be able to develop, to do necessary movements and work, to be able to protect their health, and to use the nutrients in the body in a balanced manner” and Çelik defined nutrition as (2), “a process involving taking, digesting, sucking, and metabolizing the body of nutrients through the food”. Soydemir (7) defined nutrition like Gürman in similar way (1) “for the survival of the living beings, to be able to develop, to do necessary movements and work, to be able to protect their health, and to use the nutrients in the body in a balanced manner”. Yasar Arıkan (8) described the feeding as shortly enough that the nutritional items needed by the individual can be met adequately.

For this reason, nutrition by the World Health Organization (WHO) has been described as the intake of nutrients according to what the body needs briefly (67). By looking at the different definitions made, we can define nutrition as “the balanced and necessary intake of the nutrients needed for the body to work, grow, develop and sustain life in a healthy way and the process involving their use in the body”

As it is expressed in its different definitions, nutrition is crucial because it is a process required for the body to work and to maintain the life of the individual(67). For this reason, the nutritional value of nutrition is discussed with the concepts of inadequate and unbalanced and adequate and balanced nutrition. In order to ensure adequate and balanced nutrition in the shortest definition, to maintain health and to be able to grow and grow, energy, and nutrients required as a measure, variety, quality and

variety that are needed, economically, consistently and regularly based on the age, sex, and physiological (4,8,9).

For this reason, such as maintaining a healthy growth and development and maintaining health adequate and balanced nutrition is provided by paying attention to the recommendations of specialists such as the meals consumed during the day and their frequency and the amount of food consumed in one day (8,11,12). Because when you do not pay attention to these and similar features “inadequate and unbalanced nutrition, which is defined (13) as the condition in which the body needs the energy and the nutrients are not included in the desired size, feature and variety of metabolism” occurs. As a result, both physical growth and development as well as brain and intelligence development are affected (9). Many metabolic disorders such as obesity, cardiovascular diseases, hypertension, hypercholesterolemia and diabetes occur in the organism (7,14). Therefore, human health is negatively affected as a whole as a result of inadequate and unbalanced nutrition.(15,16).

2.2. Nutritional Elements and Healthy Nutrition

Nutrient is defined as materials that enter into the structure of living tissues in dictionaries and are required to supply energy to organisms or to feed any organism (17). In academic studies; nutrients that are defined as complex compounds consisting of nutrients (18) or chemical compounds which are present in foods and which are of importance for health and which are absorbed in the body (8). Different nutrients, which are usually collected in six groups, are fat, vitamin, carbohydrate, protein, mineral and water. They (19) need to be taken from the outside because they can not be made in the body (17).

2.2.1. Carbohydrates

In the dictionary, carbohydrates (17), which are defined as the generic name of organic compounds composed of hydrogen and oxygen atoms, are the most important energy source of the body and provide energy to the body (9). Carbohydrates, organic compounds that occur in the form of oxygen, carbon, and hydrogen, oxygen, carbon and hydrogen, depending on the number and type of combination of the organism and its utilization. Therefore, carbohydrate are divided in to three groups: sugars, polysaccharides and oligosaccharides according to their polymerisation grades by

Food and Agriculture Organization (FAO) and the United Nations World Health Organization (UN-WHO) (55) (Tablo 2.1).

Table 2.1: The Classification of Carbohydrates

Base indexes	Subgroups	Use in human
Sugars	1. Monosaccharides Glucose, fructose, galactose 2. Disaccharides Sucrose, maltose, lactose 3. Sugar alcohols Sorbitol, maltitol, lactitol	It is rapidly absorbed from the small intestine. Glucose quickly increases blood sugar It is absorbed in the small intestine. Saccorose quickly raises blood sugar. Slowly absorbed from the small intestine, partially fermented
Oligosaccharides	1. malto-oligosaccharides (α -glucan) 2. Other oligosaccharides Fructo-oligosaccharides Galacto-oligosaccharides	a. It is digested in the small intestine, absorbed, and increases blood sugar. b. Digestion goes through a resistant, small intestine, fermented. Indigestible, passes through the large intestine, becomes fermented, stimulates the growth of bifidobacteria
Polysaccharides	1. Starch(α -glucan) 2. Non-starch polysaccharides	a.It is digested, it increases blood sugar. b. Resistant to digestion, passes to large intestine, fermented. a.The plant cell wall, indigestible, fermented inlarge intestine. b. Non-the plant cell wall, fermented in different levels.

Carbohydrates are the most important nutrient that affects the blood glucose level according to the constitution, and after being digested, they pass blood to glucose to form blood glucose levels (65). It is possible to materialize the functions of carbohydrates in their body as follows. Carbohydrates;

1. The nutrient that provides the maximum amount of energy the body needs (18). Therefore, they provide a large portion of the energy that the body spends. Brain

tissue uses only carbon hydrate for energy. Also, 1 gr carbohydrate provides 4 calories energy. Thus, monitoring a nutrition program rich in carbohydrates allows individuals to survive for a longer time without getting tired.

2. They are antiketogenic.
3. It plays a role in the passage of sodium passes from the intestines to blood and helps keep the electrolytes and water in the body.
4. The need for protein in the body reduces protein by preventing it from being used for generating energy. Thus, proteins are used for different functions.
5. . Increases intestinal motility, plays a role in the digestion of nonstarch polysaccharides, oligosaccharides, resistant starch and lignin and as feces (gaita), they help to remove waste from the body (9).

Thus, fresh vegetables and fruits rich in carbohydrates, important carbohydrate sources such as beans, lentils and peas, whole-grain breads, honey and molasses (19) must be included in the nutritional program(66). 55-60% of the energy received in a healthy diet should be met from carbohydrates, 12-15% from proteins and 25-30% from fat (56).

2.2.2. Proteins

Proteins originated from the amino acid combination, usually found in carbon, sulfur and oxygen, is defined as natural materials with complex structure (17), which brings the main material of living cells to the field (17) and is known as the building stone of the cells. Proteins are therefore found everywhere in the body where they are receptive(4).

Proteins are substances that occur in different tissues such as skin, muscle, bone and organs, and enzymes, substances that bring the structure of the various hormones of the cell into play (57). Besides, the structure of some hormones such as hypothalamus, pituitary and pancreas hormones. The most important tasks of proteins is strengthening the immune system and building resistance to diseases, as well as repairing worn out body cells, preserving, renewing and strengthening bone and muscle tissues (59). In addition to, proteins work in the structure of hemoglobin, which carries oxygen in red blood cells, in the structure of enzymes, in the provision of osmotic balance of intracellular and extracellular fluids (60).

In addition to, 1 gr of protein provides 4 calories of energy and proteins are of great importance for the construction of antibodies, the strengthening of the immune system, and the provision of liquid and acid-base balances (18). For this reason, 10-15% of your daily energy needs need to be met from proteins. If there is protein deficiency, there are significant health problems in the World (56).

“Quality of proteins”, is defined as the level of utilization of the body of the protein and differs according to the state of digestion and absorption, the type and amount of amino acids in the protein's composition, and the conversion to body proteins. Therefore, the quality of proteins indicates the degree to which the body utilizes proteins (58).

Nutrients vary in terms of protein quality and quantity they have (59). For example, 100% of breast milk and egg are taken from the body. For this reason, they are called sample proteins. 91-100% of other animal nutrients such as milk and meat are digested. For this reason, animal foods such as milk and meat are called good quality proteins (58). Protein quantities in 100 grams of some food and food groups are given on Table 2.2.

Table 2.2: Protein Content of Some Nutrients and Nutrient Groups

Nutrients	Protein quantity in 100 grams (gram)
Soya bean	30-35
Dry Legumes	20-25
Oil Seeds	15-20
Meat, chicken, fish	15-22
Types of cheese	15-25
Egg	12-13
Grains	8-12
Milk, yogurt	3-4
Fresh vegetables	1-2
Fresh fruits	0.5-1

In addition, the proteins are in good quality in cheese and sediment, mutton, fish, eggs, beef, poultry, liver, kidney, cow milk. In addition to; Examples of protein-rich plant sources are sesame, peanut, walnut, potato, rice, corn, hazelnut and wheat products (58). However, they contain low-quality protein and digestion is difficult.

On the other hand, dried beans, lentils and chickpeas are among the protein rich foods (60). Fresh fruits and green vegetables such as cabbage, leek, spinach, fresh beans and lettuce are not rich in protein (58).

2.2.3. Fats

Fats are defined as "vegetable or animal substances in which glycerin and palmitic, stearic, oleic acids are present in combination in the dictionary and whose consistency varies according to the proportions of these substances" (17). The lipid is a heterogeneous group of molecules soluble in organic solvents, such as ether, chloroform and acetone, which are mainly water and insoluble in carbon and hydrogen atoms (61).

Fats are high-energy nutrients (62) and are an important source of energy for the organism (57). Fats that provides energy to the body like carbohydrates, provides more than 2 times more energy than carbohydrates. Because 1 g of fat gives approximately nine calories of energy (18). Similar rates are 4 k cal / gr in proteins and 4 k cal / gr in carbohydrates (63).

Some of the functions of the fats in body are (58,63):

1. Benefits in the absorption of certain vitamins during chemical reactions.
2. A, D, E and K are needed to absorb soluble vitamins in the oil.
3. They give a feeling of fullness in the way of digesting hunger because they leave late.
4. They form the structure of the cell. Especially needed for infant and fetus development and for eye, brain, and skin health with essential fatty acids.
5. Maintain the body temperature against the heat change of the environment.

6. It protects the organs by wrapping them around the organs against external influences. For example; the kidneys are covered with a thick layer of fat and are particularly protected against cold.

The fats are divided into two groups according to their chemical structure (59). Accordingly, saturated fatty acids are known to those with no double bonds in structure, and unsaturated fatty acids with double bonds (58). Furthermore, fatty acids are classified according to the number of carbons in the molecule and the absence of double bond between carbons. The chain length of fatty acids is very important to feed. Those found in the molecule with less than 6 ‘‘C’’ ; are short chain, those with 6-10 ‘‘C’’, those with middle and 12 ‘‘C’’ ; are called long chain fatty acids. (57).

Saturated fatties are added at room and body temperature and the carbon atoms in them are linked to each other by a single bond (58). As the best examples of saturated fats, it is possible to show the inner fat, tail fat, margarine, butter and milk of animals (59). On the other hand, the majority of the oil found in fish is unsaturated fatties (58). In addition, the saturated fatty content of mayonnaise, salami, sausage, chocolate varieties, chips, avocado, olives, biscuits and crackers, waffles (59).

Unsaturated fatties are fats that are in liquid form at room and body temperature (59) and are double bonds between the carbon atoms in their structure (58). Unsaturated fatty acids are more common in vegetable fats. Unsaturated fatty acids are separated into omega-6, omega-3 and omega-9 (w-9) fatty acids, which are obligatory to be taken from the outside because they can not be synthesized in the human body (58).

Olive oil, hazelnut and hazelnut oil are monounsaturated oils and they are divided into two categories:

- 1) Omega 6 series such as soybean, cotton, sunflower, corn oil (59).
- 2) Omega 3 series such as mackerel, salmon, tuna fish, sardines, anchovies, island tea, kiwi, flaxseed oil, perilla (58).

However, when fats are consumed more than their body needs, they become stored in the body and become body fat (22). Therefore, when excessive consumption of fat is required, problems such as obesity and obesity arise and play a role in diseases such as diabetes, hypertension and cancer (63).

Therefore, attention should be paid to the intake of total energy received from the body:

- The intake of trans fatty acids should be reduced.
- Saturated fat must be <%7 inpatients with LDL-cholesterol more than ≥ 100 mg/dl
- Dietary cholesterol intake <300 mg/dl should be considered.
- The percentage of saturated fat should be <%10.
- 2-3 portions of fish per week should be recommended.
- Total polyunsaturated fatty acids should be ~ 10% of intake energy (55).

In addition to these;

- Liquid oil such as sunflower, corn oil, soy, olive oil, hazelnut oil should be used in all foods.
- Egg should be consumed twice a week.
- Offalities should not be consumed
- The amount of fat in meals should be reduced as much as possible.
- Avoid meat products such as bacon, sausage, salami and sausage when possible.
- When food is cooked, baking, grilling or scalding methods should be used instead of roasting and frying.
- No fat should be added to meat dishes (62).

2.2.4. Vitamin ve Minerals

Vitaminins, help build up the biochemical processes needed to generate energy from fat, carbohydrates and proteins, including in the structure of certain enzymes in the body and turn them into a regular style (18) and are organic compounds that are not needed in the body that are required for the normal metabolic processes of the body to be maintained and to be maintained in a healthy manner (9).

Therefore, vitamins are involved in growth, healthy living, development, and regular work of the body (58). Since most of the vitamins can not be synthesized by the body, they need to be taken with our nutrients (64). Living a balanced and healthy life,

depend on the regular work of the organs, their duties. For this reason, vitamins play an important role in the regular functioning of metabolism (58).

In addition to, vitamins have a relative that is in business with other nutritional ingredients. Thus, vitamins work together with nerve, skeletal and digestive systems in cell work and work together with other nutrients in skin and mucosa health (58).

Vitamins are divided into two groups when their characteristics are taken into consideration. These groups are vitamins which are soluble in oil and water:

- A, D, E, K vitamins are fat- soluble.
- C ve B vitamin groups are water-soluble (64).

It is possible to summarize the vitamins and their sources for a healthy life as follows (63):

Vitamin A :

- Vitamins that are stored in the body and required for embryo development, blood making, vision, growth, reproduction, immune system and tissue cell differentiation (58). Therefore, problems arise if there is a lack of childhood, pregnancy and lactation periods (64).
- There are dark green leafy vegetables, fish oil, milk, yellow and orange fruits (apricot, peach etc) mostly in the liver, butter, egg, yellow orange (carrot, winter squash etc.) (58).

Vitamin D:

- Vitamin D, also known as sunlight vitamins (59), is a vitamins that are absorbed by the body and help store phosphorus and calcium in the bones and teeth.
- D vitamins are found in egg yolks, butter, fish oil, fish, liver and sunlight. In the absence of vitamin D, bloating occurs in the joints (58), and rickets is seen (58). Teethe is late.

Vitamin E:

- Vitamin E, which is fat soluble, is sensitive to sunlight and alkaline aeration, is a vitamins with little indication of inadequacy in humans because they are found in sufficient amounts in daily foods (58).
- Oil seeds and the oils obtained from them, green leafy plants, grain grains and dried legumes are the richest sources (63)

Vitamin K:

- Vitamin K, a fat-soluble vitamin, is defined as blood clotting factor .
- There are as many as our daily food, especially animal and vegetable foods.
- Dry legumes and fish, clover, spinach, etc. green leafy vegetables are the richest sources (63).

Vitamin B1 (Thiamine):

- Food items have a role in turning the energy and making energy from carbohydrates.
- B1 vitamins are mostly found in walnuts, nuts and eggs, dry legumes, cereals (wheat, corn, rice) and liver and other organ meats, meat, milk (58).

Vitamin B2 (Riboflavine):

- Vitamin B2 plays a role in the formation of energy in protein metabolism (59). milk and dairy products, kurubaklagiller, eggs, green leafy vegetables are richly placed (59).
- Besides, green leafy vegetables are found in liver, meat, fish and grains (58).

Nicotinic Acid, B3 Vitamin (Niasin):

- Protein is involved in carbohydrate and fat metabolism.
- Most are found in cereals, dry legumes, poultry, liver, meat, fish, yeast and green leafy vegetables (58).

Vitamin B5 (Pantothenic acid):

- B5 Vitamin is one of the vitamins of B Group, plays a role in the synthesis of fats and in the functioning of the nervous system and some hormones (58).

Vitamin B6 (Pyridoxine):

- It is essential for the immune system and aids in the metabolism of fat, protein and carbohydrates (64).
- The richest are cereals and dry legumes and are found in meat, liver, kidney (58).

Vitamin B7 (Biotin):

- It is a vitamin taking part in carbohydrate metabolism (58).
- As much as in all foods, including soybean flour, meats, liver, egg yolk and yeast. (58).

Vitamin B9 (folic acid):

- The need for blood cells and amino acids and their construction.
- Vitamin C is needed to function in the body (64).
- Most green leafy vegetables are found in yeast, liver, other organ meats, dry legumes and grains (58).

Vitamin B12 (Cobalamin):

- Vitamin B12, which can only be taken from animal-derived foods; in the nervous system, in the immune system, in the production of blood cells in bone marrow, and in protein metabolism (58).
- Therefore, vitamin B12 deficiency causes irreversible damage to the nervous system and causes anemia.
- Most commonly found in meat, milk, cheese, eggs and fish (58).

Vitamin C (ascorbic acid):

- Vitamins C are being non-resistant to heat which are soluble in water, with a sour taste, easy to be oxidized when contact with air (58).
- Prevents eye cataract formation.
- Make it easier for iron and folic acid to pass into the blood.
- Has a role in strengthening the immune system.
- An antioxidant vitamins (64).
- Vegetables and fruits have plenty of Vitamin C. It is mostly found in green leafy vegetables such as strawberries, blackberries, rosehips, tomatoes, cabbage, potatoes, lemons, oranges, tangerines and green pepper vine leaves, spinach and lettuce (58)

Minerals are inorganic substances such as phosphorus, potassium, calcium, chlorine, magnesium and sodium which are common in nature (64) and contained in foods. The body performs various functions such as protection of the cells, heart rhythm and blood pressure, fluid electrolyte balance in the body, healthy bone, tooth and skin structure. For this reason, an average of 4-6% of the human body is minerals.

Calcium:

- Calcium helps in muscle contraction, nerve stimulation, blood coagulation, heart beat.
- Milk and milk products such as sediment, kefir, yoghurt and cheese are the best sources of calcium.
- Good sources of dark green leafy vegetables (lettuce, broccoli etc.), molasses, oilseeds, dry legumes, dry fruits; some fruits (orange, mandarin, lemon, strawberry) are green vegetables, eggs, medium resources.
- Other vegetables, fruits and meats are poor sources.
- The best known bone maker and restorer (59).

Phosphorus:

- It is required for cell work besides calcium.

- Hücre içinde ve dışındaki sıvıların dengede tutulmasını sağlar, vücut sıvılarının asit ortama dönüşümünü engeller. It keeps in balance liquids in and out of the cell, preventing the body fluids from converting to acid.

Sodium, Chlorine and Potassium:

- Chlorine and potassium are found in all body fluids and tissues.
- One of the most important tasks is to provide acid-base balance, body water balance and muscle condition.
- 2% of the body's mineral content is sodium, 5% is potassium, and 3% is chlorine (64).

Magnesium:

- Magnesium has functions such as regular working of the muscular and nervous system, energy metabolism in the body, regulation of blood pressure, formation of bones and teeth.

Iron:

- An adult human body has an average of 3-5 grams of iron (64).
- The most important task is to find red blood cells in the structure (59).
- The task of iron in the structure of hemoglobin is to transfer oxygen to the body (64).
- It is found entirely in animal and plant resources. However, iron, which is best used by the body, is found mainly in red meat, chicken and fish meat.
- Although there is a lot of iron in herbal nutrients, its useful to the body is less. Dried legumes, molasses, eggs, nuts, green leafy vegetables, dried fruits and soy products are rich in iron.
- If you do not get enough iron, you may develop fatigue and anemia due to iron deficiency in individuals.

Iodine:

- An adult individual has 15-20 mg of iodine in his body. 70% of this is in the thyroid gland, while the rest is in the tissues and in the blood.

- Iodine is involved in the production of thyroid hormones in the thyroid gland. Iodine is required for the thyroid gland to work (64).

Zinc:

- It is involved in the structure of enzymes that have important metabolic tasks in the body.
- It is an important mineral that is needed for body growth, cell proliferation, repair and energy production and helps to use carbohydrates, proteins and oils (59).
- Most of the vegetable sources contain zinc. However, their availability by the body is lower than that from animal-derived nutrients (59).

Fluorine:

- The most important task of the flour is to prevent tooth decay.
- It is found mostly in the body of teeth and bones.
- Adequate fluoride intake causes osteoporosis while excessive fluoride intake causes osteoporosis (64).

Selenium:

- A mineral that helps cell proliferation, protects cells against oxidation, helps prevent heart disease, cancer and other health problems.
- Seafood, organ meats and other meats are important sources.
- Vegetables and fruits are not good sources (59).

2.2.5. Water

Water is one of the most basic necessities of all nutrients, such as oxygen, which enables an average 70% of the human body to grow and maintain its vital activities. An adult individual needs to drink an average of eight to twelve glasses of water every day and individuals may live for up to five to six days without consuming water, although they may continue their lives for weeks without nutrition (4).

Along with the loss of fluid in the body, various health problems arise. Some of these are:

- Changes in blood flow to muscle tissue slow down metabolic waste removal.
- There are consequences such as a decrease in the total plasma volume and a decrease in the minute volume of the heart.
- The food distribution in the body drops.
- In body internal temperature (rectal temperature) increase.
- The cellular metabolism in the body is changing.
- Heart beat speed increases.

For this reason, adequate water intake is a very important issue (19).

2.3. Meals and Meal Patterns in Healthy Nutrition

The provision of healthy and balanced nutrition throughout the day ensures that meals and meal patterns have a great deal of prescription. Different meals the nutrients taken into the body form the building blocks of the cells, meet the energy that tissue need and the metabolism work in a balanced way. Thus, meals and meal patterns are important for relieving fatigue, ensuring a healthy and balanced leveling of metabolism, healthy thinking and prevention from illness (23,24).

For these reasons, food items need to be taken at specific time intervals in the body. These time intervals are called main and intermediate meals. From these, the main meals are breakfast, lunch and dinner in the morning; feedings between them are intermediate meal. Research shows that the ideal diet lasts for 4-5 hours from the main meal consumption. The energy balance and the metabolic structure of the body are damaged when the main meals are consumed for a long time or when excessive amounts of food are taken with the intermediate meal. But, If needed, between main meals, intake of rich and nutritious snacks, lower energy content in food is helpful for regulating blood sugar and in a short time prevents that hunger again and the consumption of food that exceeds the requirement for the next main meal (17).

Moreover, the more stable the distribution of nutrients consumed in the main and intermediate meals, the more regularly the metabolism works, if a balanced diet is provided (10). For this reason, 55-60% carbohydrate, 10-15% protein and 20-30% fat intake are of major importance in the main and intermediate meals (9).

Among the meals breakfast is a special feature that needs to be emphasized. The breakfast meal is important for the first time feeding after a long night of about 10-12 hours of nightly, it is important that the performance of the body can be achieved at a high level. Because during the night, the energy and nutrients needed by the body are met from the body's stores. When a breakfast meal is not made, there can be problems such as fatigue, weakness, headache, attention and perception problems during the day.

Individuals who do not have regular breakfast consume more nutrients, especially those with higher energy and fat, for the rest of the day. So, those who do not consume the breakfast meal are slightly overweight or obese. It is also known that individuals who do not eat breakfast have an increase in waist circumference, more hypertension, a higher risk of developing type 2 diabetes, and increased blood fat (19,20).

Therefore, it is necessary to pay attention to these in a balanced breakfast:

- Have a regular breakfast habit.
- A quarter or day of daily energy should be met.
- The right nutrition pattern should be selected (17).

2.4. Anthropometric Measurements in Determination of Nutritional Status

Anthropometric measurements are important in determining the nutritional status of individuals. Therefore, many anthropometric methods that are economical, reliable, repeatable, sensitive to changes have been developed and are still in use.

Anthropometric measurements simple, reliable, non-destructive, inexpensive, can be done by anyone, easy to implement, accurate, precise, objective, fast and responsive when standard techniques are used. Some of the frequently used anthropometric methods are body mass index (BMI), skin fold thickness, body weight,

height, bioelectrical impedance (BIA), diameter and circumference measurements and lean body mass determinations and body fat percentage (48,68).

2.4.1. Body Weight and Length

Determination of body weight and height is a method that allows you to make an assessment according to reference values. In reference values; there are body weight percentage values are determined according to age and sex according to normal range of values and height. Therefore, evaluations such as being weak or overweight, being short or long and nutritional status can be made. However, the calculation of the body mass index using body weight and height length is an easier and more practical (49).

2.4.2. Body Mass Index (BMI)

Body Mass Index (BMI), is a measurement which is the determination of nutritional characteristics, classification of obesity, obesity and etc. used for the planning of disease detection and treatment methods (kg) / body (kg) / length (m²) as a result of dividing the height of the body weight in kg by the height (m²) (69). Although BMI can not directly measure fat in the body, it is widely preferred because of its ease of use (25).

The result of the measurement is that the BMI is less than 18.5, the individual is underweight and the value between 18.5-24.9 is normal weight. In addition, body mass index value; 25-29,9 kg / m² preobesity, 30-34,9 kg / m² first degree obesity, 35-39,9 kg / m² second degree obesity and 40 kg / m² over third degree or over obesity type are categorized (Table 2.3) (26).

Table 2.3: Classification by BMI

BMI	Classification
<16,0	Severe weakness
16-18,5	Weakness

18,5-24,9	Normal weight
25-29,9	Overweight (Preobez)
30-34,9	Overweight –Class 1 obesity
35-39,9	Overweight –Class 2 obesity
≥40	Extreme overweight Class 3 obesity)

2.4.3. Waist / Hip Ratio

Waist / hip ratio is a measurement method used to assess the risk for healthy nutrition and chronic diseases by revealing where the body fat accumulates. The waist measurement is made by finding between the lower rib bone and the anterior upper face of the pelvic girdle, and measuring the circumference passing through the middle point. Hip measurement is performed with the environment measurement passing through the highest point. The waist / hip ratio is determined by dividing the waist circumference (cm) to the hip circumference (cm).

In males, a waist circumference of 93 cm is risky for health and a 101 cm limit is considered high risk. In women, these measures are > 79 cm (risky) and >87 cm (high risky). It is also suggested that the waist / hip ratio in males should not be more than 1.0 and in females should not be more than 1,0.

2.5. Chronic Diseases Related to Nutrition

2.5.1. Diabetes

Diabetes is known in the medical literature as Diabetes Mellitus (DM), is a continuing disease that lasts for life, insufficient production of insulin by the pancreas with the shortest definition or resulting in the inability to use the body's insulin effectively and with a decrease in chronic and insulin-producing cells, resulting in an abnormal increase in blood sugar. Insulin hormones are not produced or affected in diabetic patients. Therefore, the sugar can not be transported into the cell, the it increases in blood and the blood sugar increases (hyperglycemia). This is called diabetes (50,51,70).

Diabetes; in case of continuation, is a metabolic disease that can cause life-threatening dangers in all organ system, nerves, eyes, heart, kidney and etc and and

decrease the quality of life and quality of life. Diabetes, which is one of the most commonly diagnosed chronic diseases in many countries today, is becoming increasingly widespread. In Turkey, the prevalence of diabetes (over 20 years) was found to be 7.2% (TURDEP-I) (51).

Diabetes is divided into two groups in scientific sources. The primary type 1 diabetes is the pancreatic beta cells responsible for insulin production are impaired and there is absolute insulin deficiency . Insulin deficiency needs to be met by daily injections. Type 1 diabetes insulin treatment is absolutely necessary from the very beginning and these patients can not survive if they do not use insulin. Type 1 diabetes are 5-10% of diabetic patients. Type 2 diabetes is a result of decreasing insulin secretion over time Type 2 diabetes covers more than 90% of total diabetes cases (50,70).

Diabetes is a disease that is directly related to nutrition. Therefore, it is necessary to pay attention to the amount of food dietary and food Being conscious of the type, quantity and timing of foods and taking it in a certain balance will provide blood sugar control and prevent long-term complications (52).

2.5.2. Hypertension

The transport of oxygen and other substances necessary for the human body to the blood by blood and the release of residual substances and the release of carbon dioxide from the blood by the blood are called blood circulation. The pressure generated in the arterial wall as a result of the pumping function that the heart makes for this circulation to take place is called the blood pressure (27,28). Hypertension, or hypertension, is simply the blood pressure of the blood vessels are more than normal in the simplest definition, and the high pressure that the blood circulating in the vein creates on the vein wall (29,30).

According to the classification according to the blood pressure values published by the European Society of Hypertension and the European Society of Cardiology in 2007 systolic (high) blood pressure 120-129 mm/Hg, diastolic(low) blood pressure is between 80-84 mm/Hg are “normal” tension values. They have a “high normal” tension of 130-139 mm / Hg and 85-89 mm / Hg, respectively. If the systolic blood pressure is more than 140 mm / Hg and the diastolic blood pressure is more than 90 mm / Hg, this is called “hypertension”. The hypertension values were divided into

categorical groups such as stage 1, stage 2, stage 3. Classification categories and their limit values are given in detail in Table 2.4 (31).

Table 2.4: Hypertension Classification of European Hypertension Association and European Society of Cardiology

Kategori	Sistolik (mm/Hg)		Diyastolik (mm/Hg)
Normal	120-129	ve/veya	80-84
Yükseknormal	130-139	ve/veya	85-89
Evre1Hipertansiyon	140-159	ve/veya	90-99
Evre2Hipertansiyon	160-179	ve/veya	100-109
Evre3Hipertansiyon	≥180	ve/veya	≥110
İzoleSistolikHipertansiyon	≥140	ve	<90

Hypertension is the most common present all over the world and is a common disorder in adults and especially in the elderly and the first order in the order of the diseases examined in the outpatient clinic and prescribed for medication for treatment (32). Complications arising as a result of hypertension cause 9.4 million deaths annually in 2016 (33). In addition, hypertension accounts for 45% of deaths due to heart disease and 51% of stroke-related deaths (34).

Untreated hypertension can also cause significant damage to the functioning of vital organs such as the heart, brain and kidneys and cause permanent injuries and deaths. Diseases such as heart failure, coronary heart disease, hemorrhoid and thrombotic stroke, renal failure, peripheral arterial disease, aortic dissection are among the diseases (34). Therefore, hypertension is a factor that shortens the life span by 10-20 years. However, today, only half of the world's hypertensive patients are aware that they are hypertensive (32).

Hypertension is also a common problem in our country. As a result of the study titled ;Heart Disease and Risk Factors in Turkish Adults ; (TEKHARF), with an 18-

year effort was made in 2008 and published hypertension is a common problem in our country and it is stated that this problem is not sufficiently aware and treated. Accordingly, approximately five million men and six million women in the Turkish population are suffering from hypertension (36). In addition, it is stated that 13.2% of the population (15 years and over) in Turkey's 2012 health statistics is hypertensive. This rate is expressed as 17.6% for females and 8.7% for males (37).

2.5.3. Obesity

Obesity by the World Health Organization (WHO), is extreme or abnormal fat accumulation (38), T. C. The Ministry of Health “is defined as a chronic disease that is explained by the fact that the amount of energy consumed by the nutrients in the body is caused by the excess of the energy consumed and the body fat mass is increased compared to the lean body mass. Also; obesity is generally explained as the weight of an individual being 20% greater than the ideal body weight (39).

The imbalance between energy expenditure and energy intake is the main cause of obesity. The excess energy is stored in the form of fat in the body when the energy consumed is excessive and causes obesity (26). However, various internal and external factors, including demographic, genetic, environmental, psychological and behavioral factors, have an impact on obesity. If both parents are obese, their chances of being obese are 80%; if only one of the parents is obese, it is 50% (40). In addition, obesity is seen in all ages, but as the age increases, the obesity rate also increases and the obesity rate is higher in women (41).

In addition, unbalanced eating habits and environmental factors cause obesity to develop. Environmental factors causing obesity; big family, use of lift, work of mother, school services, single child, domestic discomfort, technological tools, spend time on television and computer, inadequate green space in cities, economic reasons, apartment life, negative environment in urban life, fragmented family, old mothers (42).

Obesity is now known as the second most important cause of preventable deaths after smoking cigarettes all over the world and in Turkey (43). Obesity lowers quality of life. As the obesity increases, the respiratory work load increases and the quality of life decreases due to respiration. Increased burden on the joints causes discomfort such as pain and loss of motion. Spiritual influences, especially in women, emerge and self-

esteem and decreased self-esteem emerge. Also obesity; cause to a wide variety of diseases such as hypertension, type 2 diabetes, cardiovascular diseases, osteoarthritis, biliary diseases, breast, prostate, colon and endometrium, reflux, sleep apnea, respiration (25).

Obesity according to WHO; it is a great public health problem. According to the year 2014 statistics, 1.9 billion of the world's population, or 39%, are overweight and 600 million or 13% obese (44). In the European Union (EU), 300,000 people die annually due to illnesses caused by obesity and overweight, and the number of obese people in Europe has tripled in the past 20 years (45).

According to the statistics published by TURKSTAT in 2015 in Turkey, the obesity rate in 2014 has reached 19.9%. This ratio is 15.3% for males; and 24.5% for women. Overweight rates are 38.2% for males; 29.3% in women and 33.7% in total population. In addition, the obesity rate increased by 31.1% over the 6-year period from the previous measurement year of 2008 to 2014 (46). Obesity is increasing day by day. Therefore, child and adult obesity in Turkey has become an important and worrying health problem. According to a statement made by the Minister of Health on January 29, 2017, a third of the Turkish population is still obese and is among the 10 worst countries in the world in obesity rates in Turkey (47).

2.5.4. Osteoporosis

Osteoporosis is a systematic skeletal disease and is one of the most common metabolic bone diseases. Distortion of low bone mass and micro-structure of bone tissue is characterized by an increase in resultant bone fragility and susceptibility to shading. Therefore, as a result of the increase in loss of bones, weakness and increased risk of fracture is a disease. Fractures due to osteoporosis and osteoporosis are an important public health problem. However, while osteoporosis affects the entire skeleton, fractures usually occur in the wrist, spine, and hipbone (35,53).

The reasons that increase the risk of osteoporosis are:

- Body weight is below ideal,
- Do not exercise regularly,

- Insufficient consumption of calcium-rich foods such as milk and dairy products,
- inadequate physical activity since childhood
- Vitamin D deficiency,

For this reason, healthy nutrition has great importance in terms of prevention of osteoporosis. Fish consumption, consumption of vegetables and fruits, increased consumption of calcium and vitamin D is of great importance to osteoporosis (35,54).

2.6. Behavior and information relation

Scientific studies Show “information-attitude-behavior” triple is related to each other, there is no direct interaction between them and many indirect factors influence this trilogy (72). They need to be used alone or sometimes together to create behavioral change. Human behaviors are the result of the individual's interaction with the environment. The individual learns many behaviors from the people around him, modeling them and imitating them. Health behaviors also have an effect on physical environment and social environment (71,74). When we look at the behavior of health workers, it can be said that they have physical, cultural and social elements which do not act with their knowledge and affect their behavior. Therefore, it is not enough to change the knowledge level behavior of health workers and the lifestyle information levels and contents may not show similarity at the same time (73).

3.MATERIALS AND METHOD

3.1.Place of Research

The research was carried out in Istanbul Special Region Hospitals.

3.2.Sample of Research

It was aimed to reach all the doctors, nurses and ebbs who served in the hospital between May 2017 and August 2017 and dutied. The study was conducted with 130 physicians and nurses / midwives who agreed to participate in the research.

Private Maltepe Regional Hospital, Istanbul Private Sancaktepe Regional Hospital and İstanbul Special Pendik Regional Hospital have created a universe of physicians, nurses and researchers who have been working for more than 1 month.

3.3. Collection of Data

3.3.1. Data Collection Tools

The questionnaire that constituted the data collection tool of the research included 36 questions. In this questionnaire form, the person's gender, age, occupation, marital status, education status, occupation period, professional status, tea / coffee consumption, sporting status, chronic illness, vitamin supplementation, cigarette and alcohol use on a daily basis, and food consumption during duty and off were wanted to learn. (APP-1).

Calorie and energy calculations of the study group were determined by the Nutrition Information System (BeBIS Student). Individuals in our study were calculated based on height (mezura), weight (Poor Hercules Body Analysis Scale, sensitive to 100 gr), waist and hip circumference (mezzanine), BMI and waist / hip ratio records.

3.3.2. Data Collection Process

The questionnaires were implemented between May 2017 and August 2017.

3.4. Evaluation of Data

In the evaluation of the research data, SPSS Statistics 22 program was used and a variety of descriptive and meaningful statistical methods were applied. Accordingly,

the normal distribution of the data was evaluated by the ShapiroWilks test. Oneway ANOVA test and post hocTukey HSD test were used in the analysis of differences with normal distribution .

The Kruskal Wallis H test, one of the nonparametric methods, was used for the difference analysis of the variables with no normal distribution. The t-test was used for the comparison between two groups of variables with normal distribution. Chi-square test, Fisher's Exact test, Fisher Freemanhalton test and Continuity (Yates) correction were used for comparison of qualitative data. Level of significant was evaluated as $p < 0.05$.



4. RESULTS

4.1. Demographic Results

The study was carried out between March 2017 and May 2017 with a total of 130 health workers, aged between 20 and 61, 49 (37.7%) male and 81 (62.3%) female. The average age of health workers is 36.57 ± 10.17 (Tablo 4.1).

Table 4.1: Distribution by Socio-Demographic Characteristics of Health Personels

Socio-Demographic Features	Min.-Max	Ave \pm SS
Age	20-61	36,57 \pm 10,17
Occupation duration(year)	1-35	11,49 \pm 8,17
Sex n,%		
Male	49	37,7
Female	81	62,3
Marital statüs n,%		
Married	78	60
Single	52	40
Occupation n,%		
Doctor	63	48,5
Nurse	61	46,9
Midwife	6	4,6
Physican education statüs (n=63) n,%		
General practitioner	8	12,7
Specialist	55	87,3
Midwife/Nurse education statüs (n=67) n,%		
High school	29	43,3
Associate degree (AÖF)	3	4,5
Bachelor degree	27	40,3
Master	8	11,9

In addition, the age of health care workers ranged from 20 to 61 years, average is 36.57 ± 10.17 . Occupation durations range from 1 to 35 years, average 11.49 ± 8.17 .

37.7% of health workers are men, 62.3% are females. 60% are married, 40% are single. 48.5% were physicians, 46.9% were nurses and 4.6% were midwives. 12.7% of are practitioners physicians, 87.3% are specialists of doctors 43.3% of the nurses are graduated from high school, 40.3% are bachelor, 11.9% are masters and 4.5% are associate degree graduates (Table 4.1).

Table 4.2: Length, Weight, Waist / Hip Ratio and BMI Average, Min.-Max Values and BMI Distribution

Measurement	Min.-Max	Ave±SS
Height (cm)	149-192	168,5±8,63
Weight (kg)	45-110	72,05±14,77
BMI	17,8-42	25,28±4,51
Waist circumference (cm)	52-120	87,03±15,9
Hip circumference (cm)	60-130	100,56±10,19
Waist/hip ratio	0,61-1,22	0,86±0,12
BMI height n,%		
<25	63	48,5
≥25	67	51,5

When the data in Table 4.2 are examined, the health workers range in size from 149 to 192 cm with an average of 168.5 ± 8.63 . The weight varies between 45 and 110, the average is 72.05 ± 14.77 . The BMI values ranged from 17.8 to 42, average is

of 25.28 ± 4.51 . Waist circumferences vary between 52 and 120 , average is 87.03 ± 15.9 . The hip circumference ranges from 60 to 130 and is 100.56 ± 10.19 . Waist / Hip ratios vary between 0.61 and 1.22, average is 0.86 ± 0.12 . 48.5% of the health care workers are below the 25th percentile of the BMI, 25 out of 51.5%.

Table 4.3: Comparison of BMI, Waist Circumference, Hip Circumference and Waist / Hip Rates of Individuals by Sex

Measure	Sex		p
	Male	Female	
	Ave±SS	Ave±SS	
BMI	26,42±3,2	24,59±5,03	0,013*
Waist circumference (cm)	94,53±12,01	82,49±16,31	0,001*
Hip circumference (cm)	101,19±8,46	100,18±11,14	0,584
Waist/hip ratio	0,93±0,12	0,82±0,11	0,001*

Student t Test *p<0.05

When the data in Table 4.3 were examined, the BMI values of males were found to be statistically significantly higher than the values of females (p:0.013; p<0.05). Men's waist circumference averages were statistically significantly higher than women averages (p:0.001; p<0.05). There was no statistically significant difference in the mean hip circumference between males and females (p>0.05). The waist / hip ratios of males were statistically significantly higher than females (p:0.001; p<0.05).

4.2. Results of Eating Habit

While 44.6% of health workers had never smoked before, 19.2% consumed between 11 and 20 cigarettes a day, 17.7% consumed between 6 and 10 cigarettes a day, 9.2% stopped using, 8.5 % consumed between 1 and 5 cigarettes a day and 0.8 % consumed other frequently.

While 60% of health care workers do not use alcohol, 17.7% use 1-4 times a month, 13.8% a few times a year and 8.5% use 2-4 times a week. While 90.8% of the health workers consume tea / coffee, 9.2% do not consume. Health workers consume between 0 and 8 cups of coffee per day, average is 1.96±1.62. The tea consumes between 0 and 14 cups a day and the average is 4.14 ± 2.61 (Table 4.4).

Table 4.4: Distribution of Cigarette and Alcohol Consumption, Tea / Coffee Consumption Status of Individuals

Question/Answer	Min.-Max	Ave±SS
Do you smoke? n,%		
Never used	58	44,6
I used to , gave up	12	9,2
1-5 per day	11	8,5
6-10 per day	23	17,7
11-20 per day	25	19,2
Other	1	0,8
Do you drink alcohol ? n,%		
No	78	60
2-4 in a week	11	8,5
1-4 in a month	23	17,7
Several times in a year	18	13,8
Do you drink tea/coffee ? n,%		
Yes	118	90,8
No	12	9,2
If your answer yes coffee consumption (cup/day) (n=118)	0-8	1,96±1,62
If your answer yes tea consumption (cup/day) (n=118)	0-14	4,14±2,61

On the other hand, there was no statistically significant difference in the distribution ratios of smoking status between males and females ($p>0.05$). There were no statistically significant differences in the distribution ratios of alcohol use among men and women ($p>0.05$). There was no statistically significant difference between men and women in terms of tea / coffee consumption ratios ($p>0.05$) (Table 4.5).

Table 4.5: Assessment of Cigarette, Alcohol, Tea / Coffee Use Status by Individuals Attending the Survey

Question	Answer	Sex		p
		Male	Female	
		n (%)	n (%)	
Do you smoke?	Never used	22 (%45,8)	36 (%44,4)	10,904
	I used to,gave up	4 (%8,3)	8 (%9,9)	
	1-5 per day	4 (%8,3)	7 (%8,6)	
	6-10 per day	7 (%14,6)	16 (%19,8)	
	11-20 per day	11 (%22,9)	14 (%17,3)	
Do you drink alcohol?	No	28 (%57,1)	50 (%61,7)	10,177
	2- 4 in a week	7 (%14,3)	4 (%4,9)	
	1-4 in a month	6 (%12,2)	17 (%21)	
	Several times in a year	8 (%16,3)	10 (%12,3)	
Do you drink tea/coffee?	Yes	46 (%93,9)	72 (%88,9)	20,533
	No	3 (%6,1)	9 (%11,1)	

Note: Numbers of other cigarette use cases are excluded from analysis due to their low number.

Table 4.6: Distributions of Diseases

Question/Answer	n	%
Do you have any diseases?		
Yes	15	11,5
No	115	88,5
Which of the following situations do you have (n=15)		
hypothyroidism	3	20
Anemia	11	73,3
Diabetes	1	6,7

When the data in Table 4.6 are examined, 11.5% of health care workers have any disease while 88.5% are not. Of the 15 health care workers with the disease, 73.3% had anemia, 20% had hypothyroidism and 6.7% had diabetes.

Table 4.7: Use of Additional Vitamin Mineral, by Whom and Distribution of Objective

Question / Answer	n	%
The use of supplemental vitamins / minerals in the last year(n=129)		
Yes	15	11,6
Sometimes	15	11,6
No	99	76,7
Who recommended the vitamins you used? (n=24)		
Doctor	20	83,3
Social media	4	16,7
What is your purpose of using vitamins? (n=24)		
Disease	9	37,5
To be more fit and healthy	12	50
to protect from diseases	1	4,2
Other	2	8,3

According to Table 4.7, 76.7% of the health care workers do not use additional vitamins / minerals in the last year, 11.6% use it and 11.6% use it occasionally. In the last year, 83.3% of those who use supplemental vitamins / minerals and occasionally used it by doctor's recommendation and 16.7% through social media.

50% of those who use vitamin and sometimes use it to be healthier and better, 37.5% for the disease, 8.3% for the other reasons and 4.2% for the diseases.

Table 4.8: Distribution of Exercise Situations of Individuals

Do you do exercise regularly?	n	%
Yes	30	23,1
No	100	76,9

According to this, 23.1% of health workers do regular sports, 76.9% do not.

Table 4.9: Regular Exercise Status According to BMI Height

Regular Exercise Status	BMI height		p
	<25	≥25	
	N (%)	n (%)	
Yes	13 (%20,6)	17 (%25,4)	0,665
No	50 (%79,4)	50 (%74,6)	

Continuity (Yates) Correction

There was no statistically significant difference in the rate of regular sports activities among the BMI height groups ($p > 0.05$). 20.6% of cases with a body mass index below 25 and 25.4% of cases with a body mass index of 25 or more are doing regular sports.

Table 4.10: Evaluation of Individuals' Main and Snack Meal Consumption

Question	Answer	n	%
How many main meals do you have per day ?	2 meals	92	70,8
	3 meals	38	29,2
How many snack meals do you have per day ?	0 meal	3	2,3
	1 meal	48	36,9
	2 meals	72	55,4
	3 meals	7	5,4
Do you skip meal?	Yes	87	66,9
	Sometimes	9	6,9
	No	34	26,2
Yes or Sometimes? Which meal dou you skip ? (n=95)	Morning	73	76,8
	Midday	14	14,7
	Evening	8	8,4
Do you skip snack meal? (n=129)	Yes	112	86,8
	Sometimes	12	9,3
	No	5	3,9
Yes or Sometimes? Which meal dou you skip? (n=122)	Mid-morning	61	50
	Afternon	56	45,9
	Night	5	4,1
What is your reason to skip main meal? (n=95)	Heavy workload	72	75,8
	Don' want to eat	15	15,8
	Lose weight /preserve my weight	8	8,4
What is your reason to skip snack meal? (n=123)	Heavy workload	31	25,2
	Don' want to eat	86	69,9
	Lose weight /preserve my weight	6	4,9

According to Table 4.10, 70.8% of health professionals eat 2 main meals a day and 29.2% eat 3 main meals a day. 2.3% did not eat any meals at all 36.9% of them eat 1 snack, 55.4% 2 snacks and 5.4% 3 snacks.

66.9% of health workers skip main meals, 6.9% sometimes jump and 26.2% do not. Of those skipping main meals, 76.8% skipped morning breakfast, 14.7% skipped lunch and 8.4% skipped dinner.

86.8% of health workers skip meals, 9.3% sometimes jump and 3.9% do not skip meals. 50% of those who skip meals are bird, 45.9% are atleast and 4.1% is skipping at night.

75.8% of those skipping main meals skip main meals due to work intensity, 15.8% skip due to lack of willingness and 8.4% skip to maintain weight / weight. Twenty-five percent of those who skip meals skip meals due to work intensity, 69.9 percent skip it because of the inability of your life and 4.9 percent to maintain weight / weight.

Table 4.11: Assessment of Meals Jumping According to Body Mass Index

Question	Answer	BMI
		Ave±SS (medyan)
State of skip main meal	Yes	25,39±4,59 (25,1)
	Sometimes	27,65±2,79 (27,8)
	No	24,37±4,5 (24,2)
	P	0,098
State of skip snack	Yes	25,3±4,59 (25,1)
	Sometimes	25,19±3,93 (25,9)
	No	24,48±5 (25,7)
	p	0,929

Kruskal Wallis Test

There were no statistically significant differences in terms of BMI among the skip of main meal situations ($p>0.05$).

There were no statistically significant differences in terms of BMI among the skip os snack meals ($p>0.05$).

Table 4.12: Evaluation of Individuals' Eating Speed and Eating Forms According to their Psychological Situations (Being Grieved or Joyful)

Does your psychological state change your eating habit?	Speed of eating			p
	Speed	Normal	Slow	
	n (%)	n (%)	n (%)	
Not change	30 (%50)	23 (%40,4)	3 (%23,1)	
Eat more	22 (%36,7)	12 (%21,1)	4 (%30,8)	0,012*
Eat less	8 (%13,3)	22 (%38,6)	6 (%46,2)	
Ki Kare Test	* $p<0.05$			

There is a statistically significant difference in the distribution ratios of changes in eating speed between eating according to psychological status ($p:0.012$; $p<0.05$). As a result of the binary comparisons made for the determination of the difference; Less eating habits than the psychological status of fast food eaters (%13,3), Were found to be statistically significantly lower than the ratios of 1 normal (38.6%) and 2 slow (46.2%) eating eaters ($p1:0.006$, $p2:0.033$; $p<0.05$).

There was no statistically significant difference in the distribution ratios of the changes in the eating behavior according to the psychological status between the normal and slow food eaters ($p>0.05$).

Table 4.13: Distribution of Nutrition Consumption during Snack Meals of Individuals

Question	Answer	n	%
Do you consume food between meals?	Yes	122	93,8
	Sometimes	8	6,2
Yes or Sometimes;	Tea/Coffee	104	80
	Fruit/Raw vegetables	23	17,7
	Cola/Soda	53	40,8
	Milk/Yogurt/Ayrann	13	10
	Cake/Biscuits/chips	95	73,1
	Soft drinks/Fruit juice	29	22,3
	Nuts	77	59,2
Do you have regular meal times when working shift?	Yes	27	20,8
	No	103	79,2
Are your meals regular off shift?	Yes	4	3,1
	No	126	96,9
Do you have breakfast when working shift?	Yes	121	93,1
	No	9	6,9
If your answer is yes (n=121)	Tea/Coffee	102	84,3
	Fruit/Raw vegetables	38	31,4
	Cola/Soda	44	36,4
	Milk/Yogurt/Ayrann	38	31,4
	Cake/Biscuits/chips	75	62
	Soft drinks/Fruit juice	32	26,4
	Nuts	73	60,3
	Lahmacun / pita / hamburger	53	43,8
	Grain loaf with milk	9	7,4
	Classic breakfast plate	117	96,7
	Pastry	90	74,4
If your answer is no, which of the following foods do you usually prefer, until morning? (n=9)	Cola/Soda	5	55,6
	Lahmacun/pita/hamburger	9	100

According to Table 4.13, 93.8% of health professionals consume food at intermediate meals and sometimes consumes 6.2%. 80% of those who consume and sometimes consume food among meals are tea / coffee, 73.1% biscuit / chips, 59.2% nuts, 40.8% cola / soda, 22.3% soft drinks / fruit juice, 17.7% fruit and raw vegetables and 10% consumes milk / yogurt / ayran.

Twenty-eight percent of health workers have regularly scheduled mealtimes while 79,2% are not regular. While 3,1% are out of work hours, 96,9% are not regular.

93.1% of the health workers are having breakfast at night, %6,9'u of health workers aren't having breakfast. % 96.3% of those who made breakfast at night were classic breakfast plates, 84.3% tea / coffee, 74.4% pastry, 62% cake / biscuit / chips, 60.3% nuts, 43.8% lahmacun / pide / hamburger, 36.4% cola / soda, 31.4% fruit and raw vegetables, 31.4% milk / yogurt / ayran, 26.4% soft drinks / fruit juice, 7,4% milk and grain cereal. Those who do not eat breakfast at night prefer 55.6% cola / soda and 100% lahmacun / pide / hamburger.

Table 4.14: Distribution of Daily Energy Purchases on the Shift (BEBIS)

	Shift	
	Min-Max	Ave±SS
Energy	469,5-3938,3	1830,67±563,09
Water	336-2991,1	1236,8±417,27
Protein	11,3-143,4	67,94±20,51
Fat	11,1-184,7	75,82±28
Carbohydrate	38,6-524,5	211,97±82,16
Fiber	4,5-158,8	20,64±14,34
Vitamin A	115,6-6133,4	872,3±806
Vitamin E	1,6-61,1	20,01±10,94
Vitamin B12	0-11,4	3,85±2,14
Vitamin C	2,9-195,8	54,35±37,95
Vitamin B12	0,2-1,9	0,71±0,27
Carotene	0,1-9,1	1,95±1,64
Vitamin B2	0,3-2,4	1,1±0,39
Vitamin B6	0,2-3	1,07±0,46
Tot. Folikas	89,1-676,8	237,02±97,54
Sodium	942,2-13945,1	3818,24±1848,45
Potassium	539,5-5050,9	1922,24±703,52
Calcium	183-3011,4	587,48±357,74
Magnesium	86,8-912,8	242,9±94,79
Phosphorus	426,7-1828,3	1008,27±277,57
Iron	2,6-53,5	10,98±5,81
Zinc	2,1-23,3	9,73±3,21
Alcohol	0-0,5	0,01±0,06
Polyunsaturated fat	2-84,3	21,76±11,83
Cholesterol	16-710,1	214,31±136,25
Table salt	2,1-33,7	9,07±4,14
Caffeine	0-300	53,99±70,11

On duty; energy values ranged from 469.5 to 3938.3, average is 1830.67±563.09. Water values ranged from 336 to 2991,1, average is 1236.8±417.27. Protein values range from 11.3 to 143,4 average is 67.94.±20.51. The fat values ranged from 11.1 to 184.7, average is 75.82±28. The carbohydrate values range from 38.6 to 524.5, average is 211.97±82.16. Fiber values range from 4.5 to 158.8, average is 20.64±14.34.

The vitamin A values ranged from 115.6 to 6133.4 and the average is 872.3±806. Vitamin E values ranged from 1.6 to 61.1, average is 20.01±10.94. Vitamin B12 values ranged from 0 to 11.4 average is 3.85±2.14. Vitamin C values ranged from 2.9 to 195.8, average is 54.35±37.95. Vitamin B12 values range from 0.2 to 1.9, average is 0.71±0.27. The carotene values range from 0.1 to 9.1, average is 1.95±1.64. Vitamin B2 values range from 0.3 to 2.4, average is 1.1±0.39. Vitamin B6 values range from 0.2 to 3, average is 1.07±0.46. Total folica values ranged from 89.1 to 676.8, average is 237.02±97.54.

Sodium values range from 942.2 to 13945.1, average is 3818.24±1848.45. Potassium values ranged from 539.5 to 5050.9, average is 1922.24±703.52. Calcium values ranged from 183 to 3011.4, average is 587.48±357.74. Calcium values ranged from 183 to 3011.4, average is 242.79±94.79. Phosphorus values ranged from 426.7 to 1828.3, average is 1008.27±277.57. The iron values range from 2.6 to 53.5, average is 10.98±5.81. Zinc values range from 2.1 to 23.3, average is 9.73±3.21. Alcohol values range from 0 to 0.5, average is 0.01±0.06. Polyunsaturated fat values ranged from 2 to 84.3, average is 21.76±11.83. Cholesterol values range from 16 to 710.1, average is 214.31±136.25. Table salt values range from 2.1 to 33.7, average is 9.07±4.14. Caffeine values range from 0 to 300, average is 53.99±70.11.

Table 4.15: Distribution of Daily Energy Purchases Off Duty BEBIS)

	Off duty	
	Min-Max	Ave±SS
Energy	529,9-4381,7	1819,5±649,19
Water	371,9-2609	1192,15±406,25
Protein	11,7-1150,9	78,18±98,83
Fat	10,2-241,4	76,17±37,26
Carbohydrate	69,5-417,5	200,71±82,92
Fiber	5,8-116,4	17,92±12,76
Vitamin A	19,3-2734,4	795,9±509,37
Vitamin E	3,7-900,7	22,76±78,41
Vitamin B12	0-19,9	4,41±3,26
Vitamin C	2-278,5	71,88±54,81
Vitamin B12	0,1-34,6	0,99±3
Carotene	0-15,7	1,94±2,12
Vitamin B2	0,1-2,8	1,16±0,45

Vitamin B6	0,1-3,1	1,08±0,5
Tot. Folikas	1,1-740,1	232,63±123,01
Sodium	236,5-12446,8	3414,04±1813,86
Potassium	276-6010,3	1946,1±843,81
Calcium	54-1574	579,94±256,04
Magnesium	61-848,1	222,98±106,18
Phosphorus	184-2209,4	996,78±363,93
Iron	1,7-947,3	16,85±82,33
Zinc	1,6-30,6	9,76±4,22
Alcohol	0-59,4	0,82±6,26
Polyunsaturated fat	0-52,3	17,31±11,42
Cholesterol	0-1007,2	278,83±194,57
Table salt	0,6-339,4	10,82±29,34
Caffeine	0-332	42,25±66,73

According to this; Off duty , The energy values ranged from 529.9 to 4381.7 ,the average is 1819.5±649.1. Water values range from 371.9 to 2609, average is 1192.15±406.25. Protein values ranged from 11.7 to 1150.9, average is 18.±98.83. The fat values ranged from 10.2 to 241.4, average is 76.17±37.26. The carbohydrate values range from 69.5 to 417.5, average is 200.71±82.92. Fiber values ranged from 5.8 to 116.4, average is 17.92±12.76.

Vitamin A values ranged from 19.3 to 2734,4, average is 795.9±509.37. Vitamin E values ranged from 3.7 to 900,7, average is 22.76±78.41. Vitamin B12 values ranged from 0 to 19,9, average is 4.41±3.26. Vitamin C values ranged from 2 to 278,5, average is 71.88±54.81. Vitamin B12 values ranged from 0.1 to 34,6, average is 0.99±3. Caratone values ranged from 0 to 15,7, average is 1.94±2.12. Vitamin B2 values ranged from 0.1 to 2,8, average is 1.16±0.45. Vitamin B6 values ranged from 0.1 to 3,1average is 1.08±0.5. Total. folicas values ranged from 1.1 to 740,1, average is 232.63±123.01.

Sodium values ranged from 236.5 to 12446,8, average is 3414.04±1813.86. Potassium values ranged from 276 to 6010,3, average is 1946.1±843.81. Calcium values ranged from 54 to 1574, average is 579.94±256.04. Magnesium values ranged from 61 to 848,1, average is 222.98±106.18. Phosphorus values ranged from 5.8 to 116.4average is 996.78±363.93. Iron values ranged from 1.7 to 947.3, average is 16.85±82.3. Zinc

values range from 1.6 to 30.6, average is 9.76 ± 4.22 . Alcohol values range from 0 to 59.4, average is 0.82 ± 6.26 . Polyunsaturated fat values range from 0 to 52.3, average is 17.31 ± 11.42 . Cholesterol values range from 0 to 1007.2, average is 278.83 ± 194.57 . Table salt values range from 0.6 to 339.4, average is 10.82 ± 29.34 . Caffeine values range from 0 to 332, average is 42.25 ± 66.73 .

Table 4.16: Distribution of Basic Nutrition Groups on Duty

	On Duty	
	Min.-Max	Ave \pm SS
Protein (%)	3-30	15,73 \pm 4,04
Fat (%)	13-59	37,03 \pm 7,42
CHO (%)	26-72	47,10 \pm 8,20

According to Table 4.16, naturally protein (%) values range from 3 to 30 and the average is 15.73 ± 4.04 . Fat (%) values ranged from 13 to 59 average is of 37.03 ± 7.42 . The CHO (%) values ranged from 26 to 72 and the average is 47.10 ± 8.20 .

Table 4.17: Distribution of Basic Nutrition Groups Off Duty

	Off duty	
	Min.-Max	Ave \pm SS
Protein (%)	5-39	16,38 \pm 5,34
Fat(%)	15-59	37,36 \pm 9,09
CHO (%)	25-70	45,95 \pm 10,4

According to this, protein (%) values range from 5 to 39 off duty, is 16.38 ± 5.34 . Fat (%) values ranged from 15 to 59 average is 37.36 ± 9.09 . The CHO (%) values range from 25 to 70, average is 45.95 ± 10.4 .

Table 4.18: Nutrition Habits Distribution According to Anthropometric Measurements On Duty

	Duty			
	Energy	Protein (%)	Fat (%)	Carbohydrate (%)
	Ave±SS	Ave±SS	Ave±SS	Ave±SS
BMI(kg/m²)				
<25 (n=63)	1735,11±564,42	16,01±3,95	36,68±7,80	47,25±8,76
≥25 (n=67)	1920,52±550,96	15,46±4,13	37,36±7,09	46,95±7,71
p1	0,060	0,437	0,606	0,837
Waist circumference male (cm)				
Normal (n=25)	1992,68±495,51	14,36±3,13	35,96±7,61	49,64±7,35
Risk factor(n=9)	2033,43±389,78	17,67±2,74	39,33±8,80	43,11±8,28
High risk factor(n=15)	2091,3±499,09	14,47±2,36	35,67±5,81	49,87±5,98
p2	0,821	0,012*	0,441	0,052
Waist circumference female (cm)				
Normal (n=38)	1636,75±599,61	16,34±4,24	36,63±7,88	46,92±9,10
Risk factor(n=13)	1774,85±655,57	15,92±3,04	39,15±8,28	44,77±8,64
High risk factor (n=30)	1774,33±532,94	16,07±5,36	37,50±6,76	46,03±7,99
p2	0,574	0,947	0,580	0,730
Waist/Hip ratio male				
Normal (n=35)	2023,75±475,23	14,94±3,42	35,94±6,86	49,11±6,99
Risky(n=14)	2046,86±480,58	15,14±2,03	37,86±8,47	47,00±8,59
p1	0,879	0,802	0,414	0,376
Waist/Hipratio female				
Normal (n=36)	1661,19±597,96	16,00±3,75	38,14±8,33	45,67±9,66
Risky (n=45)	1748,81±572,31	16,31±5,04	36,73±6,82	46,71±7,64
p1	0,504	0,759	0,406	0,588
1Student t Test	2OnewayAnova Test			

There is no statistically significant difference in energy, protein (%), fat (%) and carbohydrate (%) averages among the BMI heights according to Table 4.18 ($p > 0.05$).

There was no statistically significant difference in energy, fat (%) and carbohydrate (%) averages between male waist circumference risk groups ($p > 0.05$). There is a statistically significant difference in protein (%) averages between male waist circumference risk groups ($p: 0.012$; $p < 0.05$). The percentages of protein (%) of men in the risk factor group in terms of waist circumference, (%) of males whose waist circumference is within the normal range ($p: 0.012$) and those with high risk factor group ($p: 0.028$) are statistically significantly higher ($p < 0.05$). There is no significant difference between the protein (%) averages of males with normal waist circumference and high risk factor group ($p > 0.05$).

There was no statistically significant difference in terms of energy, protein (%), fat (%) and carbohydrate (%) averages among female waist circumference risk groups ($p > 0.05$).

There was no statistically significant difference in energy, protein (%), fat (%) and carbohydrate (%) averages between male waist / hip ratio risk groups ($p > 0.05$).

There was no statistically significant difference in energy, protein (%), fat (%) and carbohydrate (%) averages between female waist / hip ratio risk groups ($p > 0.05$).

Table 4.19: Distribution of Nutrition Habits According to Anthropometric Measurements Off Duty

	Off Duty			
	Energy	Protein	Fat	Carbohydrate
	Ave±SS	Ave ±SS (medyan)	Ave ±SS	Ave ±SS
BMI (kg/m²)				
<25 (n=63)	1744,48±732,35	16,81±5,30	39,44±8,62	43,38±10,57
≥25 (n=67)	1890,04±556,3	15,98±5,38	35,40±9,15	48,36±9,71
p1	0,203	0,381	0,011*	0,006*
Waist circumference male (cm)				
Normal (n=25)	2133,92±752,46	17,76±5,45	37,48±8,87	44,56±10,23
Risk factor (n=9)	2406,86±870,14	13,67±2,40	39,89±11,22	46,22±10,59
High risk factor (n=15)	1808,23±512,73	15,93±5,30	33,67±10,67	50,67±10,80
p2	0,133	0,109	0,295	0,211
Waist circumference female (cm)				
Normal (n=38)	1651,19±650,52	16,31±5,60	39,26±8,33	43,47±10,24
Risk factor (n=13)	1618,02±525,37	16,23±3,81	39,07±9,08	44,69±11,58
High risk factor (n=30)	1687,43±387,95	16,43±6,08	35,20±8,37	48,33±9,51
p2	0,922	0,993	0,126	0,149
Waist/Hip ratio male				
Normal (n=35)	2147,01±711,70	16,94±5,33	38,11±8,74	44,86±9,46
Risky (n=14)	1927,69±772,86	15,21±4,58	33,36±12,13	51,43±12,14
p1	0,346	0,292	0,131	0,049*
Waist/Hipratio female				
Normal (n=36)	1676,26±657,73	15,64±5,74	38,86±8,89	44,61±10,57
Risky (n=45)	1645,72±432,29	16,91±5,26	36,82±8,32	46,15±10,18
p1	0,802	0,302	0,291	0,507
1Student t Test	2OnewayAnova Test	* p<0.05		

When Table 4.19 is examined, there is no statistically significant difference in energy and protein (%) averages between BMI elevations except seizure ($p>0.05$).

Less than 25 of at (%) averages of those with a BMI were found statistically significantly higher than those with a BMI greater than 25 ($p:0.011$; $p<0.05$).

The carbohydrate (%) averages of those with a BMI of less than 25 were found to be statistically significantly lower than those with a BMI greater than 25 ($p:0.006$; $p<0.05$).

There was no statistically significant difference in energy, protein (%), fat (%) and carbohydrate (%) averages among male waist circumference risk groups ($p>0.05$).

There was no statistically significant difference in terms of energy, protein (%), fat (%) and carbohydrate (%) averages among female waist circumference risk groups ($p>0.05$).

There was no statistically significant difference in energy, protein (%) and fat (%) averages between male waist / hip ratio risk groups ($p>0.05$).

The average of carbohydrate (%) of men with waist / hip ratio in the risk group was found to be statistically significantly higher than normal ones ($p:0.049$; $p<0.05$).

There was no statistically significant difference in terms of energy, protein (%), fat (%) and carbohydrate (%) averages among female waist / hip ratio risk groups ($p>0.05$).

Table 4.20: Distribution of Daily Energy Purchases Off Duty and Duty

Daily Energy (kcal)	On Duty		Off duty	
	n	%	n	%
500-1000	6	4,6	6	4,6
1001-1500	32	24,6	38	29,2
1501-2000	50	38,5	42	32,3
2001-2500	30	23,1	26	20
2501-3000	6	4,6	12	9,2
3001 ve üstü	6	4,6	6	4,6
Total	130	100	130	100

According to this, 38.5% of the cases naturally receive 1501-2000 kcal energy per day, 24.6% of them are between 1001-1500 kcal, 23.1% are between 2001-2500 kcal, 4.6% are between 500-1000 kcal, 4.6% between 2501-3000 kcal and 4.6% are receiving energy over 3001 kcal and above.

Off duty, 32.3% of the cases were receiving 1501-2000 kcal energy per day 29.2% for 1001-1500 kcal, 20% for 2001-2500 kcal, 9.2% for 2501-3000 kcal, 4.6% for 500-1000 kcal and 4.6% for 3001 kcal and above is.

Table 4.21: Distribution of Basic Nutrition Groups Off Duty and Duty

	On Duty		Off Duty	
	n	%	n	%
Carbohydrate (%)				
%49 and below	83	63,8	82	63,1
%50-55	26	20	26	20
%56 and over	21	16,2	22	16,9
Protein (%)				
% 14 and below	50	38,5	54	41,5
%20-30	64	49,2	51	39,2
%21 and over	16	12,3	25	19,2
Fat(%)				
% 19 and below	3	2,3	3	2,3
%20-30	19	14,6	25	19,2
%31 and over	108	83,1	102	78,5
Total	130	100	130	100

According to Table 4.21, the carbohydrate value of 63.8% of the cases is 49% and below, 50-55% of 20%, and 56% and above of 16.2%. Protein value of 49.2% is in the range of 20-30%, in 14% and below of 38.5% and in 21% and above of 12.3% . The fat value of 83.1% is over 31% and over, 14.6% is between 20-30% and 2.3% is below 19%.

Off duty, 63.1% of the cases had a carbohydrate value of 49% or less, 20% of 50-55%, and 16.9% of 56%. Protein value of 41.5% is below 14%, 39.2% is between 20-30%, and 19.2% is above 21%. 78.5% of the fat value is above 31%, 19.2% is between 20-30% and 2.3% is below 19%.

Table 4.22: Distribution of Dietary Fiber Consumption Off Duty and On Duty

Diet Fiber (g)	On Duty		Off Duty	
	n	%	n	%
24,9 and below	101	77,7	111	85,4
25-30	18	13,8	5	3,8
30,1 and over	11	8,5	14	10,8
Total	130	100	130	100

According to this, 77.7% of cases have dietary fiber consumption of less than 24.9 grams, 13.8% of 25-30 grams, and 8.5% of 30.1 grams and above.

Off duty, 85.4% of the cases had dietary fiber consumption of less than 24.9 grams, 30.1 grams and over of 10.8%, and 25-30 grams of 3.8%.

Table 4.23: Evaluation of Daily Diet Fiber Consumption Off Duty and on Duty Between BMI Heights

	Fiber	BMI Height		p
		<25	≥25	
		n (%)	n (%)	
On Duty	24,9 and below	50 (%79,4)	51 (%76,1)	10,905
	25-30	8 (%12,7)	10 (%14,9)	
	30,1 and over	5 (%7,9)	6 (%9)	
Off Duty	24,9 and below	54 (%85,7)	57 (%85,1)	20,260
	25-30	4 (%6,3)	1 (%1,5)	
	30,1 and over	5 (%7,9)	9 (%13,4)	

1Ki Square Test 2FisherFreemanHalton Test

According to Table 4.23, there is no statistically significant difference in the distribution ratios of daily dietary fiber consumption groups among the NAI height groups ($p>0.05$).

There was no statistically significant difference in the distribution ratios of daily dietary fiber consumption groups among the BMI height groups off duty ($p>0.05$).

Table 4.24: Distribution of Daily Vitamin Purchase on Duty and Off Duty

Vitamin	On Duty		Off Duty	
	Min.-Max.	Min.-Max.	Ave±SS	Ave±SS
Vitamin A	115,6-6133,4	19,3-2734,4	795,9±509,37	872,3±806
Vitamin E	1,6-61,1	3,7-900,7	22,76±78,41	20,01±10,94
Vitamin B12	0-11,4	0-19,9	4,41±3,26	3,85±2,14
Vitamin C	2,9-195,8	2-278,5	71,88±54,81	54,35±37,95
Vitamin B12	0,2-1,9	0,1-34,6	0,99±3	0,71±0,27
Carotene	0,1-9,1	0-15,7	1,94±2,12	1,95±1,64
Vitamin B2	0,3-2,4	0,1-2,8	1,16±0,45	1,1±0,39
Vitamin B6	0,2-3	0,1-3,1	1,08±0,5	1,07±0,46
Total. Folicas	89,1-676,8	1,1-740,1	232,63±123,01	237,02±97,54

According to this, on duty, vitamin A values ranged from 115.6 to 6133.4, average is 872.3±806. Vitamin E values ranged from 1.6 to 61.1, average is 20.01±10.94. Vitamin B12 values ranged from 0 to 11.4, average is 3.85±2.14. Vitamin C values ranged from 2.9 to 195.8, average is 54.35±37.95. Vitamin B12 values ranged from 0.2 to 1.9, average is 0.71±0.27. Carotene values range from 0.1 to 9.1, average is 1.95±1.64. Vitamin B2 values range from 0.3 to 2.4, average is 1.1±0.39 Vitamin B6 values range from 0.2 to 3, average is 1.07±0.46. Total folicas values ranged from 89.1 to 676.8, average is 237.02±97.54.

Off duty, Vitamin A values ranged from 19.3 to 2734.4, average is 795.9±509.37. Vitamin E values ranged from 3.7 to 900.7, average is 22.76±78.41. Vitamin B12 values ranged from 0 to 19.9, average is 4.41±3.26. Vitamin C values ranged from 2 to 278.5, average is 71.88±54.81. Vitamin B12 values ranged from 0.1 to 34.6, average is 0.99±3. Carotene values ranged from 0 to 15.7, average is 1.94±2.12.

Vitamin B2 values ranged from 0.1 to 2.8, average is 1.16 ± 0.45 . Vitamin B6 values ranged from 0.1 to 3.1, average is 1.08 ± 0.5 . Total. folicas values ranged from 1.1 to 740.1, average is 232.63 ± 123.01 .

Table 4.25: Daily Mineral Intake Distribution on Duty and Off Duty

	On Duty		Off Duty	
	Min.-Max.	Min.-Max.	Ave \pm SS	Ave \pm SS
Sodium	942,2-13945,1	236,5-12446,8	3414,04 \pm 1813,86	3818,24 \pm 1848,45
Potassium	539,5-5050,9	276-6010,3	1946,1 \pm 843,81	1922,24 \pm 703,52
Calcium	183-3011,4	54-1574	579,94 \pm 256,04	587,48 \pm 357,74
Magnesium	86,8-912,8	61-848,1	222,98 \pm 106,18	242,9 \pm 94,79
Phosphorus	426,7-1828,3	184-2209,4	996,78 \pm 363,93	1008,27 \pm 277,57
Iron	2,6-53,5	1,7-947,3	16,85 \pm 82,33	10,98 \pm 5,81
Zinc	2,1-23,3	1,6-30,6	9,76 \pm 4,22	9,73 \pm 3,21

Examined in Table 4.25, naturally, sodium values ranged from 942.2 to 13945.1 average is 3818.24 ± 1848.45 . Potassium values ranged from 539.5 to 5050.9 and the average is 1922.24 ± 703.52 . Calcium values ranged from 183 to 3011.4, average is 587.48 ± 357.74 . Magnesium values range from 86.8 to 912.8, average is 242.79 ± 94.79 . Phosphorus values ranged from 426.7 to 1828.3, average is 1008.27 ± 277.57 . The iron values ranged from 2.6 to 53.5, average is 10.98 ± 5.81 . Zinc values ranged from 2.1 to 23, average is 9.73 ± 3.21 .

Off duty, sodium values ranged from 236.5 to 12446.8, average is 3414.04 ± 1813.86 . Potassium values ranged from 276 ile 6010.3, average is 1946.1 ± 843.81 . Calcium values ranged from 54 ile 1574, average is 579.94 ± 256.04 . Magnesium values ranged from 61 ile 848.1, average is 222.98 ± 106.18 . Phosphorus values ranged from 184 ile 2209.4, average is 996.78 ± 363.93 . Iron values ranged from 1.7 ile 947.3, average is 16.85 ± 82.33 . Zinc values ranged from 1.6 ile 30.6, average is 9.76 ± 4.22 .

Table 4.26: Distribution of Cholesterol Intake On Duty and Off Duty

Cholesterol (mg)	On Duty		Off Duty	
	n	%	n	%
0-200 mg	73	56,2	57	43,8
200-300 mg	26	20	19	14,6
300 mg and over	31	23,8	54	41,5
Total	130	100	130	100

When the results of Table 4.26 are examined, 56.2% of the cases have cholesterol intake values between 0-200 mg, 23.8% of them are 300 mg and over and 20% of them are between 200-300 mg.

Off duty, 43.8% of the cases had a cholesterol intake value of 0-200 mg, 41.5% had 300 mg and over and 14.6% had 200-300 mg.

Table 4.27 Evaluation of Daily Cholesterol Intake Out of Duty and on Duty Between BMI Groups

Cholesterol	BMI		p	
	<25	≥25		
	n (%)	n (%)		
0-200 mg	32 (%50,8)	41 (%61,2)		
On Duty	200-300 mg	15 (%23,8)	11 (%16,4)	0,441
	300 mg and over	16 (%25,4)	15 (%22,4)	
0-200 mg	29 (%46)	28 (%41,8)		
Off Duty	200-300 mg	6 (%9,5)	13 (%19,4)	0,279
	300 mg and over	28 (%44,4)	26 (%38,8)	

Ki Square Test

According to Table 4.27, there is no statistically significant difference in the distribution ratios of daily cholesterol uptake groups among naturopathic hypertension groups ($p>0.05$).

There was no statistically significant difference in the distribution of daily cholesterol intake groups among the BMI height groups off duty ($p>0.05$).

Table 4.28: Distribution of Daily Salt Consumption Off Duty and On Duty

Table Salt (gr)	On Duty		Off Duty	
	n	%	n	%
5 gr and below	16	12,3	24	18,5
5 gr over	114	87,7	106	81,5
Total	130	100	130	100

According to this, 12.3% of the cases are above 5 grams of salt consumption, and 5 grams of 87.7%.

Off duty, 18.5% of the cases were below 5 grams of salt consumption and 5 grams of 81.5%.

Table 4.29: Evaluation of Daily Salt Consumption Off Duty and On Duty Between BMI Groups

	Table Salt	BMI		p
		<25	≥25	
		n (%)	n (%)	
On Duty	5 gr and below	6 (%9,5)	10 (%14,9)	0,349
	5 gr over	57 (%90,5)	57 (%85,1)	
Off Duty	5 gr and below	13 (%20,6)	11 (%16,4)	0,536
	5 gr over	50 (%79,4)	56 (%83,6)	

Ki SquareTest

Table 4.29 shows that there is no statistically significant difference in the distribution ratios of daily salt consumption groups among the BMI altitude groups ($p>0.05$).

There was no statistically significant difference in the distribution rates of daily salt consumption groups among the BMI height groups out of duty ($p>0.05$).

Table 4.30: Distribution of Daily Caffeine Consumption on Duty and Off Duty

Caffeine (mg)	On Duty		Off Duty	
	n	%	n	%
300 mg and below	129	99,2	129	99,2
300 mg over	1	0,8	1	0,8
Total	130	100	130	100

According to this, caffeine consumption value of 99.2% of cases is above 300 mg, while it is below 300 mg. The caffeine consumption value of 99.2% of cases was over 300 mg off duty, while it was below 300 mg and 0.8%.

Table 4.31: Evaluation of Daily Caffeine Consumption On Duty and Off Duty Between BMI Groups

Caffeine	BMI		p	
	<25	≥25		
	n (%)	n (%)		
On Duty	300 mg and below	62 (%98,4)	67 (%100)	0,485
	300 mg over	1 (%1,6)	0 (%0)	
Off Duty	300 mg ve alti	63 (%100)	66 (%98,5)	1,000
	300 mg over	0 (%0)	1 (%1,5)	

Fisher'sExact Test

Accordingly, there is no statistically significant difference in the distribution ratios of daily caffeine consumption groups among the BMI height groups ($p>0.05$). There was no statistically significant difference in the distribution ratios of daily caffeine consumption groups among the BMI height groups out of duty ($p>0.05$).



5. EVALUTAION OF RESULTS

In this section, the results obtained from the questionnaire form applied between the May-June of 2017 to the 130 health personnel who are actively working in İstanbul Özel District Hospital were discussed. The discussion section of the study was examined in accordance with the flow in the result section. The age of the 130 health personnel participating in the research is between 20-61 years and the average age is $36,57 \pm 10$. The majority of these personnel are female individuals (62.3% women, 37.7% men). The majority of the women participating in the survey were related to the high percentage of nurses and ebbers who participated (51.5%).

The health personnel who participated in our research were selected from the individuals who worked in the profession between 1-35 years and the average was determined as $11,49 \pm 8,1$ years. In terms of representing the universe, it is appropriate for duration of profession.

The average age of health workers in the study is medium, because the duration of the training is longer so they start at a later age. According to the 2003 report of the Turkey Demographic and Health Survey (90) when considering the previous population and health survey it can be said that the increase in the level of education that has been observed has explained that the female staff participating in the research is above the Turkey average.

It is understood that although the majority of the health personnel participating in the survey (60%) are married, they are below the average marriage rate of 65.1% according to TURKSTAT 2013 (89). This is because the training period is long, since the vast majority of physicians participating in the survey were experts, they started at a later age in their profession, or due to unsustainable unhealthy marriages due to difficult working conditions .

The average of the health personnel participating in the study ranged from 149 to 192 cm and the average is 168.5 ± 8.63 . Their weight ranged from 45 to 110 and the average was 72.05 ± 14.77 . The Boy-Kilo Index (BMI) values ranged from 17.8 to 42 average is 25.28 ± 4.51 . When evaluated according to the BMI classification calculated according to the data of TSA 2010 (88), which is done by TURKSTAT, 48.5% of the

health personnel participating in the study were below the BMI value of 25, %51.5 is over 25. According to the definitions of the World Health Organization (WHO), most of the respondents (51.5%) are overweight. The BMI values of the male health personnel participating in the survey are higher than the participating female health personnel. Similar to TSA 2010 (88), 37.3% of males were overweight, 13.2% were obese while 28.4% were overweight and 21% were obese. This may be due to the fact that male health personnel have a more sedentary life than female staff. Since the number of women participating in TSA 2010 (88) is higher than the number of men (%73.6>%26.4) , it is also understood that the number of women with obesity is higher than that of men.

The waist circumference of the health personnel varies between 52 and 120 and the average is 87.03 ± 15.9 . The hip circumference ranges from 60 to 130 and is 100.56 ± 10.19 . The waist / hip ratio ranges from 0.61 to 1.22 and the average is 0.86 ± 0.12 . According to the World Health Organization (WHO) classification, waist / hip ratio distribution should be <0.85 for women and <0.90 for men (91). The average of the male staff participating in the survey is 0.93 ± 0.12 in the risk group. In females, this situation is normal with 0.82 ± 0.11 . The fact that male staff has higher waist / hip ratios than female staff indicates that even participants with knowledge of health do not put their knowledge into practice in their lives.

When the effect of cigarette smoking on feeding habits was considered, it was determined that the variables had different results. Variables such as the gender of the person, education level, socioeconomic level can change the effects of cigarette on nutritional habits and BMI values. Molarius and Seidell (82) found that the effects of smoking on BMI were different according to different educational levels and sex. They found that BMI was significantly higher in smokers with higher education than smokers in non-smokers with higher education. The release of the cigarette has determined that women and low-educated men cause an increase in BMI of men with higher education levels while not causing a change in BMI. 44.6% Of the health personnel participating in the survey had never smoked before, 19.2% consumed between 11 and 20 cigarettes a day, 17.7% consume between 6 and 10 cigarettes a day, 9.2% cease to use, 8.5% consume between 1 and 5 cigarettes a day, and 0.8% consume at other frequencies. There was no significant difference in the effect of cigarette smoking on the BMI values

according to gender variable, since there was no significant difference between men and women in smoking. As another variable, alcohol consumption affects male and female nutrition habits and BMI values. According to Tolstrup and friends (87), a significant relationship was found between BMI and the amount of alcohol consumed in women and men. However, there was an inverse relationship between alcohol and BMI. Accordingly, as the total amount of alcohol consumed increases, BMI increases while the amount of less frequent alcohol consumption decreases BMI. According to Breslow and Smothers (77), alcohol consumption is predicted to lead to an increase in BMI, but frequent and low alcohol intake will lead to a significant decrease in BMI. While 60% of the health personnel participating in the survey do not use alcohol, 17.7% use 1-4 times a month, 13.8% several times a year and 8.5% use 2-4 times a week. As there was no significant difference in alcohol consumption between males and females, there was no significant difference in the effect of alcohol consumption on BMI values according to gender. Since there is no data on excessive alcohol consumption, this has not been mentioned in relation to BMI.

The effects of caffeine, an important stimulant, insomnia, headache, impaired concentration, increased heart rate and blood pressure, stomach problems, spontaneous abortion in pregnant women, low birth weight infants and it increases the risk of postmenopausal osteoporosis by adversely affecting bone health and is reported to have a diuretic effect (80). During the study, it was observed that health personnel consumed caffeine frequently in sedentary lifestyles. 90.8% of the health personnel participating in the research support the observation of tea / coffee consumption. There is no gender difference in terms of tea and coffee consumption among the health personnel who consumed 1.96 ± 1.62 coffee and 4.14 ± 2.61 tea per day on average. The amount of caffeine consumed by the health personnel participating in the study during and during the seizure was compared. Almost all of the participants consume caffeine at around 300 mg and less on duty and out off duty (%99.2).

The vast majority of participating health personnel do not have chronic or transient illnesses (%88.5). However, there are physical, chemical, microbiological and psychological risk factors that threaten their health due to their work or genetic factors. Some of these are hypothyroidism, anemia and diabetes. Hyperthyroidism is seen in 20% of the health personnel participating in the research and having any disease.

Hypothyroidism is a disease caused by the fact that the thyroid gland hormones can not be made partially or completely from the thyroid gland and can not be delivered to the bloodstream. Whether or not the thyroid gland works adequately shows the values of TSH hormone secreted from the brain called the ‘‘pituitary’’. This substance stimulates hormone secretion in the thyroid gland, allowing more hormones to be produced and given to the blood. When the thyroid gland is running low, pituitary TSH increases in blood. Thyroid hormones can not be secreted in the amount needed for body tissues. In this condition, called hypothyroidism, the level of thyroid hormones is low and the hormones do not reach enough amount to the tissues (Yalçınkaya, M., Özer, G.K. ve Karamanoğlu, A. Y, 2007).

73.3% of the health personnel participating in the research and having any disease have anemia.. Blood is called hemoglobin level or the number of red blood cells and the accompanying results are called anemia. According to the criteria of the World Health Organization, the level of hemoglobin falling below 12 g / dL in women and below 13 g / dL in men is considered anemia (93). Anemi rahatsızlığı, Anemia is mostly caused by menstrual bleeds. It is parallel to this knowledge that the higher the percentage of women surveyed than the majority of the respondents are thought to be women.

6.7% of diabetic patients participating in the study and having any disease have diabetes. Diabetes is a life-long illness that occurs when the pancreatic secretory gland does not produce sufficient amounts of insulin hormone or when the insulin hormone it produces can not be used effectively (93).

Only 11.5% of the surveyed health personnel have any disease. The vast majority of patients also have anemia. It is thought that the ratio can be further reduced if attention is paid to anemia in any measure to be taken.

In recent years, the metabolism of vitamins and minerals, deficiencies and deficiency diseases have become clear. As a result, new life style and changing nutrition culture and vital importance of human health have been revealed. In addition, the detection of new functions of many vitamins and minerals has resulted in new areas of treatment, protection and nutrition in the food industry. on the other hand, vitamins and minerals containing 10 to 40 times the amount of natural foods are produced industrially

(78). Sağlık çalışanlarının. The supplemental vitamins used by the social media and with the suggestion of a physician are rarely used by health personnel involved in my research (%76.7). Health personnel using vitamins use these drugs with the first priority to be more fit and healthy. When working conditions, physical, chemical and psychological factors are considered, and there are other priorities to avoid being ill and taking care to use medicines. Misuse and unnecessary use of vitamins in adults is often achieved with the aim of reducing stress and fatigue, preventing chronic illnesses and improving mental functions. Murphy and his colleagues (83) in Hawaii's Los Angeles Multiethnic Cohort (MEC) study show that 48% of men and 56% of women reported receiving multivitamin supplements at least once a week in the last year despite no chronic diseases. Bülbül and colleagues (78) have reported that supplementation with vitamins and minerals is appropriate for people living in stressful conditions.

Our community's and health personnel's exercise habit is very low. Pasinlioğlu and Gözüm (85) conducted a study of health personnel working in primary health care services to measure their health behaviors found that the highest average score was in the diet and the lowest score was in the exercise sub-area. Ayaz and colleagues. (76) in the study of health promotion behaviors of nursing school students da the highest score is found in the self-realization sub-dimension, the lowest score is the exercise sub-dimension. Only 23.1% of health personnel participating in our study did regular exercise in parallel with other studies. Participants with normal levels of BMI are thought to be able to exercise their fitness to exercise, while those at higher levels are thought to be weaker. It can be argued that the majority of the participants, both of whom are on an equal level, did not exercise. According to the CDC (2004), despite the proven benefits of physical activity, 60% of adults in the United States do not exercise regularly, and 25% live entirely a sedentary lifestyle. Not exercising seems to be a serious problem in developed countries too.

It is important that the daily intake of nutrients is divided into three main meals for the healthy nutrition of the individual. It's a mistake to think that the skipping meals will weak you. Because the other meal the person will be hungry more and will also want to eat more. However, the vast majority of participating health personnel are fed two meals by skipping a meal. The number of personnel skipping both a main meal and a snack is quite high. Because of nurses' and doctors' intense and irregular working

hours and they are inactive, they don't give importance nutrition. Especially they skip breakfast because Health personnel work according to system of duty and can't organize his meal and has a sedentary life style.

The eating speeds of the health personnel participating in the study differ due to work intensity and psychological factors. Tokgöz and colleagues (92) stated that 50.2% of the individuals in their studies performed eat less than usual when they were sad. 50% of fast-food eaters who participated in the survey show that the amount of food they eat does not change when psychological factors are taken into account but slow eaters reported that they eat less than 46.8%. It can be argued that this is caused by the inability of your slow-moving staff to suffer from mental fatigue.

Participants were 93.1% of the staff who made breakfast at night because of their working according to seizure procedure. Most of them are fed with breakfast meal (%96.7). Almost all non-breakfasters prefer ready-to-eat food products such as lahmacun / pide / hamburger. Especially the high number of personnel who are fed with two meals a day causes them to feed frequently between these two meals. They consume sugar and caffeine-containing foods and beverages between meals because of the intensity of working conditions and the need to stay physically constant. Especially working hours because they become habitual irregular feedings during working hours. they continue to feed irregularly out of duty.

Comparisons were made between the energy days of the individuals who were on duty and the days they were out of duty. The average daily energy received during the duty was 1830.67 ± 563.09 while this value decreased to 1819.5 ± 649.19 . While the amount of water they received during the duty was 1236.8 ± 417.27 on average, this value decreased to 1192.15 ± 406.25 out of the duty. The value of the protein at the time of duty was 67.94 ± 20.51 , while this value increased to 78.18 ± 98.83 out of duty. The value of fat intake during duty was 75.82 ± 28 , but this value increased to 76.17 ± 37.26 out of duty. The average amount of carbohydrates they received while on duty was 211.97 ± 82.16 , while this value decreased to 200.71 ± 82.92 out of duty. The amount of fiber they received when they were on duty was 20.64 ± 14.34 while this value decreased to 17.92 ± 12.76 out of duty. The value of vitamin C they received while on duty was 54.35 ± 37.95 , this value increased to 71.88 ± 54.81 out of duty.

According to Dölekoğlu ve Yurdakul (79) the amount of energy that an adult person should take daily should be around 2800, but the health personnel are far below this value because of the sedan lifestyle. Especially, eating sugary foods, which keep them awake while keeping a guard, explains that they get higher than the amount of energy they get when they are out of duty hours. In the same way, it caused the value to be low out of duty hours because of high consumption on duty. Protein value was higher and fiber value was lower due to consumption of more nutritious substances except for duty hours and consumption of foods such as biscuits and chips less than working hours. Especially the high increase in vitamin C value is thought to be due to the high consumption of fruit out of duty.

Duty and off duty health personnel's participating in the study nutritional habits were compared according to the anthropometric measurements. According to there was no significant difference between waist circumference and energy, fat and carbohydrate values of male health personnel who were normal according to BMI values on duty there is a difference between the amount of protein. Accordingly, in terms of waist circumference, the amount of protein in the risk group is higher than the amount of protein in the normal range. There is no mention of a significant difference for women. There is no difference in terms of waist / hip ratios. However, the average fat levels of male health personnel who were normal according to BMI values on duty period were found to be higher than those in the risk group, the amount of carbohydrate is lower. There is no significant difference in terms of waist circumference for all health personnel. However, there was no significant difference in energy, protein and fat averages between waist / hip ratio risk groups of male staff but the average of the male staff in the risk group in terms of the average of carbohydrates was found to be higher than the normal ones. This is due to the irregular and unbalanced eating habits that the male staff continues to work outside working hours. Although the education levels are high especially when the vast majority of the male health personnel participating in the research are thought to be physicians despite their high level of education, are not able to fully implement their regular and balanced diet in their lives. There is no mention of a meaningful difference for women.

The balance between energy intake and expenditure in favor of buying is the most important factor in the development of nutritional problems. During the required energy

intake indicated by Dölekoğlu and Yurdakul (79), 4.6 of the personnel reached 9.2 out of the duty. The basic nutrients to be taken daily should be 50-55% carbohydrate, 15-20% protein, 20-30% fat (75). During the study, these values are below 49% for carbohydrates, 20-30% for protein and 31% for fat. Out of duty, the carbohydrate is below 49%, protein is below 14% and fat is above 31%. There is no significant difference in duty and off- duty variables for dietary fiber consumption. Compared with vitamin intake, most of the vitamin A is taken whwn of duty . According to Güngör (81), vitamin A is found in cream, milk, cheese, oil, eggs, green vegetables, carrots, tomatoes, bananas, plums, peaches, apricots, oranges and livers. Out of duty, the increase in vitamin A is thought to be due to the fact that the health personnel are more regular and balanced in the morning breakfast in particular.

According to Tamer et al. (86), cholesterol is one of the molecules in the lipid group. Total cholesterol levels were determined as below 200 desirable levels, 200-239 as high level and 240 as high level cholesterol. The cholesterol levels of the health personnel participating in the study were compared duty and out of duty. While most of the participants were at the desired level during the duty (56%), the desired level and the high level were determined to be close to each other out of duty (%43.8-%41.5). Despite the decrease in the amount of fat consumed, especially out of duty hours, it is seen that the cholesterol levels of health personnel who are fed irregular and unbalanced are high. However, when the BMI values of the health personnel participating in the study were examined, there was no significant difference between those with normal cholesterol level and those with risk group.

The amounts of salt consumed during the duty and out of duty were compared among the health personnel participating in the study. The great majority of participants consume more than 5 gr of salt when on duty and out of duty (%87.7-%81.5).

6. CONCLUSION

As a result, it is possible to materialize the results obtained as a result of the study:

- Significant differences were found between the BMI values of the male health personnel participating in the study and the BMI values of the women.
- There was a significant difference between the waist / hip ratios of the male health personnel participating in the survey and the waist / hip ratios of the women.
- There is a significant relationship between alcohol and cigarette use and eating habits of health personnel participating in the survey.
- The majority of health personnel participating in the study are skipping a meal during working hours.
- There is a significant relationship between energy distributions and eating habits of health personnel participating in the research.
- There is a significant relationship between the psychological status of the health personnel participating in the research and the eating speed.
- There is a significant difference between the nutrition and vitamins taken during work hours by the health personnel participating in the study and the nutrients and vitamins they have taken outside working hours.

7.SUGGESSTIONS

Recent developments in nutrition theoric reveal the importance of nutrition in the maintenance and development of health. Programs need to be developed to provide behavioral change to improve healthy eating behaviours. Healthy eating behaviours are influenced by many factors such as age, gender, educational status, socioeconomic level, habits, marital status. There is a need for nutritional surveys in which factors affecting healthy nutrition are also examined throughout the country. Programmed treatments in this direction are called behavioral change therapy. It is intended to change the positive behavior of the behavior modification treatment which is under the supervision of the balanced diet, the eating behavior causing the weight problem and the negative behaviors related to the physical activity, is a form of treatment aimed at reinforcing positive behaviors and becoming a way of life. As noted in the study, the importance of balanced nutrition especially with mass media was emphasized for irregularly fed and inadequately exercised individuals and should be encouraged to change their behavior. The collection of health personnel participating in the survey should be an example in this regard. For this, health personnel should be given regular nutrition training and seminars. Care must be taken to ensure that the trainings to be given are practicable by everyone in everyday life. Care should be taken to consume vitamin intake and meal without breaking the homeostatic balance of the body. However according to the study, even if health personnel can fail to put their knowledge in to practice There is also a need for further research on the emergence factors like psychological, social, etc. that determine eating behavior.

8. REFERENCES

- 1) Gürman Ü. *Yemek Pişirme Teknikleri ve Uygulamaları 1*. Ankara: Devlet Kitapları Müdürlüğü; 2004.
- 2) Çelik ZM. *Online diyet alan yetişkin bireylerin obezite, yeme tutum ve depresyon ilişkilerinin değerlendirilmesi* [yüksek lisans tezi]. İstanbul: Okan Üniversitesi Sağlık Bilimleri Enstitüsü, 2015.
- 3) MerriamWebster. Definition of Nutrition. Erişim: 20.08.2017.
<https://www.merriam-webster.com/dictionary/nutrition>
- 4) Dülger H. *Bartın Üniversitesi Sağlık Hizmetleri Meslek Yüksekokulu öğrencilerinde beslenme alışkanlıkları ve obeziteprevalansı* [yüksek lisans tezi]. Düzce: Düzce Üniversitesi Sağlık Bilimleri Enstitüsü, 2015.
- 5) TDK Büyük Türkçe Sözlük Web Sayfası. Erişim: 03.08.2017.
http://www.tdk.gov.tr/index.php?option=com_bts.
- 6) Tanır F, Şaşmaz CT, Beyhan Y, et al. Doğankent Beldesinde bir tekstil fabrikasında çalışanların beslenme durumu. *Türk Tabipler Birliği Mesleki Sağlık ve Güvenlik Dergisi*, 2001; 7(2): 22-5.
- 7) Soydemir G. *Beslenme ve diyet polikliniğine başvuran hastaların yeme tutum ve davranışları ile diyet algılarının değerlendirilmesi* [yüksek lisans tezi]. Ankara: Başkent Üniversitesi Sağlık Bilimleri Enstitüsü, 2017.
- 8) Yaşar Arıkan Z. *Üniversite öğrencilerinin beslenme alışkanlıkları: Dumlupınar Üniversitesi örneği* [yüksek lisans tezi]. Kütahya: Dumlupınar Üniversitesi Fen Bilimleri Enstitüsü, 2015.
- 9) Baysal A. *Beslenme*. Ankara: Hatiboğlu Yayıncılık; 2012.
- 10) BalancingCarbs, Protein, andFat. Erişim: 20.08.2017.
<https://www.ghc.org/healthAndWellness/?item=/common/healthAndWellness/conditions/diabetes/foodBalancing.html>
- 11) Importance of GoodNutrition. Erişim: 20.08.2017.
<https://www.hhs.gov/fitness/eat-healthy/importance-of-good-nutrition/index.html>
- 12) Yılmaz G. *Niğde Üniversitesi Beden Eğitimi ve Spor Yüksek Okulu öğrencilerinin beslenme ve kahvaltı alışkanlıklarının değerlendirilmesi* [yüksek lisans tezi]. Niğde: Niğde Üniversitesi Sosyal Bilimler Enstitüsü, 2002.
- 13) Arslan P, Karaağaoğlu N, Duyar İ, et al. Yükseköğrenim gençlerinin beslenme alışkanlıklarının puanlandırma yöntemi ile değerlendirilmesi. *Beslenme ve Diyet Dergisi*, 1994; 22(2): 195-208.
- 14) Nissinen A, Stanley K. Unbalanceddiets as a causeofchronicdiseases. *Am J ClinNutr*, 1989; 49(5): 993-98.
- 15) Karaağaoğlu N, Eroğlu Samur G. *Anne ve Çocuk Beslenmesi*, Ankara; 2015.

- 16) Şimşek H. *Ortaokul öğrencilerinin beslenme bilgi ve alışkanlıkları üzerine bir araştırma* [yüksek lisans tezi]. Ankara: Gazi Üniversitesi Sosyal Bilimler Enstitüsü, 1991.
- 17) 6 EssentialNutrientsandTheirFunctions. Erişim: 20.08.2017.
<http://healthyeating.sfgate.com/6-essential-nutrients-functions-4877.html>
- 18) Uzşen H. *Okul çağı çocuklarının beslenme alışkanlıklarının değerlendirilmesi ve oyunla beslenme eğitiminin beslenme alışkanlıklarına etkisi* [yüksek lisans tezi]. İzmir: Ege Üniversitesi Sağlık Bilimleri Enstitüsü, 2016.
- 19) Türkiye Halk Sağlığı Kurumu. Erişim: 03.08.2017.
<http://beslenme.gov.tr/index.php?lang=tr&page=68>.
- 20) BetterHealth Channel. Erişim: 20.08.2017.
<https://www.betterhealth.vic.gov.au/health/healthyliving/breakfast>
- 21) Kutluay Merdol T. *Beslenme Eğitimi ve Danışmanlığı*. Ankara: Sağlık Bakanlığı; 2008.
- 22) Pekcan G, Şanlıer N, Baş, M. *Türkiye Beslenme Rehberi 2015(TÜBER)*. Ankara: T.C. Sağlık Bakanlığı Yayın No: 1031; 2016.
- 23) *Türkiye'ye Özgü Besin ve Beslenme Rehberi*, Ankara: Hacettepe Üniversitesi; 2015.
- 24) Importance of EatingRegularly. Erişim: 19.08.2017.
<https://www.lifestyle.com.au/health/importance-of-eating-regularly.aspx>
- 25) Güçlü LP. *Obez bireylerde ağırlık kaybı ile antropometrik ölçümler, bazı biyokimyasal bulgular ve yaşam kalitesi arasındaki ilişkinin belirlenmesi* [yüksek lisans tezi]. Ankara: Başkent Üniversitesi Sağlık Bilimleri Enstitüsü, 2016.
- 26) Alp G. *Özel bir fizik tedavi merkezinde uygulanan obezite tedavisinin kilo verme üzerine etkisinin saptanması* [yüksek lisans tezi]. Ankara: Başkent Üniversitesi Sağlık Bilimleri Enstitüsü, 2014.
- 27) TheFactsabout High Blood Pressure. Erişim: 21.08.2017.
https://www.heart.org/HEARTORG/Conditions/HighBloodPressure/GettheFactsAboutHighBloodPressure/The-Facts-About-High-Blood-Pressure_UCM_002050_Article.jsp#mainContent
- 28) Bloodpressure. Erişim: 10.08.2017.
<http://www.bloodpressureuk.org/microsites/u40/Home/facts/Bloodpressure>.
- 29) High Blood Pressure. Erişim: 10.08.2017.
http://www.heart.org/HEARTORG/Conditions/HighBloodPressure/AboutHighBloodPressure/What-is-High-Blood-Pressure_UCM_301759_Article.jsp#.WFpGGvmLSUk.
- 30) Şahin N.Ş. *Hipertansiyon yönetiminde hasta uyumu ve hastaların sağlık anlayışlarına yönelik bir girişimin uyum üzerine etkisi* [uzmanlık tezi]. Aydın: Adnan Menderes Üniversitesi Tıp Fakültesi, 2014.
- 31) Türk Kardiyoloji Derneği Ulusal Hipertansiyon Tedavi ve Takip Kılavuzu. Erişim: 11.08.2017. <http://www.tkd.org.tr/kilavuz/k03.htm>.

- 32) Yılmazel G. *Çorum il merkezindeki ilköğretim öğretmenlerinde sağlık okuryazarlığı, hipertansiyon farkındalığı ve kontrolü arasındaki ilişki* [doktora tezi]. Kayseri: Erciyes Üniversitesi Sağlık Bilimleri Enstitüsü, 2014.
- 33) Q&As on Hypertension. Erişim: 11.08.2017.
<http://www.who.int/features/qa/82/en/>.
- 34) World Health Organization. A global brief on Hypertension: Silent killer, global public health crisis. *WHO Report*, 2013; 7-19.
- 35) What is Osteoporosis and What Causes It? Erişim: 21.08.2017.
<https://www.nof.org/patients/what-is-osteoporosis/>
- 36) Onat A, et al. *TEKHARF 2009: Toplumumuzda Kan Basıncı ve Hipertansiyon*. İstanbul: Figür Grafik ve Matbaacılık; 2009.
- 37) T.C. Sağlık Bakanlığı. Sağlık İstatistikleri Yıllığı 2013. Erişim: 12.08.2017.
http://ekutuphane.sagem.gov.tr/kitaplar/t.c._saglik_bakanligi_saglik_istatistikleri_yilligi_2013.pdf.
- 38) World Health Organization Web Page. Erişim: 03.08.2017.
<http://www.who.int/topics/obesity/en/>.
- 39) Sağlık Bakanlığı Web Sitesi. Erişim: 12.08.2017.
<http://www.saglik.gov.tr/TR,11692/obezite.html>.
- 40) Durukan P. *Fiziksel aktivite ve psikososyal faktörlerin obezite üzerine etkisinin değerlendirilmesi* [uzmanlık tezi]. Ankara: Ankara Eğitim ve Araştırma Hastanesi, 2001.
- 41) Peker İ, Çiloğlu F, Buruk Ş, et al. *Egzersiz Biyokimyası ve Obezite*. İzmir: Nobel Tıp Kitabevi; 2000.
- 42) Özer MK. *Fiziksel Uygunluk*. Ankara: Nobel Yayın Dağıtım; 2001.
- 43) Diyabet ve Metabolik Hastalıklar Daire Başkanlığı. Erişim: 13.08.2017.
<http://beslenme.gov.tr/index.php?lang=tr&page=38>.
- 44) World Health Organization Web Page. Erişim: 13.08.2017.
<http://www.who.int/mediacentre/factsheets/fs311/en/>.
- 45) Berghöfer A, et al. Obesity prevalence from a european perspective: a systematic review. *BMC Public Health*, 2008; 8(1), 2008.
- 46) TÜİK, 2015. Erişim: 13.08.2017.
http://www.tuik.gov.tr/basinOdasi/haberler/2015_58_20151008.pdf.
- 47) Anadolu Ajansı. Erişim: 03.08.2017. <http://aa.com.tr/tr/saglik/saglik-bakani-akdag-turkiyede-her-uc-kisiden-biri-obez/737064>.
- 48) Şanlıer N, *Gençlerde biyokimyasal bulgular, antropometrik ölçümler, vücut bileşimi, beslenme ve fiziksel aktivite durumlarının değerlendirilmesi*. Gazi Üniversitesi Gazi Eğitim Fakültesi Dergisi, 2005; 25(3), 47-73.
- 49) Pekcan G. *Beslenme Durumunun Saptanması*. Ankara: Hacettepe Üniversitesi; 2012.

- 50) Türkiye Halk Sağlığı Kurumu. Diyabet Nedir. Erişim: 13.08.2017.
<http://diyabet.gov.tr/index.php?lang=tr&page=25>.
- 51) Erçakır M. *Tip 2 diyabet hastalarında beslenme durumu ve duygusal stres arasındaki ilişkinin değerlendirilmesi* [yüksek lisans tezi]. Ankara: Hacettepe Üniversitesi Sağlık Bilimleri Enstitüsü, 2016.
- 52) Türkiye Halk Sağlığı Kurumu. Diyabette Beslenme. Erişim: 13.08.2017.
<http://diyabet.gov.tr/index.php?lang=tr&page=48>.
- 53) Yılmaz M. *Batı Karadeniz bölgesi kadınlarında osteoporoz prevalansı ve tarama programı başlangıç yaşının belirlenmesi: Düzce örnekleme* [uzmanlık tezi]. Düzce: Düzce Üniversitesi Tıp Fakültesi, 2016.
- 54) İstanbul Halk Sağlığı Müdürlüğü. Osteoporoz ve Beslenme. Erişim: 13.08.2017.
<http://www.istanbulhalksagligi.gov.tr/duyuru/osteoporoz-ve-beslenme/635>.
- 55) Özel H. *Tip 1 Diabetes Mellitus ve Beslenme*. Mised, 2010; 23(2), 1-7.
- 56) Koza M. *Moda Diyetlere Gerçekçi Bakış*. Göller Bölgesi Aylık Hakemli Ekonomi ve Kültür Dergisi Ayrıntı, 2016; 4(42), 25-29.
- 57) Besler T. *Beslenme Destek Tedavisi: Genel İlkeler ve Malnütrisyonun Değerlendirilmesi*. 7. Ulusal İç Hastalıkları Kongresi. Ankara, 2015.
- 58) Aydın G. *Sağlıklı Bireyler İçin Temel Beslenme El Kitabı*. Türk Böbrek Vakfı, 2016.
- 59) Karabudak E. *Vejetaryen Beslenmesi*. Ankara: Sağlık Bakanlığı Yayınevi; 2012.
- 60) Ersoy G. ve Hasbay A. *Sporcu Beslenmesi*. Ankara: Sinem Matbaacılık; 2006.
- 61) Demir H. *Kanserli Hastalarda Serum, Lipit, Toplam Protein ve Lipoprotein Düzeylerinin Araştırılması*. XV. Ulusal Kimya Kongresi. İstanbul, 2001.
- 62) Yıldız E. *Diyabet ve Beslenme*. Ankara: Sağlık Bakanlığı Yayınevi; 2012.
- 63) Sayan A. *Beslenme Alışkanlıkları ve Temel Besin Gereksinimleri*. Atatürk Üniversitesi Hemşirelik Yüksekokulu Dergisi, 1999; 2(2), 53-62.
- 64) Samur G. *Vitaminler Mineraller ve Sağlığımız*. Ankara: Sağlık Bakanlığı Yayınevi; 2008.
- 65) Türkiye Halk Sağlığı Kurumu. *Çocukluk Çağı Diyabeti Eğitimci Rehberi*. Ankara: Sağlık Bakanlığı Yayınları; 2014.
- 66) Türkiye Endokrinoloji ve Metabolizma Derneği. *Diabetes Mellitus ve Komplikasyonlarının Tanı, Tedavi Ve İzlem Kılavuzu-2013*. Ankara: BAYT Bilimsel Araştırmalar Basın Yayın; 2013.
- 67) Nutrition-WHO. Erişim: 21.08.2017.
<http://www.who.int/topics/nutrition/en/>
- 68) Antropometric Measurements. Erişim: 21.08.2017.
<http://medical-dictionary.thefreedictionary.com/anthropometric+measurements>
- 69) Merriam Webster. Erişim: 21.08.2017.
<https://www.merriam-webster.com/dictionary/body%20mass%20index>

- 70) DiseasesandConditions: Diabetes. Eriřim: 21.08.2017.
<http://www.mayoclinic.org/diseases-conditions/diabetes/basics/definition/con-20033091>
- 71) Albano L, Matuozzo A, Marinelli P, &DiGiuseppe G. Knowledge, attitudesandbehaviour of hospitalhealth-careworkersregardinginfluenza A/H1N1: a crosssectionalsurvey. *BMC infectiousdiseases*, 2014; 14(1): 208.
- 72) Kurulgan M, &Argan, M. Anadolu üniversitesi öğrencilerinin internet üzerinden bilgi arama davranışları. *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 2007; 9(1): 291-304.
- 73) Çetin A, Şentürk M. Bilgi Paylaşma Davranışının Planlı Davranış Teorisi ve Sosyal Değişim Teorisi Bağlamında İncelenmesi: Dermatologlar Üzerine Ampirik Bir Araştırma. *Ege AcademicReview*, 2016; 16(2): 241-256.
- 74) Uçak NÖ. Bilgi gereksinimi ve bilgi arama davranışı. *Türk Kütüphaneciliği*, 1997; 11(4): 315-325.
- 75) Akbulut G. Erişkinlerde Şişmanlığın Diyet Tedavisindeki Güncel Yaklaşımlar ve Fiziksel Aktivitenin Önemi. *Mised Dergisi*, 2010; 23-24: 86-90.
- 76) Ayaz S, Tezcan S ve Akıncı F. Hemşirelik Yüksekokulu Öğrencilerinin Sağlığı Geliştirme Davranışları. *Cumhuriyet Üniversitesi Hemşirelik Yüksekokulu Dergisi*, 2005; 9(2): 26-34
- 77) Breslow RA, Smothers BA. Drinkingpatternsand body massindex in never smokers: nationalhealthinterviewsurvey, 1997-2001. *AmericanJournal of Epidemiology*, 2005; 161(4): 368-376.
- 78) Bülbül S, Sürücü M, Aşık G. Vitamin Kullanım Alışkanlıkları ve Etkileyen Faktörler. *Çocuk Sağlığı ve Hastalıkları Dergisi*, 2014; 57: 241-245.
- 79) Dölekoğlu CÖ, Yurdakul O. Adana İlinde Hane Halkının Beslenme Düzeyleri ve Etkili Faktörlerin Logit Analizi ve Belirlenmesi. *Akdeniz İ.İ.B.F. Dergisi*, 2004; 8:62-86.
- 80) Garipağaoğlu M, Kuyrukçu N. Çocuk Sağlığı ve Kafein. *Çocuk Dergisi*, 2009; 9(3):110-115.
- 81) Güngör, K. Vitamin ve Minerallerin Diş Hekimliğindeki Önemi. *Gazi Üniversitesi Diş Hekimliği Fakültesi Dergisi*. 2003; 20(1): 51-56.
- 82) Molarius A, Seidell JC. Differences in theassociationbetweensmokingandrelative body weightbylevel of education. *Int J ObesRelatMetabDisord*. 1997; 21:189-96.
- 83) Murphy SP, White KK, Park SY, Sharma S. Multivitaminmultimineral supplements' effect on total nutrientintake. *Am J ClinNutr*, 2007; 85: 280-284.
- 84) National Center forHealthStatistics. (2004). Prevalence of OverweightandObesityAmongAdults. United States, 1999-2002., NHCS.
- 85) Pasinlioğlu T. ve Gözüm S. Birinci Basamak Sağlık Hizmetlerinde Çalışan Sağlık Personelinin Sağlık Davranışları, Cumhuriyet Üniversitesi Hemşirelik Yüksekokulu Dergisi, 1998; 2(2): 60-68.

- 86) Tamer İ, Dabak R, Tamer G, Orbay E. ve Sargın M. Güncel Kılavuzlar Eşiğinde Hiperlipidemi, *Aile Hekimleri Dergisi*, 1998; 2(3): 6-10.
- 87) Tolstrup JS, Heitmann BL, Tjonneland AM, Overvad OK, Sorensen TI, Gronbaek MN. (2005). Therelationbetweendrinkingpatternand body massindexandwaistandhipcircumference, *International Journal of Obesity*,2005; 29, 490–497.
- 88) TÜİK, 2010. *Türkiye sağlık araştırması 2010*. Ankara: Türkiye İstatistik Kurumu.
- 89) TÜİK, 2013. *Nüfus ve konut araştırması 2011*. Ankara: Türkiye İstatistik Kurumu.
- 90) Türkiye Nüfus ve Sağlık Araştırması, 2003. Erişim: 06 Nisan 2017.<http://www.hips.hacettepe.edu.tr/tnsa2003/analizrapor.htm>
- 91) Sağlık Araştırmaları Genel Müdürlüğü, 2014. *Türkiye Beslenme ve Sağlık Araştırması Raporu 2010*. Ankara: Sağlık Araştırmaları Genel Müdürlüğü Yayınları.
- 92) Vançelik S, Önal GS, Güraksın A, Beyhun E. Üniversite Öğrencilerinin Beslenme Bilgi ve Alışkanlıkları ile İlişkili Faktörler. *TSK Koruyucu Hekimlik Bülteni*,2007; 6(4): 242-248.
- 93) Yalçınkaya M, Özer GK, Karamanoğlu AY. Sağlık Çalışanlarında Sağlıklı Yaşam Biçimi Davranışlarının Değerlendirilmesi.*TSK Koruyucu Hekimlik Bülteni*, 2007; 6(6): 409-420.

9. ANNEXES

ANNEX 1. Arařtırmada Kullanılan Anket

YEDİTEPE ÜNİVERSİTESİ
SAĞLIK BİLİMLERİ ENSTİTÜSÜ
BESLENME VE DİYETETİK BÖLÜMÜ

Sayın Katılımcı ,

Bu arařtırma ile Özel Bir Hastanede Çalışan Sağlık Profesyonellerinde (Hemşire/Doktor) Nöbet Usulü Çalışma Sisteminin Beslenme Alışkanlıklarına Etkisinin İncelenmesi amaçlanmaktadır. Kimliğiniz ve cevaplarınız arařtırmacılar tarafından gizli tutulacaktır. Lütfen boş yanıt bırakmayınız. Katılımınız için teşekkürler.

**Özel Bir Hastanede Çalışan Sağlık Profesyonellerinde (Hemşire/Doktor) Nöbet
Usulü Çalışma Sisteminin Beslenme Alışkanlıklarına Etkisinin İncelenmesi**

ANKET FORMU

Anket No :

Yapıldığı Tarih :

I.GENEL BİLGİLER

1. Cinsiyet :
a) Erkek b) Kadın
2. Yaş:
3. Medeni Durumuz:
a) Evli b) Bekar c) Dul
4. Mesleğiniz:
a) Hekim b) Hemşire & Ebe
5. Öğrenim Durumunuz (hekim için) :
a) Pratisyen Dr b) Uzmanlık Öğrencisi c) Uzman
6. Öğrenim Durumunuz (hemşire/ebe) :
a) Lise b) Ön lisans (AÖF) c) Lisans d) Yüksek lisans
7. Meslek süreniz (toplam):/yıl
8. Sigara kullanıyor musunuz?

- a) Hiç içmedim d) Günde 6 ila 10 sigara
b) Eskiden içerdim, bıraktım e) Günde 11 ila 20 sigara
c) Günde 1 ila 5 sigara f) Diğer(belirtiniz):adet/gün
9. Alkol kullanıyor musunuz?
a) Hayır b) Haftada 2-4 kez c) Ayda 1-4 kez
d) Yılda birkaç kez e) Diğer(belirtiniz):
10. Çay/kahve tüketiyor musunuz?
a) Evet b) Hayır
11. Cevabınız EVET ise: Kahve:fincan/gün
Çay :çay bardağı/gün
12. Belirtilen durumlardan herhangi birine veya birilerine sahip misiniz?
a) Hipotroidi e) Kronik karaciğer hastalığı
b) Anemi f) Kronik böbrek yetmezliği
c) Diyabet g) Kalp yetmezliği
d) Hipertroidi
13. Uyguladığınız bir diyet var mı?
a) Evet: (belirtiniz) b) Hayır
14. Cevabınız EVET ise ne kadar süredir uyguluyorsunuz?
.....
15. Sürekli kullandığınız bir ilaç var mı?
a) Evet b) Hayır
16. Cevabınız EVET ise ilacı hangi hastalık için kullanıyorsunuz?
Hastalık adı :
17. Son bir yılda herhangi bir ek vitamin-mineral kullandınız mı/ kullanıyor musunuz?
a) Evet b) Bazen c) Hayır
*Cevabınız HAYIR ise diğer bölüme geçiniz.
18. Cevabınız EVET veya BAZEN ise hangi vit& mineral ihtiyacı için olduğunu, kullanım sıklığını ve süresini belirtiniz.
a) Vit&Min :
b) Adet :
c) Süre :

19. Kullandığınız vitamin- minerali kim önerdi?
a) Doktor c) Komşu e) Eczacı
b) Arkadaş d) Diyetisyen f) Sosyal medya g)Diğer
20. Vitamin-mineral kullanım amacınız nedir?
a) Hastalığım için
b) Daha zinde ve sağlıklı olmak için
c) Hastalıklardan korunmak için
d) Diğer (belirtiniz)
21. Düzenli olarak spor yapıyor musunuz?
(Haftanın en az 3 günü, günde en az 30 dk tempolu yürüyüş, koşu, futbol vb.)
a) Evet b) Hayır

II.BESLENME ALIŞKANLIKLARI

1. Günde kaç öğün yemek yiyorsunuz?
..... ana öğün, ara öğün
2. Ana Öğün atlar mısınız?
a) Evet b) Bazen c) Hayır
3. Cevabınız EVET veya BAZEN ise genelde hangi öğünü atlarsınız?
a) Sabah b) Öğle c) Akşam
4. AraÖğün atlar mısınız?
a) Evet b) Bazen c) Hayır
5. Cevabınız EVET veya BAZEN ise genelde hangi ara öğünü atlarsınız?
a) Kuşluk b) İkinci c) Gece
6. Ana Öğün atlama sebebiniz nedir?
a) İş yoğunluğu c) Zayıflamak/ kilomu korumak için yemiyorum
b) Canım istemiyor d) Diğer (belirtiniz)
7. Ara Öğün atlama sebebiniz nedir?
a) İş yoğunluğu c) Zayıflamak/ kilomu korumak için yemiyorum
d) Canım istemiyor d) Diğer (belirtiniz)

8. Yemek yeme hızınızı nasıl tanımlarsınız?
a) Hızlı b) Normal c) Yavaş
9. Psikolojik durumunuza göre (üzüntü/sevinç) yemek yeme şekliniz değişiyor mu?
a) Değişmez c) Daha az yerim
b) Daha çok yerim d) Diğer(belirtiniz)
10. Öğün aralarında besin tüketiyor musunuz?
a) Evet b) Bazen c) Hayır
11. Cevabınız EVET veya BAZEN ise belirtiniz. (Birden fazla işaretleyebilirsiniz.)
a) Çay/kahve d) Süt/yoğurt/ayran g) Kuruyemiş
b) Meyve/çiğ sebze e) Kek/bisküvi/cips vb.
c) Kola/gazoz vb. f) Meşrubat/ meyve suyu
12. Öğün saatleriniz düzenli midir?
Evet Hayır
Mesaideyken :
Mesai dışında :
13. Nöbetteyken gece kahvaltısı yapar mısınız?
a. Evet
b. Hayır
14. Cevabınız EVET ise gece kahvaltısından sabaha kadar genellikle hangi besini tercih ediyorsunuz?
a) Çay/kahve e) Süt/yoğurt/ayran h) Kuruyemiş
b) Meyve/çiğ sebze f) Kek/bisküvi/cips vb. ı) Lahmacun/ pide/
hamburger
c) Kola/gazoz vb. g) Meşrubat/ meyve suyu i) Süt ile birlikte tahıl
gevreği
d) Diğer(belirtiniz)

15. Cevabınız HAYIR ise gece kahvaltısı yapmadan sabaha kadar genellikle hangi besini tercih ediyorsunuz?

- a) Çay/kahve e) Süt/yoğurt/ayran h) Kuruyemiş
b) Meyve/çiğ sebze f) Kek/bisküvi/cips vb. ı) Lahmacun/ pide/
hamburger
c) Kola/gazoz vb. g) Meşrubat/ meyve suyu i) Süt ile birlikte tahıl
gevreği
d) Diğer(belirtiniz)

III.BESİN TÜKETİMİ

Bir günlük besin tüketiminizi porsiyon belirterek yazınız.

Nöbetteyken Besin Tüketimi	Nöbet Dışındayken Besin Tüketimi
Kahvaltı:	Kahvaltı:
Kuşluk:	Kuşluk:
Öğle:	Öğle:
İkinci:	İkinci:
Akşam:	Akşam:
Gece:	Gece:

IV. ANTROPOMETRİK ÖLÇÜMLER

1. Boy:.....cm.
2. Vücut ağırlığı:.....kg.
3. BKİ:.....kg/m²
4. Bel çevresi:.....cm.
5. Kalça çevresi:.....cm.
6. Bel-kalça oranı:



ANNEX 2. Etik Kurul Onay Formu



BAHÇEŞEHİR ÜNİVERSİTESİ KLİNİK ARAŞTIRMALAR ETİK KURULU

Üniversitemiz Klinik Araştırmalar Etik Kurulu'na ait 15 Mart 2017 Tarih ve 2017-05/05 Sayılı Karar Örneğidir.

KARAR:2017-05/05

Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü, Beslenme ve Diyetetik Yüksek Lisans Programı Öğrencisi, Damla KAYA'nın "**Özel Bir Hastanede Çalışan Sağlık Profesyonellerinde(Hemşire/Doktor) Nöbet Usulü Çalışma Sisteminin Beslenme Alışkanlıklarına Etkisinin İncelenmesi**" isimli tez araştırmasının başvuru dosyası görüşüldü.

Görüşmeler sonunda; Yeditepe Üniversitesi Sağlık Bilimleri Enstitüsü, Beslenme ve Diyetetik Yüksek Lisans Programı Öğrencisi, Damla KAYA'nın "**Özel Bir Hastanede Çalışan Sağlık Profesyonellerinde(Hemşire/Doktor) Nöbet Usulü Çalışma Sisteminin Beslenme Alışkanlıklarına Etkisinin İncelenmesi**" isimli tez çalışması gerekçe, amaç, yaklaşım ve yöntemleri dikkate alınarak; incelenmiş ve uygun bulunmuş olup araştırmanın/çalışmanın başvuru dosyasında belirtilen merkezlerde gerçekleştirilmesinde etik ve bilimsel sakınca bulunmadığına karar verildi.

Prof.Dr. Nazire AFŞAR
Etik Kurul Başkanı

ANNEX 3. Özgeçmiş

Kişisel Bilgiler

Adı	DAMLA	Soyadı	
Doğum Yeri	MALATYA	Doğum Tarihi	04.09.1990
Uyruğu	T.C	TC Kimlik No	
E-mail	damlakaya90@hotmail.com	Tel	05396707272

Öğrenim Durumu

Derece	Alan	Mezun Olduğu Kurumun Adı	Mezuniyet Yılı
Doktora			
Yüksek Lisans			
Lisans	Beslenme ve Diyetetik	Yeditepe Üniversitesi	2015
Lise		T.E.B Ataşehir Lisesi-	2007

Bildiği Yabancı Dilleri	Yabancı Dil Sınav Notu (#)
İngilizce	

*Başarılımış birden fazla sınav varsa (KPDS, ÜDS, TOEFL; EELTS vs), tüm sonuçlar yazılmalıdır

İş Deneyimi (Sondan geçmişe doğru sıralayın)

Görevi	Kurum	Süre (Yıl - Yıl)
Diyetisyen	Özel Maltepe Bölge Hastanesi	2016 Kasım-Halen
Diyetisyen	Gebze Medical Park Hastanesi	2016 Haziran-2016 Kasım
Uzman Kadrosu (Diyetisyen)	Yeditepe Üniversitesi	2015 Haziran-2016 Haziran

Bilgisayar Bilgisi

Program	Kullanma becerisi
Microsoft Office	Çok İyi

*Çok iyi, iyi, orta, zayıf olarak değerlendirin

Bilimsel Çalışmaları

SCI, SSCI, AHCI indekslerine giren dergilerde yayınlanan makaleler

Diğer dergilerde yayınlanan makaleler

Uluslararası bilimsel toplantılarda sunulan ve bildiri kitabında (Proceedings) basılan bildiriler

Hakemli konferans/sempozyumların bildiri kitaplarında yer alan yayınlar

Diğer (Görev Aldığı Projeler/Sertifikalari/Ödülleri)
