

REPUBLIC OF TURKEY MINISTRY OF HEALTH

TURKEY NUTRITION AND HEALTH SURVEY (TNHS)

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FOREWORD

Within the context of historical development of health indicators, important achievements have been made against communicable diseases thanks to the increase in the level of welfare. Increase of life expectancy to birth has increased the importance of chronic diseases in public health. Prevention from chronic diseases has become a fundamental public health study area.

Healthy lifestyle habits acquired from early ages have a great importance in the fight against chronic diseases. In the context of healthy lifestyle habits, active life style and healthy diet may be listed among most important measures that people may take for their own health. For this reason, the widespread adoption of a healthy diet in the population across the country is an issue that should not be neglected in terms of maintaining and improving countries' levels of health in the future.

Reliable research data are needed in order to determine national nutritional problems and to prepare, implement and monitor effective, beneficial and sustainable nutrition plans for these problems. As in the case of similar studies conducted around the world, we, as the Ministry of Health, Republic of Turkey, also conduct "Turkey Nutrition and Health Survey" periodically in order to reveal the nutritional and health status of our country.

Although various nutrition surveys have been conducted in our country since the seventies, these surveys have been limited in terms of scope and content. Furthermore, results of the survey conducted by our Ministry in 2010 played an important role in guiding the Ministry's policies in terms of its scope.

"Turkey Nutrition and Health Survey (TNHS) – 2017", which was initiated by our Ministry in 2017 and reached to approximately 13 000 persons, is the most comprehensive survey that has been conducted to date, and it constitutes a critical data source in this respect. By this survey, it is aimed to determine nutritional habits and nutritional status in Turkey. It is detected that individuals are experiencing various problems, such as overweight, obesity and underweight/wasting. Biochemical and haematological data were also obtained and physical activity level, frequency of use of food supplements and prevalence of diet-related health problems were determined. The changes were determined by making comparisons with previous studies, and were evaluated.

Nutrition plays a critical role in the maintenance human life and increasing the quality of life. I would like to thank all of our stakeholders and those, who contributed to this survey, in which I believe that it is will make a critical contribution in determination of health policies, and I would like to wish health and happiness to all our citizens.

Fahrettin KOCA, MD Minister of Health

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ABBREVIATIONS

А	Vitamin A		
AHA	American Heart Association		
AI	Adequate Intake		
FBS	Fasting Blood Sugar		
ALA	Alfa-Linolenic Acid		
ALP	Alkaline Phosphatase		
ALT	Alanine Aminotransferase		
AMDR	Acceptable Macronutrient Distribution Ranges		
FHC	Family Health Centre		
AST	Aspartate Aminotransferase		
AR	Average Requirement (European Food Safety Authority)		
B ₁	Vitamin B ₁ (Thiamine)		
B ₂	Vitamin B ₂ (<i>Riboflavin</i>)		
B ₆	Vitamin B ₆		
B ₁₂	Vitamin B ₁₂ (Cobalamin)		
IFG	Impaired Fasting Glucose		
WC/HT	Waist Circumference to Height Ratio		
BEBİS	Nutrition Information System Software Package		
BMI	Body Mass Index		
WHR	Waist-Hip Ratio		
NCDs	Noncommunicable Diseases		
NHS	Nutrition and Health Survey		
С	Vitamin C (Ascorbic Acid)		
cm	Centimeter		
CRP	C-Reactive Protein		
PUFA	Polyunsaturated Fatty Acid		
D	Vitamin D		
DHA	Docosahexaenoic Acid		
Min.	Minutes		
DBP	Diastolic Blood Pressure		
dL	Decilitre		
DM	Diabetes Mellitus- Diabetes		
DRV	Dietary Reference Value		
WHO	World Health Organization		
SFA	Saturated Fatty Acid		
М	Male		
EAR	Estimated Average Requirement		
EFSA	European Food Safety Authority		
EPA	Eicosapentaenoic Acid		
FAO	Food and Agriculture Organisation		
FIE	Food Insecurity Experience Scale		
fL	Femtolitre		
FT4	Free Thyroxine		

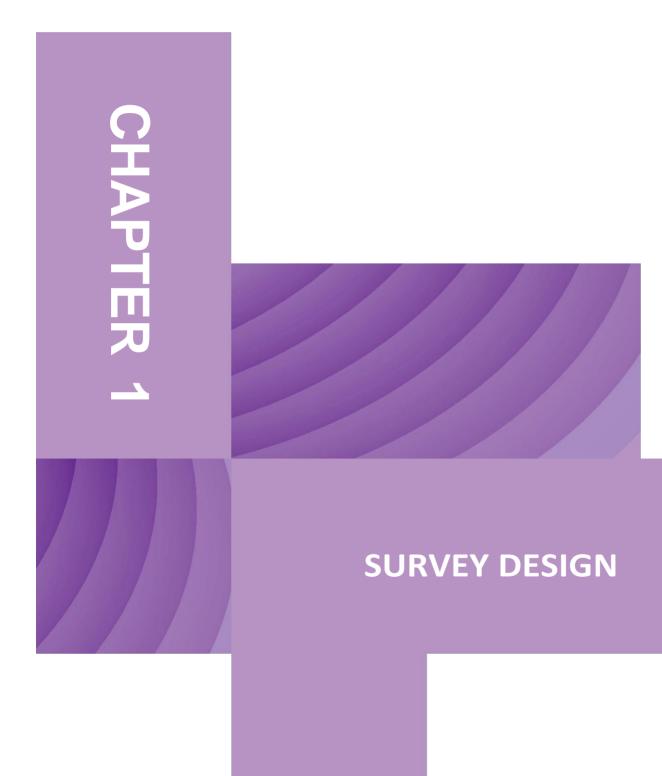
g	Gram
ь СI	Confidence Interval
GNHS	Gaziantep Nutrition and Health Survey
GGT	Gamma Glutamyl Transferase
GPAQ	Global Physical Activity Questionnaire
GÜ	Gazi University
HbA1c	Glycated Hemoglobin
Hct	Hematocrit
HDL	High Density Lipoprotein
HDL-C	High Density Lipoprotein-Cholesterol
Hgb	Hemoglobin
нт	Hypertension
IOM	Institute of Medicine
IQR	Inter Quantile Range
F	Female
CVD	Cardiovascular Disease
KETEM	Cancer Early Diagnosis, Screening and Training Centre
kg	Kilogram
kcal	Kilocalorie
COPD	Chronic Obstructive Pulmonary Disease
CVD	Cardiovascular Disease
L	Litre
LA	Linoleic Acid
LDL	Low Density Lipoprotein
mcg	Microgram
МСН	Mean Corpuscular Hemoglobin
МСНС	Mean Corpuscular Hemoglobin Concentration
MCV	Red Blood Cells (Erythrocytes) Mean Volume (Mean Corpuscular Volume)
METS	Metabolic Equivalents
mg	Milligram
mL	Milliliter
Ν	Number
ng	Nanogram
NUTS	The Nomenclature of Territorial Units for Statistics
PAL	Physical Activity Level
PAR	Physical Activity Ratio (Coefficient)
pg	Picogram
РТН	Parathormone
PRI	Population Reference Intake
RDA	Recommended Dietary Allowances
RDW	Red Cell Distribution Width
МоН	Ministry of Health
ЕНРН	Eat Healthy, Protect Your Heart
SS	Standard Deviation Score (Z-score)
SBP	Systolic Blood Pressure
SPSS	Statistical Package for the Social Sciences

SD	Standard Deviation
STEPS	National Household Health Survey - Prevalence of Noncommunicable Diseases (STEPwise approach to surveillance)
T2DM	Tip II Diabetes Mellitus
TNHS	Turkey Nutrition and Health Survey
R.T.	Republic of Turkey
MUFAs	Monounsaturated Fatty Acids
TEKHARF	Turkey Adult Heart Health and Hypertension Survey and Risk Factors
TIBC	Total Iron Binding Capacity
TNSA	Turkey Population and Health Survey TPTotal Protein
TSH	Thyroid Stimulating Hormone
TURDEP	Turkish Epidemiology Survey of Diabetes, Hypertension, Obesity and Endocrine Diseases
TÜBER	Turkey Dietary Guidelines
тÜİK	Turkish Statistical Institute
τν	Television
UAVT	National Address Database
UHY-ME	National Disease Burden and Cost Effectiveness Survey
UN	United Nations
UNU	United Nations University
BW	Body Weight
VIT D	25-Hydroxy vitamin D
WHA	World Health Assembly
WHO	World Health Organization
x	Mean
%	Percentage
≥	and over/above
Sx	Standard error





CHAPTERS



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1. INTRODUCTION

Reliable and comprehensive food consumption surveys are important for determining and monitoring food consumption habits, and intakes of energy and nutrients. In Turkey, first food consumption and health survey was conducted in 1974, and second survey was repeated in 1984, without considering health aspect, in order to determine changes in nutrition pattern in 3 provinces (Pekcan, 2009; Köksal, 1974; Tönük et al., 1984).

"World Health Organization (WHO) European Food and Nutrition Action Plan" supports member countries to conduct "National Diet, Nutrition and Health Surveys" representing the country (WHO, 2014a). It is stated that national dietary and nutrition surveys are conducted in two-thirds of 53 countries in WHO European Region until 1990, and that nutrients data of only 22 countries are reported from 2000 until today. Turkey Nutrition and Health Survey (TNHS) was included to the publication related with this scope in 2010 (Rippin et al.2018; TNHS, 2010). In aforementioned studies, it is reported that by using the guidelines of European Food Safety Authority (EFSA) methods of countries may be unified and that comparisons may be made (EFSA, 2009; EFSA, 2011; EFSA, 2014).

Nutrition surveys play an important role in determination of the nutritional pattern of the entire population. In the world, nutrition and health surveys constitute the basic information source for determination of risk factors in diets, lack of physical activity and analysis of disease risks.

Methods for determining of nutritional status cover determination of individuals' demographical characteristics, medical history and health problems, nutritional habits, food consumption status and Frequency of food consumption, clinical and biochemical data, and anthropometric measurements.

In "WHO Global Action Plan for the Prevention and Control of Noncommunicable Diseases", various noncommunicable diseases, such as cardiovascular diseases, cancers, chronic respiratory diseases and diabetes etc., are very important globally. In this direction, it is aimed to decrease the burden of communicable diseases and to prevent diseases, disabilities and deaths. Nine targets are emphasized globally. These targets are as follows: a 25% reduction in risk of premature mortality from cardiovascular diseases, cancer, diabetes, or chronic respiratory diseases; at least 10% reduction in the harmful use of alcohol; a 10% reduction in prevalence of inadequate physical activity; a 30% reduction in population intake of salt/sodium; a 30% reduction in prevalence of current tobacco use in individuals aged \geq 15 years; a 25% reduction in the prevalence of raised blood pressure; halt the raise in diabetes and obesity; a 50% of coverage in drug therapy and counseling (including glycaemic control) to prevent heart attacks and strokes; an 80% coverage in basic technologies and essential medicines, required to treat noncommunicable diseases in both public and private facilities (WHO, 2013a; WHO, 2013b).

The intention of the WHO European Food and Nutrition Action Plan 2015 – 2020 is to significantly reduce the burden of preventable diet-related noncommunicable diseases, obesity and all other forms of malnutrition still prevalent in the WHO European Region, and to improve and develop the nutritional status of the population (WHO, 2014a; WHO, 2014b). Unhealthy diet is one of the four behavioural risk factors of noncommunicable diseases (unhealthy diet, physical inactivity, tobacco use and harmful use of alcohol). In the European Region, four risk factors together account for 77% of noncommunicable chronic diseases and 86% of premature mortality (WHO, 2014b).

In Turkey, the mortality related to NCDs are similar to those in other countries of the WHO European Region. Overall 87.5% of all deaths In Turkey are caused by noncommunicable diseases. The probability of premature mortality from one of the four noncommunicable diseases for an individual living in Turkey was around one in six in 2015 (16.8%) (STEPS, 2017). Adequate and balanced nutrition (healthy/optimal nutrition) is the basic element of life, health and national development throughout the entire course of life. Adequate and balanced nutrition is essential for survival, physical growth, mental development, performance, productivity, health and well-being across the entire life-span: from the earliest stages of fetal development, at birth, and through infancy, childhood, adolescence and on into adulthood (WHO, 2013b).

Malnutrition is a critical public health problem that affects all age groups in the course of life. It is a condition that occurs due to inadequate or excessive intake of one or several essential nutrients. Nutrition during pregnancy including fetal life that begins with fertilization and childhood has critical effects on growth, development, diseases and deaths, cognitive enhancement and economic productivity, including fetal life that begins with fertilization, and childhood. These effects range from brain damage during pregnancy to growth retardation in childhood, decreased physical and mental development, and risk of diet-related chronic diseases (cardiovascular disease, type II diabetes, and certain cancer types etc.) at later ages. Health problems related with inadequate and unbalanced nutrition reveal themselves as vitamin and mineral deficiencies, overweight, obesity and obesity related chronic diseases. A healthy life may only be sustained by ensuring sustainable nutrition, food security and food safety (Pekcan, 2009).

WHO, Food and Agriculture Organization in particular and other international organizations determined targets in order to decrease prevalence of nutritional and health problems and support the efforts to prevent increase. Among these targets, *"Global Targets 2025 to improve maternal, infant and young child nutrition"*, which are determined as a result of World Health Organization World Health Assembly Resolution 65.665.6 (WHA65.6: World Health Assembly) in 2012 to improve maternal, infant and young child nutrition, has an important place. These targets are as follows; 40% reduction in the number of children under 5 years, who are stunted, 50% reduction of anaemia in women of childbearing age, 30% reduction in low birth weight, no increase in the prevalence of childhood overweight, increase the rate of exclusive breastfeeding in the first 6 months up to at least 50%, and reduce and maintain childhood wasting to less than 5% (WHO, 2014c).

New "Sustainable Development Goals-2015 to 2030" program is initiated with the completion of "Millenium Development Goals; 2000-2015" program. "Sustainable Development Goals" contains 17 global goals and 169 targets. One specific goal and 13 targets are determined within aforementioned scope. In the target for health, it is recommended to "ensure healthy life and promote well-being for all at all ages". It is noted that "health stands at the center of sustainable development is placed right in the middle. It is stated that promotion of nutrition is essential for health, education, employment, empowerment of women, poverty and progress on inequality. It is reported that various other issues also make critical affects on results of nutrition, such as poverty and inequality, water, sanitation and hygiene, education, food systems, climate change, social protection and agriculture etc. (SDG, 2015-2030).

Maternal and child malnutrition is critical as a global problem due to its effects on incidence of vital and acutechronic diseases, health promotion and economic productivity. Today, stunting (low height-for-age), wasting (low weight-for-height), deficiency of essential vitamins and minerals are listed at the top of issues examined carefully. Prevalence of such problems and their adverse effects in short and long term draw special attention in any country, and they try to produce solutions by effective nutrition intervention programs. By *"First 1000 Days Nutrition Approach"*, which begins from pregnancy and which covers the first two years of life, in recent years, special areas of interest include examining positive effects of adequate and balanced nutrition and healthy growth on the course of life.

In this context, it is recommended;

a) Exclusive breastfeeding of infants for the first 6 months of life, and introduction of complementary food with suitable amount and quality at 6 months together with continued breastfeeding up to 2 years of age,

b) Increasing the consumption of fresh vegetables and fruits, legumes, seeds, nuts and whole grains,

c) Inclusion of unsaturated fats in the diet instead of saturated and trans fats,

d) Reducing the consumption of sugar-sweetened beverages and salty snacks that contain high energy, inadequate nutrients, etc.

2. OBJECTIVES OF SURVEY

Within the scope of "Turkey Healthy Nutrition and Active Life Program", which is being conducted by the Ministry of Health, and "10th Development Plan (2014-2018) 1.21. Healthy Life and Activity Program", it is envisaged to perform the "Turkey Nutrition and Health Survey" in every 5 years. TNHS-2017 was conducted in collaboration with the Turkish General Directorate of Public Health, Ministry of Health, Başkent University, Hacettepe University and Hasan Kalyoncu University, and it was aimed to obtain data on the following issues:

- Health status and prevalence of diseases,
- Specific health parameters
- Scientific and up-to-date data related with several diseases, which represent the entire country,
- Knowledge, attitudes and habits related with nutrition,
- Physical activity levels,
- Overweight and obesity status at national level,
- Food insecurity,
- Frequency of use of food supplements,
- Assessment of food consumption, amount of consumed foods and intakes of energy and nutrients by age, gender and physiological condition (pregnancy and lactation period), and
- Nutrition-related risk factors,
- Pattern that occurred in nutrition and other parameters will be determined by making comparisons with TNHS-2010 data, and changes shall be evaluated,
- Plans and policies will be developed to prevent each risk factor so that public health may be improved and developed in line with the data obtained, and existing policies will be monitored, evaluated and updated.

In addition, the long-term and short-term objectives of the survey are given below.

Long-Term Objectives

- To provide the necessary data to policy makers and planners for determination of "Food and Nutrition Plans and Policies",
- To develop food production and distribution planning in the light of data obtained,
- To have knowledge about the food consumption level and differences of the population and food consumption pattern by education and income levels, and by various demographical characteristics, such as age and gender, foods that are inadequately consumed, and demand of increase for food groups in the future,
- To determine mean (average) intakes of energy and nutrients, and inadequate and excessive intake levels by education and income levels, and by various demographical characteristics, such as age and gender,
- To ensure that food and nutrients reference intake requirements are determined by age, gender and physiological characteristics,
- To determine priorities for the problems of risk groups that are more vulnerable to inadequate and unbalanced nutrition problems (children, pregnant women, lactating women and elderly etc.), to determine relative reasons, to produce and monitor solutions, and to make assessments,
- To determine the prevalence of overweight, obesity, wasting, underweight and stunting by age and gender by comparing anthropometric measurements with reference values, and to obtain reference values of individuals from various ages and genders with regards to our country,
- To determine the physical activity level and exercise habits of the population by education and income levels, and by demographical characteristics, such as age and gender,
- To determine the average energy expenditure amount and intakes of nutrients by the physical activity level of the population, by education and income levels, and by demographical characteristics, such as age and gender etc.,
- To create food fortification and food supplementation programs according to specified vitamin and mineral deficiencies, and to review, assess and monitor those that are currently being implemented,
- To ensure food safety, production and consumption of safe food, and to conduct risk and benefit analyses of foods,
- To determine average estimated intake amounts of various substances with foods based on food consumption data, such as additives, pesticides, toxic components and industrial chemicals etc.,
- To contribute and conduct studies to develop new products in the direction of nutritional problems of the food industry, and to ensure that products available in the market are improved and developed by determined nutritional and health status (making arrangements in contents, such as fats, sugar, salt and energy etc.),
- To develop education programs and tools and materials, to prepare nutrition education programs, to prepare food-based guidelines, and to update those, which are available, based on the result of data obtained,
- To determine anthropometric measurements and biochemical analyses and health status of individuals by education and income levels, and demographical characteristics, such as age and gender,
- To obtain reference values specific of biochemical parameters,
- To provide guidance to institutions in relation with used methods and other issues, and to highlight the future studies,
- To ensure that collected data are used in academic studies, and to support advanced analyses,
- To improve the capacity of the central and provincial organization of the Ministry of Health to conduct institutional surveys, and
- To make comparisons between countries by collected data.

Short-Term Objectives

- To prepare a report that aims to meet the priority needs of policy makers, various sectors, academic and non-academic experts from public agencies or voluntary organizations,
- To prepare a report that is directed towards academicians, decision makers and policy makers in order to provide data to national and international stakeholders that provide service in fields of health and nutrition,
- To demonstrate changes over time (i.e. consumption patterns and trends) by using National Nutrition Health and Food Consumption Survey data collected within the scope of 2017 Turkey Nutrition and Health Survey, and
- To conduct a series of analyses that will be prepared by academic personnel and related experts, in the form of a joint research report, on nutrition, health and food consumption in Turkey.

The data summarized below was obtained in this study in the direction of aforementioned objectives.

Questionnaire for individuals aged 15 years and over

- Basic demographic information related with the interviewed person,
- Anthropometric measurements,
- Disease status,
- Use of tobacco and tobacco products,
- Physical activity status,
- Nutritional habits ,
- General information on women, who have experienced pregnancy and lactating, and their nutritional habits,
- Frequency of food consumption,
- Food security,
- Food supplements, and
- 24-hour dietary recall.

Laboratory form for individuals aged 15 years and over

- Basic demographic information on interviewed person,
- Sampling date/centrifuge date, and
- Exclusion criteria: -fasting full, pregnant.

3. SURVEY SAMPLING

This Chapter provide general information on TNHS 2017 sample size and sample distribution, selection of first stage units (primary sampling units), cluster and block lists.

3.1. Scope of the Survey

All settlements located within the borders of the Republic of Turkey were included in the scope of survey. Noninstitutional civilian population aged 15 years and over who live within the borders of the Republic of Turkey, are in the scope of survey.

Persons living in dormitoriess, rest homes for elderly persons, nursing homes and prisons, military barracks and recreation quarters for officers and staying in hospitals (patients staying in sanatoriums and mental hospitals, etc. for a long time) and hotels for a long time, i.e. those, who are defined as institutional population, are not covered.

TNHS 2017 sample size was calculated by the Turkish Statistical Institute in a way to cover nutritional habits of all of the females – males aged 15 years and over, food consumption, health status, physical activity status and blood tests, in a way to ensure that it is statistically significant across Turkey, and sampling procedure was also performed by the TURKSTAT by using Family Medicine Database.

Ethics Committee approval for the survey was obtained from the Clinical ResearchEthics Committee of Zekai Tahir Burak Women's Health and Research Hospital, Ministry of Health, Republic of Turkey (2011-KAEK-19), on 14.02.2017 (Appendix-1). "Informed Consent Form" was obtained from the individuals (Appendix 2).

Sample Design

Estimation Level: Sample size of the survey was calculated in a way to produce estimations based on total number of females – males aged 15 years and over in Turkey.

Sample Volume Calculation Study: Frequencies used in studies performed belong to 2016 Turkey Health Survey, 2016 Turkey Childhood Obesity Surveillance (COSI, 2016) and results of the evaluation made in 29 provinces, in which bicycles are distributed. Also, loss rates of the pilot study, which was conducted in Gaziantep province, and household surveys, which were conducted by the Turkish Statistical Institute (TÜİK), were considered for TNHS survey. All of the calculations were made in consideration of rare variables.

The following mathematical formula was used in the calculation of sampling volume of the survey:

$$n = (\frac{t^2 * p * q * deff}{d^2} * H)/(1 - ko)$$

Whereas;

t: t distribution table value used for reaching to 95% confidence interval,

p: prevalence of relative characteristic (p=0.025)

The proportion of males with BMI $\leq 18.5 \text{ kg/m}^2$ was used in the calculations.

q: 1-p, (q=0.975)

d: accuracy level (d=0.005)

H: number of layers (H=1) (Estimation size for total of Turkey)

Deff: design effect (design effect is considered as deff=2 in calculation)

ko: loss rate (total loss rate was used as 0.40, taking into account the response rates of the study performed in Gaziantep province as a pilot study, and household and individual loss rates obtained in household surveys conducted by the Turkish Statistical Institute).

The sample volume was calculated as 12 485 by applying relative procedure by selecting 1 eligible individual aged 15 years and over from each sample household. Since the loss rates were also taken into account when calculating the sample size, no substitution/replacement was used for households and individuals in the study. The sample size was determined as 24 000 in a way to ensure that estimations are obtained reliably by gender and age groups and to ensure regional representation.

Sampling Method

The sampling method of the survey is 3-stage cluster sampling.

Primary Sampling Unit: Cluster

The clustering was performed to include approximately 100 addresses for settlements.

In the first stage, a total of 2 400 clusters were selected. Clusters were selected by using the method of selection with probability proportional to size. The number of addresses available in each cluster constituted the cluster size.

Secondary Sampling Unit: Address (Household)

In the second stage, 10 addresses were selected systematically from each selected cluster.

Tertiary Sampling Unit (individuals aged 15 years and over)

Within the scope of the survey, the selected addresses were matched with the updated Family Medicine Database created by the Ministry of Health. After that, an individual aged 15 years and over from among the eligible individuals matching at each address was randomly selected by TURKSTAT. Field implementation was performed by relevant individual.

Address Frames Used

The frames used in the sampling study of the survey are as follows:

Selection of first 2 stages (Blocks and addresses):

Blocks and addresses used in first two stages were selected from the National Address Database (NADB), which was completed in 2007 and which constitutes the basis of the Address-Based Population Registration System (current frame as of August 2017). Since any update made on the Address-Based Population Registration System also ensures updating of the National Address Database, sample addresses were selected from NADB directly with no need to perform address listing procedures.

Selection of final sampling units (eligible individuals aged 15 years and over):

The updated Family Medicine Database created by the Ministry of Health was used in the selection of individuals.

Design Weights

Design weights are inversely proportional to final selection probabilities. First, second and third stage selection probabilities were taken into consideration while calculating design weights. Design weights are calculated as below:

11

$$w_i = \frac{1}{p_i} \frac{1}{g_{ij}} \frac{1}{r_{ij}}$$

Whereas,

 w_i refers to design weight for cluster i, p_i refers to probability of selecting cluster i, g_{ij} refers to probability of selecting address j in cluster i, and r_{ij} refers to probability of selecting eligible individual at address j in cluster i.

In the formula, *p* represents the probability of selecting primary sampling unit, *g* represents the probability of selecting secondary sampling unit, and *r* represents the probability of selecting tertiary sampling unit.

Selection probabilities of the primary sampling unit are calculated as below:

$$p_i = \frac{b * S_i}{\sum_{i=1}^N S_i}$$

Whereas,

 p_i refers to probability of selecting cluster i, b refers to the number of clusters selected,

Si refers to total number of addresses in cluster i, and

N refers to the number of clusters.

This calculation is based on the formula of selection with probability proportional to cluster size.

The probabilities of selecting secondary sampling unit are calculated as below:

$$g_{ij} = \frac{c}{S_i}$$

Whereas,

 g_{ij} refers to probability of selecting address j in cluster i, C refers to the number of addresses selected from cluster i, and S_i refers to the total number of addresses in cluster i.

In the second stage, number of selected addresses (C) is equal to 10 in all of the clusters since 10 households are selected systematically out of each selected cluster.

Calculations of probability of selecting secondary sampling unit are made on cluster basis. The calculated probabilities are equal in the same cluster.

Probabilities of selecting tertiary sampling unit are calculated as below:

$$r_{ij} = \frac{1}{e_{ij}}$$

Whereas,

 r_{ij} refers to probability of selecting eligible individual from address j in cluster i, and e_{ij} refers to the number of eligible individuals in address j at cluster i.

Data Weighting:

The initial weights were obtained by multiplying probabilities of selecting of primary, secondary and tertiary sampling units, and by taking the opposite of such number.

$$w_{iik} = \frac{1}{p_i \quad g_{ij} \quad r_{ij}}$$

According to result codes, questionnaire forms coded with "The questionnaire form could not be completed due to the lack of enough knowledge and skills", "Residence destroyed" or "Nobody lives in residence" were excluded from the analysis. Questionnaire forms coded by "No household member at home", "Interview interrupted" and "Refused" are considered as a "loss". Loss rate was considered as the proportion of households, who did not give response within each secondary sampling unit. Second weights were calculated by multiplying first weight with the loss rate.

х

$$W_{ikinci} = W_{ilk}$$
 ko

Data Calibration:

Obtained sampling data was calibrated with 2016 Address-Based Population Registration System data by age and gender, obtained from the TURKSTAT. Calibration rates were obtained as below, whereas P_T refers to table percentages obtained from the distribution of 2016 Address-Based Population Registration System data by age and gender, and P_0 refers to table percentages by age and gender obtained from sampling data.

$$W_{kal} = \frac{P_T}{P_{\ddot{O}}}$$

The final weighting coefficient was obtained by multiplying calibration rates found with second weights.

$$W_{son} = W_{ikinci} - W_{kal}$$

The final weighting coefficient found was introduced to the "Complex Samples" menu of IBM SPSS 23 Statistics software package. All analyzes and tables were obtained through this menu. Weighted percentage and unweighted numbers were given in all tables.

4. METHOD OF THE SURVEY

4.1. Survey Plan

On 17.01.2017, Executive Committee (Appendix 6) which was established within the scope of the survey, convened to develop questionnaires to be applied, and on 11.04.2018, Executive Committee convened to make the general evaluation of the survey.

A survey supervisor was assigned in each province in order to conduct the survey in provinces. Survey supervisor was responsible for conducting the survey in relative province within the scope of TNHS-2017. Survey coordinator coordinated the study, established communication between teams, supplied and distributed transportation vehicles and materials, determined study areas of teams, and coordinated transfer of forms and samples to the headquarters.

Regarding implementation of fieldwork within the scope of TNHS 2017, project consultant academic members gave training to 238 provincial health directors and branch managers, who participated to TNHS 2017, in Ankara between August 10, 2017 and August 11, 2017, and to 240 dietitians and other healthcare professionals in two sessions in Ankara between August 14, 2017 and August 17, 2017 and between August 21, 2017 and August 24, 2017 respectively. Trainings were focused mainly on theoretical and practical practices with regards to importance and organization of the survey, laboratory, anthropometric measurements, obtaining 24-hour dietary recalls, completion of questionnaires and electronic data entry etc.

In trainings, basic information was provided in relation with importance of the survey and collection of accurate data, and all of the questions that are available in questionnaires were examined one by one, and objective of each question was explained. Then, various in-class practices were performed with questionnaires, and deficiencies that were detected during such practices were re-emphasized, and thus, it was ensured that questionnaires are completed without any mistake.

Survey was conducted within the body of family health centres (FHC). Therefore, survey supervisor and survey coordinator determined areas, in which teams will work, prior to the commencement of the study. Suitable environments, in which interviews will be held with individuals within the body of FHCs where survey data vwill be obtained and where anthropometric measurements shall be performed, were created.

Physicians, who are in charge of FHCs and who lived in relative settlements, called the individuals, who were selected out of individuals living in residences included to the sample selected by the Turkish Statistical Institute, and they informed relative individuals on the survey, and their consents were obtained with regards to their participation to the study. Those, who agreed to participate to the survey, were invited to admit the FHCs early in the morning in the appointment date determined to collect data, provided that they admit the FHCs without consuming any food for minimum 8 hours and provided that they fast before coming to FHCs. Those, who failed to fast before attending FHCs hungry, were required to re-admit FHCs between 7 and 10 AM in the second day since blood sample must be collected while one is fasting. Individuals, who showed up after being invited to FHCs, were informed on the objective and characteristics of the survey. Questionnaire was performed, and laboratory questionnaire was completed, and then, blood samples were collected under the supervision of a physician.

If the selected individual failed to admit the FHC although he/she was invited, he/she was invited to the FHC again at a later date. Those, who failed to admit for the third time, were visited at home, an appointment was made, and information was provided on sample collection. Individual questionnaire was completed and anthropometric measurements were performed in the appointment date. Blood sample collection procedures were performed. Individuals were admited three times or relative authorities endeavoured to make another appointment, if required, in order to complete questionnaires and to collect samples.

After collection of blood samples, samples were centrifuged and forwarded to pre-determined Public Health Laboratories under suitable conditions. Summary of the organization of the survey is provided in below table.

Table 1.1. Application of questionnaire and collection plan of blood samples

	What	How	Who
DAY 1	SELECTED INDIVIDUAL If the individual attended to the FHC in the 1 st VISIT, questionnaire was administered. Anthropometric measurement was performed. Information about sample collection was provided.	Fasting, sample was collected.	Dietitian / Nurse/ Delivery Nurse
DAY 2	SELECTED INDIVIDUAL He/she was invited to the FHC fasting in the morning for collection sample (to draw blood). Barcodes were affixed on the blood samples (Tubes). Blood samples were centrifuged. Blood samples were separated. Barcodes were affixed on separated blood samples. It was checked whether the barcode with Republic of Turkey ID Number was on individual laboratory sample form and sample tubes. Blood samples were delivered to the laboratory.	Blood samples were collected between 7-10 AM. Procedures were performed according to cold chain rules until delivery of blood samples. 3 rd visit was made, if required.	Nurse/Midwife Laboratory Technician
	IF THE SELECTED INDIVIDUAL FAIED TO ADMIT TO THE 1 st INVITATION, Appointment were scheduled for a suitable date. Below procedures were performed: completion of individual questionnaire, anthropometric measurement and drawing blood sample.	3 rd visit was made at home, if required	Dietitian/Nurse/ Midwife/ Laboratory Technician

A laptop computer and mobile internet service were provided by public health directorates to all of the dietitians/interviewers, in order to be used throughout the survey, and all of the data entered electronically, except 24-hour dietary recalls. Daily dietary recalls were determined and amount of food consumed was converted to portion sizes (with grams/milliliters) by interviewers, and entered to BEBIS software. In the study, 24-hour dietary recall was taken 2 times by an interval of 2 weeks (10-14 days) as recommended by the European Food Safety Authority (EFSA- 2009; EFSA, 2010; EFSA, 2011; EFSA, 2014b).

After completion of data entry across Turkey, information and biostatistics consultants of the survey matched and combined data available in questionnaires and food consumption data by identity numbers of each participant (BEBIS software).

4.2. Survey Questionnaires

The documents prepared for TNHS 2017, starting from September 2016, based on studies conducted with the participation of consultants from various fields and representatives of the General Directorate of Public Health, Ministry of Health, as well as literature reviews, feedbacks obtained from pilot studies and assessment of experts' opinions, are as below:

- ✓ Questionnaire for individuals aged 15 years and over (Appendix 2)
- ✓ 24-hour dietary recall Form 1 and 2 (Appendix 3 and Appendix 4)
- ✓ Individual Laboratory Form (Appendix 5)
- ✓ Fieldwork guideline

4.2.1. Questionnaire for 15 years and over

The questionnaire for age group of 15 years and over is comprised of 3 main sections

I. Main Section	Online questionnaire that is comprised of questions on various issues, such as demography, anthropometric measures, Frequency of food consumption and physical activity status etc.
Section 1	Basic information
Section 2	Anthropometric measurements
Section 3	Disease status
Section 4	Physical activity status
Section 5	Nutritional habits
Section 6	General information on women, who have experienced pregnancy and lactation and their nutritional habits
Section 7	Frequency of food consumption
Section 8	Food security
Section 9	Food supplements
II. Main Section	24-hour dietary recall questionnaire (Applied 2 times with an interval of 10-14 days).
III. Main Section	Online laboratory survey/ questionnaire

4.2.1.1. Basic Information on the Respondent

Respondent's gender, data of birth and age were recorded.

4.2.1.2. Anthropometric Measurements

All of the anthropometric measurements were held and evaluated according to recommended techniques and cut-off points (TNHS, 2010; Pekcan, 2008; Pekcan 2016: Lohman, 1988; Gibson, 2005).

- All anthropometric measurements were performed by establishing a good communication with related individual after completion of "Personal Information Forms".
- The severely obese individuals who weighted more than the scale could weight, were recorded on the Individual Anthropometry Measurement Form as "Could not be measured".
- Body weight and height values based on the self-report were not accepted, and recorded as "Could not be measured".

In TNHS 2017, the subjects aged 15 years and over had undergone following anthropometric measurements by age and special condition.

Subjects aged 15 years and over	Pregnant and lactating women		
Body weight	Body weight		
Height	Height		
Waist circumference			
Hip circumference			
Neck circumference			

Tools and Equipment Used in Anthropometric Measurements

For all Family Health Centers, the standard has been provided for measurement tools.

Body weight	Digital scales
Height	Stadiometer (standing height gauge)
Circumferen ce	Tape (rigid, but flexible)
measureme	
nts	

Anthropometric Measurement Techniques Measurement of Body Weight and Height

Body weight and height were measured on any individual aged 15 years and over, who agreed to undergo measurement procedures.

Placement of the Weight Scale and Stadiometer

- Weight scale to be used was placed on a firm and flat surface.
- It was ensured that sufficient amount of light was available in the measurement area.

Calibration of the Weight Scale and Stadiometer

- The scale was checked before each measurement using a constant weight (5 kg water gallon).
- The scale pointer was checked to point "0.0" before each measurement.
- Stadiometer was checked in each measurement procedure a constant ruler. Measurements were repeated with inaccuracy two mm.
- Subject procedures were recorded to calibration forms by dates. They were sent to the headquarters together with other documents with the completion of the survey.

Measurement of Body Weight

- Body weight was measured in standing position by a weight scale for adults.
- Thick clothes (coats, jackets and sweaters etc.) and items in pockets (wallet, keychain and mobile phone etc.) were asked to be removed. Shoes were taken off.
- The feet were placed properly on the scale and it was made sure that the body weight was equally distributed between the two feet.
- The individual was asked to stand still and straight.
- Measurement was performed with the accuracy of 0.1 kg (100 g).

Measurement of Height

- Stadiometer was used in the measurement.
- Measurements were made in standing position by taking off shoes and any other clothes, such as hats, if any.
- Measurement was performed with the accuracy of 0.1 cm (1 mm).

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A "Calibration Form" was developed for anthropometric measurements, and training was provided in order to ensure that scale and stadiometer used for height and body weight measurements were used at the site after being calibrated. Measurement data were collected in relation with "intra-observer and inter-observer measurement reliability" during practical applications held within the scope of trainings, and data were evaluated by Kappa Cohesion Measurement Test. As a result, it is aimed to reach valid and reliable anthropometric measurement data.

Measurement of the Waist Circumference

In this survey, measurement technique recommended by the World Health Organization was used during measurement of waist circumference. World Health Organization recommends measurement of the circumference that passes at the mid point between lower margin of the least palpable rib and the top of the iliac crest (WHO, 2011).

- A non-stretch tape, which was in the length of 200 cm, was used. Broken tapes were replaced.
- The individual has been asked to wear light clothing. Trousers were pulled down in the case of males, and skirts and trousers were pulled down in the case of females. It was ensured that individuals do not wear loose-fitting and thick dresses and belts etc. that may constraint the measurement. Pockets of individuals were emptied.
- Measurer stood right in front of the measured person.
- Measurements were performed by an unelastic tape and with light clothing, while individuals were in standing position, hands and arms were stretched at both sides, legs were close to each other (at a distance of 12-15 cm) and were standing as weight was distributed to both legs equally (Frankfort plane).
- Lowest rib of the measured individual was found on the right, and it was marked by a marker pen or makeup pen. Iliac crest was found at midaxillary line, and was marked.
- The space between two marks was measured, and its mid point was marked.
- It was required from individuals to breathe in and out normally. It was required from individuals to breathe in (to hold their breath) and to not to tighten up. Thus, it was ensured that the abdomen was free and not strained (breath was not held, the measurement was taken at the end of normal expiration).
- Circumference was measured. Tape was held held loose during measurements, and excessive pressure was not applied.
- Measurements were performed from the closest millimeter (with an accuracy of 0.1 cm) and detected values were recorded, e.g. 75.3 cm, 88.1 cm and 104.5 cm etc.
- Persons, who provided assistance during measurements, stood behind and at the side of measurer, and ensured that the tape was placed accurately, and held parallel to the ground

Measurement of Hip Circumference

- It was ensured that individuals stood with their arms by their side, with their legs standing side by side and that they were standing erect. It was ensured that individuals were looking towards the front area and parallel to the ground (Frankfort plane: ear canal and inferior margin of the orbit were in alignment and were parallel to the ground).
- Measurements were performed by standing on the right of individuals.
- Highest point of the hip (laterally) was determined, and a tape was used during circumference measurements. It was ensured that the tape stood parallel to the ground. It was ensured that a second person supported the measurer for such purpose.
- Individuals have undergone measurement procedures by wearing light clothing as much as possible.
- Individuals were prevented from wearing heavy clothing that may prevent performing hip measurement
 procedures and that may cause making wrong measurements, and from carrying items that may cause
 thickness in their pockets (keyholders, wallets, telephones and notebooks etc.), and children were
 prevented from carrying food and snacks etc. with them.
- Measurements were performed with an accuracy of 0.1 cm (Lear et al, 2010, WHO, 2011).

Measurement of Neck Circumference

- Measurements were performed at Frankfort plane by a tape, while the neck was nacked, from below the thyroid cartilage/adam's apple, above root of the neck (close to the arm), and were recorded in cm.
- It was ensured that breath was not held during measurement procedures, and that measurements were performed when breathe out procedure is completed (Ben-Noun et al., 2001).

Anthropometric Measurements in Pregnant Women

Height and body weight were measured in pregnant women, and pre-pregnancy body weight was determined according to self-report. BMI values before and during pregnancy were calculated (WHO, 1995).

Anthropometric Measurements in Lactating Women

Height and body weight of lactating women were measured, and BMI values were calculated.

Evaluation of Anthropometric Measurements

BMI, waist/hip circumference and waist circumference/height ratios were calculated. Obtained values were evaluated by gender and age group. Arithmetic mean (\bar{x}) and standard deviation (SD) values of all of the measurements were determined. Also, their distribution was examined by cut-off points.

Body Mass Index (BMI)

Body mass index (BMI: body weight-kg/height-m₂) was calculated based on body weight and height measurements of adults (aged (\geq 19 years and over). Collected data were evaluated by gender and age (WHO, 1995; WHO, 2010).

BMI cut-off points for adults are presented in Table 1.2, and BMI cut-off points for individuals aged 15-18 years are provided in Table 1.3.

Table 1.2. Body Mass Index (BMI) classification and cut-off points (WHO, BMI)

Classification	BMI (kg/m²) Basic cut-off points
Underweight	< 18.50
Normal	18.5-24.9
Overweight, pre-obesity	25.0-29.9
Obese	≥ 30.00
Class I obesity	30.0-34.9
Class II obesity	35.0-39.9
Class III obesity (Morbid)	≥ 40.0

BMI was evaluated by age in individuals of age group of 15-18 years. Body mass index (BMI: body weight-kg / height-m₂) was calculated based on body weight and height measurements.

Body mass index values and calculated BMI values were evaluated by using "*Reference values for children aged* 5 – 19 years (61 – 228 months) – 2007" by z-score (SD) cut-off points by age and gender. (WHO, 2007; <u>https://www.who.int/growthref/who2007 bmi for age/en/</u>). "WHO AnthroPlus Program" (www.who.int/growthref/en/) was used during evaluation.

The following classification and interpretation were made accordingly; BMI<-1SD: underweight; BMI≥-1SD-<+1SD: normal; BMI≥+1SD-<+2SD: overweight; BMI≥+2SD -<+3SD: obese and BMI≥+3SD morbid obese.

Table 1.3. BMI Z-Score cut-off points in individuals aged 15-18 years (WHO, 2007)

Classification	BMI Cut-off Points by age
Underweight	< -1 SD
Normal	≥ -1SD - < +1SD
Overweight	≥ +1SD - < +2SD
Obese	≥ +2SD - <+3SD
Morbid obese	≥ +3SD

Waist Circumference

The measurement results were evaluated as a normal group of <94 cm in males and <80 cm in females, an increased risk group of 94- 102 cm in males and 80-88 cm in females, a substantially high-risk group \geq 102 cm in males and \geq 88 cm in females (Lear, 2010; WHO, 2011).

Waist/Hip Circumference

Measurement results were evaluated as below; <90 in males and <85 cm in females were assessed as normal, and \geq 0.90 in males and \geq 0.85 in females were assessed as "high risk" (WHO, 2011).

Waist Circumference to Height Ratio

A risk occurs when the ratio is below 0.4 and above 0.5, and requires take care and action. If the value is 0.6 and above, it means that an action must be taken and that chronic disease risk has increased (Ashwell et al. 2005).

Neck Circumference

Average of neck circumference measurements was calculated for males and females. Groupings were created out of means for levels that constitute a disease risk. In adults, neck circumference of \geq 37 cm for males and \geq 34 cm for females constitute a disease risk (Ben-Noun et al., 2001).

4.2.1.3. Disease Status

QUESTION 301 to 313: Following question shall be asked: "Do you have any chronic disease (diseases) diagnosed by a physician?" If the answer is "NO",

Skip to Question 314. If the answer is "YES", ask Questions 302 to 313 and mark them accordingly.

QUESTION 314 to 318: It was asked about oral and dental health, whether the individual is admitted to any of the healthcare facility, which shall be listed, recently due to any reason (disease/control) in the last 3 months (mark only one option) and person, to whom he/she applied, reason for being admitted by a healthcare institution recently (mark only one option), hospitalization in minimum one hospital in the last 12 months due to any health problem (mark only one option), and vaccination against hepatitis and number of the doses of hepatitis vaccine.

QUESTION 320 to 320A: It was asked about physical or mental disability status, disability type, cause of disability, percentage (%) and duration (year and month).

QUESTION 321 to 324: It was asked whether the individual is currently use tobacco (cigarettes, hand-rolled cigarettes, pipes, cigars and hookah). If the answer is "No, I never smoked" or "No, I quit smoking", please skip to Question 324. If the answer is 'Yes', continue with Question 323.

QUESTION 323: Frequency of use and the type of tobacco are asked, if the individual uses tobacco.

QUESTION 324: The use of cigarettes/cigars/ pipes in the indoor (home, workplace) is determined. If the answer is "No", "1" shall be marked and if the answer is "Yes", "2" shall be marked.

4.2.1.4. Physical Activity Status

The questions available in this section were asked to determine the physical activity levels of individuals. Physical activity questions were prepared based on WHO Global Physical Activity Questionnaire (GPAQ). This questionnaire assesses physical activity behavior in three domains: work-related physicial activities (including paid or unpaid work, working inside or outside the home), transport-related physical activities (travelling to/from somewhere) and leisure- time physical activities. Weekly metabolic equivalent (METs) per minute was defined in order to classify the physical activity level and total physical activity of each participant.

1. Physical activity status: It was asked to interviewed persons whether they exercise, and how often they spend time on the TV and computer etc. on weekdays and weekends. Also, 24-hour physical activity data was collected from individuals. Prepared questions were asked to individuals aged 15 years and over. For the analysis of physical activity data, existing guidelines were followed in the study. It is recommended that adults should do at least one of the following throughout a week, including work-, transportation- and leisure time-related activities.

- ✓ 150 minutes of moderate-intensity physical activity, or
- ✓ 75 minutes of vigorous-intensity aerobic activity, or
- ✓ An equivalent combination of moderate- and vigorous-intensity physical activity achieving at least 600 MET-minutes.

METs (Metabolic Equivalents) are commonly used to represent the intensity of physical activities. Also, they are used in analysis of the data obtained from Global Physical Activity Questionnaire (GPAQ). One MET is defined as as the amount of oxygen consumed while sitting at rest, and it is equal to an energy cost of 1 kcal/kg/hour. In the analysis of GPAQ data, it is estimated that the physical activity level of an individual is four times higher than the energy expended by sitting still when he/she is moderately active, and that it is eight times higher than the energy expended by sitting, if he/she is engaged in any vigorous physical activity. Therefore, the following MET values are used to calculate the total physical activity of an individual by using GPAQ data:

	MET value
Work-related Moderate intensity activities Vigorous intensity activities	MET value of moderate intensity activities = 4.0 Vigorous intensity MET value = 8.0
Transport-related	MET value of riding bicycle or walking = 4.0
Recreation-related	MET value of moderate intensity activities = 4.0 Vigorous intensity MET value = 8.0

Total number of time spent on physical activity throughout a typical week and intensity of physical activity shall be considered to calculate the categoric indicator related with the amount of physical activity recommended for health. A calculation was made in consideration of following values during classification.

<u>High</u>

Any individual, who meets any of the below criteria, shall be classified in this category:

- High level physical activity for 75 minutes weekly, or
- Those, who are engaged in vigorous intensity activities for minimum 3 days a week, i.e. minimum 1 500 MET-minutes / hours , or
- Those, who are engaged in any combination of moderate or vigorous intensity activities, for 7 days or more, i.e. minimum 3 000 MET-minutes weekly.

Moderate

Any person, who does not meet the criteria stipulated for "High" category, but who satisfies any of below criteria, is classified in this category:

- Moderate level physical activity for 150 minutes or
- Doing vigorous activities for minimum 20 minutes per day for 3 days or more or
- Doing moderate activities for 5 days or more or walking for minimum 30 minutes per day or
- Walking and performing a combination of moderate or vigorous intensity activities for 5 days or more, i.e. for minimum 600 MET weekly.

Low

• Any person, who does not meet aforementioned criteria, shall be included to this category.

Failure to meet aforementioned criteria stipulated by WHO

Below recommendations were used out of physical activity criteria provided by WHO in relation with the health of participants;

- 150 minutes of moderate-intensity physical activity, or
- ✓ 75 minutes of vigorous-intensity aerobic activity, or

 \checkmark An equivalent combination of moderate- and vigorous-intensity physical activity achieving at least 600 MET-minutes.

Classification 1 of PAL Values for Adults (FAO/WHO, 2004; WHO 2010): It was asked to interviewed persons whether they exercise, and how often they spend time on the TV and computer etc. during the week and at weekends.

A"24-hours physical activity recall questionnaire" was administered to Individuals aged 15 years and over. Physical activities done in a day were recorded to the Physical Activity Registration Form by assigning suitable codes. These activities were comprised of activities, which were performed prior to the day when the interview was held, and was covered a period of 24-hours.

After recording activities, which are performed by intervals of fifteen minutes, by codes, energy expended while performing any of the activities is calculated by multiplying multiples of basal metabolic speed with physical activity ratio (coefficient) (PAR=Physical Activity Ratio). Value of physical activity level (PAL=Physical Activity Level) is calculated by dividing calculated value to 1,440 minutes (24 hours), the period of a signle day (FAO/WHO, 20104; EFSA, 2013).

PAL values classification of the European Food Safety Authority (EFSA, 2013) and FAO/WHO/UNU (FAO/WHO/UNU, 2004) for adults are shown below. TNHS 2017 survey data are reviewed according to aforementioned data.

Table 1.4. PAL values classification of the European Food Safety Authority (EFSA, 2013) andFAO/WHO/UNU for adults

Activity classification or life-style	PAL value		
EFSA ¹			
Low active (sedentary) life-style	1.4		
Moderately active life-style	1.6		
Active life-style	1.8		
Very active life-style	2.0		
FAO/WHO/UNU ²			
Sedentary or light active life-style	1.40-1.69		
Active or moderately active life-style	1.70-1.99		
Vigorous pr vigorously life-style	2.00-2.40*(* PAL values >2.40 are difficult to maintain over value a long period.		

References: ¹EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA); Scientific Opinion on Dietary Reference Values for energy. EFSA Journal 2013;11(1):3005. [112 pp.] doi:10.2903/j.efsa.2013.3005. Available online: www.efsa.europa.eu/efsajournal. ²FAO/WHO/UNU. Human Energy Requirement. 2004.

4.2.1.5. Nutritional habits

Questions were asked about the nutritional habits of the subjects during the main meal and snack.

4.2.1.6. General Information on Women, Who Have Experienced Pregnancy and Lactation, and Their Nutritional habits

Information was obtained on the nutritional status of females in age group of 15 years and over during pregnancy and lactating.

4.2.1.7. Frequency of food consumption

Questions were asked on issues that individuals aged 15 years and over pay attention while shopping for food, as well as their frequency of consuming certain foods and beverages in the previous month.

4.2.1.8. Food Security

Changes that occurred in food consumption of individuals in the last year due to lack of money and other resources, as well as their frequency of not being able to eat food due to economic reasons in the last year, although one has been hungry. "Food Insecurity Experience Scale – FIES" developed by Food and Agriculture Organization (FAO) was used in examining food insecurity (Ballard et al. 2013).

4.2.1.9. Food Supplements

The use of food supplements of individuals were evaluated.

4.2.2. 24-Hour Dietary Recall

Questions were asked on foods that interviewed individuals ate/drank in the last 24 hours. Food consumption (dietary recall) was collected two times by an interval of 10-14 days (EFSA- 2009; EFSA, 2010; EFSA, 2011; EFSA, 2014b).

24-Hour Dietary Recall (3rd Questionnaire) was questioned and recorded to the questionnaire. Then, interviewers registered Republic of Turkey ID Number and code A (1111111111A) of each participant to BEBIS software by opening a file. 24-Hour Dietary Recall was repeated on the phone/by face-to-face interview 2 weeks later, and Republic of Turkey ID Number and code B (1111111111B) of each participant were registered to BEBIS software by opening a file.

24-Hours Dietary Recall Form was transferred to the questionnaire at first, and data were entered to BEBIS software electronically after determining the types and amounts of foods and beverages consumed.

24-Hour Dietary Recall (Retrospective Food Consumption) Record

24-Hour Dietary Recall Method: Interviewers collected data on individuals' food consumption 24-hour recall method by face-to-face method. "Meals and Foods Photography Catalogue" was used to determine the portion of foods – beverages and food items Rakicioğlu et al, 2016). Energy, macro- and micronutrients of food consumption records were analysed by using version 7.1 of "Nutrition Information Systems Software Package (BEBIS)" developed for Turkey

"24-Hours Dietary Recall" was applied on subjects (EFSA, 2009; EFSA, 2014b; van Staveren et al., 2006). Types and amounts of foods, beverages and meals consumed during main meals and snacks throughout a day were recorded in detail. The amount of water and/or beverages were recorded and calculated in "household measures" and "mL/gram" by using the book titled "Meals and Foods Photography Catalogue – Sizes and Amounts" (Rakıcıoğlu et al, 2016). Amount of food, which is included to the portion of meal consumed in various locations other than home, such as restaurants and institutions etc., was recorded and calculated based on the book titled "Standard Recipes for Mass Catering Services in Institutions" (Merdol Kutluay, 2003).

After the foods and beverage amounts were calculated in grams, the amount of energy, macro-, and micronutrients intakes were calculated using the Nutrition Information Systems Software Package (BEBIS-7.1).

Daily amounts of food consumed (in grams, mL) are grouped as follows.

 Meat group foods Milk and dairy products 	 Red meat, poultry, fish and processed fish products, other sea foods, processed meat products (salami, sucuk, sausage, pastrami (cured and dried meat), offals, etc.). Eggs Legumes, nuts/seeds etc. Milk, yoghurt, cheese, diluted yoghurt (ayran), kefir, ice cream, etc.
3. Fresh vegetables and fruits group	 Green leafy vegetables, potatoes, other fresh vegetables Citrus fruits, other fresh fruits
4.Bread and cereal group	 Bread group: wholemeal bread, whole grain, white bread, pita, lavash, flatbread, phyllo dough, bagels, etc. Cereals group: Grain cereals (rice, rye, corn, wheat, etc.), flours (wheat, corn, rice etc.), cracked wheat (bulgur, pasta, noodles, shredded wheat for dessert, breakfast cereals, biscuits, crackers, cakes, fermented dried flour and yoghurt mixture (tarhana), starch, etc.
5. Water, soda, mineral water	
6. Non-alcoholic beverages	 Water, tea (black, green), herbal tea, coffee, cocoa, carbonated beverages (cola and soda etc.), mineral waters, sparkling waters, fresh vegetables, fruit juices, ready-to-drink fruit juices, sports drinks, energy drinks, conventional drinks and drink powders etc.
7. Alcoholic beverages	Beer, wine, raki etc.
8. Fats and oils group	 Olive oil/hazelnut oil, sunflower/corn oil/soybean oil, canola oil, hard margarine, soft margarine, butter/cream/cream, tail fat/ tallow ,etc.
9. Sweets	 Sugar, honey, jam, molasses, other sweets (chocolate, hazelnut paste, etc.), pudding, Turkish delight, fruit pulp/churchkhela, tahini halva, etc.

24-hour dietary recall was repeated on the phone or by face-to-face interview 10-14 days after the first interview (EFSA, 2009; EFSA 2014b).

The questionnaire for individuals aged 15 years and over, was interviewed data on certain medicine groups, that may affect the nutritional status of individuals were determined however, the number of specified medicines was inadequate.

4.2.3. Laboratory Analyses

Within the scope of Turkey Nutrition and Health Survey that was being conducted across Turkey, blood samples obtained from subjects aged 15 years and over were analysed in public health laboratories and in state hospitals, in the case of provinces that do not have a public health laboratory.

Studies that are required to minimize preanalytic error were conducted (written open procedures - points to consider document and guideline, training of healthcare professionals, automation use, monitoring quality indicators and improvement of communication and cooperation between healthcare professionals – family physicians, dietitians and personnel of directorates and laboratories were informed and coordinated). Blood samples collected from pre-determined individuals across Turkey by ASEs (Healthcare Personnel)/nurses/laboratory technicians had undergone procedures, details of which were explained in the Site Application Guideline during survey training, and were delivered to laboratories in 2-4 hours by undergoing centrifuging and cold chain, in the case of those, who could not admit the Family Health Centres, and they were analysed subsequently.

Collaboration was established with General Directorates for Health Services, Medical Laboratories Services Department, General Directorate of Public Health, and Consumer Safety and Public Health Laboratories Departments in order to minimize analytic errors (device calibration, sample mixing, sample in accurate volume, quality control, substances that become active by test – exclusion criteria were determined, device stability impairment). Our laboratories apply the control program and external quality assessment program at suitable intervals within the framework of the Public Health Laboratories Regulation and quality standards. By quality control procedures, it is ensured that random errors and systematic errors, i.e. total analytic errors, do not exceed the limit of total errors allowed from the perspective of patient safety (Medical Laboratories Regulation No.: 28.790, dated 09/10/2013).

Interpretation of tests and reporting were performed in the headquarters directly in order to prevent postanalytic errors.

Laboratory Sampling and Analysis Stages

- The process of centrifuge and cold chain stages was observed in each family health centre prior to the beginning of survey.
- Subjects were invited to relative FHC by the head physician of relative FHC (Note: It was emphasized that one must not eat any food for 10 hours (*subjects were admitted early in the morning*).
- Interviewer explained the goal and characteristics of the survey. "Informed Consent Form for Explorative Survey" was read and explained, and they informed us whether they shall participate to the survey, and then, they signed relative paperwork.
- Individuals, who agreed to participate to the survey, were interviewed and available survey form "Questionnaire for individuals aged 15 and over" and "Laboratory Blood Samples Form" were completed.
- When the selected individual was invited for the first time and after an appointment was made, and when he/she admitted the Family Health Centre (FHC);
- Survey specific to the selected individual from relative age group was applied,
- Information was given on sample collection location, sample collection method and sample collection time for laboratory analyses.
- Questionnaire was completed in the FHC, and FHC/nurse or laboratory technician related with blood samples firstly completed laboratory questionnaire electronically, and then, blood samples were drawn under the supervision of a physician, and anthropometric measurements were performed.
- If the selected individual failed to admit the FHC, to which he/she was invited, and if his/her home address was visited, questionnaire was completed electronically, and relative individual was re-invited to relative FHC for blood collection.
- A visit was made to residence, questionnaire was completed and anthropometric measurements were performed,
- Then, physician invited subject to HC early in the morning, and subject completed laboratory questionnaire, and then, blood samples were drawn under the supervision of physician.
- Subject was visited 3 more times in order to complete questionnaire and to perform blood collection procedure or we tried to make an appointment.
- Blood samples were taken to the provincial public health laboratory. Blood samples were accepted via software distributed to relative units.
- Results were transferred to the software of the project by laboratory officials and transformed into suitable formats (xls, dba, mdb etc.) gathered and shared with other centers (Ministry) electronically.
- Analyses that are made within the scope of the project are presented in Table 1.5.

Routine Biochemical Tests	Hormone Tests	HbA1c	Complete Blood Count
Glucose	Thyroid Stimulating Hormone (TSH)	HbA1c	Hemoglobin (Hgb)
Urea	FT4		Hct
Creatinine	Ferritin		MCV
AST	Vit D		МСН
ALT	Vit B ₁₂		МСНС
Protein	Folic acid		RDW
Albumin	РТН		
ALP			
Total Cholesterol			
Triglycerides			
HDL-C			
LDL-C			
GGT			
Са			
Mg			
Р			
Fe			
ТДВК			
CRP			

Table 1.5. Laboratory Tests Performed in Turkey Nutrition and Health Survey 2017

4.3. Pilot Studies

Pre-Test Survey

"Pre-test" study was performed prior to "Pilot Study" of e-questionnaires. Pre-test study was comprised of survey completion activities that had no result analysis and that were conducted on 10-15 individuals in order to inspect consistency of prepared surveys, to ensure application of surveys accurately and to determine defects that may occur during application of surveys. Survey consistency was controlled initially by the tool provided by LimeSurvey platform. After this consistency test, e- questionnaire was tested on 15 real persons between February 8 and February 10. A part of these tests was completed by TNHS consultants, and a part of them were completed by interviewers participated to Ankara pilot study. Required corrections were made, during relative entries, based on feedbacks provided by interviewers and TNHS consultants. All of the responses given within the scope of surveys entered within the framework of the pre-test were recorded safely without losing any data (Figure 1.1). Responses given to the pre-test survey are not used in any statistical result analysis.

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Figure 1. 1. TNHS 2017 Pre-test survey entry records

Ankara Pilot Study

Pilot study of the method of Turkey Nutrition and Health Survey TNHS – 2017 was conducted in Ankara in February 2017 in order to test the tools that will be used in the survey and to test application.

Pilot study was performed by 15 dietitians appointed by the General Directorate of Public Health, Healthy Nutrition and Active Life Department. A training program was organized by the General Directorate of Public Health prior to the study. Physician of FHC invited the subject to the FHC;

- The physician explained the objective and characteristics of the pilot study. Informed Consent Form was read and explained, and relative individual declared whether he/she will participate in the survey.
- Individuals, who agreed to participate in the survey "TNHS 2017 Questionnaire" were interviewed and answers were recorded electronically.
- Questionnaires were completed and anthropometric measurements were taken with 14 children aged 6-14 years, and 98 adults aged 15 years and over.

Laboratory tests were not performed in Ankara pilot study.

Gaziantep Nutrition and Health Survey (GNHS) 2017 Pilot Study

Problems that occurred in the implementation phase of the survey were determined after Ankara pilot study, and questionnaires were updated. Gaziantep Nutrition and Health Survey (GNHS) 2017 pilot study was conducted on subjects selected for Gaziantep province by Turkish Statistical Institute (ages of 6–14 years: 449 persons, individuals aged 15 years and over: 699 persons) in order to ensure assessment of laboratory tests by updated forms.

By this study, it was aimed to determine nutritional status, nutritional habits and physical activity levels of individuals aged 6–14 years and individuals aged 15 years and over in Gaziantep province, to provide scientific and current data on several nutrition-related diseases with by blood tests, and to develop suggestions based on findings. Also, this survey was organized as an actual pilot study, and Survey Questionnaires, 24-hour dietary recall and laboratory tests and methods of TNHS 2017 were tested. Ankara and Gaziantep pilot studies are presented in Table 1.6

Date	Study Stages		
September 2016 - February 2017	Preparation of questionnaires		
February 8, 2017	Ankara province pilot study training (15 Dietitians) General Directorate of Public Health		
February 8-10, 2017	Pre-test application		
February 13 – February 28, 2017	Ankara pilot study		
February 17, 2017	Field study with dietitians (application of the questionnaire)		
March 1, 2017	Assessment of Ankara pilot study with dietitians (General Directorate of Public Health)		
March 2017	Review of the questionnaire		
April 6, 2017	Assessment of nutritional status by BEBIS program, data entry and preparation of the report		
April 10-14, 2017	Finalization of the questionnaire		
April 10-14, 2017	Preparation of field practice guideline		
April 18-20, 2017	Dietitian training of Gaziantep NHS (22 Dietitians) (Ankara)		
April 27-May 30, 2017	Data collection for Gaziantep NHS		
June 2017- March 2018	Data cleaning and data analysis for Gaziantep NHS		
May 3, 2018	Launch of Gaziantep NHS		

Table 1.6. Stages of Ankara pilot and Gaziantep pilot studies

NHS: Nutrition and Health Survey

4.4. Data Entry

In the study, data collection process was performed online, except for food consumption data. Data accuracy was controlled.

4.4.1. E- survey Software

E- survey software was prepared on an open source software named LimeSurvey. Platform allows the following;

- To code questions by survey type,
- To set question types and preferences,
- To prepare question and response texts,
- To create interfaces that shall allow the entire survey to be completed online,
- To create pin codes for users, and to make authorization settings,
- To save entered questionnaires,
- To produce results in required format after completion of survey,
- To allow creation of the software that shall allow basic statistical analyses to be performed. All of the aforementioned stages are performed for TNHS survey, and all of the aforementioned characteristics were used in the pilot study conducted in Ankara between February 16, 2017 and February 28, 2017.
- Following link was provided to access to the survey; <u>https://anket.thsk.gov.tr/index.php/116347/lang-tr</u>. When survey page opens, a screen that asks the user to enter relative pin code opens (Figure 1.2).

Figure 1.2. TNHS 2017 adult e-survey homepage

TBSA YETİŞKİN
Türkiye Beslenme ve Sağlık Araştırması
2017
SORU FORMU (15 yaş ve üzeri)

Size bir pin kodu verilmişse lütfen aşağıdaki kutuya yazın ve Devam düğmesine tıklayın.

Pin Ko	odu:	
3	Devam Edin	J

- Each interviewer initiates the survey process by entering the pin code provided to him/her. This code ensures that we follow the type of survey, identity of interviewer, location where the survey is completed and date when the survey is completed. Homepage opens after entering the pin code. Brief summary of the survey statement and number of questions are provided in this page.
- In following pages, survey questions and response options that shall be given to those questions shall be available in following pages, i.e. a separate page for each section.
- All of the pages of two e-surveys prepared for adults and children shall be provided in the end of the report.
- Prepared surveys shall be operated on a LimeSurvey server software installed beforehand on a server computer belonging to the Information Technologies Department, General Directorate of Public Health. In this context, entire content of the survey, user authorization data, survey settings and completed surveys are saved in a computer belonging to the General Directorate of Public Health. Responses given in surveys are saved in this server computer immediately. Software may provide specific statistical results, and responses may be downloaded in SPSS or ".csv" formats as raw data in order to allow results to be analyzed by Statistics Consultant in detail.

4.4.2. 24-Hour Dietary Recall Data Entry

- The food consumption data of the individuals was collected by the interviewer by 24-hour dietary recall method face-to-face interview. "**Meals and Foods Photography Catalogue- Measures and Amounts**" was used to determine the portion size of foods, beverages and meals (Rakicioğlu et al, 2016). Energy, macroand micronutrients of food consumption records (dietary recalls) were analysed by using version 7.1 of Nutrition Information Systems Software Package (BEBIS-7.1)" developed for Turkey.
- "24-Hour Dietary Recall" was administered to the individuals in the selected sample (EFSA, 2009; EFSA, 2014b; van Staveren et al., 2006). The types and amounts of meals, foods and beverages consumed during main meals and snacks throughout the day were recorded in detail. The amount of water and/or beverages was recorded and calculated in "household measure" and "mL/gram" by using the book titled "Meals and Foods Photography Catalogue Measures and Amounts" (Rakicioğlu et al, 2016). Amount of food, which is included to the portion of meal consumed in various locations other than home, such as restaurants and institutions etc., was recorded and calculated based on the book titled "Standard Recipes for Mass Catering Services in Institutions" (Merdol Kutluay, 2003).
- After amounts of foods and beverages were calculated in grams, the amounts of energy, macro- and micronutrients intake were determined by using Nutrition Information Systems Software Package (BEBIS – 7.1).

4.5. Data Cleaning

•

The following procedures were carried out in the initial data cleaning stage:

- Data obtained from e-survey software were organized in a format that can be opened in SPSS software. These files are provided under the title of "TNHS_yetiskin.sav" in the DVD attached to the report.
- It has been observed that interviewers discontinued some of questionnaires and did not continue to fill them, and began to fill the questionnaire under a new entry. Therefore, incomplete responses are removed from the list.
- It has been observed that some of the interviewers made new entries on questionnaires, which were completed and saved, after realizing that they are defects on such questionnaires. Therefore, the wrong one among the repeated entries was removed from the list.
- It has been observed that a separate column was created for each option in some questions that were asked to mark a single option. A Perl script was prepared to facilitate statistical analyses of such questions, and relative responses were converted into single column responses.

4.6. Statistical Analysis

Statistical analysis of the data was performed by statician consultants on IBM SPSS Statistics 23 statistical software. Number, percentage and 95% confidence interval were calculated for qualitative data, and mean (\mathbf{x}), standard deviation (SD) and 95% confidence interval (CI) values were calculated for quantitative data.

Descriptive statistics related with demographic information, health status and nutrition were shown in tables and graphics.

Anthropometric measurements of individuals were assessed by gender and age groups. The distributions of measurements were provided according to the internationally recommended cut-off points.

The distribution of physical activity status was provided by age groups and gender.

Distribution of below issues is provided in the characteristics and habits of nutrition section; persons, who buy foods at home, and issues that are considered while shopping for food, persons, who prepare foods and nutrients, cooking methods applied by meal type, production of homemade meals in the household, habits of adding salt in meals and vegetarians.

Below issues are provided in food supplements section; use of food supplements, food consumption and its frequency, and Frequency of food consumption of individuals. Also, complementary statistics are provided on energy and other nutrient intakes of individuals by age and gender, and descriptive statistics related with daily consumption of food groups.

4.6.1. Calculation of the Meeting Daily Recommended Intakes

Status of meeting daily recommended intakes of vitamins and minerals (%) is obtained by making a comparison with EFSA Dietary Reference Values (DRV). Dietary Reference Intake Values (IOM: DRI and EFSA: DRV) cover Estimated Average Requirement (IOM: EAR and EFSA: AR), Recommended Dietary Allowance (IOM: RDA and EFSA: PRI), Adequate Intake (IOM and EFSA: AI) and Tolerable Upper Intake Level (IOM and EFSA: UL) (TÜBER, 2015; IOM, 2001; EFSA, 2018).

It is recommended to use EAR or AR values in determining adequency of the energy and nutrient intake of the population (IOM, 2002/2005). RDA or PRI are amounts targeted for daily energy and nutrient intakes of the individuals. In the life cycle of health of the individuals in the population, RDA and PRI meet approximately 97.5% (97%-98%) of the requirement of the individuals in the population by gender, and EAR and AR meet 50% of the requirement of the individuals in the population.

In this study, micronutrient intakes of individuals by age and gender were assessed by the amount of AR (average requirement) and AI (adequate intake) out of EFSA DRV values (EFSA, 2017; EFSA 2018, https://www.efsa.europa.eu/en/interactive-pages/drvs) (Table 1.7).

Micronutrients	Age (Years) Gender	DRV						
		AI	AR	PRI	UL			
Vitamin A (mcgRE)	M: 15-17; ≥18	-	580;570	750;750	2600;3000			
	F: 15-17	-	490	650	2600			
	Premenopause: 18-59	-	490	650	3000			
	Postmenopause: ≥40	-	490	650	-			
Vitamin E (mg αaocopherol)	M: 15-17; ≥18	13;13	-	-	260;300			
	F: 15-17; ≥18	11;11	-	-	260;300			
Vitamin D (mcg)	M, F: 15-17	15	-	-	100			
	≥18	15	-	-	100			
Vitamin B ₁ (mg)	M, F: 15-17	-	0.3 mg/1000kkal	0.4 mg/1000 kcal	-			
	M, F: ≥18	-	0.3 0.4 mg/100 mg/1000kcal kcal		-			
Vitamin B ₂ (mg)	M, F: 15-17	-	1.4	1.6	-			
•	M, F: ≥18	_	1.3	16	_			
Niacin (mg)	M, F: 15-17	-	5.5 mgNE/1000kcal	6.6 mgNE/1000kcal	8 mg nicotinio acid			
	M, F: ≥18	-	5.5mgNE/ 1000kcal	6.6mgNE/ 1000kcal	900 mg/day nicotinamide			
Vitamin B ₆ (mg)	M: 15-17; ≥18	-	1.5;1.5	1.7;1.7	20;25			
	F: 15-17; ≥18	-	1.3;1.3	1.6;1.6	20;25			
Folate (mcg)	M, F: 15-17	-	250	330	800			
	M, F: ≥18	-	250	330	1000			
Vitamin B ₁₂ (mcg)	M, F: 15-17	4	-	-	-			
	M, F: ≥18	4	-	-	-			
Vitamin C (mg)	M: 15-17; ≥18	-	85;90	100;110	-			
	F: 15-17; ≥18	-	75;80	90;95	-			
Calcium (mg)	M, F: 11-17	-	960	1150	-			
Vitamin C (mg) Calcium (mg)	M, F: 18-24	-	860	1000	2500			
	M, F: ≥25	-	750	950	2500			
Magnesium (mg)	M: 10-17; ≥18	300	-	-	250			
	F: 10-17; ≥18	250	-	-	250			
Iron (mg)	M: 12-17; ≥18	-	8;6	11;11	-			
	F: 12-17	-	7	13	-			
	Premenopause: ≥18	-	7	16	-			
	Post-menopause: ≥40	-	6	11	-			
Zinc (mg)	M: 15-17; ≥18	-	11;12.7	14;16.3	25			
	F: 15-17; ≥18	-	9.9; 8.9	11.9; 11	22;25			
Potassium (mg)	M, F: 11-17	3500	-	-	-			
	M, F: ≥18	3500	-	-	-			
Phosphorus (mg)	11-17	640	-	-	-			
	≥18	550	-	-	-			
Copper (mg)	M: 11-17; ≥18	1.1;1.6	-	-	4;5			
	F: 11-17; ≥18	1.1;1.3	-	-	4;5			
lodine (mcg)	M, F: 15-17	130	-	-	500			
,	M, F: ≥18	150	-	-	600			

Table 1.7. EFSA DRV values: Recommended daily AR (adequate requirement) and AI (adequate intake)

4.6.2. Application and Response Status of the Questionnaire

TNHS 2017 questionnaire response rates are given in Table 1.8.

Application status of	Male	S	Femal	es	Overa	all
questionnaire	N	%	Ν	%	Ν	%
Questionnaire completed	5824	53.0	7162	62.7	12986	57.9
No household member was at home during the survey	509	4.6	351	3.1	860	3.8
Refused	2915	26.5	2564	22.4	5479	24.4
Interview was interrupted	76	0.7	89	0.8	165	0.7
No one lives in the residence, address / address is not a residential	339	3.1	267	2.3	606	2.8
Residence demolished	7	0.1	7	0.1	14	0.1
Address not found	349	3.2	288	2.5	637	2.6
The questionnaire could not completed in because the person did not have enough knowledge / skills.	68	0.6	60	0.5	128	0.6
Other (please specify)	897	8.2	642	5.6	1539	6.9
TOTAL	10984	100	11430	100	22414	100

Table 1.8. Application status of the questionnaire during the survey and distribution of females and males who were reached, TBSA 2017

Out of total 53.0% of males and 62.7% of females, participated in the survey, and the questionnaires were filled. The percentage of refused subjects were 26.5% for males, 22.4% for females, and 24.4% overall (Table 1.8).

Table 1.9. Distribution of non-response status of the survey by gender and age groups %, TNHS 2017
--

	Males	Females	Overall
15-18	45.8	39.5	42.8
19-64	46.5	34.5	40.5
65 and over	36.9	40.3	38.9
TOTAL	45.3	35.8	40.4

In the survey, non-response rates (drop-out) by gender and age group are 45.3% for males, and 35.8% for females. In the age group of 19-64 years, non-response rates are 46.5% for males, and 34.5% for females. (Table 1.9).

Table 1.10. Distribution of non-response rates of the survey by NUTS regions %, TNHS 2017

	Males	Females	Overall
Istanbul	59.4	49.4	54.4
West Marmara	31.4	27.9	29.7
Aegean	37.7	28.1	32.8
Eastern Marmara	43.9	33.1	38.5
Western Anatolia	49.1	39.6	44.1
Mediterranean	42.4	30.6	36.2
Central Anatolia	41.6	35.8	38.5
Western Black Sea	38.4	33.3	35.8
Eastern Black Sea	49.3	39.2	43.9
Northeastern Anatolia	47.1	37.1	42.1
Central Eastern Anatolia	34.5	25.9	30.0
Southeastern Anatolia	47.0	35.0	41.0
TOTAL	45.3	35.8	40.4

In the survey, in consideration of the distribution of non-response rates by NUTS areas (The Nomenclature of Territorial Units for Statistics), highest non-response rates were observed in Istanbul (54.4%) and Western Anatolia (44.1%), while the lowest rate was observed in Western Marmara (29.7%) (Table 1.10).

4.7. Ethical Issues

Ethics Committee approval of the survey was obtained from Dr.Zekai Tahir Burak Women Health and Research Hospital, Ministry of Health, Republic of Turkey.

In the data collection stage of the survey, interviewer explained the objective and characteristics of the survey to subjects. "Informed Consent Form" was read and explained, and individuals declared whether they wish to participate to the survey or not. The individuals, who participated to the survey, filed the form, and signed relative paperwork.

CHAPTER 2

NUTRITIONAL HABITS AND STATUS



1. INTRODUCTION

2. NUTRITIONAL AND HEALTH STATUS IN TURKEY

- 2.1. TNHS-2010: Nutritional Status
- 2.2. Food Consumption Status, Intakes of Energy and Nutrients
- 2.3. Current Nutritional Problems in Turkey
- 2.4. Prevention of Nutritional Problems

3. FINDINGS

- 3.1. Anthropometric Measurements
- **3.2. Physical Activity Status**
- 3.3. Nutritional Habits of Individuals
- 3.4. Information on Women Who Have Experienced Pregnancy and Lactating
- **3.5. Frequency of Food Consumption**
- 3.6. Food Security
- 3.7. Use of Food Supplements
- 3.8. 24-Hour Dietary Recall

4. CONCLUSIONS and RECOMMENDATIONS

- 4.1. Conclusions
- 4.2. Recommendations
- **5. REFERENCES**



1. INTRODUCTION

Nutrition is essential for a healthy life, basic human need and basic human right. An adequate and balanced diet is essential for processes in the life cycle such as growth and development, being healthy, being active and maintaining life.

It is known that today's nutritional well-being is under the influence of many factors such as globalization, free trade, economic development, food production and distribution conditions, cultural factors, changes in the food industry and technology, changes in individual preferences, urbanization, climate change, and transition in nutrition. These changes affect the dietary, nutritional and health status in many countries and cause significant changes in the nutritional habits and patterns of countries and individuals. Determining the nutritional and health status and analyzing the effects of these changes on human is the first important step in the development of food and nutrition policies at the national level. For this reason, food and nutrition surveys are the main tool in understanding changes in diet and nutritional status.

In this direction, "*National Nutrition and Health Surveys*" contribute to the determination and monitoring of the nutritional and health status in the country, determination of priorities and revealing regional inequalities, researching of solutions, and determination of food and nutrition policies. In order to establish national food and nutrition plans and policies, it is necessary to have data on nutrition, food consumption and health related to the country in question. For this purpose, it is very important for every country to conduct "Nutrition, Health and Food Consumption Survey" regularly. Food consumption survey data constitute the basis of risk assessment studies (EFSA, 2010).

2. NUTRITIONAL AND HEALTH STATUS IN TURKEY

2.1. TNHS-2010: Nutritional Status

Developing, implementing, monitoring and evaluating effective policies to identify nutritional and health problems, their causes, sizes and changes over the years, find solutions to solve these problems, and improve nutritional status require an effective and continuous information access system. It is recommended that national nutrition, health and food consumption surveys should be conducted by various international organizations at minimum 5-10 years intervals to determine the nutritional and health status. It is known that there are nutrition surveys conducted in Turkey at the provincial and regional levels in different age and gender groups. However, the first comprehensive *"Food Consumption and Health Survey"* reflecting entire Turkey was conducted in 1974, and general changes in food consumption that have occurred over the years were evaluated with the study conducted in three provinces in 1984. A comprehensive study reflecting the situation across the country and according to the settlements was carried out exactly 36 years later with *"Turkey Nutrition and Health Survey (TNHS) 2010"* in collaboration with the Ministry of Health, Hacettepe University, Faculty of Health Sciences, Department of Nutrition and Dietetics, Ankara Numune Training and Research Hospital, in order to assess the food consumption trends, physical activity status, anthropometric findings.

2.2. Food Consumption Status, Intakes of Energy and Nutrients

According to TNHS-2010 data, the mean daily energy intake in the age group of 15-18 years was 2288 ±940 kcal/day for males and 1700±687 kcal/day for females, respectively (TNHS, 2010). The intakes of iron, zinc and calcium were found below the recommended daily intakes. The consumption of meat, milk and dairy products of individuals were low. The consumption amounts of fresh vegetables and fruits were in the recommended levels (TÜBER, 2015).

Mean energy intake in adults (aged 19-64 years) was 2162 ±820 kcal/day for males and 1617 ±647 kcal/day for females. In total, 39.5% of daily energy was obtained from bread and cereals. The mean protein intake for males and females was 70.7 g/day and 51.7 g/day, respectively. The mean percentages of energy coming from carbohydrate, protein and fat were 51.8%, 13.4% and 34.4%, respectively. The mean daily intake of dietary fiber was 21.8 grams (TNHS, 2010). According to the data of *"Nutrition, Health and Food Consumption Survey in Turkey, 1974"* the mean percentages of energy coming from carbohydrate, protein and fat were 64%, 12% and 24%, respectively, while they were 63%, 12% and 24%, respectively, according to the data of *"Food Consumption and Nutrition Survey, 1984"*. As it is seen, while there was no significant change between 1974 and 1984, a significant change was observed in 2010, especially the percentage of energy from fat has increased (Köksal, 1974; Tönük et al. 1984; TNHS, 2010). TÜBER (2015) recommends the percentage of energy coming from carbohydrate as 45-60%, from protein as 10-20%, and from fat as 20-35%.

According to TNHS-2010 data, the individuals in the age group of 19-64 years consumed an average 69 g of meat and meat products, 24 g of eggs, 9 g of legumes, 7 g of seeds, 189 g of milk and dairy products, 548 g of total vegetables and fruits, 277 g of bread and cereals, 33 g of total fats and oils and 33 g of sugar and sweets per capita per day (TNHS, 2010). It was determined that the mean consumption of vegetables and fruits was above the recommended level, and the consumption amount of milk and dairy products was inadequate (TÜBER, 2015).

In elderly individuals (aged 65 years and over), consumption of meat and meat products, eggs, milk and dairy products was less than the recommended levels of daily intake. It was determined that the mean daily recommended intake of many vitamins and minerals, especially vitamin B₁₂, B₆, vitamin E, calcium, magnesium and zinc, were inadequate (below EAR and AI) (TÜBER, 2015).

According to the results of the TNHS-2010 study, total vitamin and mineral deficiencies were determined in all age groups. Calcium (70.2%), vitamin B_1 (55.4%), zinc (44.9%), vitamin C (35.4%), vitamin B_6 (33.1%), vitamin A (31.6%), vitamin B_2 (31.1%) and folate (26.1%) deficiencies were common problems. Dietary intake of vitamin D was less than the recommended daily intake in 99.1% of individuals (TÜBER, 2015). The intake of calcium and the intake of vitamin B_{12} were below the recommended daily average intake (EAR/AR or AI) in 72.4% and 86.4% of elderly individuals (\geq 65 years), respectively. According to TNHS-2010 data, 15.2% of the elderly individuals used calcium supplement (M: 5.0%; F: 22.9%), 13.0% of them used B_{12} supplement (M: 7.4%; F: 17.4%) and 8.8% of them used vitamin D supplement (M: %1.9; F: 14.1%) (TNHS, 2010). The main source of vitamin D is sunlight. Benefiting from the sunlight is of great importance in meeting the vitamin D requirement. Another important source is enriched foods.

2.3. Current Nutritional Problems in Turkey

Stunting, Underweight, Overweight and Obesity Among Children Aged 15-18 Years and Over

Children aged 15-18 years: Among children in the age group of 15-18 years, the prevalence of those whose height-for-age was very short (stunted; height-for-age: <-2SD) was 4.6% (Boys: 5.1%; girls: 4.2%). The frequency of children who were severely underweight (BMI: <-2SD) according to Body Mass Index was 2.6% (Boys: 1.5%; girls: 3.8%), and the frequency of those who were underweight) (BMI: ≥-2SD - <-1SD) was 15.6% (Boys: 16.6%; girls: 12.0%) (TNHS, 2010).

The prevalence of obesity (BMI: \geq 2SD) was 8.3% (Boys: 8.3%; girls: 8.2) %, and the prevalence of overweight (BMI: \geq 1SD-<2SD) was 13.3% (Boys: 13.5%; girls: 13.0%) (TNHS, 2010).

Chronic Energy Deficiency, Overweight and Obesity Among Adults

Chronic Energy Deficiency: In order to identify chronic energy deficiency, the Body Mass Index (BMI) cut-off point of <18.5 kg/m² is considered as the criterion in adults. Chronic energy deficiency in adults does not appear to be a major problem in Turkey. According to the results of TNHS-2010, the prevalence of chronic nutritional deficiency was 2.2% (TNHS, 2010).

Overweight and Obesity: In the TURDEP-II study, the prevalence of obesity in Turkey in 2009 was found as 31.2% (Satman, et al. 2013).

According to TNHS-2010 data, the prevalence of obesity (BMI: \geq 30 kg/m²) in age group 19 years and over was 30.3% (males: 20.5%; females: 41.0%), and the prevalence of overweight (pre-obesity) (BMI: 25.0-29.9 kg/m²) was 34.6% (males: 39.1%; females: 29.7%). The prevalence of morbid obesity (BMI: \geq 40 kg/m²) was 2.9% (males: 0.7%, females: 5.3%) (TNHS, 2010).

Among individuals in the age group of 19 years and over, the mean BMI was found as 26.4 ± 4.5 kg/m² for males and 28.9 ± 6.4 kg/m² for females (TNHS, 2010). Mean BMI values in both gender groups were at the pre-obesity (BMI: 25.0-29.9 kg/m²) category according to the WHO classification.

According to the data of "Nutrition, Health and Food Consumption Survey in Turkey, 1974", BMI values were calculated as 22.9 kg/m² for males and 24.9 kg/m² for females in Turkey, using the mean values of body weight and height. The increase in height over 36 years in males and females is 3 cm for males and 4 cm for females. The increase in body weight is 12.5 kg for both males and females.

According to the data of "Household Health - Prevalence of Noncommunicable Diseases Survey in Turkey, 2017" (STEPS, 2017) conducted in 2017, the frequency of individuals aged 15 years and over who are overweight (BMI: 25.0-29.9 kg/m²) was 35.6% (males: 41.2%; females: 30.1%), and the frequency of those who are obese was 28.8% (males: 21.6%; females: 35.9%). The mean BMI was found to be 26.4 ±4.5 kg/m² for males and 28.9 ±6.4 kg/m² for females.

Waist Circumference (WC), Waist-hip Ratio (WHR): In the TNHS-2010 study, the mean waist circumference was found as 93.1 cm (94-102 cm: 23.9%; > 102 cm: 23.9%) for males and 90.1 cm (80-88 cm: 19.5%; >80 cm: 53.9%) for females, and the mean waist-hip ratio was found as 0.91 (>0.90: 54.2%) for males and 0.84 (>0.85: 40.4%) for females (TNHS, 2010).

According to STEPS-2017 data, the mean waist circumference was found as 91.3 cm (normal: <94 cm) for males and 87.9 cm (normal: <80 cm) for females, and the mean waist-hip ratio was found as 0.93 (normal: <0.95) for males and 0.86 (normal: 0.80) for females (STEPS-2017).

Waist-height ratio (WHR): When the waist-height ratio is above 0.5 and below 0.4, it creates a risk and requires taking action (Ashwell et al. 2005). In TNHS-2010, the waist-height ratio was 0.55 for males and 0.58 for females (TNHS, 2010).

Physical Activity Level: According to TNHS-2010 data, 52.2% of males and 54.1% of females across Turkey had a sedentary/light activity level. Of all individuals aged 12 years and over, 44.2% were watching television for 2-4 hours, 16.2% for 4-6 hours, 7.4% for 6 and more hours on weekdays; 38.3% for 2-4 hours, 16.8% for 4-6 hours and 8.1% for 6 and more hours on weekends (TNHS, 2010). The mean value of physical activity level (PAL) was 1.81 for males and 1.74 for females in the age group of 20-30 years, 1.87 for males and 1.79 for females in the age group of 31-50 years, 1.75 for males and 1.74 for females in the age group of 51-64 years, 1.69 for males and 1.64 for females in the age group of 65-74 years, 1.55 for males and 1.53 for females in the age group of 75 years and over (TNHS, 2010).

In the STEPS-2017 study, the frequency of those who had moderate-intense activity of <150minutes/day was 43.6% among all individuals (males: 37.4%; females: 61.1%) (STEPS, 2017).

Noncommunicable Chronic Diseases-NCD (Diet-Related Chronic Diseases)

The umbrella of NCDs covers cardiovascular diseases (48% of NCDs), cancers (21%), chronic respiratory diseases (12%) and diabetes (3.5%), etc..

Cardiovascular Disease (CVD): NCDs is estimated to be responsible for 86% of total deaths in Turkey; CVD are responsible for the 47% of these deaths (WHO, 2014). Two most common causes of death by disease in Turkey are ischaemic heart disease (22%) and cerebrovascular diseases (15%) (Jakab, et al. 2014). Cardiovascular diseases are the leading cause of all deaths in our country with 47.73%.

Hypertension: The prevalence of hypertension is 23.7%. The prevalence of hypertension is 21.1% for males and 26.1% for females. The prevalence of hypertension increases with age in both males and females. While the prevalence of hypertension is 3% in the age group of 15-24 years, it was increased to 14% in the age group of 35-44 years. Approximately one out of every two individuals in the age group of 55-64 years is hypertensive (53%). The prevalence of hypertension among the geriatric population (\geq 65 years) was 68% (59% for males, 76% for females) (MoH, General Directorate of Public Health, 2013).

According to the STEPS-2017 study, the prevalence of hypertension was 26.1%. The prevalence of hypertension was 29.3% for males and 27.7% for females. Salt consumption amount calculated in the study was 9.9 grams. This amount was 11 grams for males and 8.7 grams for females (STEPS 2017).

Cancers: According to the data of TURKSTAT Causes of Death Statistics (2009), cancer was the second most common cause of death with a prevalence of 21.1% (males: 24.9%, females: 16.5%).

Type II Diabetes: The prevalence of diabetes is increasing in Turkey (Jakab et al. 2014). According to the results of the "Household Survey 2003" conducted by the Ministry of Health, prevalence of diabetes based on self-report was found as 4.75% (5.75% for females; 3.42% for males) for individuals aged 18 years and over. According to the analyses performed within the scope of "National Burden of Disease Study", the prevalence of diabetes in Turkey was around 5% (MoH, 2004). According to the data of "Turkey Adult Heart Disease and Risk Factors Study (TEKHARF)" published in 2009, the prevalence of diabetes among population over 35 years old in Turkey was estimated as 11.3%, and it was calculated that this ratio corresponds to 3.3 million people (Onat, 2009).

According to the results of the "Turkey Diabetes Epidemiology Study" (TURDEP-I) conducted between 1997 and 1998, the prevalence of type 2 diabetes in Turkey was 7.2%, and prevalence of impaired glucose tolerance (IGT) was 6.7% (Satman et al., 2002). In the TURDEP-II study, carried out in 2009, 26 499 individuals aged 20 years and over were surveyed across the country, and it was found that the prevalence of type 2 diabetes increased significantly (prevalence of diabetes: 16.5%; standardized by age: 13.7%) and was higher in females (males: 16.0%; females: 17.2%). The prevalence of pre-diabetes was 28.7% (Satman et al. 2013). Diabetes was ranked 8th on the list of the most common causes of death in Turkey (with 2.2%) (MOH, 2013).

Metabolic syndrome: Metabolic syndrome was observed in nearly one in three people in Turkey. Females (41.1%) had higher risk than males (28.8%) (WHO, 2013a).

NCDs is estimated to account for 86% of total deaths in Turkey (WHO, 2014). The probability of mortality between the ages 30 years and 70 years from the 4 most common behavioral risk factors for NCDs was 18%. In total, 42% of males and 13% of females are currently smokers (overall: 27%). In the STEPS 2017 study, the prevalence of tobacco use was found as 43.6% for males, 19.7% for females and 31.5% in all individuals (STEPS, 2017). The consumption of alcohol per capita in 2015 in Turkey was 1.4 liters (WHO, 2013b).

"Household Health Survey - Prevalence of Noncommunicable Diseases Risk Factors in Turkey" was conducted in 2017 in Turkey using the approach of WHO Surveillance of Chronic Diseases (STEPwise). The main objectives of the study were: to determine the prevalence of the most common behavioural and biological risk factors for noncommunicable diseases in the general population aged 15 years and over; and to determine differences in the prevalence of risk factors between the genders, across five age groups and across 12 regions described by level-1 Nomenclature of Territorial Units for Statistics. The risk conditions were grouped into behavioural factors understood as modifiable (tobacco use, harmful alcohol consumption, low consumption of fruits and vegetables, and physical inactivity etc.) and biological factors considered controllable (hypertension, overweight and obesity, raised blood sugar and increased total cholesterol etc.). The results obtained in the study was determined the current prevalence of NCD risk factors among the Turkish population. A total of 6,053 people participated in the study (STEPS, 2017).

In the STEPS study, the prevalence of raised blood pressure among individuals aged 15 years and over was 27.7%, increased total cholesterol (\geq 240 mg/dL) was 10.1%, low HDL cholesterol (Males: <40 mg/dL and Females: <50 mg/dL) was 52.3%, high triglyceride level more than \geq 150 mg/dL was 25.6% and triglyceride level more than \geq 180 mg/dL was 16.7%, diabetes mellitus was 9.1%, fasting blood glucose (\geq 126 mg/dL) was 11.1%, impaired fasting glucose (110-126 mg/mL) was 7.9%, high HbA1c (\geq 6.5%) was 12.0%, and the total of high HbA1c: \geq 6.5 and fasting blood glucose: \geq 120 mg/dL was 17.3% (STEPS, 2017).

According to the results of Prevalence of Chronic Diseases and Risk Factors Study in Turkey (2013) carried out in 2013 by the General Directorate of Public Health of Ministry of Health, the prevalence in the age group of 15 years and over were determined as 29.6% for increased total cholesterol, 28.4% for high LDL cholesterol level, 52.0% for low HDL cholesterol level, 16.0% for high triglyceride level, 11.1% for diabetes, 24.0% for hypertension and 23.4% for metabolic syndrome (Table 2.1.).

Table 2.1. Prevalence of Chronic Diseases and Risk Factors Study in Turkey (2013)

S years Ageo 1:27; F:32) 32.51 1:26.9; F:29.6) 27.21 5.274 52.74	5% 37 2% 32	ed >30 years .6% .5% .4%
1:26.9; F:29.6) 27.2	2% 32	.5%
52.7	7% 53	.4%
1:21; F:12) 17.99	9% 19	.6%
1:10.8; F:11.4) 12.3	3%	
21; F:26) 26%	% >6	5 yrs: 26%
		.2% :19.9, F:44.6)
	, ,	1:15; F:31.8) 26.2% 32

M: Males F: Females

Common Nutritional and Health Problems Related to Vitamin and Mineral Deficiencies

Based on the TNHS-2010 food consumption data, it was observed that especially vitamin and mineral intakes were significantly inadequate. Inadequate intake of vitamins and minerals were the main causes of below mentioned problems. In addition, obesity and obesity-related chronic diseases were prevalent/common due to unbalanced nutrition and sedentary life-style (Pekcan, 2016a). These problems and their implications are summarized below.

Iron deficiency anemia, vitamin B12 deficiency, folate deficiency: Children aged 0-5 years, school-age children and adolescents, pregnant and lactating women are important risk groups for anemia in Turkey. Within the scope of the monitoring and evaluation study of "Iron-Like Turkey Program of the Ministry of Health", a study was carried out by Gazi University in 2011 to determine hemoglobin levels for children aged 6-17 months and their mothers; and it was found that the hemoglobin level of 24.9% for the mothers was below 12 g/dL. It was reported that 48.3% of these mothers were diagnosed with anemia before the study, 54.9% of them had iron deficiency anemia, and the anemia of the mothers who said that they had anemia before was mostly observed during pregnancy (71.8%). 74.7% of the mothers reported that they used iron supplements during pregnancy. Ferritin level was found to be <12 ng/mL in 43.7% of the mothers. In addition, it was declared by the mothers that 4.6% of them were diagnosed with vitamin B₁₂ deficiency and 2.3% were diagnosed with folic acid deficiency during pregnancy (Gazi University/MoH, 2011).

A total of 2 187 subjects were screened by Memişoğulları et al. (2012), and 565 of them (overall: 25.8%; males: 18.2%; females: 30.0%) were found to have anemia (males: Hb <13 g/dL; females: Hb <12 g/dL). Iron deficiency anemia (serum iron level: <60 μ g/dL and serum ferritin level: 20-40 ng/mL; and ferritin level <20 ng/mL) was determined in 26.7% of subjects. 46.9% of the anemic subjects had microcytic anemia (MCV: <80 fL), 52.6% had normocytic anemia (MCV: 80-95 fL) and 0.5% had macrocytic anemia (MCV: >95 fL). Prevalence of vitamin B₁₂ deficiency (B₁₂: <200 pg/mL) was 29.3% and prevalence of folic acid deficiency (<2 ng/mL) was 2.2%.

Karabulut et al. (2015) determined that that prevalences among females aged 18-45 years were 24.9% for anemia (Hb <12 g/dL), 46.1% for low ferritin level (<12 mcg/L), 21.6% for low vitamin B_{12} level (<200 pg/mL), and 3.4% for low folate level (<4 ng/mL). It was reported that 11.7% females had polymenorrhea, 24.8% had hpermenorrhea, 3.4% had pica, and 22% had meat consumption less than 2-3 servings per month.

Yıldırım et al. (2015) found that the prevalences in 827 elderly individuals were 7.1% for iron deficiency, 64.2% for vitamin B_{12} deficiency and 10.9% for folic acid deficiency. Iron deficiency (iron level: <60 µg/dL and

ferritin level <12 ng/mL) anemia was 2.8%, Vitamin B₁₂ deficiency (<200 pg/mL) anemia was 4.4% and folic acid deficiency (<2.6 ng/mL) anemia was 1.0%. The prevalence of anemia (males: Hb <13 g/dL; females: Hb <12 g/dL) was reported as 7.3%.

Folate deficiency: It is a common problem in pregnant women. Folate deficiency can cause congenital disorders, especially neural tube disorders-NTD, megaloblastic anemia and some complications during pregnancy (miscarriage, hemorrhage, pre-eclampsia, intrauterine growth retardation (restriction), and placenta abruption). Low folate level can also cause hyperhomocysteinemia, blood coagulation and venous thrombosis. The consequence is an increased risk of cardiovascular diseases (EFSA, 2014a: Steegers-Theunissen, 2014).

Iodine deficiency disorders: Iodine deficiency is an important public health problem. Severe iodine deficiency in pregnant women increases the risk of mental retardation, affects brain development and damages intellectual development, and causes goiter and hypothyroidism. Iodine requirement increases during pregnancy and lactation period. It is recommended that the daily requirement of 150 mcg for adult women of childbearing age should be 250 mcg for pregnant and lactating women and a median urinary iodine excretion should be 150 mcg/L for pregnant women (IOM, 2001). Many studies have shown that inadequate iodine in pregnant women is at significant levels. Although a program was implemented in the country, it was determined that the median urinary iodine excretion of pregnant women was inadequate, especially in the 2nd (4-6 months) and 3rd (7-9 months) trimesters of pregnancy (Kut et al. 2010; Kurtoğlu et al 2004; Eğri et al. 2010; Oguz Kutlu et al. 2012; Anaforoğlu et al. 2016; Oral et al. 2015).

Salt intake is also restricted in pregnant women for health reasons. For this reason, it is recommended to give 100-200 mcg of iodine supplement per day to pregnant women in addition to the use of iodized salt. "Prevention of lodine Deficiency Disorders and Salt Iodization Program (1994)" is being carried out in our country. In a study conducted in 2008, it was found that 84.4% of households used iodized salt. Today, the necessity of reducing the daily salt consumption to less than 5 grams and the use of iodized salt should be emphasized in the nutrition trainings that are given continuously. According to the data of Turkey Demographic and Health Survey 2008, the frequency of iodized salt usage in households was found as 85.3% (Urban: 90%; Rural: 72%) (TNHS, 2008).

Vitamin D deficiency: Vitamin D deficiency, together with calcium deficiency, causes rickets in children and bone loss, osteoporosis and osteomalacia in adults as a result of decreased bone mineral density. A vitamin D supplementation program is being implemented as a national policy for infants and pregnant women in Turkey.

Based on TURDEP-II data, Satman et al. (2010) determined the prevalence of vitamin D deficiency in 9,560 adults (Mean age: 45.3 ± 15.4 years; females 64%; 540 urban and rural, January-June 2010) as 93% (females aged <40 years: 96.2%; males aged \geq 65 years: 91.9%) when assessed according to the intersection of 25(OH) D level \leq 20 ng/mL (\leq 50 nmol/L). It was determined that vitamin D deficiency is higher in females compared to males (Satman et al., 2010).

2.4. Prevention of Nutritional Problems

In order to prevent nutritional problems, basically four approaches are recommended. These are;

a. Diet improvement, nutrition education: In order to improve the nutritional status of the population, it is necessary to raise awareness and provide nutrition education continuously to ensure adequate and balanced nutrition of the population. For this purpose, "Turkey Dietary Guidelines (TÜBER)-2015" was prepared based on TNHS-2010 data in coordination with Ministry of Health, according to age groups, genders, physical activity levels and physiological status. Dietary guidelines also need to be updated based on the results of national nutrition and health surveys carried out.

b. Food (dietary) supplements: Food supplement means a product with specified daily intake dosage prepared from concentrates or extracts of nutrients such as vitamins, minerals, proteins, carbohydrates, fiber, fatty acids, amino acids and/or other substances of plant, herbal and animal origin with a nutritional or physiological effect, bioactive substances and similar substances, prepared alone or in the form of capsules, tablets, lozenges, disposable powder packages, liquid ampoules, dropper bottles and other similar liquid or powder forms in order to supplement normal nutrition. Food supplementation programs can also be implemented to risk groups as a national policy. For example, in Turkey, infants are given vitamin D and iron supplement, and pregnant women are given vitamin D supplement.

c. Fortification of foods: Increasing the nutrient intake in the target group by increasing the nutrient/nutrients content of foods is a public health practice that aims at correcting or preventing nutrient deficiency in the population or in a specific risk group. For example: Enriching table salt with iodine, enriching bread with iron and folic acid, adding vitamin D to milk.

d. Improving and development of healthcare: Such as prevention of viral, bacterial, parasitic diseases. Many programs are carried out to prevent nutritional problems in Turkey. For example: Healthy Nutrition and Active Life Program in Turkey, Reduction of Excessive Salt Consumption in Turkey, etc.

The dietary pattern of the population may change over the years and these changes cause nutritional problems and affect public health. For this reason, regular national nutrition and health surveys (usually every 5 years is recommended) are required for the establishment, effective monitoring and assessment of food and nutrition policies and establishment of a continuous national food, nutrition and health information system.

In order to reach the expected quality of life in line with the changes in the world, it is necessary to raise the nutritional awareness in all individuals and the population, and to transform a healthy diet into a lifestyle. A healthy dietary pattern based on dietary diversity for optimal health provides adequate and balanced amounts of both energy and nutrients.

3. FINDINGS

All tables show weighted percentages and unweighted numbers. See "Chapter 3 Health Status and Biochemical Findings" for the health-related findings of the survey.

For the comparison of consumption amounts of food groups and nutrients and regional analyzes of TNHS 2010 and TNHS 2017, see Appendix 8.

3.1. Anthropometric Measurements

Information on the thoughts/perceptions of individuals aged 15 years and over, who participated in TNHS 2017, about their body image and appearance and their attempts to lose body weight are given in Table 2.2.

In total, 11.3% of males perceived themselves as underweight, 52.7% as having normal body weight, and 36% as overweight and obese. The same frequencies for females were 7.7%, 41.7% and 50.7%, respectively. Overall, 9.5% of all participants perceived themselves as underweight, 47.4% as normal, 43.1% as overweight and obese. 7.2% of males, 11.1% of females and 9.1% of all individuals reported that they were on diet or done another practice to lose body weight.

Mean and Standard Deviation Values of Body Weight, Height and Body Mass Index for Males

The mean and standard deviation values of body weight, height and body mass index of males in the age group of 15 years and over, who participated in the survey, are given in Table 2.3.

Mean body weights in males by age groups were 79.7±15.65 kg for age of 15 years and over; 80.9±15.18 kg for age of 19 years and over; 81.2±15.34 kg for ages of 19 to 64 years, and 78.8±13.50 kg for age of 65 years and over, respectively. Mean heights in males by age groups were 172.0±7.61 cm for age of 15 years and over, 172.0±7.61 cm for age of 19 year and over, 172.6±7.46 kg/m² for ages of 19 to 64 years, 166.0±6.69 cm for age of 65 years and over, respectively. Mean Body Mass Index was 26.9±5.29 kg/m² for age of 15 years and over, 27.4±5.15 kg/m² for age of 19 years and over, 27.3±5.21 kg/m² for ages of 19 to 64 years, 28.4±4.52 kg/m² for age of 65 years and over, respectively.

Table 2.2. Distribution of thoughts/perceptions about body image and appearance and dieting practice to lose weight among individuals aged 15 years and over, by gender, TNHS 2017

		Males			Females			Overall		
	N	%	95%CI	N	%	95%CI	N	%	95%CI	
Thought/perception about body image and appearance										
Underweight	569	11.3	10.2-12.5	448	7.7	6.8-8.6	1017	9.5	8.8-10.3	
Normal weight	3054	52.7	51.0-54.4	2785	41.7	40.1-43.3	5839	47.4	46.2-48.5	
Overweight	2003	32.5	31.0-34.1	2931	42.6	41.0-44.2	4934	37.4	36.3-38.5	
Obese	206	3.5	2.9-4.1	586	8.1	7.3-8.9	792	5.7	5.2-6.2	
OVERALL	5832	100.0	100.0	6750	100.0	100.0	12582	100.0	100.0	
Dieting or other practice to lose weight										
No, my weight is just fine	2832	48.4	46.6-50.1	2446	36.2	34.7-38.7	5278	42.5	41.3-43.6	
No, I need to lose some weight	2070	33.9	32.3-35.5	3205	45.9	44.3-47.5	5275	39.7	38.6-40.9	
No, I need to gain weight	506	10.6	9.5-11.7	376	6.8	6.0-7.8	882	8.7	8.1-9.5	
Yes, I do practice to lose weight	424	7.2	6.4-8.1	723	11.1	10.1-12.1	1147	9.1	8.4-9.8	
OVERALL	5832	100.0	100.0	6750	100.0	100.0	12582	100.0	100.0	

A ()			Body Weigh	t (kg)	Height (cm)				Body Mass Index (kg/m ²)			
Age (years)	N	x	SD	95%CI	N	x	SD	95%CI	N	x	SD	95%CI
Males												
15-18	251	66.3	14.45	64.3-68.3	251	172.5	7.56	171.4-173.5	251	22.2	4.35	21.6-22.8
19-30	889	76.7	15.42	75.5-77.9	888	174.7	6.88	174.1-175.2	888	25.1	4.68	24.7-25.5
31-50	2397	83.1	14.96	82.4-83.9	2396	172.6	7.69	172.2-173.0	2396	27.9	5.36	27.6-28.2
51-64	1237	83.2	14.71	82.1-84.3	1237	169.6	6.70	169.1-170.1	1237	28.8	4.59	28.5-29.1
65-74	615	80.9	13.56	79.7-82.1	615	167.3	6.53	166.7-168.0	615	28.8	4.55	28.4-29.3
75-84	261	75.4	12.29	73.5-77.2	261	165.2	6.83	164.3-166.1	261	27.6	4.37	27.0-28.1
≥85	53	70.4	12.44	66.4-74.3	53	162.6	5.72	161.0-164.2	53	26.5	3.88	25.3-27.8
Overall												
≥15	5703	79.7	15.65	79.1-80.2	5701	172.0	7.61	171.8-172.3	5701	26.9	5.29	26.7-27.1
≥19	5452	80.9	15.18	80.4-81.5	5450	172.0	7.61	171.7-172.2	5450	27.4	5.15	27.2-27.6
19-64	4523	81.2	15.34	80.6-81.7	4521	172.6	7.46	172.3-172.9	4521	27.3	5.21	27.0-27.5
≥65	929	78.8	13.50	77.8-79.8	929	166.5	6.69	166.0-167.0	929	28.4	4.52	28.1-28.7

Table 2.3. Distribution of mean (x̄), standard deviation (SD) and 95% CI (Confidence Interval) values of body weight (kg), height (cm), body mass index (kg/m²) of males, by age groups, TNHS 2017

Mean and Standard Deviation Values of Waist Circumference, Hip Circumference, Neck Circumference for Males

The mean and standard deviation values of waist circumference, hip circumference, neck circumference of males aged 15 years and over, who participated in the survey, are given in Table 2.4.

Mean waist circumferences in males by age groups were 94.4±13.64 cm for age of 15 years and over, 95.7±13.04 cm for age of 19 years and over, 95.0±12.93 cm for ages of 19 to 64 years, and 102.2±12.18 cm for age of 65 years and over, respectively. Mean hip circumferences in males by age groups were 103.1±9.03 cm for age of 15 years and over, 103.7±8.68 cm for age of 19 years and over, 103.6±8.70 cm for ages of 19 to 64 years, and 104.6±8.43 cm for age of 65 years and over, respectively.

Mean neck circumferences were 38.9±3.51 cm for age of 15 years and over, 39.2±3.42 for age of 19 years and over, 39.1±3.40 for ages of 19 to 64 years, and 39.8±3.47 cm for age of 65 years and over, respectively.

		W	/aist Circun	nference (cm)		Hip (Circumferen	ce (cm)		Neck Circumference (cm)			
Age (years)								ee (em)				(0)	
• /	Ν	x	SD	95%CI	Ν	x	SD	95%CI	N	x	SD	95%CI	
Males													
15-18	250	79.7	11.14	78.2-81.2	250	95.7	9.46	94.4-97.0	250	35.7	2.86	35.3-36.1	
19-30	879	88.1	12.38	87.1-89.1	879	101.3	9.21	100.5-102.0	879	38.1	3.27	37.7-38.3	
31-50	2372	96.7	11.6	96.1-97.3	2369	104.6	8.26	104.2-105.0	2367	39.4	3.29	39.3-39.6	
51-64	1226	101.2	12.09	100.3-102.1	1225	105.0	8.20	104.3-105.7	1223	40.0	3.42	39.8-40.2	
65-74	607	103.1	12.16	101.8-104.3	607	105.2	8.23	104.4-105.9	608	40.1	3.56	39.8-40.4	
75-84	261	101.0	11.98	99.4-102.6	261	104.0	8.89	102.8-105.2	260	39.3	3.25	38.8-39.8	
≥85	52	97.1	12.22	92.9-101.4	52	100.6	7.16	98.3-102.8	52	38.2	2.87	37.3-39.1	
Overall													
≥15	5647	94.4	13.64	93.9-94.9	5642	103.1	9.03	102.8-103.4	5638	38.9	3.51	38.8-39.0	
≥19	5397	95.7	13.04	95.3-96.2	5393	103.7	8.68	103.4-104.1	5388	39.2	3.42	39.1-39.3	
19-64	4477	95.0	12.93	94.5-95.5	4473	103.6	8.70	103.3-104.0	4468	39.1	3.40	39.0-39.2	
≥65	920	102.2	12.18	101.2-103.1	920	104.6	8.43	104.0-105.2	920	39.8	3.47	39.5-40.0	

Table 2.4. Mean (x̄), standard deviation (SD) and 95% CI (Confidence Interval) values of waist circumference, hip circumference and neck circumference of males, by age groups, TNHS 2017

Mean and Standard Deviation Values of Waist-Hip Ratio and Waist-Height Ratio for Males

The mean and standard deviation values of waist-hip ratio and waist-height ratio of males aged 15 years and over, who participated in the survey, are given in Table 2.5. Mean waist-hip ratios in males by age groups were 0.91±0.08 for age of 15 years and over, 0.92±0.07 for age of 19 years and over, 0.91±0.07 for ages of 19 to 64 years, and 0.98±0.08 for age of 65 years and over, respectively. Mean waist-height ratios in males by age groups were 0.55±0.08 for age of 15 years and over, 0.56±0.08 for age of 19 years and over, 0.55±0.08 for ages of 17 to 64 years, and 0.61±0.07 for age of 65 years and over, respectively.

0 (,	Waist-hip ratio			Waist-height ratio					
Age (years)	N	x	SD	95%CI	N	x	SD	95%CI			
Males											
15-18	249	0.83	0.68	0.82-0.84	250	0.46	0.64	0.45-0.47			
19-30	878	0.87	0.07	0.86-0.87	879	0.50	0.07	0.50-0.51			
31-50	2369	0.92	0.06	0.91-0.92	2371	0.56	0.07	0.55-0.56			
51-64	1224	0.96	0.06	0.96-0.97	1226	0.60	0.07	0.59-0.60			
65-74	607	0.98	0.08	0.97-0.99	607	0.62	0.07	0.61-0.62			
75-84	261	0.97	0.08	0.96-0.98	261	0.61	0.07	0.60-0.62			
≥85	52	0.96	0.09	0.93-1.0	52	0.60	0.07	0.57-0.62			
Total											
≥15	5670	0.91	0.08	0.91-0.92	5646	0.55	0.08	0.54-0.55			
≥19	5391	0.92	0.07	0.91-0.92	5396	0.56	0.08	0.55-0.56			
19-64	4471	0.91	0.07	0.91-0.92	4476	0.55	0.08	0.55-0.55			
≥65	920	0.98	0.08	0.97-0.98	920	0.61	0.07	0.61-0.62			

Table 2.5. Mean (x̄), standard deviation (SD) and 95% CI (Confidence Interval) values of waist-hip ratio and waist-height ratio of males, by age groups, TNHS 2017

Mean and Standard Deviation Values of Body Weight, Height and Body Mass Index for Females

The mean and standard deviation values of body weight, height and body mass index of females aged 15 years and over, who participated in the survey, are given in Table 2.6. Mean body weights in females by age groups were 70.7±16.17 kg for age of 15 years and over, 71.9±15.85 kg for age of 19 years and over, 71.6±15.82 kg for ages of 19 to 64 years, and 73.6±15.96 kg for age of 65 years and over, respectively. Mean heights in females by age groups were 157.6±7.12 cm for age of 15 years and over, 157.2±7.09 cm for age of 19 years and over, 158.1±6.72 cm for ages of 19 to 64 years, and 151.3±6.59 cm for age of 65 years and over, respectively. Mean Body Mass Index was 28.6±7.08 kg/m² for age of 17 years and over, 29.2±6.95 kg/m² for age of 19 years and over, 28.8±6.92 kg/m² for ages of 19 to 64 years, 32.1±6.41 kg/m² for age of 65 years and over.

		Bod	y Weight (kg	5)		Height	t (cm)		Body Mass Index (kg/m ²)				
Age (years)	N	x	SD	95%CI	Ν	x	SD	95%CI	N	x	SD	95%CI	
Females													
15-18	269	58.6	14.30	56.7-60.5	269	161.1	6.37	160.3-162.0	269	22.5	5.26	21.8-23.2	
19-30	958	62.3	13.21	61.2-63.4	958	160.5	6.62	159.9-161.1	958	24.2	5.27	23.8-24.6	
31-50	2478	73.7	15.10	72.7-74.7	2477	158.4	6.31	158.1-158.7	2477	29.5	6.37	29.0-29.9	
51-64	1547	78.1	15.13	77.1-79.0	1547	155.0	6.32	154.6-155.4	1547	32.6	6.75	32.1-33.0	
65-74	713	77.3	15.61	75.7-78.8	711	152.8	6.19	152.2-153.3	711	33.1	6.44	32.5-33.8	
75-84	369	69.4	14.43	67.4-71.4	369	149.7	6.24	148.9-150.5	369	30.9	6.02	30.1-31.8	
≥85	106	61.5	14.16	58.2-64.9	105	146.3	7.02	144.6-148.0	105	28.6	5.66	27.3-29.9	
Overall													
≥15	6440	70.7	16.17	70.1-71.3	6436	157.6	7.12	157.3-157.8	6436	28.6	7.08	28.4-28.9	
≥19	6171	71.9	15.85	71.3-72.5	6167	157.2	7.09	157.0-157.4	6167	29.2	6.95	29.0-29.5	
19-64	4983	71.6	15.82	70.9-72.3	4982	158.1	6.72	157.9-158.4	4982	28.8	6.92	28.5-29.1	
≥65	1188	73.6	15.96	72.4-74.8	1185	151.3	6.59	150.8-151.8	1185	32.1	6.41	31.6-32.6	

Table 2. 6. Mean (x̄), standard deviation (SD) and 95% CI (Confidence Interval) values of body weight (kg), height (cm), body mass index (kg/m²) of females, by age groups, TNHS 2017

Waist Circumference, Hip Circumference, Neck Circumference for Females

The mean and standard deviation values of waist circumference, hip circumference, and neck circumference of females aged 15 years and over, who participated in the survey, are given in Table 2.7.

Mean waist circumferences in females by age groups were 90.4±16.26 cm for age of 15 years and over, 91.9±15.90 cm for age of 19 years and over, 90.2±15.50 cm for ages of 19 to 64 years, and 102.7±14.08 cm for age of 65 years and over, respectively. Mean hip circumferences in females by age groups were 106.3±12.81 cm for age of 15 and over, 107.4±12.59 cm for age of 19 years and over, 106.6±12.43 cm for ages of 19 to 64 years, and 111.9±12.71 cm for age of 65 years and over, respectively.

Mean neck circumferences were34.6±3.53 cm for age of 15 years and over, 34.9±3.49 cm for age of 19 years and over, 34.7±3.46 cm for ages of 19 to 64 years, and 36.0±3.48 cm for age of 65 years and over.

• • • • • • • • • • • • • • • • • • •		Waist Cire	cumference	e (cm)		Hip Circur	nference (cm	٦	Neck Circumference (cm)			
Age (years)	N	x	SD	95%CI	N	x	SD	95%CI	N	x	SD	95%CI
Females												
15-18	265	74.8	11.08	73.3-76.3	264	95.7	9.95	94.3-97.1	265	35.1	2.85	31.7-32.5
19-30	947	78.9	12.49	77.9-79.9	946	99.1	10.36	98.3-100.0	944	33.0	3.38	32.8-33.3
31-50	2467	91.5	13.89	90.6-92.5	2466	108.0	11.60	107.1-108.8	2458	35.1	3.26	34.9-35.2
51-64	1539	100.1	13.41	99.3-101.0	1539	112.5	11.98	111.7-113.2	1539	35.9	3.22	35.7-36.1
65-74	705	103.8	13.99	102.3-105.3	707	113.9	12.95	112.6-115.2	706	36.1	3.23	35.8-36.5
75-84	359	102.0	13.90	100.0-104.0	360	109.5	11.45	107.9-111.2	360	35.9	3.97	35.3-36.5
≥85	104	96.7	13.99	93.8-99.7	104	105.7	11.74	103.3-108.1	104	35.4	3.39	34.5-36.2
Total												
≥15	6386	90.4	16.26	89.8-90.9	6386	106.3	12.81	105.9-106.8	6376	34.6	3.53	34.5-34.8
≥19	6121	91.9	15.90	91.3-92.5	6122	107.4	12.59	106.9-107.9	6111	34.9	3.49	34.8-35.0
19-64	4953	90.2	15.50	89.5-90.8	4951	106.6	12.43	106.1-107.2	4941	34.7	3.46	34.6-34.8
≥65	1168	102.7	14.08	101.5-103.8	1171	111.9	12.71	111.0-113.0	1170	36.0	3.48	35.7-36.3

Table 2.7. Mean (x̄), standard deviation (SD) and 95% CI (Confidence Interval) values of waist circumference, hip circumference and neck circumference of females, by age groups, TNHS 2017

Mean and Standard Deviation Values of Waist-Hip Ratio and Waist-Height Ratio for Females

The mean and standard deviation values of waist-hip ratio and waist-height ratio of females aged 15 years and over, who participated in the survey, are given in Table 2.8. Mean waist-hip ratios in females by age groups were 0.85±0.07 for age of 15 years and over, 0.85±0.09 for age of 19 years and over, 0.84±0.08 for ages of 19 to 64 years, and 0.91±0.08 for age of 65 years and over, respectively. Mean waist-height ratios in females by age groups were 0.57±0.07 for age of 15 years and over, 0.59±0.11 for age of 19 years and over, 0.57±0.11 for ages of 19-64 years, and 0.68±0.09 for age of 65 years and over, respectively.

0 ()			Waist-hip ratio)	Waist-height ratio					
Age (years)	N	x	SD	95%CI	N	x	SD	95%CI		
Females										
15-18	264	0.78	0.06	0.77-0.79	265	0.46	0.07	0.45-0.47		
19-30	946	0.79	0.08	0.78-0.80	947	0.49	0.08	0.48-0.50		
31-50	2466	0.85	0.08	0.84-0.85	2466	0.58	0.09	0.57-0.58		
51-64	1539	0.89	0.08	0.88-0.89	1539	0.64	0.09	0.64-0.65		
65-74	705	0.91	0.08	0.90-0.92	705	0.68	0.09	0.67-0.69		
75-84	359	0.93	0.09	0.92-0.94	359	0.68	0.09	0.67-0.69		
≥85	104	0.91	0.09	0.90-0.93	103	0.66	0.09	0.64-0.68		
Total										
≥15	6383	0.85	0.07	0.84-0.85	6384	0.57	0.07	0.57-0.58		
≥19	6119	0.85	0.09	0.85-0.86	6119	0.59	0.11	0.58-0.59		
19-64	4951	0.84	0.08	0.84-0.85	4952	0.57	0.11	0.57-0.58		
≥65	1168	0.91	0.08	0.91-0.92	1167	0.68	0.09	0.67-0.69		

Table 2.8. Mean (x̄), standard deviation (SD) and 95% CI (Confidence Interval) values of waist-hip ratio and waist-height ratio of females, by age groups, TNHS 2017

Body Mass Index (BMI) and Waist-Height Ratio (WHR) for All Individuals

The mean and standard deviation values of body mass index and waist-height ratio of all individuals aged 15 years and over, who participated in the survey, are given in Table 2.9. Mean Body Mass Index by age groups was $27.8\pm6.27 \text{ kg/m}^2$ for age of 15 years and over, $28.3\pm6.15 \text{ kg/m}^2$ for age of 19 years and over, $28.0\pm6.12 \text{ kg/m}^2$ for ages of 19 to 64 years, and $30.4\pm5.93 \text{ kg/m}^2$ for age of 65 years and over, respectively. Mean waist-height ratios by age groups were 0.56 ± 0.10 for age of 15 years and over, 0.57 ± 0.09 for age of 19 years and over, 0.56 ± 0.09 for ages of 19 to 64 years, and 0.65 ± 0.09 for age of 65 years and over, respectively.

Table 2.9. Mean (\bar{x}), standard deviation (SD) and 95% CI (Confidence Interval) values of BMI (kg/m²) and waist-height ratio of all individuals, by age groups, TNHS 2017

			BMI (kg/m ²))		Waist-height ratio					
Age (years)	N	x	SD	95%CI	N	x	SD	95%CI			
Males and Females		_									
15-18	520	22.4	4.82	21.9-22.8	515	0.46	0.06	0.45-0.47			
19-30	1846	24.7	4.96	24.4-25.0	1826	0.50	0.07	0.49-0.50			
31-50	4873	28.7	5.91	28.4-28.9	4837	0.57	0.08	0.56-0.57			
51-64	2785	30.7	6.07	30.5-31.0	2765	0.62	0.08	0.62-0.63			
65-74	1326	31.1	6.02	30.7-31.5	1312	0.65	0.09	0.65-0.66			
75-84	630	29.5	5.60	28.9-30.0	620	0.65	0.09	0.64-0.66			
≥85	158	27.9	5.23	27.0-29.0	155	0.64	0.09	0.62-0.66			
Overall											
≥15	12137	27.8	6.27	27.6-27.9	12030	0.56	0.10	0.56-0.57			
≥19	11617	28.3	6.15	28.1-28.4	11515	0.57	0.09	0.57-0.57			
19-64	9503	28.0	6.12	27.8-28.1	9428	0.56	0.09	0.56-0.56			
≥65	2114	30.4	5.93	30.1-30.8	2087	0.65	0.09	0.64-0.65			

Risk of Cardiovascular Disease According to Waist Circumference Values Among Individuals

The distribution of risk of cardiovascular disease according to waist circumference values for gender and age groups in individuals aged 15 years and over, who participated in the survey, are given in Table 2.10. Among males, 6.8% of those in the age group of 15-18 years were in increased risk group and 5.2% were in the high risk group. These values were 25.5%, 27.9% and 28.1%, 48.5% for males in the age group of 19-64 years and 65 years and over, respectively. For age group of 15 years and over, the increased risk frequency was 24.2%, and the high risk frequency was 27.9%, while these values were 25.8% and 30%, respectively, for males in age group of 19 years and over.

Among females, 15.3% of those in the age group of 15-18 years were in the increased risk group and 12.1% were in the high risk group. For females in the age group of 19-64 years and 65 years and over, these values were 20.1%, 52.1% and 8.4%, 86.8%, respectively. For age group of 15 years and over, the increased risk frequency was 18.2% and the high risk frequency was 52.9%, while these values were 18.5% and 56.8%, respectively, for females in the age group of 19 years and over.

Gender Age (years)		Normal			Increased	risk	High risk			
Age (years)	Ν	%	95%CI	Ν	%	95%CI	Ν	%	95%CI	
Males										
15-18	217	88.0	82.9-91.7	19	6.8	4.2-10.9	14	5.2	2.9-9.2	
19-64	1858	46.6	44.6-48.5	1243	25.5	24.0-27.1	1376	27.9	26.3-29.6	
≥65	232	23.5	40.4-26.8	257	28.1	24.8-31.6	431	48.5	44.6-52.3	
≥15	2307	47.9	46.1-49.6	1519	24.2	22.9-25.6	1821	27.9	26.5-29.4	
≥19	2090	44.2	42.4-46.0	1500	25.8	24.4-27.3	1807	30.0	28.5-31.6	
Females										
15-18	189	72.6	66.1-78.3	45	15.3	10.9-21.0	31	12.1	8.3-17.2	
19-64	1201	27.8	26.1-29.6	976	20.1	18.6-21.6	2776	52.1	50.3-54.0	
≥65	55	4.8	3.0-7.6	116	8.4	6.7-10.3	997	86.8	83.9-89.3	
≥15	1445	28.9	27.3-30.5	1137	18.2	17.0-19.6	3804	52.9	51.2-54.6	
≥19	1256	24.7	23.2-26.3	1092	18.5	17.2-19.9	3773	56.8	55.1-58.5	
Overall										
15-18	406	80.5	76.3-84.0	64	11.0	8.3-14.4	45	8.6	6.2-11.7	
19-64	3058	37.7	36.4-39.1	2219	23.0	21.9-24.1	4152	39.3	38.0-40.6	
≥65	287	13.3	11.5-15.3	373	17.3	15.5-19.3	1428	69.4	66.9-71.8	
≥15	3752	38.7	37.5-40.0	2656	21.3	20.4-22.3	5625	39.9	38.8-41.1	
≥19	3346	34.8	33.6-36.1	2592	22.3	21.3-23.3	5580	42.9	41.7-44.1	

Table 2.10. Distribution of risk of cardiovascular disease by waist circumference* values for gender and age groups in individuals aged 15 years and over, by TNHS 2017

* Waist circumference (WC): Normal= Males: <94 cm, Females: <80 cm

Increased risk= Males: 94-101.9 cm, Females: 80-87.9 cm High risk= Males: ≥102 cm, Females: ≥88 cm

Risk of Cardiovascular Disease According to Waist-Hip Ratio Among Individuals

The distribution of risk of cardiovascular disease by waist-hip ratio for gender and age groups in individuals aged 15 years and over, who participated in the survey, is given in Table 2.11. Among males, 11.7% of those in the age group of 15-18 years, 60.3% of those in the age group of 19-64 years and 86.7% of those in the age group of 65 years and over were in the high risk group. The high risk frequency was 58.7% for males in the age group of 15 years and over, and 63.0% for males in the age group of 19 years and over.

Among females, 17.7% of those in the age group of 15-18 years, 47.7% of those in the age group of 19-64 years, and 83.2% of those in the age group of 65 years and over were in the high risk group. While the high risk frequency for females in the age group of 15 years and over was 49.4%, it was 52.5% in the age group of 19 years and over.

Overall, in males and females, the high risk frequency was 54.2% in the age group of 15 years and over, and 57.9% in the age group of 19 years and over.

Table 2.11. Distribution of risk of cardiovascular disease according to waist-hip ratio for gend	er and age
groups in individuals aged 15 years and over, TNHS 2017	

Age (years)	Normal				High risk	
	N	%	95%CI	Ν	%	95%CI
Males						
15-18	215	88.3	83.5-91.9	34	11.7	8.1-16.5
19-64	1502	39.7	37.8-41.7	2969	60.3	58.3-62.2
≥65	125	13.3	10.9-16.1	795	86.7	83.9-89.1
≥15	1842	41.3	39.5-43.1	3798	58.7	56.9-60.5
≥19	1627	37.0	35.2-38.8	3746	63.0	61.2-64.8
Females						
15-18	219	82.3	76.5-87.0	45	17.7	13.0-23.5
19-64	2484	52.3	50.4-54.2	2467	47.7	45.8-49.6
≥65	208	16.8	14.0-20.0	960	83.2	80.0-86.0
≥15	2911	50.6	48.9-52.2	3472	49.4	47.8-51.1
≥19	2692	47.5	45.8-49.3	3427	52.5	50.7-54.2
Overall						
15-18	434	86.4	81.7-88.4	79	14.6	11.6-18.3
19-64	3986	45.6	44.3-47.0	5436	54.5	53.0-55.7
≥65	333	15.2	13.3-17.3	1755	84.8	82.7-86.7
≥15	4753	45.8	44.5-47.0	7270	54.2	53.0-55.5
≥19	4319	42.1	40.8-43.3	7191	57.9	56.7-59.2

** Waist -hip ratio (WHR): Normal= Males: <0.90, Females: <0.85
High risk= Males: ≥0.90, Females: ≥0.85</pre>

Distribution by Body Mass Index (BMI) Classification in Individuals

The distribution of BMI groups by gender and age groups in individuals aged 15 years and over, who participated in the survey, is given in Table 2.12. Among males, 1.2% of those in the age group of 15 years and over were underweight, 34.3% were of normal weight, 39.9% were overweight, 23.3% were obese, and 1.3% were morbid obese. 1.1% of males in the age group of 19 years and over were underweight, 29.2% were of normal weight, 43.4% were overweight, 24.9% were obese, and 1.4% were morbid obese. 1.2% of males in the age group of 19-64 years were underweight, 31.6% were of normal weight, 42.0% were overweight, 23.8% were obese, and 1.3% were of normal weight, 42.0% were overweight, 23.8% were obese, and 1.3% were morbid obese. 0.8% of males in the age group of 65 years and over were underweight, 22.0% were of normal weight, 43.3% were overweight, 33.2% were obese, and 0.7% were morbid obese.

Among females, 2.1% of those in the age group of 15 years and over were underweight, 31.2% were of normal weight, 27.6% were overweight, 32.7% were obese, and 6.4% were morbid obese. 2.1% of females in the age group of 19 years and over were underweight, 26.0% were of normal weight, 29.2% were overweight, 35.6% were obese, and 7.0% were morbid obese. 2.3% of females in the age group of 19-64 years were underweight, 30.0% were of normal weight, 28.5% were overweight, 33.1% were obese, and 6.2% were morbid obese. 1.0% of females in the age group of 65 years and over were underweight, 9.6% were of normal weight, 28.2% were overweight, 50.1% were obese, and 11.0% were morbid obese.

	BMI (kg/m²)												
Age	N	<18.5	95%CI	18.5-24.9	95%CI	25.0-29.9	95%CI	30.0-39.9	95%CI	≥40.0	95%CI	≥30	95%CI
(years)		Und	erweight	Nor	mal	Overv	veight	OI	bese	Mo ot	rbid Dese	O mort	bese + id obese
Males													
15-18	251	2.0	0.8-4.9	73.9	67.1-79.6	15.7	11.1-21.8	6.5	3.9-10.5	1.9	0.7-5.1	8.4	5.4-12.8
19-30	888	2.6	1.7-4.1	51.2	47.0-55.4	33.0	29.4-36.9	12.2	9.9-15.1	0.9	0.5-1.8	13.2	10.6-16.0
31-50	2396	0.6	0.3-1.1	25.1	23.0-27.4	46.6	44.2-49.1	26.4	24.3-28.6	1.3	0.8-2.0	27.7	25.5-29.9
51-64	1237	0.6	0.3-1.1	17.5	15.2-20.1	45.1	41.6-48.6	34.9	31.6-38.5	1.9	1.2-3.0	36.8	33.4-40.4
65-74	615	0.7	0.3-1.7	19.6	16.2-23.4	42.5	37.9-47.2	36.3	31.9-40.9	1.0	0.4-2.3	37.2	32.8-41.9
75-84	261	1.1	0.3-3.9	25.6	19.9-32.2	43.5	36.5-50.8	29.5	23.2-36.8	0.2	0.0-1.7	29.8	23.4-37.0
≥85	53	-	-	34.8	21.3-51.2	52.9	37.2-68.1	12.3	5.4-25.8	-	-	12.3	5.4-25.8
Total													
≥15	5701	1.2	0.9-1.7	34.3	32.5-36.0	39.9	38.3-41.6	23.3	21.9-24.7	1.3	1.0-1.7	24.6	23.2-26.0
≥19	5450	1.1	0.8-1.5	29.2	27.5-30.9	43.4	41.7-45.2	24.9	23.5-26.4	1.4	1.0-1.8	26.3	24.8-27.8
19-64	4521	1.2	0.8-1.7	31.6	29.7-33.6	42.0	40.2-43.9	23.8	22.3-25.4	1.3	1.0-1.7	25.1	23.9-27.1
≥65	929	0.8	0.4-1.6	22.0	19.1-25.3	43.3	39.5-47.1	33.2	29.7-36.9	0.7	0.3-1.6	33.9	30.4-37.6
Females													
15-18	269	2.1	0.8-5.4	72.7	66.2-78.3	18.6	13.8-24.7	4.8	2.8-8.2	1.8	0.6-5.2	6.6	4.1-10.6
19-30	958	6.7	5.1-8.7	58.4	54.3-62.4	21.7	18.6-25.2	12.5	9.9-15.5	0.8	0.4-1.8	13.2	10.7-16.3
31-50	2477	0.7	0.4-1.3	24.1	22.1-26.3	33.6	31.3-35.9	34.8	32.4-37.2	6.8	4.8-9.7	41.6	38.9-44.3
51-64	1547	0.3	0.1-0.6	9.0	7.2-11.3	26.9	24.1-29.8	52.9	49.8-56.1	10.9	9.3-12.9	63.9	60.7-66.9
65-74	711	0.4	0.1-1.1	7.1	5.3-9.4	25.5	21.1-30.4	52.6	47.9-57.4	14.5	11.4-18.2	67.1	62.2-71.6
75-84	369	2.2	0.5-9.6	10.2	7.3-13.9	32.9	26.7-39.7	47.8	40.7-55.1	6.9	4.3-10.8	54.7	47.6-61.7
≥85	105	1.9	0.4-8.7	25.9	16.9-37.4	31.4	21.1-43.9	40.4	29.3-52.5	0.5	0.1-3.6	40.9	29.7-53.0
Total													
≥15	6436	2.1	1.7-2.7	31.2	29.6-32.8	27.6	26.2-29.1	32.7	31.2-34.2	6.4	5.4-7.5	39.1	37.5-40.7
≥19	6167	2.1	1.7-2.7	26.0	24.5-27.6	29.2	27.8-30.7	35.6	34.1-37.2	7.0	6.0-8.2	42.6	41.0-44.3
19-64	4982	2.3	1.8-2.9	30.0	28.2-31.8	28.5	27.0-30.2	33.1	31.4-34.8	6.2	5.0-7.5	39.3	37.9-41.6
≥65	1185	1.0	0.4-2.9	9.6	7.9-11.6	28.2	24.7-31.9	50.1	46.3-53.9	11.0	8.9-13.6	61.2	57.4-64.9

Table 2.12. Distribution of Body Mass Index (kg/m ²) classification in individuals by age groups and gender (%), TNHS 2017

The distribution of BMI groups by age groups in all individuals aged 15 years and over, who participated in the survey, is given in Table 2.13.

Among individuals in the age group of 15 years and over, 1.7% were underweight, 32.8% were of normal weight, 34.0% were overweight, 27.8% were obese, and 3.7% were morbid obese. Among individuals in the age group of 19 years and over, 1.6% were underweight, 27.7% were of normal weight, 36.6% were overweight, 30.0% were obese, and 4.1% were morbid obese.

Among individuals in the age group of 19-64 years, 1.7% were underweight, 29.3% were of normal weight, 36.9% were overweight, 28.4% were obese, and 3.8% were morbid obese. Among individuals in age group of 65 years and over, 0.9% were underweight, 15.2% were of normal weight, 35.0% were overweight, 42.5% were obese and 6.4% were morbid obese.

						BMI (k	(g/m²)						
A.g.o.	N	<18.5	95%CI	18.5-24.9	95%CI	25.0-29.9	95%CI	30.0-39.9	95%CI	≥40.0	95%CI	≥30	95%CI
Age (years)		Unde	erweight	Nor	mal	Ov	Overweight		bese	Morbid obese			bese + id obese
TOTAL (ma	ales and fem	ales)											
15-18	520	2.1	1.1-3.9	73.3	68.7-77.4	17.2	13.7-21.3	5.7	3.9-8.1	1.8	0.9-3.8	7.5	5.4-10.3
19-30	1846	4.4	3.5-5.6	54.4	51.5-57.3	28.0	25.5-30.6	12.3	10.6-14.3	1.5	1.0-2.3	13.8	11.4-15.2
31-50	4873	0.6	0.4-1.0	24.7	23.2-26.2	40.5	38.8-42.2	30.3	28.7-31.9	3.9	2.8-5.3	34.2	32.5-36.0
51-64	2784	0.4	0.2-0.7	13.2	11.7-14.9	35.9	33.7-38.2	44.0	41.7-46.4	6.4	5.5-7.5	50.4	48.1-52.8
65-74	1326	0.5	0.3-1.0	12.9	11.0-15.1	33.5	30.2-36.8	44.9	41.6-48.3	8.1	6.4-10.2	53.1	49.7-56.4
75-84	630	1.7	0.6-5.3	17.0	13.8-20.6	37.5	32.8-42.6	39.8	34.7-45.1	4.0	2.5-6.2	43.7	38.6-49.0
≥85	158	1.3	0.3-6.0	28.7	20.9-38.0	38.2	29.2-48.0	31.5	23.2-41.1	0.4	0.0-2.5	31.9	23.6-41.5
Overall													
≥15	12137	1.7	1.4-2.0	32.8	31.6-34.0	34.0	32.9-35.1	27.8	26.8-28.8	3.7	3.2-4.3	31.5	30.5-32.6
≥19	11617	1.6	1.3-1.9	27.7	26.5-28.9	36.6	35.5-37.8	30.0	29.1-31.1	4.1	3.5-4.7	34.1	33.0-35.3
19-64	9503	1.7	1.4-2.1	29.3	28.0-30.7	36.9	35.6-38.1	28.4	27.2-29.5	3.8	3.2-4.5	32.1	30.9-33.4
≥65	2114	0.9	0.5-1.9	15.2	13.5-17.0	35.0	32.4-37.6	42.5	39.9-45.2	6.4	5.2-7.8	48.9	46.2-51.6

Table 2.13. Distribution of Body Mass Index (kg/m²) classification in all individuals by age groups (%), TNHS 2017

Distribution of Waist-Height Ratio

The distribution of waist-height ratio by gender and age groups in individuals aged 15 years and over, who participated in the survey, is given in Table 2.14. Among males in the age group of 15 years and over, the frequency of those with waist-height ratio <0.4 was 1.3%, the frequency of those with waist-height ratio between 0.4 and 0.49 was 25.9%, the frequency of those with waist-height ratio between 0.5-0.59 was 44.1%, and the frequency of those with waist-height ratio \geq 0.6 was 28.7%. In the age group of 19 years and over, the frequency of those with a waist-height ratio <0.4 was 0.7%, the frequency of those with waist-height ratio between 0.4-0.49 was 22.0%, the frequency of those with waist-height ratio \geq 0.6 was 30.8%. In the age group of 19-64 years, the frequency of those with waist-height ratio <0.4 was 0.8%, the frequency of those with waist-height ratio between 0.4-0.49 was 24.0%, the frequency of those with waist-height ratio between 0.5-0.59 was 47.6% and the frequency of those with waist-height ratio \geq 0.6 was 27.6%. In the age group of 5 years and over, these frequency of those with waist-height ratio \geq 0.6 was 27.6%. In the age group of 5 years and over, these frequency of those with waist-height ratio \geq 0.6 was 27.6%. In the age group of 65 years and over, these frequencies were 0.2%, 4.1%, 36.8% and 58.8%, respectively.

Among females in the age group of 15 years and over, the frequency of those with waist-height ratio <0.4 was 2.8%, the frequency of those with waist-height ratio between 0.4-0.49 was 24.3%, the frequency of those with waist-height ratio between 0.5-0.59 was 31.2%, and the frequency of those with waist-height ratio with \geq 0.6 was 41.7%. In the age group of 19 year and over, the frequency of those with waist-height ratio <0.4 is 1.8%, the frequency of those with waist-height ratio between 0.5-0.59 is 32.2%, and the frequency of those with waist-height ratio \geq 0.6 was 45.0%. In the age group of 19-64 years, the frequency of those with waist-height ratio of <0.4 was 2.1%, the frequency of those with waist-height ratio between 0.4-0.49 was 23.9%, the frequency of those with waist-height ratio between 0.5-0.59 was 34.5%, and the frequency of those with waist-height ratio \geq 0.6 was 39.5%. In the age group of 65 years and over, these frequencies were 0%, 2.4%, 17.1% and 80.5%, respectively.

Age				Waist-Heigh	t Ratio (W	/HR) (%)				
(years)			Males					Females		
	Ν	<0.4	0.4-0.49	0.5-0.59	≥0.6	N	<0.4	0.4-0.49	0.5-0.59	≥0.6
15-18	250	8.3	68.9	17.4	5.4	265	12.9	58.8	21.4	6.9
19-30	879	2.1	48.5	38.3	11.2	947	5.9	51.9	32.2	10.0
31-50	2371	0.02	15.7	56.1	28.0	2466	0.09	17.7	41.3	40.2
51-64	1226	-	7.2	43.0	49.8	1539	0.01	4.3	24.5	71.1
65-74	607	-	4.2	36.0	59.8	705	-	1.6	17.6	80.8
75-84	261	0.8	3.1	39.3	56.8	359	-	4.2	12.4	83.4
≥85	52	-	9.6	34.3	56.1	103	-	1.9	29.8	68.3
Overall										
≥15	5646	1.3	25.9	44.1	28.7	6384	2.8	24.3	31.2	41.7
≥19	5396	0.7	22.0	46.5	30.8	6119	1.8	21.0	32.2	45.0
19-64	4476	0.8	24.0	47.6	27.6	4952	2.1	23.9	34.5	39.5
≥65	920	0.2	4.1	36.8	58.8	1167	-	2.4	17.1	80.5

Table 2.14. Distribution of individuals aged 15 years and over by waist-height ratio %), TNHS 2017

Distribution by Neck Circumference Classification

The distribution of neck circumference classifications by gender and age groups in individuals aged 15 years and over, who participated in the survey, is given in Table 2.15. Among males in the age group of 15 years and over, the frequency of those with neck circumference <37 cm was 26.5%, the frequency of those with neck circumference >39.5 cm was 41.3%. In the age group of 19 years and over, the frequency of those with neck circumference <37 cm was 22.4%, the frequency of those with neck circumference between 37-39.5 cm was 44.2%. In the age group of 19 years, and the frequency of 19-64 years, the frequency of those with neck circumference >39.5 cm was 33.7%, and the frequency of those with neck circumference >37.5%, the frequency of those with neck circumference >39.5 cm was 23.0%, the frequency of those with neck circumference between 37-39.5 cm was 43.2%. In the age group of 5 years and over, these frequency of those with neck circumference >39.5 cm was 33.7%, and the frequency of those with neck circumference >39.5 cm was 23.0%, and 52.7%, respectively.

Among females in the age group of 15 years and over, the frequency of those with neck circumference <34 cm was 41.8%, the frequency of those with neck circumference between 34-36.5 cm was 31.7%, and the frequency of those with neck circumference >36.5 cm was 26.5%. In the age group of 19 years and over, the frequency of those with neck circumference of <34 cm was 38.8%, the frequency of those with neck circumference between 34-36.5 cm was 23.0%, and the frequency of those with neck circumference of those with neck circumference >36.5 cm was 28.3%. In the age group of 19-64 years, the frequency of those with neck circumference <34 cm was 40.8%, the frequency of those with neck circumference >36.5 cm was 28.3%. In the age group of 19-64 years, the frequency of those with neck circumference <34 cm was 40.8%, the frequency of those with neck circumference >36.5 cm was 26.6%. In the age group of 65 years and over, these frequencies were 26.1%, 34.9%, and 39.0%, respectively.

Age				Neck circum	ference (cm)	(%)		
(years)		Ma	les			F	emales	
		<37	37-39.5	>39.5	Ν	<34	34-36.5	>36.5
	Ν	%	%	%	%	%	%	%
15-18	250	71.4	19.5	9.1	265	73.6	18.6	7.8
19-30	878	34.9	37.4	27.7	944	63.3	25.5	11.1
31-50	2367	18.3	33.9	47.8	2458	35.4	35.4	29.3
51-64	1223	16.3	28.1	55.6	1530	25.7	35.4	38.8
65-74	608	14.2	28.9	56.9	706	21.6	39.8	38.6
75-84	260	20.9	32.2	46.9	360	33.8	25.8	40.4
≥85	52	33.2	37.8	28.9	104	32.9	30.2	36.8
Overall								
≥15	5638	26.5	32.2	41.3	6376	41.8	31.7	26.5
≥19	5388	22.4	33.4	44.2	6111	38.8	33.0	28.3
19-64	4468	23.0	33.7	43.2	4941	40.8	32.6	26.6
≥65	920	17.0	30.3	52.7	1170	26.1	34.9	39.0

Table 2.15. Distribution of individuals by neck circumference classification (%), TNHS 2017

Pre-Pregnancy and During Pregnancy Body Weight and BMI

The mean and standard deviation values of the body weights gained during pregnancy according to prepregnancy body weight of the pregnant women aged 15 years and over, who participated in the survey, are given in Table 2.16.

The mean body weight gained by pregnant women in the age group of 19-30 years, who were in the first trimester, during this period was 1.7 ± 3.15 kg, the average body weight gained by those who were in the second trimester was 4.7 ± 7.14 kg, and the average body weight gained by those who were in the third trimester was 10.5 ± 5.46 kg. The average body weight gained by pregnant women in the age group of \geq 31 years, who were in the first trimester, during this period was 2.1 ± 2.80 kg, the average body weight gained by those who were in the second trimester was 5.1 ± 3.21 kg, and the average body weight gained by those who were in the third trimester in the third trimester was 9.5 ± 4.55 kg.

Overall, for all pregnant women, the average body weight gained by those who were in the first trimester was 1.9±2.94 kg, the average body weight gained by those who were in the second trimester was 4.9±5.92 kg, and the average body weight gained by those who were in the third trimester was 10.0±5.01 kg.

Mean and standard deviation values of BMI differences during pregnancy periods according to pre-pregnancy BMI values of pregnant women aged 15 years and over, who participated in the survey, are given in Table 2.17. The mean BMI difference compared to the pre-pregnancy BMI values of pregnant women in the age group of 19-30 years who were in the first trimester was 0.7±1.33 kg/m², the mean BMI difference compared to the pre-pregnancy BMI values of those who were in the second trimester was 1.8±2.66 kg/m², the mean BMI difference compared to the pre-pregnancy BMI values of those who were in the third trimester was 4.2±2.25 kg/m².

For pregnant women aged \geq 31 years, these figures were 0.8 ±1.16 kg/m², 2.0±1.22 kg/m² and 3.6±1.80 kg/m² respectively. Overall, among all pregnant women, the mean BMI difference of those who were in the first trimester was 0.8 ±1.23 kg/m², the mean BMI difference of those who were in the second trimester was 1.9±2.21 kg/m², and the mean BMI difference of those who were in the third trimester was 3.9±2.04 kg/m².

Table 2.16. Mean (x̄), standard deviation (SD) and 95% CI (Confidence Interval) values of body weight (kg) of pregnant women by pregnancy periods, TNHS 2017

									Pregnar	ncy Per	iod							
			1-3	mont	h				4-6 m	onths					7-9 m	onths		
Age (years)	Р	Pre-pregnancy Difference in weigh						Pre-pregnancy Difference in weight					t Pre-pregnancy weight			Difference in weight		
	x	SD	95%CI	x	SD	95%CI	x	SD	95%CI	x	SD	95%CI	x	SD	95%CI	x	SD	95%CI
19-30	62.7	13.30	55.4-70.1	1.7	3.15	0.13-3.26	69.9	17.96	60.8-78.9	4.7	7.14	1.20-8.21	64.7	11.07	60.3-69.0	10.5	5.46	8.2-12.7
≥31	72.7	16.53	64.6-80.8	2.1	2.80	1.03-3.20	69.2	12.12	64.1-74.3	5.1	3.21	3.5-6.7	69.5	12.25	64.1-74.9	9.5	4.55	7.8-11.2
Overall	67.9	15.74	62.0-74.0	1.9	2.94	0.9-2.9	69.6	15.84	63.6-75.6	4.9	5.92	2.6-7.1	67.0	11.78	63.4-70.6	10.0	5.01	8.6-11.4

Table 2.17. Mean (x̄), standard deviation (SD) and 95% CI (Confidence Interval) values of BMI (kg/m²) of pregnant women by pregnancy periods, TNHS 2017

									Pregnar	ncy Pei	riod							
			1-3	mont	h				4-6 m	onths					7-9 n	nonths		
Age (years)	Pr	Pre-pregnancy Difference in BMI BMI			nce in BMI	Pre-pregnancy Difference in BMI BMI					Pi	re-pregr BM	-	Difference in BMI				
	x	SD	95%CI	x	SD	95%CI	x	SD	95%CI	x	SD	95%CI	x	SD	95%CI	x	SD	95%CI
19-30	24.2	4.62	21.6-26.7	0.7	1.33	0.28-1.34	26.8	6.06	23.7-29.8	1.8	2.66	0.55-3.15	25.2	3.82	23.7-26.6	4.2	2.25	3.22-5.11
≥31	28.9	5.54	26.2-31.6	0.8	1.16	0.40-1.30	27.3	4.72	25.4-29.2	2.0	1.22	1.42-2.58	26.1	3.35	24.8-27.5	3.6	1.80	2.93-4.31
Overall	26.7	5.60	24.5-28.8	0.8	1.23	0.38-1.17	27.0	5.53	24.9-28.9	1.9	2.21	1.06-2.75	25.6	3.60	24.6-26.6	3.9	2.04	3.31-4.49

Body Weight and BMI During Lactation

The mean and standard deviation values of BMI according to the breastfeeding duration of lactating women aged 15 years and over, who participated in the survey, are given in Table 2.18.

The mean BMI of women in the age group of 19-30 years with the breastfeeding duration of 1-3 months was $27.7\pm5.11 \text{ kg/m}^2$, the mean BMI of women with the breastfeeding duration of 4-6 months was $26.1\pm4.71 \text{ kg/m}^2$, the mean BMI of women with the breastfeeding duration of 7-12 months was $25.1\pm4.61 \text{ kg/m}^2$, and the mean BMI of women with the breastfeeding duration of >12 months was $25.9\pm4.39 \text{ kg/m}^2$.

For women aged \geq 31 years, these values were 28.8±4.69 kg/m², 28.1±4.09 kg/m², 28.0±5.46 kg/m² and 27.2±5.01 kg/m², respectively. Overall, the mean BMI of lactating women by breastfeeding duration were as follows: 28.2±4.94 kg/m² for 0-3 months, 26.8±4.56 kg/m² for 4-6 months, 26.2±5.12 kg/m² for 7-12 months, and 26.6±4.73 kg/m² for >12 months.

Table 2.18. Mean (\bar{x}), standard deviation (SD) and 95% CI (Confidence Interval) values (kg/m²) of BMI of lactating women by breastfeeding duration (months), TNHS 2017

				Breastfeeding Duration (months)									
		0-3 mo	onths		4-6 mo	nths		7-12 m	onths	>	12 mon	ths	
Age (years)		BMI (kg	/m²)	BMI (kg/m²)			E	3MI (kg/	′m²)	BMI (kg/m²)			
	x SD 95%CI		x	SD	95%CI	x	SD	95%CI	x	SD	95%CI		
19-30	27.7	5.11	25.6-29.7	26.1	4.71	24.0-28.1	25.1	4.61	23.8-26.3	25.9	4.39	24.8-27.1	
≥31	28.8	4.69	27.3-30.3	28.1	4.09	26.3-29.8	28.0	5.46	26.0-30.0	27.2	5.01	26.0-28.4	
Overall	28.2	4.94	26.9-29.5	26.8	4.56	25.3-28.3	26.2	5.12	25.0-27.3	26.6	4.73	25.7-27.4	

3.2. Physical Activity Status

Regular physical activity done by individuals at a certain level is important to be healthy and fit, to ensure their energy balance, and to prevent obesity and obesity-related chronic diseases, which are often associated with sedentary lifestyle.

The types of physical activity done in a 24-hour period by individuals aged 15 years and over were surveyed and gathered in 9 groups. These are the time spent on sleeping, activity done lying down, activity done sitting, light, moderate, and vigorous activities, and light, moderate, and vigorous exercises/sports activities. Each activity done in a certain time (hour or minute) has an energy cost and it is called Physical Activity Ratio (PAR). Physical Activity Level (PAL) is obtained from the total PAR values (FAO/WHO/UNU, 2001).

The mean (\bar{x}), standard deviation (SD) and 95% CI (Confidence Interval) values of the activities done throughout the day are given for individuals by gender (Table 2.19) and for all individuals (males and females, overall) (Table 2.20).

Sleeping: When all individuals were assessed together with both genders, it was found that the mean \pm SD values of sleeping duration were similar among individuals in the age groups of \geq 15 years, \geq 19 years and 19-64 years, and they were 482.8 \pm 102.7, 481.6 \pm 102.8 and 477.8 \pm 100.9 minutes (min), respectively; and sleeping duration was longer (509.6 \pm 112.3 min.) in the age group of \geq 65 years (Table 2.20). Sleeping durations were 475.5 \pm 101.6, 473.7 \pm 101.9, 469.9 \pm 100.7 and 505.7 \pm 106.3 minutes for males in the age groups of \geq 15 years, \geq 19 years, 19-64 years and \geq 65 years, respectively. For females, sleeping durations were 490.0 \pm 103.4, 489.4 \pm 103.1, 485.8 \pm 100.4 and 512.6 \pm 116.8 minutes in the age groups of \geq 15 years, \geq 19 years, 19-64 years, 19-64 years and \geq 65 years, respectively. Sleeping duration was longer in females compared to males (Table 2.19).

Activities while lying down: Mean±SD time of activities done lying down for all individuals was 90.7 ± 137.5 (M: 95.4 ± 136.0 ; F: 86.1 ± 138.8), 92.0 ± 137.9 (M: 96.1 ± 134.7 ; F: 87.9 ± 140.8), 83.9 ± 123.3 (M: 91.9 ± 127.3 ; F: 75.7 ± 118.4) in the age groups of ≥15 , ≥19 and 19-64 years, respectively, and it was 152.0 ± 208.1 (M: 131.8 ± 182.7 ; F: 167.8 ± 224.8) minutes in the age group of ≥65 years.

Activities while sitting: Mean±SD time of activities done sitting for all individuals was 496.9±210.9 (M: 517.3±221.4; F: 476.8±197.9) minutes in the age group of \geq 15 years, 487.4±209.8 (M: 511.4±223.1; F: 463.8±192.8) minutes in the age group of \geq 19 years, 482.3±209.2 (M: 507.6±224.4; F: 456.5±189.1) minutes in the age group of 19-64 years, and 525.3±209.8 (M: 543.3±208.9; F:511.4±209.6) minutes in the age group of \geq 65 years.

Standing activities (light): Mean±SD time of light standing activities for all individuals was 310.8 ± 199.8 (M: 268.0±195.2; F: 353.1 ± 195.2) minutes in the age group of ≥ 15 years, 318.5 ± 202.6 (M: 272.6±198.8); F: 363.8±196.8) minutes in the age group of ≥ 19 years, 330.7 ± 203.7 (M: 278.4±201.9; F: 383.9 ± 191.3) minutes in the age group of 19-54 years, and 227.9±169.2 (M: 222.7±162.0; F: 231.9 ± 174.9) minutes in the age group of ≥ 65 years.

Standing activities (moderate): Mean±SD time of moderate standing activities for all individuals was 43.1±104.7 (M: 56.4±122.0; F: 30.0±82.2) minutes in the age group of \geq 15 years, 44.5±107.0 (M: 58.0±124.6; F:31.1±84.0) minutes in the age group of \geq 19 years; 47.6±110.8 (M: 61.1±128.2; F: 33.8±87.5) in the age group of 19-64 years, and 21.5±68.8 (M: 31.2±83.6; S:13.9±53.4) minutes in the age group of \geq 65 years. The time of moderate standing activities was highest in the age group of 19-64 years, and the lowest in the age group of 65 years and over.

Standing activities (vigorous): Mean±SD time of vigorous standing activities for all individuals was 12.4±69.4 (M: 22.8±93.9; F: 2.1±25.5) minutes in the age group of \geq 15 years, 13.1±71.4 (M: 24.0±96.7; F: 2.2±26.0) minutes for the age group of \geq 19 years, 14.5±75.3 (M: 26.5±101.3; F: 2.3±26.5) minutes in the age group of 19-64 years, and 2.1±27.1 (M: 3.1±31.8; F:1.3±22.7) minutes in the age group of \geq 65 years. The time of vigorous standing activities was highest in the age group of 19-64 years, and the lowest in the age group of 65 years and over.

Light, moderate, and vigorous exercises/sports activities: Table 2.20 shows the mean±SD time spent on doing light, moderate, and vigorous exercises/sports activities by individuals. They were 1.5 ± 14.1 (M: 1.7 ± 16.0 ; F: 1.3 ± 11.9), 0.8 ± 12.8 (M: 1.4 ± 17.4 ; F: 0.3 ± 5.0), and 0.9 ± 10.9 (M: 1.5 ± 14.2 ; F: 0.3 ± 6.0) minutes, respectively, in the age group of ≥ 15 years. They were 1.5 ± 14.4 (M: 1.8 ± 16.4 ; F: 1.3 ± 12.0), 0.8 ± 12.4 (M: 1.3 ± 16.9 ; F: 0.3 ± 5.2), and 0.7 ± 10.1 (M: 1.2 ± 13.3 ; F: 0.2 ± 5.5) minutes, respectively, in the age group of ≥ 19 years. They were 1.6 ± 14.6 (M: 1.8 ± 16.7 ; F: 1.3 ± 12.1), 0.9 ± 13.2 (M: 1.4 ± 17.8 ; F: 0.3 ± 5.5), and 0.8 ± 10.7 (M: 1.3 ± 13.8 ; F: 0.3 ± 5.9) minutes, respectively, in the age group of 19-64 years. They were 1.4 ± 12.8 (M: 1.8 ± 14.6 ; F: 1.0 ± 11.2), 0.1 ± 1.6 (M: 0.1 ± 2.1 ; F: 0.1 ± 1.1) and 0.2 ± 4.3 (M: 0.3 ± 6.5 ; F: 0.0 ± 0.0) minutes, respectively, in the age group of ≥ 65 years.

Age (yea	rs)	Sle	eping (mi	in.)		ctivities w ng down	-		Activities sitting (n	-
	Ν	x	SD	95%CI	x	SD	95%CI	x	SD	95%CI
Males										
15-18	253	495.9	96.2	483.2-508.6	87.3	149.4	57.9-116.7	583.7	189.2	553.9-613.6
19-49	3264	467.6	104.0	462.7-472.5	89.2	122.0	83.7-94.7	503.8	226.8	493.7-513.9
50-64	1330	477.6	88.8	472.6-483.1	100.8	143.1	92.0-109.6	520.1	215.9	505.7-534.4
≥65	976	505.7	106.3	497.8-513.7	131.8	182.7	118.3-145.2	543.3	208.9	527.5-559.1
Total										
≥15	5823	475.5	101.6	472.0-479.0	95.4	136.0	90.6-100.1	517.3	221.4	509.7-524.9
≥19	5570	473.7	101.9	470.1-477.3	96.1	134.7	91.7-100.5	511.4	223.1	503.6-519.2
19-64	4594	469.9	100.7	466.0-473.9	91.9	127.3	87.3-96.6	507.6	224.4	499.2-516.1
Females										
15-18	273	497.6	106.0	483.7-511.6	65.9	110.6	52.3-79.7	625.3	194.7	598.9-651.7
19-49	3928	486.6	101.4	482.4-490.7	69.2	109.8	64.6-73.8	456.5	190.6	448.4-464.6
50-64	1676	483.6	97.4	477.6-489.5	95.9	140.2	87.6-104.2	456.7	184.5	445.4-467.9
≥65	1284	512.6	116.8	503.8-521.4	167.8	224.8	143.8-191.8	511.4	209.6	494.3-528.4
Total										
≥15	7161	490.0	103.4	468.9-493.2	86.1	138.8	81.5-90.8	476.8	197.9	470.4-483.1
≥19	6888	489.4	103.1	486.2-492.6	87.9	140.8	83.0-92.8	463.8	192.8	457.6-470.0

Table 2.19. Mean (\bar{x}) , standard deviation (SD) and 95% CI (Confidence Interval) values of the activities done throughout the day for individuals, TNHS 2017

Table 2.19. Mean (x̄), standard deviation (SD) and 95% CI (Confidence Interval) values of the activities done throughout the day for individuals, TNHS 2017 (continued)

118.4

71.7-79.7

456.5

189.1

449.8-463.2

75.7

Age (years)			ng activiti GHT) (mir			anding acti IODERATE)		Standing activities (VIGOROUS) (min.)			
	Ν	x	SD	95%CI	x	SD	95%CI	x	SD	95%CI	
Males											
15-18	253	216.2	139.7	195.7-236.7	38.5	85.6	27.2-49.8	9.1	51.6	1.5-16.8	
19-49	3264	282.4	207.5	272.8-292.1	63.1	131.8	56.9-69.3	28.9	105.1	24.1-33.6	
50-64	1330	265.5	181.8	253.7-277.3	54.5	115.4	47.4-61.7	18.8	87.5	13.3-24.2	
≥65	976	222.7	162.0	210.2-235.2	31.2	83.6	24.8-37.5	3.1	31.8	0.9-5.3	
Total											
≥15	5823	268.0	195.2	261.1-274.8	56.4	122.0	52.1-60.7	22.8	93.9	19.6-26.1	
≥19	5570	272.6	198.8	265.4-279.8	58.0	124.6	53.4-62.5	24.0	96.7	20.6-27.5	
19-64	4594	278.4	201.9	270.6-286.3	61.1	128.2	56.1-66.1	26.5	101.3	22.6-30.3	
Females											
15-18	273	230.2	133.1	210.7-249.7	17.2	55.3	9.7-24.8	1.1	18.6	0.0-3.0	
19-49	3928	390.4	195.3	382.3-398.6	33.2	87.5	29.9-36.6	2.3	27.2	1.3-3.3	
50-64	1676	363.9	177.1	353.4-374.3	35.4	87.4	30.4-40.3	2.3	24.2	1.2-3.4	
≥65	1284	231.9	174.9	218.1-245.1	13.9	53.4	10.0-17.9	1.3	22.7	0.0-2.6	
Total											
≥15	7161	353.1	195.2	347.1-359.2	30.0	82.2	27.6-32.4	2.1	25.5	1.4-2.8	
≥19	6888	363.8	196.8	357.6-370.0	31.1	84.0	28.6-33.6	2.2	26.0	1.5-2.9	
19-64	5604	383.9	191.3	377.3-390.6	33.8	87.5	30.9-36.6	2.3	26.5	1.5-3.1	

19-64

5604

485.8

100.4

482.4-489.3

Age (years)		LIGHT (exercises/s (min.)	ports	MODE	RATE exer (mii	cises/sports n.)	VIGOROUS exercises/sports (min.)			
	N	x	SD	95%CI	x	SD	95%CI	x	SD	95%CI	
Males											
15-18	253	1.5	10.0	0.3-2.6	2.7	22.7	0.5-4.8	5.2	21.9	2.4-7.9	
19-49	3264	1.6	16.4	1.0-2.3	1.8	20.3	0.0-3.6	1.5	14.5	0.9-2.1	
50-64	1330	2.2	17.7	0.8-3.6	0.1	1.5	0.0-0.1	0.5	11.3	0.0-1.1	
≥65	976	1.8	14.6	0.7-2.9	0.1	2.1	0.0-0.2	0.3	6.5	0.0-0.6	
Total											
≥15	5823	1.7	16.0	1.3-2.2	1.4	17.4	0.2-2.5	1.5	14.2	1.1-2.0	
≥19	5570	1.8	16.4	1.2-2.3	1.3	16.9	0.0-2.5	1.2	13.3	0.8-1.6	
19-64	4594	1.8	16.7	1.2-2.3	1.4	17.8	0.0-2.77	1.3	13.8	0.8-1.8	
Females											
15-18	273	1.8	10.9	0.4-3.2	-	-	-	0.8	9.7	0.0-1.9	
19-49	3928	1.2	10.8	0.8-1.6	0.2	3.8	0.1-0.4	0.4	6.7	0.0-0.7	
50-64	1676	1.7	15.4	0.4-3.1	0.6	8.9	0.0-1.2	0.1	2.1	0.0-0.2	
≥65	1284	1.0	11.2	0.3-1.8	0.1	1.1	0.0-0.1	0.0	0.0	0.0-0.0	
Total											
≥15	7161	1.3	11.9	1.0-1.7	0.3	5.0	0.1-0.4	0.3	6.0	0.0-0.5	
≥19	6888	1.3	12.0	0.9-1.7	0.3	5.2	0.1-0.4	0.2	5.5	0.0-0.5	
19-64	5604	1.3	12.1	0.9-1.8	0.3	5.5	0.1-0.5	0.3	5.9	0.0-0.6	

Table 2.19. Mean (\bar{x}) , standard deviation (SD) and 95% CI (Confidence Interval) values of the activities done throughout the day for individuals, TNHS 2017 (continued)

Table 2.20. Mean (x), standard deviation (SD) and 95% CI (Confidence Interval) values of the activities done throughout the day in all individuals, TNHS 2017

Z
4

Age (years)

		Sleeping	g (min.)		Activit	ies while lying (down (min.)	Activities while sitting (min.)		
	N	x	SD	95%CI	x	SD	95%CI	x	SD	95%CI
MALES and FEM	ALES									
15-18	526	496.8	101.1	487.3-506.2	76.7	132.0	60.3-93.1	604.4	193.0	584.3-624.4
19-49	7192	476.9	103.1	473.7-480.1	79.4	116.5	75.7-82.9	480.5	211.1	474.0-487.0
50-64	3006	480.6	93.2	476.5-484.7	98.3	141.6	92.3-104.3	488.1	203.2	478.8-497.5
≥65	2260	509.6	112.3	503.5-515.6	152.0	208.1	137.2-166.8	525.3	209.8	513.4-537.3
Overall										
≥15	12984	482.8	102.7	480.4-485.2	90.7	137.5	87.4-94.1	496.9	210.9	492.0-501.9
≥19	12458	481.6	102.8	479.1-484.0	92.0	137.9	88.7-95.3	487.4	209.8	482.5-492.4
19-64	10198	477.8	100.9	475.2-480.4	83.9	123.3	80.8-87.0	482.3	209.2	476.9-487.8

Table 2.20. Mean (x̄), standard deviation (SD) and 95% CI (Confidence Interval) values of activities done throughout the day in all individuals, TNHS 2017 (continued)

Age (years)		Standing a (LIGHT)				tanding activitie 10DERATE) (min	Standing activities (VIGOROUS) (min.)			
	4	x	SD	95%Cl	x	SD	95%CI	x	SD	95%CI
MALES and FEM	ALES									
15-18	526	223.1	136.6	208.9-237.9	27.9	72.9	21.1-34.8	5.1	39.1	1.1-9.1
19-49	7192	335.6	208.7	329.1-342.1	48.4	113.2	44.8-51.9	15.8	78.4	13.3-18.3
50-64	3006	315.1	186.1	306.8-323.3	44.9	102.7	40.5-49.2	10.5	64.5	7.7-13.2
≥65	2260	227.9	169.2	218.4-237.4	21.5	68.8	17.9-25.1	2.1	27.1	0.9-3.3
Overall										
≥15	12984	310.8	199.8	306.1-315.4	43.1	104.7	40.7-45.6	12.4	69.4	10.7-14.1
≥19	12458	318.5	202.6	313.6-323.3	44.5	107.0	41.9-47.1	13.1	71.4	11.3-14.8
19-64	10198	330.7	203.7	325.4-336.0	47.6	110.8	44.7-50.5	14.5	75.3	12.5-16.5

Age (years)		LIGHT exerci (miı					VIGOROUS exercises/sports (min.)			
	N	x	SD	95%Cl	x	SD	95%CI	x	SD	95%CI
MALES and FE	MALES									
15-18	526	1.6	10.4	0.7-2.5	1.3	16.2	0.2-2.4	2.9	17.1	1.5-4.5
19-49	7192	0.2	13.9	1.1-1.8	1.0	14.7	0.1-1.9	0.9	11.4	0.6-1.3
50-64	3006	2.0	16.6	1.0-2.9	0.3	6.5	0.0-0.6	0.3	8.1	0.0-0.6
≥65	2260	1.4	12.8	0.7-2.0	0.1	1.6	0.0-0.1	0.2	4.3	0.0-0.3
Overall										
≥15	12984	1.5	14.1	1.2-1.9	0.8	12.8	0.2-1.4	0.9	10.9	0.7-1.2
≥19	12458	1.5	14.4	1.2-1.9	0.8	12.4	0.2-1.4	0.7	10.1	0.5-1.0
19-64	10198	1.6	14.6	1.2-1.9	0.9	13.2	0.2-1.6	0.8	10.7	0.5-1.1

Table 2.20. Mean (x̄), standard deviation (SD) and 95% CI (Confidence Interval) values of activities done throughout the day in all individuals, TNHS 2017 (continued)

Mean (x̄) and standard deviation (SD) values of Physical Activity Level (PAL)

The activities done by individuals throughout the day were assessed, the Physical Activity Level (PAL), mean (\bar{x}), standard deviation (SD) and CI (95% Confidence Interval) values are shown in Table 2.21 by age groups and gender and in Table 2.22 for all individuals by age groups. When the physical activity level of all individuals (males and females overall) by gender were assessed, it was found that mean±SD values of PAL were 1.68±0.19 (M: 1.71±0.23; F: 1.65±0.14) in the age group of 15-18 years, 1.81±0.28 (M: 1.83 ±0.33; F: 1.79 ±0.20) in the age group of 19-49 years, 1.76±0.26 (M: 1.77±0.30; F: 1.77±0.20) in the age group of 50-64 years, and 1.61±0.22 (M: 1.64±0.21; F: 1.60±0.22) in individuals aged 65 years and over. While the highest PAL value was the highest among all individuals in the age group of 19-49 years, it was the lowest in individuals aged 65 years and over.

When all individuals were assessed as aged \geq 15 years and \geq 19 years, it was found that the mean±SD values of PAL were 1.77±0.27 (M: 1.79±0.32; F: 1.75±0.21) and 1.78±0.27 (M: 1.80±0.32; F: 1.76±0.32), respectively, and they were similar overall and by gender. In the age group 19-64 years, this value was 1.80±0.27 and it was the highest. The value was the highest separately for males (1.82±0.33) and females (1.79±0.20) (Table 2.21 and Table 2.22).

Table 2.21. Physical activity level (PAL), mean (\bar{x}) , standard deviation (SD) and 95% CI (Confidence Interval) values for individuals by age groups and gender, TNHS 2017

Age (years)			PAL		
(years)	Ν	x	SD	Sx	95%CI
Males					
15-18	253	1.71	0.23	0.02	1.67-1.74
19-49	3264	1.83	0.33	0.08	1.82-1.85
50-64	1330	1.77	0.30	0.01	1.75-1.79
≥65	976	1.64	0.21	0.01	1.62-1.66
Total					
≥15	5823	1.79	0.32	0.00	1.78-1.80
≥19	5570	1.80	0.32	0.01	1.79-1.81
19-64	4594	1.82	0.33	0.00	1.80-1.83
Females					
15-18	273	1.65	0.14	0.01	1.64-1.67
19-49	3928	1.79	0.20	0.00	1.78-1.80
50-64	1676	1.77	0.20	0.01	1.76-1.78
≥65	1284	1.60	0.22	0.01	1.58-1.62
Total					
≥15	7161	1.75	0.21	0.00	1.74-1.76
≥19	6888	1.76	0.32	0.00	1.75-1.77
19-64	5604	1.79	0.20	0.00	1.78-1.79

Age (years)			PAL		
	Ν	x	SD	Sx	95%CI
Males & Females					
15-18	526	1.68	0.19	0.01	1.66-1.70
19-49	7192	1.81	0.28	0.00	1.80-1.82
50-64	3006	1.76	0.26	0.00	1.76-1.77
≥65	2260	1.61	0.22	0.01	1.66-1.63
Overall					
≥15	12984	1.77	0.27	0.00	1.77-1.78
≥19	12458	1.78	0.27	0.00	1.77-1.79
19-64	10198	1.80	0.27	0.00	1.79-1.80

Table 2.22. Physical activity level (PAL), mean (\bar{x}) standard deviation (SD) and 95% CI (Confidence Interval) values for all individuals by age groups, TNHS 2017

Assessment of individuals' Physical Activity Level (PAL) values according to EFSA and FAO/WHO/UNU classification

TNHS 2017 survey data were examined according to the PAL values classification of the European Food Safety Authority (EFSA, 2013) and FAO/WHO/UNU for adults (FAO/WHO/UNU, 2004) (See Table 1.4.).

The distribution of Physical Activity Level (PAL) according to the EFSA classification for individuals aged 15 years and over by age groups and gender is given in Table 2.23, and the distribution of Physical Activity Level (PAL) according to FAO/WHO/UNU classification is given in Table 2.24.

Assessment according to EFSA classification

When males and females were assessed together according to the EFSA classification, it was found that the percentages of those with a PAL value of 1.60 and below in the age groups of \geq 15 years, \geq 19 years, 19-64 years and \geq 65 years were 24.9% (M: 26.9%; F: 22.9%), 24.4% (M: 26.8%; F: 22.0%), 21.1% (M: 24.6%; F: 17.5%), and 48.4% (M: 44.8%; F: 60.0%), respectively. The highest sedentary lifestyle was in the age group of \geq 65 years. There were also those with a PAL value below 1.40, and the group with the lowest ratio (2.7%) was the age group of 19-64 years and the one with the highest ratio (14.6%) was the age group of 65 years and over (Table 2.23).

When males and females were assessed together according to EFSA classification, the frequencies of those with PAL values between 1.61-1.80 (moderately active lifestyle) was 36.3% (M: 33.9%; F: %38.7), 35.3% (M: 33.0%; F: 37.5%), 35.5% (M: 32.6%; F: 38.4%), and 33.9% (M: 36.9%; F: 31.6%) in the age groups of \geq 15 years, \geq 19 years, 19-64 years and \geq 65 years, respectively (Table 2.23). Individuals with moderately active lifestyle by age groups were approximately one out of every three persons, and the values were similar in all age groups.

The percentages of those with active (PAL=1.81-2.0) and very active (PAL≥2.0) lifestyles according to EFSA classification were 25.0% (M: 21.7%; F: 28.3%) and 13.8% (M: 17.5%; F: 10.1%), respectively in the age group of \geq 15 years; 25.9% (M: 22.0%; F: 29.7%) and 14.5% (M: 18.2%; F: 10.8%), respectively in the age group of \geq 19 years; 27.4% (M: 23.0%; F: 32.0%) and 16.0% (M: 19.8%; F: 12.1%), respectively in the age group of 19-64 years, and 14.3% (M: 13.8%; F: 14.7%) and 3.4% (M: 4.5%; F: 2.6%), respectively in the age group of \geq 65 years (Table 2.23).



Table 2.23. Distribution of physical activity levels (PALs) according to EFSA classification by age groups for all individuals a	ged 15 years and over (males
and females overall), TNHS 2017	

Age (years)	PAL CLASSIFICATION (EFSA)															
			≤1.40)		1.41 – 1	.60		1.61 – 1.	80		1.81 -	2.00		>2.(D
	Total Number	Ν	%	95%CI	N	%	95%CI	N	%	95%CI	Ν	%	95%CI	Ν	%	95%CI
Males																
15-18	253	9	4.7	2.1-10.1	63	24.8	19.0-31.8	112	43.6	36.6-50.9	42	17.8	12.9-23.9	27	9.1	5.8-14.0
19-49	3264	78	2.8	2.1-3.8	652	20.5	18.7-22.4	1043	31.6	29.6-33.7	776	23.4	21.6-25.4	715	21.6	19.7-23.7
50-64	1330	52	4.1	3.0-5.6	327	24.7	21.9-27.7	475	35.8	32.6-39.1	283	21.5	18.9-24.3	193	13.9	11.8-16.3
≥65	976	109	11.1	8.9-13.9	328	33.7	30.3-37.3	373	36.9	33.4-40.5	129	13.8	11.4-16.6	37	4.5	3.0-6.6
Total																
≥15	5823	248	4.0	3.4-4.8	1370	22.9	21.5-24.4	2003	33.9	32.3-35.5	1230	21.7	20.3-23.1	972	17.5	16.1-18.9
≥19	5570	239	4.0	3.4-4.7	1307	22.8	21.3-24.2	1891	33.0	31.4-34.7	1188	22.0	20.6-23.5	945	18.2	16.8-19.7
19-64	4594	130	3.1	2.5-3.9	979	21.5	20.0-23.1	1518	32.6	30.8-34.4	1059	23.0	21.5-24.6	908	19.8	18.2-21.5
Females																
15-18	273	7	2.2	1.0-4.8	85	31.9	26.1-35.8	152	52.3	45.6-58.9	24	12.1	7.8-18.3	5	1.4	0.6-3.6
19-49	3928	70	1.9	1.4-2.5	511	15.1	13.6-16.7	1422	37.6	35.5-39.8	1367	32.8	30.9-34.7	558	12.6	11.4-13.9
50-64	1676	51	3.1	2.2-4.2	262	16.1	14.0-18.5	691	40.7	37.8-43.7	498	29.5	26.9-32.4	174	10.6	9.0-12.5
≥65	1284	194	17.2	14.3-20.6	469	33.8	30.5-37.2	427	31.6	28.3-35.1	159	14.7	12.0-18.0	35	2.6	1.8-3.8
Total																
≥15	7161	322	4.0	3.5-4.7	1327	18.9	17.7-20.2	2692	38.7	37.1-40.2	2048	28.3	26.9-29.7	772	10.1	9.3-11.0
≥19	6888	315	4.2	3.6-4.8	1242	17.8	16.6-19.0	2540	37.5	35.9-39.1	2024	29.7	28.3-31.2	767	10.8	10.0-11.8
19-64	5604	121	2.2	1.8-2.7	773	15.3	14.1-16.7	2113	38.4	36.6-40.1	1865	32.0	30.4-33.6	732	12.1	11.1-13.2

Age (years)																	
			≤1.40)	1.41 - 1.60				1.61 - 1.80			1.81 – 2.00			>2.0		
	Total Number	Ν	%	95%CI	N	%	95%CI	Ν	%	95%CI	N	%	95%CI	N	%	95%CI	
Males an	d Females																
15-18	526	16	3.5	1.9-6.2	148	28.4	24.1-33.0	264	47.9	43.0-52.9	66	15.0	11.6-19.1	32	5.3	3.5-7.9	
19-49	7192	148	2.4	1.9-2.9	1163	17.8	16.7-19.1	2465	34.6	33.1-30.1	2143	28.0	26.7-29.4	1273	17.2	16.0-18.4	
50-64	3006	103	3.6	2.9-4.5	589	20.4	18.6-22.3	1166	38.3	36.1-40.5	781	25.6	23.7-27.5	367	12.2	10.9-13.7	
≥65	2260	303	14.6	12.6-16.8	767	33.8	31.4-36.2	800	33.9	31.5-36.4	288	14.3	12.4-16.5	72	3.4	2.6-4.5	
Overall																	
≥15	12984	570	4.0	3.6-4.5	2697	20.9	20.0-21.9	4695	36.3	35.2-37.4	3278	25.0	24.0-26.0	1744	13.8	13.0-14.6	
≥19	12458	554	4.1	3.7-4.6	2549	20.3	19.3-21.2	4431	35.3	34.1-36.4	3212	25.9	24.9-26.9	1712	14.5	13.7-15.4	
19-64	10198	251	2.7	2.3-3.1	1752	18.4	17.4-19.5	3631	35.5	34.2-36.7	2924	27.4	26.3-28.6	1640	16.0	15.0-17.0	

Table 2.23. Distribution of physical activity levels (PALs) according to EFSA classification by age groups for all individuals aged 15 years and over (males and females overall), TNHS 2017 (continued)

Assessment in according to FAO/WHO/UNU classification

When males and females were assessed together, it was found the frequencies of those with a PAL value of 1.69 and below (sedentary/light activity lifestyle) were 41.8% (M: 44.2%; F: 39.5%), 39.9% (M: 43.0%; F: 36.7%), 36.4% (M: 40.6%; F: 32.0%) and 70.1% (M: 63.3%; F: 68.4%) in the age groups of \geq 15 years, \geq 19 years, 19-64 years and \geq 65 years, respectively. The highest sedentary lifestyle was in the age group of 65 years and over. There were also those with a PAL value below 1.40, and the group with the lowest ratio (2.4%) was the age group of 19-64 years and the one with the highest ratio (13.5%) was the age group of \geq 65 years (Table 2.24).

The percentages of those with PAL values between 1.70-1.99 (active/moderately active lifestyle) were 43.4% (M: 37.5%; F: 49.4%), 44.6% (M: 37.8%; F: 51.3%), 46.5% (M: 38.5%; F: 54.7%) and 30.1% (M: 31.7%; F: 28.8%) in the age groups of \geq 15 years, \geq 19 years, 19-64 years and \geq 65 years, respectively. (Table 2.24). According to age groups, the most active age group was age group of 19-64 years, and the least active were the age group of \geq 65 years.

The percentages of those with a PAL value of 2.00-2.40 and a PAL value of >2.4 (very active lifestyle) were 12.0% (M: 13.5%; F: 10.5%) and 2.7% (M: 4.9%; F: 0.6%) in the age group of \geq 15 years, 12.6% (M: 13.9%; F: 11.3%) and 2.9% (M: 5.2%; F: 0.6%) in the age group of \geq 19 years, 13.9% (M: 15.1%; F: 12.7%) and 3.2% (M: 5.8%; F: 0.7%) in the age group of 19-64 years, 3.3% (M: 4.4%; F: 2.5%) and 0.4% (M: 0.7%; F: 0.2%) in the age group of \geq 65 years, respectively (Table 2.24). It was observed that females were less active than males, the age group of 19-64 years was the most active and the age group of \geq 65 years was the least active. It is known that PAL value of >2.4 are short-term and do not show continuity, and it is not a frequently observed status except perhaps for active athletes. These values determined in this study may depend on experiencing an active process specific to that day in the study.

Age (years)	PAL CLASSIFICATION (WHO)															
			<1.40)		1.40-1.	69		1.70 – 1.	99		2.00 -	2.40		>2.4	0
	Total Number	N	%	95%CI	N	%	95%CI	Ν	%	95%CI	Ν	%	95%CI	Ν	%	95%CI
Males																
15-18	253	8	4.4	1.9-9.9	131	52.6	45.3-59.8	86	33.6	27.2-40.6	25	8.5	5.4-13.3	3	0.9	0.3-3.4
19-49	3264	72	2.7	2.0-3.6	1168	36.1	34.0-38.3	1279	38.6	36.4-40.8	536	16.2	14.5-18.0	209	6.4	5.4-7.7
50-64	1330	43	3.2	2.3-4.5	566	43.3	40.0-46.8	516	38.5	35.3-41.7	157	11.5	9.5-13.7	48	3.5	2.5-4.8
≥65	976	100	10.2	8.0-12.8	525	53.1	49.3-56.8	310	31.7	28.3-35.3	34	4.4	2.9-6.5	7	0.7	0.3-1.6
Total																
≥15	5823	223	3.7	3.1-4.4	2390	40.5	38.8-42.2	2191	37.5	35.8-39.1	752	13.5	12.3-14.8	267	4.9	4.1-5.7
≥19	5570	215	3.6	3.0-4.3	2259	39.4	37.7-41.1	2105	37.8	36.2-39.5	727	13.9	12.7-15.3	264	5.2	4.4-6.1
19-64	4594	115	2.8	2.3-3.6	1734	37.8	36.0-39.7	1795	38.5	36.7-40.4	693	15.1	13.7-16.6	257	5.8	4.9-6.8
Females																
15-18	273	6	1.9	0.8-4.4	189	69.5	62.9-75.3	73	27.2	21.5-33.7	4	1.1	0.4-3.2	1	0.3	0.0-2.0
19-49	3928	61	1.6	1.2-2.2	1040	29.3	27.4-31.2	2223	55.4	53.3-57.4	573	13.0	11.8-14.4	31	0.7	0.5-1.1
50-64	1676	46	2.6	1.8-3.6	550	32.6	29.8-35.4	886	52.6	49.6-55.6	181	11.6	9.9-13.6	13	0.6	0.3-1.1
≥65	1284	181	16.2	13.3-19.6	717	52.2	48.5-56.0	349	28.8	25.5-32.4	34	2.5	1.7-3.7	3	0.2	0.1-0.8
Overall																
≥15	7161	294	3.6	3.1-4.2	2496	35.9	34.4-37.4	3531	49.4	47.8-50.9	792	10.5	9.7-11.4	48	0.6	0.4-0.8
≥19	6888	288	3.7	3.2-4.4	2307	33.0	31.5-34.5	3458	51.3	49.7-52.9	788	11.3	10.4-12.3	47	0.6	0.5-0.9
19-64	5604	107	1.9	1.5-2.3	1590	30.1	28.5-31.7	3109	54.7	53.0-56.4	754	12.7	11.6-13.8	44	0.7	0.5-1.0

Table 2.24. Distribution of physical activity levels (PALs) according to FAO/WHO/UNU classification by age groups for all individuals aged 15 years and over (males and females overall), TNHS 2017

Age (years)	PAL CLASSIFICATION (WHO)															
	<1.40 1.40-1.69					1.70 - 1.99			2.00 - 2.40			>2.41				
	Total Number	N	%	95%CI	Ν	%	95%CI	Ν	%	95%CI	N	%	95%CI	Ν	%	95%CI
Males and	d Females															
15-18	526	14	3.1	1.6-5.9	320	61.0	56.0-65.7	159	30.4	26.1-35.1	29	4.9	3.1-7.4	4	0.6	0.2-1.8
19-49	7192	133	2.2	1.8-2.7	2208	32.7	31.3-34.2	3502	46.8	45.3-48.4	1109	14.6	13.5-15.8	240	3.6	3.1-4.3
50-64	3006	89	2.9	2.3-3.7	1116	37.9	35.7-40.2	1402	45.6	43.4-47.9	338	11.5	10.2-13.0	61	2.0	1.5-2.7
≥65	2260	281	13.5	11.6-15.8	1242	52.6	49.9-55.3	659	30.1	27.7-32.6	68	3.3	2.5-4.4	10	0.4	0.2-0.9
Overall																
≥15	12984	517	3.6	3.2-4.1	4886	38.2	37.1-39.3	5722	43.4	42.3-44.6	1544	12.0	11.3-12.8	315	2.7	2.3-3.2
≥19	12458	503	3.7	3.3-4.1	4566	36.2	35.1-37.3	5563	44.6	43.4-45.8	1515	12.6	11.8-13.5	311	2.9	2.5-3.4
19-64	10198	222	2.4	2.0-2.8	3324	34.0	32.8-35.2	4904	46.5	45.3-47.8	1447	13.9	13.0-14.8	301	3.2	2.8-3.8

Table 2.24. Distribution of physical activity levels (PALs) according to FAO/WHO/UNU classification by age groups for all individuals aged 15 years and over (males and females overall), TNHS 2017 (continued)

3.3. Nutritional Habits of Individuals

Main Meal and Snack Consumption

When the main meals consumption of individuals aged 15 years and over was assessed according to results of TNHS 2017, it was found that 85% of them (M: 83.6%, F: 86.4%) had breakfast.

The frequency of having breakfast was 67.6% (M: 72.9%, F: 62.3%) for the age group of 15-18 years, 82.9% (M: 80.7%, F: 85.2%) for the age group of 19-50 years, 93.2% (M : 92.2%, F: 94.3%) for the age group of 51-64 years, 96.4% (M: 96.2%, F: 96.6%) for the age group of 65 years and over.

Among all individuals who skip breakfast, the first 3 reasons for skipping breakfast were "doesn't want to eat, no appetite" with 48.7%, "no habit" with 14.4% and "wakes up late" with 11.2%.

When the lunch consumption of individuals aged 15 years and over was assessed, it was found that 75.3% of them (M: 83.1%, F: 67.6%) had lunch and 24.7% (M: 16.9%, F: 32.4%) skipped lunch.

The first 3 reasons for skipping lunch were "doesn't want to eat, no appetite" with 23.2%, "wakes up late" with 20.7% and "eats two meals a day" with 19.8%.

When dinner consumption of individuals aged 15 years and over was assessed, it was found that 96.3% of them (M: 97.0%, F: 95.7%) had dinner and 3.7% (M: 3.0%, F: 4.3%) skipped dinner.

The first 3 reasons for skipping dinner were "doesn't want to eat, no appetite" with 29.1%, "eats two meals a day" with 17.0% and "wants to lose weight" with 14.0% (Table 2.25).

Table 2.25. Distribution of n	nain meal consumption amo	ong individuals aged 15 y	ears and over, TNHS 2017

Main meal consumption		Mal	es		Female	S	Overall			
	N	%	95%CI	N	%	95%CI	N	%	95%CI	
Breakfast										
No	805	16.4	15.1-17.8	809	13.6	12.5-14.8	1614	15.0	14.1-15.9	
Yes	5015	83.6	82.2-84.9	6356	86.4	85.2-87.5	11371	85.0	84.1-85.9	
Age (years)										
15-18	185	72.9	65.6-79.1	171	62.3	55.6-68.5	356	67.6	62.8-72.2	
19-50	2738	80.7	78.8-82.5	3482	85.2	83.6-86.6	6220	82.9	81.7-84.3	
51-64	1150	92.2	90.2-93.8	1465	94.3	92.7-95.5	2615	93.2	92.0-94.3	
≥65	942	96.2	94.4-97.5	1238	96.6	95.3-97.6	2180	96.4	95.4-97.3	
Total										
≥15	5015	83.6	82.2-84.9	6356	86.4	85.2-87.5	11371	85.0	84.1-85.9	
≥19	4830	84.6	83.1-85.9	6185	88.5	87.4-89.5	11015	86.5	85.6-87.4	
If no, what is the reason										
No time	155	21.1	17.3-25.5	113	14.2	11.5-17.4	268	17.9	15.4-20.7	
Doesn't want to eat, no appetite	339	44.1	39.6-48.8	402	54.2	49.7-58.6	741	48.7	45.5-52.0	
Food was not prepared	20	1.7	1.0-2.9	10	1.0	0.4-2.9	30	1.4	0.9-2.3	
Wants to lose weight	14	1.6	0.9-2.9	20	2.1	1.2-3.6	34	1.8	1.2-2.7	
No habit	152	16.1	13.3-19.3	108	12.3	9.9-15.3	260	14.4	12.5-16.5	
Economic reasons	4	0.1	0.0-0.4	1	0.2	0.0-1.4	5	0.2	0.0-0.5	
Has a snack instead	17	2.1	1.1-4.2	19	1.7	0.9-3.1	36	1.9	1.2-3.1	
Wakes up late	85	10.4	8.0-13.6	117	12.1	9.7-15.0	202	11.2	9.4-13.3	
Believes in 2 meals a day	4	0.4	0.1-1.4	5	0.5	0.2-1.3	9	0.5	0.2-1.0	
Doesn't believe in the importance of breakfast	3	0.4	0.1-1.4	2	0.3	0.1-1.1	5	0.3	0.1-0.8	
Other	16	1.9	1.1-3.3	8	1.5	0.7-3.3	24	1.7	1.1-2.7	
Lunch										
No	1161	16.9	15.8-18.1	2370	32.4	31.0-34.0	3531	24.7	23.7-25.	
Yes	4663	83.1	81.9-84.2	4791	67.6	66.0-69.0	9454	75.3	74.3-76.3	
If no, what is the reason										
No time	114	12.9	10.5-15.7	119	5.4	4.3-6.8	233	8.0	6.8-9.2	
Doesn't want to eat, no appetite	227	19.8	17.0-22.8	586	24.9	22.6-27.4	813	23.2	21.3-25.3	
Food was not prepared	20	0.9	1.1-3.1	22	1.8	0.6-1.5	42	1.2	0.9-1.8	
Wants to lose weight	40	4.2	2.9-6.1	73	2.9	2.2-3.7	113	3.3	2.7-4.1	
No habit	217	17.3	14.8-20.1	333	13.8	12.1-15.8	550	15.0	13.5-16.6	
Economic reasons	10	0.9	0.4-1.8	3	0.2	0.0-0.7	13	0.4	0.2-0.8	
Has a snack instead	42	3.4	2.2-5.0	170	7.2	5.9-8.6	212	5.9	4.9-6.9	
Wakes up late	179	15.9	13.4-18.7	531	23.2	20.6-26.1	710	20.7	18.7-22.8	
Not healthy	12	1.0	0.5-2.2	8	0.7	0.2-1.0	20	0.6	0.3-1.1	
Eats only two meals (breakfast, dinner)	263	20.0	17.4-22.9	490	19.7	17.8-21.8	753	19.8	18.2-21.5	
Other	37	2.9	2.0-4.2	35	1.4	1.0-2.1	72	1.9	1.5-2.5	
Dinner										
No	177	3.0	2.5-3.7	299	4.3	3.7-4.9	476	3.7	3.3-4.1	
Yes	5647	97.0	96.3-97.5	6862	95.7	95.1-96.3	12509	96.3	95.9-96.7	
If no, what is the reason										
No time	20	9.8	6.0-15.8	9	2.3	1.1-4.9	29	5.4	3.6-8.1	
Doesn't want to eat, no appetite	40	28.2	18.7-40.1	85	29.8	23.5-36.9	125	29.1	23.5-35.4	
Food was not prepared	3	1.8	0.4-7.2	3	0.7	0.2-2.5	6	1.1	0.4-3.1	
Wants to lose weight	23	14.8	8.6-24.1	40	13.4	9.3-18.9	63	14.0	10.3-18.	
No habit	32	14.7	9.7-21.7	39	12.6	8.7-18.0	71	13.5	10.2-17.	
Economic reasons	1	0.3	0.0-2.0	-	-	-	1	0.1	0.0-0.8	
Has a snack instead	17	7.8	4.4-13.5	33	11.2	7.7-16.1	50	9.8	7.2-13.4	
Wakes up late	-	-	-	-	-	-	-	-	-	
Not healthy	12	6.7	3.2-13.4	9	1.8	0.9-3.6	21	3.8	2.1-6.6	
Eats only two meals (breakfast, lunch)	20	12.6	7.2-21.1	59	20.0	15.0-26.2	79	17.0	13.0-21.8	
	9	7.0	1.6-7.0	22	12.7	5.1-12.7	31	9.2	4.1-9.2	

According to TNHS 2017 data, snack consumption status (snacking) of individuals aged 15 years and over is shown in Table 2.26.

The frequency of mid-morning snack consumption was 39.8% (M: 35.7%, F: 43.9%); frequency of afternoon snack consumption was 51.2% (M: 42.6%, F: 59.7%) and the frequency of evening snack consumption was 64.5% (M: 66.3%, F: 62.7%).

While the frequency of those who preferred healthy snacks (milk, cheese, fruits, yoghurt, etc.) for mid-morning meal was 66.3%, 33.7% preferred unhealthy snacks (chips, carbonated beverages, sweets, confectionery products, etc.). While the frequency of those who prefer healthy snacks (milk, cheese, fruits, yoghurt, etc.) for mid-afternoon meal was 51.2%, 48.8% preferred unhealthy snacks (chips, carbonated beverages, sweets, confectionery products, etc.).

While the frequency of those who preferred healthy snacks (milk, cheese, fruits, yoghurt, etc.) in their snack before bedtime is 64.5%, 35.5% preferred unhealthy snacks (chips, carbonated beverages, sweets, confectionery products, etc.).

Table 2.26. Distribution of snack consumption among individuals aged 15 years and over, TNHS 2017

Snack consumption		Mal	es		Femal	es	Overall			
Mid-morning snack	N	%	95%CI	N	%	95%CI	N	%	95%CI	
No	3811	64.3	62.7-66.0	3984	56.1	54.6-57.6	7795	60.2	59.1-61.3	
Yes	2013	35.7	34.0-37.3	3177	43.9	42.4-45.4	5190	39.8	38.7-40.9	
If yes										
Healthy snacks (milk, cheese, fruits, yoghurt, etc.)	1214	55.2	52.2-58.2	2548	75.3	73.1-77.3	3762	66.3	64.5-68.1	
Unhealthy snacks (chips, carbonated beverages, sweets, confectionery products, etc.).	799	44.8	41.8-47.8	629	24.7	22.7-26.9	1428	33.7	31.9-35.5	
Mid-afternoon snack										
No	3410	57.4	55.7-59.1	2853	40.3	38.8-41.9	6263	48.8	47.7-50.0	
Yes	2414	42.6	40.9-44.3	4308	59.7	58.1-61.2	6722	51.2	50.0-52.3	
If yes										
Healthy snacks (milk, cheese, fruits, yoghurt, etc.)	1458	56.0	53.4-58.6	3036	67.8	65.8-69.8	4494	62.9	61.3-64.5	
Unhealthy snacks (chips, carbonated beverages, sweets, confectionery products, etc.).	956	44.0	41.4-46.6	1272	32.2	30.2-34.2	2228	37.1	35.5-38.7	
Evening snack (before bedtime)										
No	1963	33.7	32.1-35.3	2659	37.3	35.8-38.8	4622	35.5	34.4-36.6	
Yes	3861	66.3	64.7-67.9	4502	62.7	61.2-64.2	8363	64.5	63.4-65.6	
If yes										
Healthy snacks (milk, cheese, fruits, yoghurt, etc.)	3052	76.5	74.6-78.3	3534	75.9	74.2-77.6	6586	76.2	74.9-77.5	
Unhealthy snacks (chips, carbonated beverages, sweets, confectionery products, etc.).	809	23.5	21.7-25.4	968	24.1	22.4-25.8	1777	23.8	22.5-25.1	

Water Consumption

According to TNHS 2017 data, daily water consumption of individuals is as shown in Table 2.27. Mean water consumption of individuals was 1594.3±968.99 mL (1766.4±1039.56 mL for males, 1423.8±860.38 mL for females). In total, 45.2% of individuals prefer gallon bottled water, 45.1% prefer tap water, 8.5% prefer spring water, and 1.1% prefer well water.

Table 2.27. Distribution of the type of water consumed daily among individuals aged 15 years and over and
average consumption of water, TNHS 2017

Water consumption		Male	S		Femal	es	Overall			
	N	%	95%CI	N	%	95%CI	N	%	95%CI	
Type of drinking water										
Tap water	2483	42.7	41.0-44.4	3412	47.5	46.0-49.1	5895	45.1	44.0-46.3	
Gallon bottled water	2663	48.2	46.4-49.9	2935	42.3	40.7-43.8	5598	45.2	44.0-46.4	
Spring water	631	8.3	7.6-9.1	731	8.8	8.1-9.6	1362	8.5	8.0-9.1	
Well water	47	0.8	0.5-1.3	83	1.4	1.0-1.9	130	1.1	0.9-1.4	
Amount of water intake (mL)										
x	1766.4				1423	.8	1594.3			
SD	1039.56				860.3	38	968.99			
95%CI	1	727.9-1	.804.9	1	.397.1-1	450.5	1570.3-1618.3			

Vegetarianism

According to TNHS 2017 data, the distribution of vegetarianism status, types and reasons for becoming a vegetarian is as shown in Table 2.28. According to these data, the frequency of vegetarians among individuals aged 15 years and over was 0.7% (M: 0.2%, F: 1.2%).

When the vegetarianism was assessed according to distribution by age, it was found that proportion of vegetarians in the age group of 15-18 years was 1.4%, in the age group of 19-50 years was 0.7%, in the age group of 51-64 years was 0.6%, in the age group of 65 years and over was 0.2%. In total, 45% of the vegetarians were semi/partial vegetarians, 33.4% were lacto-ovo-vegetarians, 11.7% were ovo-vegetarians, 7.1% were pescatarians, 2.8% were lacto-vegetarians.

Among the reasons for becoming a vegetarian of individuals were "don't like meat" with 65.7%, "animal ethics" with 9.5%, "ecological and environmental reasons" with 5%, "my friends or family are vegetarian" with 3.1%, "to be healthier/to eat healthier" with 2.3%, and "other" with 14.4%.

Table 2. 28. Distribution of vegetarianism status, types and reasons for becoming a vegetarian for individuals aged 15 years and over, TNHS 2017

		Mal	es		Femal	es	Overall		
	Ν	%	95%CI	N	%	95%CI	N	%	95%CI
Vegetarianism									
No	5808	99.8	99.6-99.9	7100	98.8	98.4-99.2	12908	99.3	99.1-99.5
Yes	16	0.2	0.1-0.4	61	1.2	0.8-1.6	77	0.7	0.5-0.9
Age (years)									
15-18	1	0.4	0.1-2.7	6	2.5	1.0-6.0	7	1.4	0.6-3.2
19-50	12	0.3	0.1-0.5	44	1.2	0.8-1.8	56	0.7	0.5-1.0
51-64	3	0.1	0.0-0.4	7	1.0	0.3-3.0	10	0.6	0.2-1.5
≥65	-	-	-	4	0.3	0.1-0.7	4	0.2	0.1-0.4
Total									
≥15	16	0.2	0.1-0.4	61	1.2	0.8-1.6	77	0.7	0.5-0.9
Type of vegetarianism									
Lacto vegetarian (consumes milk and dairy products, does not consume meat and eggs)	1	16.0	2.4-59.6	1	0.3	0.0-2.1	2	2.8	0.5-15.1
Ovo vegetarian (consumes eggs, does not consume meat and dairy products)	2	9.3	2.2-32.1	5	12.1	4.5-28.9	7	11.7	4.8-25.7
Lacto-ovo vegetarian (consumes milk and dairy products and eggs, does not consume meat)	4	17.3	5.7-42.1	23	36.4	21.8-54.0	27	33.4	20.7-49.1
Pescatarians (consumes fish, does not consume any other types of meat)	2	13.1	2.5-47.5	3	6.0	1.6-20.3	5	7.1	2.5-18.9
Vegan (does not consume any food of animal origin - meat, milk, eggs, honey)	-	-	-	-	-	-	-	-	-
Semi/Partial vegetarian (consumes chicken or fish, does not consume red meat)	7	44.3	19.3-72.6	29	45.2	29.8-61.5	36	45.0	31.3-59.6
Reason for becoming a vegetarian									
To be healthier/to eat healthier	1	2.1	0.3-14.5	1	2.4	0.3-15.0	2	2.3	0.4-11.7
Animal ethics	-	-	-	6	11.3	2.8-35.5	6	9.5	2.4-31.0
For reasons of religion/belief	-	-	-	-	-	-	-	-	-
Ecological and environmental reasons	1	2.2	0.3-15.1	2	5.5	1.2-22.0	3	5.0	1.2-18.6
Body weight control	-	-	-	-	-	-	-	-	-
My friends or family are vegetarian	-	-	-	3	3.7	1.0-12.4	3	3.1	0.9-10.5
I don't like meat	10	79.6	56.5-92.1	42	63.1	45.3-77.9	52	65.7	49.8-78.7
Other	4	16.1	5.5-38.8	7	14.1	6.2-28.9	11	14.4	7.2-26.8

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Salt Consumption

Salt consumption of individuals was assessed according to TNHS 2017 data and is shown in Table 2.29.

While the frequency of adding salt while preparing or cooking food for all individuals (aged 15 years and over) was 91.9%, the frequency of those who never add salt was 6.6%. Considering the distribution by gender, the share of this habit was 90.2% for males and 93.6% for females.

Considering the preferred type of salt, 83.9% of the individuals preferred "iodized salt", 8.6% preferred "grinding table salt/Himalayan salt", 4.9% preferred "non-iodized salt", 0.3% preferred "liquid salt", 0.1% preferred "low-sodium salt substitute", and preferred 2.3% "other salt".

When those who add salt without tasting the food at the table were examined, the frequency of those who said "I always add salt/without tasting" was 10.5%, the frequency of those who said "I add salt rarely occasionally" was 13.4%, and the frequency of those who said "I never add salt" was 76.1%. The frequency of males who said "I always add salt/without tasting" was higher compared to females (12.4% and 8.5%, respectively).

Considering the distribution of the type of salt used at the table/in salt shaker, 66.5% of the individuals reported that they preferred to use "iodized table salt", 5.0% preferred to use "grinding table salt/Himalayan salt", 2.6% preferred to use "non-iodized table salt", 0.1% preferred to use "liquid salt", 1.4% "other salt", while 24.4% reported that they did not have salt on the table and did not use salt.

Edible Herb Consumption

Edible herb consumption of individuals is given in Table 2.30.

In total, 65.9% of all individuals aged 15 years and over (64.4% of males, 67.3% of females) consumed edible herbs. Considering the age distribution, herb consumption was the most common (66.4%) among individuals in the age group of 51-64 years. This age group was followed by the age group of 65 years and over (66.4%), the age group of 19-50 years (64.5%), and the age group of 15-18 years (55.7%), respectively. The consumption frequency in the age group of 19 years and over was 66.8%. Considering the distribution of types of edible herbs, the most frequently consumed herbs were "Medicinal plants consumed as tea" with 46.6%, "Herbs with edible leaves" with 37.6%, "Medicinal plants consumed as spice" with 37.5%, "Herbs with edible fruits" with 30.1%, "Wild mushrooms" with 20.5%, "Herbs with edible stems and shoots" with 11.7, "Herbs with edible roots" with 7.7%, "Herbs with edible seeds" with 6.1%, and "Herbs with edible flowers" with 3.4%.

Food Shopping Behaviors of Individuals

Information on food shopping behaviors of individuals according to TNHS 2017 data is shown in Table 2.31.

In total, 56.4% (M: 56.2%, F: 56.5%) of all individuals (aged 15 years and over), who participated in the study, shop for food and beverages themselves. Considering the age distribution of shoppers, 64.1% of them were in the age group of 51-64 years, 60.8% were in the age group of 19-50 years, 48.7% were in the age group of 65 years and over, and 15.2% were in the age group of 15-18 years. The issues that individuals first pay attention to when shopping include the expiry date (40.6%), the brand's reliability and recognition (31.0%), price (24.5%), nutrition facts label and contents/ingredients (9.4%), health and nutrition claims (4.5%), statements/pictures/damages on the package (2.4%), registration/approval number of Ministry of Agriculture and Forestry (1.7%), and promotion (1.7%). The frequency of individuals who do not pay attention was 2.5%.

Table 2.29. Distribution of the consumption of salt and salt types among individuals aged 15 years and over, TNHS 2017

Salt consumption		Male	s		Fema	les	Overall			
	N	%	95%CI	Ν	%	95%CI	N	%	95%CI	
Adding salt while preparing/cooking food										
No, I never add/I cook without salt	466	7.3	6.5-8.2	461	6.0	5.3-6.8	927	6.6	6.1-7.2	
Yes, I add salt	5231	90.2	89.2-91.2	6677	93.6	92.8-94.3	11908	91.9	91.3-92.5	
Don't know	127	2.5	2.0-3.1	23	0.4	0.2-0.7	150	1.4	1.2-1.7	
Type of salt usually used in food										
lodized table salt	4471	86.2	84.9-87.4	5450	81.7	80.2-83.0	9921	83.9	82.9-84.8	
Non-iodized table salt	257	4.7	4.0-5.5	353	5.2	4.5-6.0	610	4.9	4.4-5.5	
Grinding table salt/Himalayan salt	380	6.6	5.8-7.4	704	10.5	9.4-11.7	1084	8.6	7.9-9.3	
Low-sodium salt substitute	5	0.0	0.0-0.1	13	0.1	0.1-0.3	18	0.1	0.1-0.2	
Liquid salt (Spring water salt)	7	0.1	0.0-0.3	22	0.4	0.2-0.6	29	0.3	0.2-0.4	
Other	111	2.4	1.8-3.1	135	2.1	1.7-2.7	246	2.3	1.9-2.7	
Adding salt at the table without tasting										
l never add	4277	71.8	70.2-73.3	5815	80.3	79.1-81.5	10092	76.1	75.1-77.1	
I add rarely/occasionally	874	15.8	14.6-17.1	785	11.1	10.2-12.1	1659	13.4	12.7-14.3	
I always add/without tasting	673	12.4	11.3-13.6	561	8.5	7.7-9.4	1234	10.5	9.8-11.2	
Type of salt usually used on the table/salt shaker										
I do not have a salt shaker on the table/I do not use salt	1425	23.0	21.6-24.4	1908	25.7	24.3-27.2	3333	24.4	23.4-25.4	
lodized table salt	3872	68.7	67.1-70.2	4527	64.3	62.7-65.8	8399	66.5	65.4-67.6	
Non-iodized table salt	147	2.2	1.7-2.7	223	3.1	2.6-3.7	370	2.6	2.3-3.0	
Grinding table salt/Himalayan salt	289	4.6	4.0-5.3	401	5.4	4.8-6.1	690	5.0	4.6-5.5	
Low-sodium salt substitute	3	0.0	0.0-0.1	4	0.1	0.0-0.2	7	0.0	0.0-0.1	
Liquid salt (Spring water salt)	4	0.1	0.0-0.1	13	0.2	0.1-0.3	17	0.1	0.1-0.2	
Other	84	1.5	1.1-1.9	85	1.3	1.0-1.7	169	1.4	1.1-1.6	

		Ma	les		Femal	es		Over	all
	Ν	%	95%CI	Ν	%	95%CI	Ν	%	95%CI
Edible herb consumption									
No	1909	35.6	33.9-37.3	2166	32.7	31.2-34.2	4075	34.1	33.0-35.3
Yes	3915	64.4	62.7-66.1	4995	67.3	65.8-68.8	8910	65.9	64.7-67.0
Age (years)									
15-18	145	57.5	50.2-64.6	160	53.8	47.0-60.5	305	55.7	50.7-60.6
19-50	2211	63.0	60.8-65.2	2823	67.9	66.0-69.8	5034	65.4	64.0-66.9
51-64	892	70.6	67.4-73.6	1169	72.8	69.9-75.6	2061	71.7	69.6-73.8
≥65	667	68.0	64.4-71.4	843	65.1	61.5-68.5	1510	66.4	63.8-68.8
Total									
≥15	3915	64.4	62.7-66.1	4995	67.3	65.8-68.8	8910	65.9	64.7-67.0
≥19	3770	65.0	63.3-66.7	4835	68.5	67.0-70.0	8605	66.8	65.6-67.9
Types consumed among those who answered "Yes"									
Wild mushrooms (Lactarius salmonicolor, Amanita caesarea, Morchella esculenta, etc.)	1420	21.2	20.0-22.6	1516	19.7	18.5-20.9	2936	20.5	19.6-21.3
Herbs with edible leaves (Indian knotweed, wild radish, Tragopogon (Tragopogon porrifolius), stinging nettle,Rumex acetosella (Rumex crispus), Trachystemon orientalis, Lamb's quarters ormelde, Mustard greens, Malva sylvestris, etc.)	2277	35.1	33.6-36.7	3108	40.1	38.6-41.6	5385	37.6	36.6-38.7
Herbs with edible stems and shoots (Ribes, Ivy butt, Bitter Herb, Glasswort, Ferula communis, Prickly ivy, etc.)	770	11.0	10.1-12.0	982	12.4	11.5-13.3	1752	11.7	11.1-12.4
Herbs with edible roots (Gundelia tournefortii, Ornithogalum umbellatum, Cnicus benedictus, etc.)	499	7.7	6.9-8.6	576	7.8	7.0-8.6	1075	7.7	7.2-8.3
Herbs with edible fruits (Blackthorn plum, Wild pear, Hawthorn, Celtis, blackberry, horse apple, Agrostemma githago, Blueberry, Irish strawberry, Rosehip, Myrtus, etc.)	1886	29.9	28.5-31.5	2247	30.2	28.8-31.6	4133	30.1	29.1-31.1
Herbs with edible seeds (Nettle seed, turpentine tree, etc.)	376	5.7	5.1-6.5	509	6.4	5.7-7.2	885	6.1	5.6-6.6
Herbs with edible flowers (Lamium, primula, chamomile, etc.)	200	3.2	2.6-4.0	280	3.6	3.1-4.2	480	3.4	3.0-3.9
Medicinal plants consumed as tea (Rosehip tea, Cranberry, Thyme, Shepherd's tea, Salvia, Linden etc.)	2853	46.1	44.4-47.8	3540	47.0	45.5-48.6	6393	46.6	45.4-47.7
Medicinal plants consumed as spice (Thyme, Rhus, Mentha longifolia (pennyroyal), Echinophora sibthorpiana etc.)	2151	35.3	33.7-36.9	2950	39.8	38.2-41.3	5101	37.5	36.4-38.7

Table 2.30. Distribution of consumption of edible herbs among individuals aged 15 years and over, TNHS 2017

Table 2.31. Distribution of food shopping behaviors of individuals aged 15years and over, TNHS 2017

Features		Mal	es		Fema	ales	Overall			
	Ν	%	95%CI	Ν	%	95%CI	Ν	%	95%CI	
Does the individual usually shop for food and beverages himself/herself?										
No	2131	43.8	42.0-45.5	2770	43.5	42.0-45.1	4901	43.6	42.5-44.8	
Yes	3693	56.2	54.5-58.0	4391	56.5	54.9-58.0	8084	56.4	55.2-57.5	
Age (years)										
15-18	41	17.9	12.6-25.0	41	12.3	8.9-16.8	82	15.2	11.8-19.3	
19-50	2180	58.0	55.8-60.3	2777	63.6	61.6-65.6	4957	60.8	59.2-62.3	
51-64	828	63.5	60.1-66.8	1045	64.7	61.7-67.7	1873	64.1	61.8-66.3	
≥65	644	63.5	59.7-67.1	528	37.3	33.8-40.9	1172	48.7	46.1-51.4	
Total										
≥15	3693	56.2	54.5-58.0	4391	56.5	54.9-58.0	8084	56.4	55.2-57.5	
The first feature that is paid attention to in the purchased food and drink (in packaged products) when shopping										
I don't pay attention	202	3.0	2.4-3.8	193	2.0	1.6-2.3	395	2.5	2.1-2.9	
Price	1464	22.7	21.4-24.1	1989	26.3	24.9-27.7	3453	24.5	23.5-25.5	
Brand's reliability and recognition	2098	32.1	30.6-33.7	2277	30.0	28.5-31.4	4375	31.0	30.0-32.1	
Nutritional value and ingredients	548	8.9	8.0-10.0	730	9.9	9.1-10.9	1278	9.4	8.8-10.1	
Health and nutrition claims	313	4.7	4.1-5.4	351	4.3	3.8-4.9	664	4.5	4.1-4.9	
Expiry date	2549	39.0	37.4-40.7	3199	42.3	40.7-43.8	5748	40.6	39.5-41.8	
Statements/pictures/damages on the package	169	2.7	2.2-3.3	169	2.0	1.7-2.4	338	2.4	2.1-2.7	
Registration/approval number of Ministry of Agriculture and Forestry	124	1.6	1.3-2.1	122	1.8	1.4-2.2	246	1.7	1.4-2.0	
Promotion	91	1.3	1.0-1.7	139	2.1	1.6-2.7	230	1.7	1.4-2.0	
Doesn't know	22	0.2	0.1-0.4	42	0.4	0.3-0.6	64	0.3	0.2-0.4	

Cooking Methods of Individuals

The data on the cooking methods among the individuals, who participated in the study, are given in Table 2.32

According to this table, while the most preferred method of cooking vegetables and legumes by individuals was "boiling in a small or large amount of water/steaming" (55.9% and 20.9%, respectively), the most frequently used cooking method was roasting for cooking red meat (29.2%), baking/grilling/cooking on a teflon pan without oil for poultry (36.9%), and deep frying for fish (51.8%). The cooking methods were "boiling in a small or large amount of water" (42.4%) for pilaf/rice, boiling (42.1%) for eggs, boiling and draining water (74.5%) for pasta/macaroni, baking (82.6%) for pastries.

Table 2.32. Distribution of cooking methods for individuals aged 15 years and over, TNHS 2017

Features	Baking/Grilling, Cooking on a teflon pan without oil	Boiling in a small or large amount of water/ Steaming	Boiling and draining water	Steaming	Roasting	Grilling such as embers and barbecue	Deep frying	Cooking with pressure cooker	Micro- waving	Doesn't cook/ doesn't know
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)
	95% Cl	95% Cl	95% Cl	95% Cl	95% Cl	95% Cl	95% Cl	95% Cl	95% Cl	95% Cl
Vegetable dishes (with or without meat)	332 (2.8) 2.4-3.2	7451(55.9) 54.7-57.0	629(5.2) 4.7-5.7	182(1.3) 1.1-1.5	2373(17.3) 16.5-18.2	24(0.2) 0.1-0.4	315(2.6) 2.3-3.1	454(3.6) 3.2-4.2	3(0.0) 0.0-0.1	1222(11.0) 10.3-11.8
Legumes (with or without meat)	54(0.4)	2972(20.9)	2140(15.2)	32(0.2)	190(1.4)	14(0.1)	22(0.1)	6331(50.6)	68(0.6)	1162(10.5)
	0.3-0.5	20.0-21.8	14.4-16.0	0.1-0.3	1.2-1.8	0.0-0.1	0.1-0.2	49.4-51.8	0.4-0.8	9.8-11.3
Red meat	1893 (15.1)	2690 (19.2)	978(7.2)	78(0.6)	3789 (29.2)	508(4.3)	721(6.1)	1304(9.3)	14(0.1)	1010(9.0)
	14.3-15.9	18.3-20.1	6.6-7.9	0.4-0.7	28.2-30.2	3.9-4.9	5.5-6.7	8.6-10.0	0.0-0.2	8.3-9.7
Poultry	4660(36.9)	2087(15.0)	1207(8.7)	89(0.7)	1047(8.0)	571(4.5)	1576(13.1)	361(2.6)	7(0.0)	1379(10.6)
	35.8-38.0	14.1-15.8	8.1-9.3	0.5-0.9	7.4-8.6	4.1-5.0	12.3-13.9	2.3-3.1	0.0-0.1	9.9-11.3
Fish	3953(30.2)	187(1.3)	13(0.1)	29(0.2)	44(0.3)	273(2.1)	6740(51.8)	55(0.5)	4(0.0)	1687(13.6)
	29.1-31.3	1.1-1.6	0.0-0.2	0.1-0.3	0.2-0.5	1.8-2.4	50.6-52.9	0.3-0.7	0.0-0.1	12.8-14.5
Rices/Pilafs	102(0.7)	5592(42.4)	427(3.5)	206(1.6)	5266(39.9)	63(0.5)	38(0.3)	105(0.8)	1(0.0)	1185(10.4)
	0.5-0.9	41.2-43.5	3.0-4.0	1.3-1.9	38.8-41.0	0.4-0.7	0.2-0.5	0.5-1.1	0.0-0.1	9.6-11.1
Pasta/Macaroni	44(0.4)	1739(12.4)	9627(74.5)	208(1.5)	240(1.9)	6(0.0)	7(0.1)	36(0.2)	2(0.0)	1076(9.1)
	0.2-0.5	11.6-13.2	73.4-75.5	1.2-1.8	1.6-2.2	0.0-0.1	0.0-0.1	0.2-0.4	0.0-0.1	8.4-9.8
Pastries	10703(82.6)	60(0.4)	13(0.1)	2(0.0)	6(0.0)	76 (0.4)	454(3.4)	7(0.1)	35(0.3)	1629(12.7)
	81.7-83.5	0.3-0.6	0.0-0.1	0.0-0.0	0.0-0.1	0.3-0.6	3.0-3.8	0.0-0.2	0.2-0.4	11.9-13.5
Eggs	270(2.2)	1443(9.3)	5781(42.1)	314(1.7)	225(2.0)	3(0.0)	4145(35.4)	19(0.1)	1(0.0)	784 (7.1)
	1.9-2.5	8.7-9.9	41.0-43.2	1.5-2.0	1.7-2.4	0.0-0.0	34.3-36.6	0.1-0.2	0.0-0.0	6.5-7.7

3.4. Information on Women Who Have Experienced Pregnancy and Lactating

Information on women who have experienced pregnancy and lactating are given in Table 2.33.

According to this information, the average age of marriage for women was 20.5±4.46 years. The distribution of age of marriage by age groups was as follows: the frequency of those who got married at the age of 18 years and below was 37.1%, the frequency of those who got married between the ages of 19 to 35 years was 62.0%, and the frequency of those who got married at the age of 35 years and over was 0.8%.

While the average age at first pregnancy of women was 21.6±4.34 years, the frequency of those who experienced their first pregnancy at the age of 18 and below was 23.9%, the frequency of those who experienced their first pregnancy between ages of 19 to 35 was 75.3%, and the frequency of those who experienced their first pregnancy at the age of 35 years and over was 0.8%. While the average number of pregnancies was 3.6±2.43, the frequency of those who had one pregnancy was 12.7%, the frequency of those who had two pregnancies was 26.3%, the frequency of those who had three pregnancies was 20.8%, the frequency of those who had four pregnancies was 14.7%, and the frequency of those who had five and above pregnancies was 25.8%.

The frequency of women who were still breastfeed was 8.6%. The mean duration of breastfeeding was 9.6±6.82 months; the frequency of those who breastfeed for three or less months was 23.4%, the frequency of those who breastfeed for 4-6 months was 29.7%, the frequency of those who breastfeed for 7-12 months was 20.0%, the frequency of those who breastfeed for 13-18 months was 6.8%, and the frequency of those who breastfeed for 19-24 months was 17.7%.

It was determined that 3.4% of the women were pregnant and the mean gestational age was 21.2 ± 10.69 weeks. The frequency of those whose gestational age was ≤ 4 weeks was 1%; the frequency of those whose gestational age was 5-12 weeks was 26.8%; the frequency of those whose gestational age was 21.2%; the frequency of those whose gestational age was 21.2%; the frequency of those whose gestational age was 29-36 weeks was 20.7%, and the frequency of those whose gestational age was 37 and more weeks was 7.8%.

	Ν	%	95%CI
Age of marriage (years)			
≤18	2346	37.1	35.6-38.7
19-35	3736	62.0	60.4-63.6
>35	62	0.8	0.6-1.2
Age (years): x ±SD	20.5±	4.46	
Age at first pregnancy (years)			
≤18	1402	23.9	22.5-25.4
19-35	4208	75.3	73.8-76.7
>35	56	0.8	0.6-1.1
Age (years): x ±SD	21.6±	4.34	
Number of pregnancies			
1	694	12.7	11.6-13.9
2	1455	26.0	24.5-27.5
3	1191	20.8	19.5-22.1
4	858	14.7	13.6-15.9
≥5	1486	25.8	24.2-27.5
Number of pregnancies: x ±SD	3.6±2	2.43	
Currently breastfed child			
No	5268	91.4	90.3-92.3
Yes	412	8.6	7.7-9.7
If yes, breastfeeding duration (months)			
≤3	95	23.4	18.3-29.5
4-6	108	29.7	24.3-35.8
7-12	93	20.0	15.8-25.1
13-18	34	6.8	4.6-10.1
19-24	11	2.3	1.2-4.3
≥25	61	17.7	13.1-23.4
Duration of breastfeeding (months):x ±SD	9.6±6	5.82	

Table 2.33. Distribution of inforn	nation on women who hav	e experienced pregnancy	and lactating, TNHS 2017
(continued).			
Prognancy status	Ν	%	0

Pregnancy status	N	%	CI
No	5515	96.6	96.0-97.2
Yes	167	3.4	2.8-4.0
Gestational age			
Weeks			
≤4	3	1.0	0.3-3.4
5-12	40	26.8	19.2-36.0
13-20	37	21.1	14.9-28.9
21-28	33	21.2	14.7-29.5
29-36	40	20.7	14.8-28.3
≥37	11	7.8	4.1-14.4
Doesn't know	3	1.5	0.5-4.5
Gestational age (weeks): x ±SD	21.2±1	10.69	
Weeks			
0-3	43	27.8	20.1-36.9
4-6	48	25.3	18.7-33.3
7-9	73	45.4	36.8-54.4
Doesn't know	3	1.5	0.5-4.5
Gestational age (months):x ±SD	5.3±2	2.67	

3.5. Frequency of Food Consumption

3.5.1. Frequency of Food Consumption For Individuals Aged 15 and Over

Table 2.34 contains data on the consumption frequency of the foods that individuals aged 15 years and over have consumed during the previous month. When the frequency of food consumption of individuals during the previous month was examined, it was found that the frequency of those who never consumed pasteurized milk across Turkey was 84.7%, the frequency of those who never consumed UHT milk was 66.5%, and the frequency of those who never consumed loose milk was 57.5%. The frequency of those who never consumed probiotic milk and dairy products (kefir, etc.) was 90.9%, the frequency of those who never consumed yoghurt and ayran (diluted yoghurt) was 1.3%, the frequency of those who never consumed probiotic yoghurt was 87.5%, and the frequency of those who never consumed probiotic yoghurt was 87.5%, and the frequency of those who never consumed probiotic yoghurt was 87.5%, and the frequency of those who never consumed probiotic yoghurt was 87.5%, and the frequency of those who never consumed probiotic yoghurt was 87.5%, and the frequency of those who never consumed probiotic yoghurt was 87.5%, and the frequency of those who never consumed probiotic yoghurt was 87.5%, and the frequency of those who never consumed probiotic yoghurt was 87.5%, and the frequency of those who never consumed cheese was 2.4%.

Across Turkey, the frequency of those who consumed pasteurized milk every day was 2.1%, the frequency of those who consumed UHT milk every day was 4.8%, the frequency of those who consumed loose milk every day was 3.7%. The frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.7%, the frequency of those who consumed yoghurt and ayran (diluted yoghurt) every day was 51.3%, the frequency of those who consumed probiotic yoghurt every day was 1.1%, and the frequency of those who consumed cheese every day was 73.9%.

Among the foods in the meat-eggs-legumes group, 10.4% of individuals never consumed beef, 35.7% never consumed lamb/mutton, 4.6% never consumed chicken, 87.6% never consumed turkey, 94.5% never consumed goose/duck, and 8.8% never consumed fish, respectively. Among the foods in this group, the ones consumed every day were beef with a frequency of 4.0%, lamb/mutton with a frequency of 1.2%, chicken with a frequency of 2.3%, and fish with a frequency of 0.2%. Among the foods in the meat-eggs-legumes group, the ones consumed 2-3 times per week were beef with a frequency of 20.9%, lamb/mutton with a frequency of 9.3%, chicken with a frequency of 28.8%, turkey with a frequency of 0.4%, goose/duck with a frequency of 0.1%, and fish with a frequency of 8.2%. The frequency of never consuming legumes, included in this group, was 2.1%, the frequency of consumption of legumes every day was 0.9%, and the frequency of consumption of legumes 2-3 days a week was 25%.

Across Turkey, the frequency of those who never consumed eggs was 3.5%, the frequency of those who consumed it every day was 36.2%, and the frequency of those who consumed it 4-5 times per week was 14.8%. The frequency of those who never consumed nuts (hazelnuts, peanuts, pistachios, walnuts, etc.) was 7.9%, the frequency of those who consumed them every day was 16.7%, and the frequency of those who consumed them 4-5 times per week was 9.0%.

In the vegetables and fruits group, the frequency of those who never consumed green leafy vegetables was 4.5%, the frequency of those who consumed them every day was 24.6%, and the frequency of those who consumed them 4-5 times per week was 12.8%. The frequency of those who never consumed other fresh vegetables (leek, cabbage) was 12.3%, the frequency of those who consumed them every day was 2.1%, and the frequency of those who consumed them 4-5 times per week was 2.8%.

The frequency of those who never consumed citrus fruits was 4.1%, the frequency of those who consumed them every day was 11.0%, and the frequency of those who consumed them 4-5 times per week was 8.6%. The frequency of those who never consumed other fresh fruits was 3.7%, the frequency of those who consumed them every day was 33.1%, and the frequency of those who consumed them 4-5 times per week was 14.7%.

While the frequency of never consuming raisin was 30.9%, 3.8% of individuals consumed them every day.

The frequency of those who consumed French fries every day was 2.8%, the frequency of those who consumed them 3-4 times per week was 22.5%, the frequency of those who consumed them 1-2 times per week was 29.6%, and the frequency of those who consumed them every 15 days was 21.7%. 11.9% of individuals never consumed French fries.

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The frequencies of total vegetables consumption across Turkey were as follows: 0.6% for those who never consumed them, 52.9% for those who consumed them every day, 14.9% for those who consumed them 4-5 times per week, 21.5% for those who consumed them 2-3 times per week, 7.0% for those who consumed them once a week. The frequencies of total fruits consumption across Turkey were as follows: 1.1% for those who never consumed them , 53.4% for those who consumed them every day, 14.5% for those who consumed them 4-5 times per week, 20.1% for those who consumed them 2-3 times per week, and 7.1% for those who consumed them once a week.

Of all individuals, 9.5% never consumed white bread, 57.4% never consumed whole grain bread, rye bread, wholemeal bread, and 41.4% never consumed home-made unleavened breads (phyllo dough, etc.), which were included in the bread and cereals group. Among the foods included in the bread and cereals group, the ones consumed every day were white bread with a frequency of 72.1%, whole grain bread, rye bread, wholemeal bread, etc. with a frequency of 15% for, and home-made unleavened breads (phyllo dough etc.) with a frequency of 9.4%. Among the foods included in the bread and cereals group, the ones consumed every day were rice with a frequency of 2.3%, bulghur with a frequency of 1.4%, pastries, cakes, buns with a frequency of 3.6%, biscuits/crackers with a frequency of 11.6%, and bagel with a frequency of 5.1%.

Across Turkey, the frequency of those who never consumed ready-made fruit juices was 41.6%, the frequency of those who consumed them every day was 4.1%, and the frequency of those who consumed them once a week was 11.4%. The frequency of those who never consumed freshly squeezed fruit juices was 51.2%, the frequency of those who consumed them every day was 0.9%, and the frequency of those who consumed them once a week was 10.8%. Freshly squeezed vegetable juices were never consumed with a frequency of 94.9%. The light and zero cola drinks were never consumed with a frequency of 90.7%, and regular cola drinks were never consumed with a frequency of 41.9%. The frequency of those who consumed black tea every day was 88.3%, while this frequency was 3.3% for green tea and 4.1% for herbal teas. The frequency of never consuming Turkish coffee was 25.8%, while its frequency of everyday consumption was 18.7%. Across Turkey, the frequencies of olive oil consumption were 22.7% for those who never consumed it, 44.6% for those who consumed it every day, and 4.6% for those who consumed it once a week. The frequencies of sunflower oil consumption were 13.5% for those who never consumed it, 61.4% for those who consumed it every day, and 5.0% for those who consumed it once a week. The frequency of those who never consumed hard margarines was 58.8% the frequency of those who consumed them every day was 2.9%, and the frequency of those who consumed them once a week was 7.8%. The frequency of those who never consumed soft margarines was 76.2%, the frequency of those who consumed them every day was 2.6%, and the frequency of those who consumed them once a week was 4.1%. The frequency of those who never consumed butter was 13.9%, the frequency of those who consumed it every day was 30.9%, and the frequency of those who consumed it once a week was 10.7%.

The frequency of those who never consumed table sugar was 27.7%, the frequency of those who consumed it every day was 60.9%, and the frequency of those who consumed it once a week was 2.3%. The frequency of not consuming pastry desserts [tulumba (dough pastry deep fried dipped in syrup), lokma (yeast fritters in thick syrup), baklava (multilayered flaky pastry with nuts)] was 18.4%, and the frequency of consumption once a week was 14.2%.

While hamburgers, fried chicken pieces, etc. were never consumed with a frequency of 64.7%, the frequency of consumption once a week was 5.7%. The frequency of never consuming doner, kebab, etc. was 18.2%, the frequency of everyday consumption was 1.6%, and the frequency of consumption once a week was 14.8%. The frequency of those who never consumed pita, pide, pizza, pancake, etc. was 13.3%, the frequency of those who consumed them every day was 0.4%, and the frequency of those who consumed them once a week was 16.0%.

Food Items						ŀ	ALL INC	VIDUALS (aged ≥	15 years)						
	I	Never	-	/ day, 6-7 s per week		imes per week		imes per week	Once	e a week	-	times a Ionth	Less than once a month			i't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
MILK AND DAIRY PRODUCTS																
Pasteurized milk	84.7	83.8-85.5	2.0	1.6-2.4	1.0	0.8-1.3	3.6	3.2-4.1	3.1	2.8-3.6	2.9	2.5-3.3	2.1	1.8-2.5	0.5	0.4-0.7
UHT milk	66.5	65.3-67.6	4.8	4.3-5.4	2.4	2.0-2.8	7.8	7.2-8.5	6.9	6.3-7.6	6.7	6.2-7.4	4.3	3.8-4.7	0.6	0.5-0.8
Loose milk	57.5	56.3-58.6	3.7	3.3-4.2	2.0	1.8-2.3	9.0	8.4-9.7	11.5	10.8-12.2	10.3	9.7-11.0	5.6	5.1-6.1	0.4	0.2-0.5
Probiotic milk and dairy products (kefir etc.)	90.9	90.2-91.5	0.7	0.6-0.9	0.3	0.2-0.5	0.9	0.7-1.2	0.8	0.7-1.0	2.2	1.9-2.5	2.3	1.9-2.7	1.9	1.6-2.3
Yoghurt, ayran (diluted yoghurt)	1.3	1.0-1.5	51.3	50.1-52.4	15.2	14.3-16.0	21.5	20.5-22.5	7.1	6.5-7.7	2.8	2.5-3.3	0.7	0.1-0.5	0.2	0.1-0.3
Probiotic yoghurt	87.5	86.6-88.2	1.1	0.9-1.4	0.4	0.3-0.5	1.0	0.8-1.2	1.1	0.9-1.4	1.6	1.2-2.0	1.8	1.5-2.1	5.7	5.2-6.2
Cheese	2.4	2.1-2.9	73.9	72.8-74.9	6.8	6.2-7.4	10.8	10.0-11.5	3.9	3.1-4.4	1.2	0.9-1.5	0.8	0.6-1.3	0.3	0.1-0.4
Sweetened/fruit/cocoa/ chocolate flavored milks	79.9	78.8-80.9	2.2	1.8-2.6	1.1	0.9-1.4	3.9	3.3-4.5	3.9	3.4-4.4	4.1	3.6-4.7	4.4	34.0-5.0	0.5	0.4-0.7
Sweetened/fruit/cocoa/ chocolate flavored yoghurts	88.0	87.2-88.8	0.4	0.3-0.6	0.3	0.2-0.4	1.3	1.1-1.7	2.1	1.8-2.5	3.4	2.9-3.9	3.7	3.3-4.2	0.7	0.5-0.9
Cream/clotted cream (kaimak)	52.8	51.7-54.0	3.2	2.8-3.8	1.3	1.1-1.6	6.9	6.3-7.5	10.4	9.8-11.1	12.5	11.8-13.3	12.4	11.7-13.2	0.4	0.2-0.5
Ice cream	17.0	16.2-17.9	1.0	0.8-1.3	0.9	0.7-1.2	7.0	6.5-7.6	14.2	13.4-15.1	29.5	28.5-30.6	30.0	29.0-31.1	0.2	0.1-0.4
Milk desserts (kazandibi (white pudding with blackened surface), sütlaç (rice pudding), pudding, milk pudding	14.7	13.9-15.5	0.8	0.7-1.1	1.1	0.9-1.4	8.8	8.2-9.6	19.7	18.8-20.7	35.4	34.3-36.5	19.0	18.2-19.9	0.3	0.2-0.4
MEAT-EGGS-LEGUMES																
Beef	10.4	9.7-11.1	4.0	3.5-4.6	4.6	4.2-5.1	20.9	20.0-21.9	21.2	20.3-22.2	25.0	24.0-26.0	13.2	12.4-14.0	0.7	0.5-0.9
Lamb/mutton	35.7	34.6-36.9	1.2	1.0-1.6	1.6	1.3-1.9	9.3	8.7-10.1	13.0	12.3-13.8	20.7	19.7-21.6	17.3	16.5-18.2	1.0	0.8-1.3
Chicken	4.6	4.2-5.1	2.3	1.9-2.7	4.5	4.0-5.0	28.8	27.8-29.9	32.0	30.9-33.1	22.5	21.6-23.5	4.9	4.5-5.3	0.4	0.3-0.6
Turkey	87.6	86.7-88.4	0.0	0.0-0.0	0.2	0.1-0.4	0.4	0.2-0.5	1.0	0.8-1.3	2.9	2.5-3.4	7.5	6.9-8.2	0.4	0.3-0.6
Goose/duck	94.5	94.0-95.0	0.0	0.0-0.0	0.0	0.0-0.0	0.1	0.0-0.2	0.2	0.2-0.4	0.9	0.7-1.2	3.8	3.4-4.3	0.4	0.3-0.6
Fish	8.8	8.1-9.5	0.2	0.1-0.3	0.4	0.3-0.5	8.2	7.7-8.8	27.0	26.0-28.0	35.8	34.7-37.0	19.0	18.1-19.9	0.6	0.4-0.8
Seafood (calamars, shrimps, mussels, etc.)	83.4	82.5-84.2	0.2	0.1-0.3	0.1	0.1-0.3	0.6	0.4-0.8	1.7	1.5-2.1	6.0	5.5-6.5	7.3	6.6-7.9	0.7	0.6-0.9
Offals (liver, kidney, spleen, etc.)	46.5	45.4-47.7	0.0	0.0-0.1	0.1	0.1-0.3	1.5	1.2-1.9	3.7	3.3-4.1	20.9	20.0-21.9	26.8	25.8-27.8	0.3	0.2-0.5
Meat products (salami, sausage, fermented sausage, pastrami, etc.)	34.3	33.2-35.3	3.2	2.8-3.6	2.1	1.8-2.5	12.0	11.2-12.8	17.1	16.3-18.0	17.9	17.0-18.8	13.1	12.3-13.8	0.3	0.2-0.5
Nuts (hazelnuts, peanuts, pistachios, walnuts, etc.)	7.9	7.3-8.6	16.7	15.8-17.5	9.0	8.4-9.7	23.9	22.9-25.0	18.3	17.4-19.2	16.7	15.9-17.6	7.2	6.6-7.8	0.3	0.2-0.5
Legumes (dry beans, chickpeas, lentils, etc.)	2.1	1.7-2.4	0.9	0.7-1.2	2.1	1.8-2.6	25.0	24.0-26.0	42.5	41.3-43.6	24.2	23.2-25.2	3.0	2.6-3.4	0.3	0.2-0.4
Eggs	3.5	3.1-4.0	36.2	35.1-37.3	14.8	13.9-15.6	30.2	29.2-31.3	10.3	9.6-11.0	3.1	2.7-3.5	1.5	1.2-2.0	0.4	0.3-0.6

Food Items						ļ	ALL IND	VIDUALS (aged ≥	15 years)						
	l	Never	Every	/ day, 6-7	4-5 1	times per	2-3	imes per	Onc	e a week	1-3	times a	Less t	han once	Doesr	n't know/
			times	per week	١	week	۱	veek			m	onth	aı	nonth	No r	esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
VEGETABLES AND FRUITS																
Green leafy vegetables	4.5	4.0-5.1	24.6	23.7-25.6	12.8	12.0-13.6	26.3	25.3-27.3	19.7	18.7-20.7	8.8	8.2-9.5	2.9	2.5-3.4	0.3	0.2-0.5
Other fresh vegetables (leek, cabbage)	15.1	14.2-16.0	2.1	1.8-2.5	2.8	2.4-3.1	13.7	13.0-14.5	26.4	25.4-27.5	27.3	26.3-28.3	12.3	11.5-13.0	0.4	0.3-0.6
Tomato	1.4	1.2-1.7	51.1	49.9-52.2	14.4	13.5-15.3	20.6	19.7-21.5	8.5	7.9-9.1	3.0	2.6-3.4	0.8	0.6-1.0	0.3	0.2-0.4
Green pepper (village pepper, banana pepper, long pepper, etc.)	5.4	4.8-6.0	37.0	35.8-38.1	12.8	12.0-13.6	23.7	22.7-24.7	13.5	12.8-14.3	5.4	4.9-5.9	1.9	1.7-2.3	0.3	0.2-0.5
Mushroom	33.4	32.3-34.5	0.1	0.1-0.2	0.3	0.2-0.6	2.3	1.9-2.7	10.0	9.4-10.7	27.1	26.1-28.1	26.5	25.4-27.5	0.3	0.2-0.5
Corn	24.9	23.9-25.9	0.6	0.4-0.8	0.7	0.5-0.9	4.2	3.8-4.7	11.2	10.5-12.0	26.8	25.8-27.8	31.3	30.3-32.4	0.3	0.2-0.5
Frozen vegetables/fruits	48.2	47.0-49.4	0.2	0.2-0.4	0.3	0.2-0.4	3.0	2.6-3.4	10.5	9.7-11.3	23.5	22.5-24.5	12.8	12.1-13.6	1.5	1.3-1.8
Dried vegetables	44.1	43.0-45.3	0.3	0.2-0.5	0.2	0.1-0.3	2.2	1.9-2.6	8.7	8.1-9.4	27.0	26.0-28.1	16.5	15.7-17.4	0.9	0.7-1.2
Dried fruits	35.6	34.5-36.8	3.5	3.1-3.9	1.8	1.5-2.1	8.9	8.3-9.6	12.8	12.0-13.6	22.3	21.3-23.3	14.5	13.8-15.3	0.6	0.4-0.8
Raisin	30.9	29.9-32.1	3.8	3.4-4.2	2.1	1.7-2.4	10.1	9.4-10.9	13.5	12.8-14.3	23.3	22.3-24.3	15.8	15.0-16.7	0.4	0.3-0.6
Citrus fruits	4.1	3.6-4.6	11.0	10.3-11.7	8.6	8.0-9.3	26.3	25.3-27.3	23.5	22.6-24.5	19.9	18.9-20.9	6.3	5.8-6.9	0.3	0.2-0.5
Other fresh fruits	3.7	3.3-4.3	33.1	32.0-34.2	14.7	13.9-15.5	25.3	24.4-26.3	13.4	12.7-14.3	6.4	5.8-7.0	3.0	2.6-3.4	0.4	0.3-0.6
Ready-made canned vegetables	85.6	84.7-86.4	0.2	0.1-0.3	0.1	0.0-0.2	0.8	0.6-1.0	1.7	1.5-2.1	5.5	5.0-6.0	5.3	4.7-5.8	0.9	0.7-1.1
Home-made canned vegetables	38.0	36.8-39.1	1.6	1.3-2.0	1.5	1.3-1.9	9.1	8.5-9.9	17.2	16.3-18.0	24.8	23.8-25.7	6.6	6.1-7.1	1.3	1.0-1.5
French fries	11.9	11.2-12.6	2.8	2.4-3.3	3.6	3.2-4.1	22.5	21.5-23.5	29.6	28.5-30.6	21.7	20.8-30.6	7.5	6.9-8.2	0.4	0.3-0.6
Vegetables, total	0.6	0.4-0.8	52.9	51.7-54.0	14.9	14.0-15.9	21.5	20.6-22.4	7.0	6.4-7.7	2.3	2.0-2.7	0.6	0.4-0.7	0.2	0.1-0.4
Fruits, total	1.1	0.9-1.4	53.4	52.2-54.5	14.5	13.8-15.3	20.1	19.2-21.1	7.1	6.5-7.7	2.7	2.4-3.1	0.9	0.7-1.1	0.2	0.1-0.3

Food Items	ALL INDIVIDUALS (aged ≥15 years)															
	Never		Every day, 6-7 times per week		4-5 times per week		2-3 times per week		Once a week		1-3 times per month		Less than once a month			n't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BREAD-CEREALS																
White bread	9.5	8.9-10.2	72.1	71.1-73.1	3.9	3.5-4.4	5.7	5.2-6.2	3.5	3.1-3.9	2.5	2.2-2.9	2.6	2.2-3.0	0.2	0.1-0.4
Whole grain bread, rye bread, wholemeal bread etc.	57.4	56.3-58.6	15.0	14.2-15.8	3.0	2.6-3.3	6.6	6.0-7.2	5.1	4.6-5.6	6.1	5.5-6.8	6.6	6.0-7.1	0.3	0.2-0.5
Home-made unleavened breads (phyllo dough etc.)	41.4	40.2-42.5	9.4	8.8-10.1	2.0	1.6-2.4	5.4	5.0-5.9	10.4	9.8-11.2	17.8	16.9-18.8	13.2	12.5-14.0	0.4	0.3-0.5
Rice	4.9	4.4-5.4	2.3	2.0-2.7	5.7	5.1-6.3	37.0	35.8-38.1	29.9	28.8-30.9	16.4	15.6-17.2	3.7	3.3-4.1	0.3	0.2-0.5
Bulghur	3.6	3.2-4.1	1.4	1.2-1.7	4.2	3.8-4.7	38.5	37.3-39.6	34.3	33.2-35.4	15.2	14.4-16.0	2.5	2.2-2.9	0.3	0.2-0.4
Macaroni, noodles, couscous	5.0	4.5-5.5	0.9	0.7-1.2	2.9	2.5-3.3	31.3	30.2-32.4	37.2	36.1-38.3	18.5	17.7-19.4	3.9	3.5-4.4	0.3	0.2-0.6
Pastries, cakes, buns	8.2	7.6-8.9	3.6	3.2-4.1	3.2	2.7-3.7	13.7	12.8-14.5	24.5	23.5-25.5	33.4	32.4-34.5	13.1	12.4-13.9	0.3	0.2-0.5
Cookies	27.2	26.2-28.2	1.1	0.9-1.3	1.0	0.7-1.3	6.5	5.9-7.2	14.5	13.7-15.4	26.6	25.5-27.6	22.8	21.9-23.8	0.3	0.2-0.5
Tarhana (fermented dried yoghurt and flour mixture)	27.1	26.1-28.2	3.1	2.8-3.5	3.8	3.5-4.2	16.3	15.6-17.1	19.9	19.0-20.8	20.0	19.1-21.0	9.3	8.6-10.0	0.4	0.3-0.5
Biscuits/crackers	20.0	19.1-20.9	11.6	10.9-12.4	7.4	6.8-8.1	19.6	18.7-20.6	15.4	14.5-16.3	13.7	13.0-14.5	12.0	11.3-12.7	0.3	0.2-0.5
Bagel	17.4	16.5-18.3	5.1	4.6-5.7	3.7	3.3-4.2	16.8	15.9-17.8	21.0	20.0-22.0	20.4	19.5-21.3	15.3	14.5-16.1	0.3	0.2-0.4
Breakfast cereals (muesli, corn flakes, wheat flakes, etc.).	88.7	87.9-89.5	0.9	0.7-1.2	0.3	0.2-0.5	1.9	1.6-2.3	1.8	1.5-2.1	2.3	1.9-2.7	3.2	2.8-3.6	0.9	0.8-1.2

Food Items						ALL	INDIVI	DUALS (age	d ≥15 y	years)						
	l	Never	6-7 t	ery day, imes per veek		5 times r week		B times er week		Once week		3 times ' month		than once month		i't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BEVERAGES																
Ready-made fruit juices	41.6	40.5-42.8	4.1	3.6-4.6	3.2	2.8-3.7	11.5	10.7-12.4	11.4	10.6-12.2	14.1	13.3-14.8	13.9	13.2-14.7	0.3	0.2-0.4
Freshly squeezed fruit juices	51.2	50.0-52.4	0.9	0.7-1.1	0.8	0.6-1.0	6.6	6.0-7.2	10.8	10.1-11.5	15.6	14.8-16.5	13.7	13.0-14.5	0.3	0.2-0.5
Freshly squeezed vegetable juices	94.9	94.3-95.4	0.1	0.1-0.2	0.1	0.0-0.2	0.5	0.4-0.8	0.8	0.6-1.0	1.3	1.1-1.6	1.8	1.5-2.1	0.5	0.3-0.6
Light, zero cola drinks	90.7	90.0-91.4	0.5	0.4-0.8	0.4	0.3-0.6	1.3	1.1-1.6	1.7	1.4-2.1	2.2	1.9-2.6	2.6	2.2-3.0	0.5	0.4-0.7
Regular cola drinks	41.9	40.8-43.0	4.7	4.3-5.3	3.8	3.3-4.4	11.9	11.2-12.8	11.8	11.1-12.6	14.5	13.6-15.4	11.0	10.3-11.7	0.3	0.2-0.4
lce teas	72.3	71.2-73.5	1.3	1.0-1.6	1.5	1.1-1.9	5.2	4.7-5.9	6.2	5.6-6.9	7.3	6.6-8.0	5.7	5.2-6.3	0.5	0.3-0.7
Tea (black)	3.3	2.8-3.8	88.3	87.5-89.1	1.9	1.6-2.3	3.0	2.6-3.4	1.8	1.4-2.2	0.8	0.6-1.0	0.6	0.5-0.8	0.3	0.2-0.5
Green tea	74.8	73.8-75.8	3.3	2.9-3.7	1.2	1.0-1.4	4.1	3.6-4.6	4.3	3.9-4.8	5.4	4.9-5.9	6.5	5.9-7.2	0.4	0.3-0.6
Herbal teas	47.1	45.9-48.2	4.1	3.7-4.6	1.9	1.6-2.2	8.2	7.6-8.8	8.9	8.3-9.6	13.8	13.1-14.6	15.6	14.7-16.4	0.3	0.2-0.5
Mineral water, soda	29.5	28.5-30.6	9.9	9.3-10.6	5.5	5.0-6.1	17.4	16.5-18.3	13.7	13.0-14.5	14.3	13.5-15.1	9.4	8.6-10.1	0.3	0.2-0.5
Instant granulated coffee	46.6	45.4-47.7	10.8	10.0-11.5	3.8	3.3-4.3	11.9	11.1-12.7	9.9	9.2-10.5	9.5	8.8-10.3	7.3	6.7-7.9	0.4	0.3-0.5
Filter coffee	90.1	89.4-90.8	1.7	1.4-2.1	0.4	0.3-0.6	1.5	1.2-1.9	1.6	1.4-2.0	1.8	1.5-2.1	1.8	1.5-2.1	1.1	0.9-1.3
Turkish coffee	25.8	24.8-26.9	18.7	17.8-19.6	5.5	5.0-6.1	16.0	15.2-16.9	12.4	11.6-13.2	13.7	12.9-14.6	7.5	7.0-8.1	0.3	0.2-0.5
Energy drinks	90.4	89.6-91.1	0.2	0.1-0.4	0.2	0.1-0.4	1.0	0.7-1.3	1.3	1.0-1.6	3.0	2.6-3.5	3.4	2.9-3.9	0.6	0.4-0.8
Alcoholic beverages	84.2	83.3-85.1	0.4	0.3-0.6	0.5	0.3-0.6	1.9	1.6-2.3	2.3	1.9-2.7	4.9	4.4-5.5	5.4	4.9-6.0	0.4	0.2-0.5

Food Items						AL	L INDI\	/IDUALS (ag	ged ≥1	5 years)						
	1	Never		very day, times per week		5 times r week		B times er week		Once week		3 times ⁻ month		han once nonth		n't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
OILS, FATS, SUGAR, DESSERTS																
Olive oil	22.7	21.7-23.7	44.6	43.4-45.7	6.7	6.1-7.2	11.6	10.8-12.4	4.6	4.1-5.1	4.2	3.7-4.7	3.3	2.8-3.7	2.5	2.1-2.9
Hazelnut oil	95.0	94.4-95.5	0.8	0.6-1.0	0.2	0.1-0.3	0.3	0.2-0.5	0.3	0.2-0.4	0.5	0.3-0.6	0.8	0.6-1.0	2.2	1.9-2.6
Sunflower oil	13.5	12.8-14.2	61.4	60.2-62.5	4.5	4.1-5.0	7.8	7.2-8.4	5.0	4.6-5.4	4.3	3.8-4.7	1.4	1.1-1.6	2.3	1.9-2.7
Corn oil	85.3	84.4-86.2	4.0	3.6-4.5	1.1	0.7-1.6	2.1	1.9-2.5	1.4	1.2-1.7	1.7	1.4-2.0	1.5	1.2-1.8	2.9	2.5-3.3
Soybean oil	96.9	96.4-97.3	0.0	0.0-0.2	-	-	0.0	0.0-0.1	0.0	0.0-0.1	0.2	0.1-0.3	0.2	0.1-0.4	2.6	2.2-3.0
Canola oil	96.6	96.1-97.1	0.1	0.0-0.2	0.0	0.0-0.1	0.2	0.1-0.6	0.0	0.0-0.1	0.1	0.0-0.1	0.2	0.1-0.4	2.7	2.3-3.1
Hard margarine	58.8	57.6-60.0	2.9	2.5-3.4	1.7	1.3-2.1	6.4	5.7-7.1	7.8	7.2-8.5	11.6	10.8-12.3	8.0	7.4-8.6	2.9	2.5-3.4
Soft margarine	76.2	75.2-77.2	2.6	2.3-3.0	1.0	0.8-1.2	4.2	3.7-4.9	4.1	3.7-4.6	4.7	4.3-5.2	4.6	4.1-5.1	2.6	2.2-3.0
Butter	13.9	13.1-14.7	30.9	29.9-32.0	9.0	8.3-9.8	22.0	21.1-23.0	10.7	10.0-11.4	8.0	7.4-8.0	3.9	3.5-4.4	1.6	1.3-1.9
Tail fat, tallow	75.9	74.8-76.9	0.9	0.6-1.2	0.4	0.3-0.7	2.1	1.7-2.5	3.2	2.8-3.6	7.3	6.7-8.0	8.2	7.6-8.9	2.0	1.6-2.4
Table sugar	27.7	26.6-28.7	60.9	59.8-62.1	1.5	1.2-1.8	2.8	2.4-3.2	2.3	1.9-2.7	2.4	2.1-2.7	2.1	1.8-2.4	0.4	0.3-0.6
Honey, jam, molasses	12.3	11.5-13.1	34.0	32.9-35.0	8.8	8.1-9.6	19.5	18.6-20.4	12.6	11.8-13.4	7.8	7.3-8.5	4.7	4.2-5.2	0.4	0.2-0.5
Sweets, Turkish Delight, chocolate	20.0	19.1-20.9	9.7	9.0-10.5	5.8	5.3-6.5	17.0	16.1-18.0	16.1	15.2-16.9	18.2	17.4-19.1	12.7	12.0-13.5	0.4	0.3-0.6
Pastry desserts, syrup sweetened (tulumba, lokma, baklava)	18.4	17.6-19.4	0.6	0.5-0.8	1.1	0.8-1.1	7.2	6.5-7.9	14.2	13.4-15.0	33.1	32.0-34.2	25.1	24.1-26.0	0.4	0.3-0.6
Pastry products with cream filling (cake, etc.)	30.2	29.2-31.3	0.2	0.2-0.4	0.4	0.3-0.6	2.7	2.3-3.1	7.9	7.3-8.7	27.4	26.3-28.4	30.8	29.7-31.8	0.4	0.3-0.6
Artificial sweeteners	97.1	96.7-97.4	0.5	0.4-0.6	0.1	0.0-0.1	0.1	0.1-0.2	0.1	0.1-0.2	0.3	0.2-0.5	0.6	0.4-0.9	1.3	1.1-1.6
Instant soups	71.7	70.6-72.7	0.4	0.3-0.5	0.6	0.4-0.8	3.6	3.2-4.0	6.1	5.6-6.7	8.5	7.9-9.1	8.6	7.9-9.2	0.6	0.4-0.8
Smoked products	92.7	92.0-93.2	0.1	0.0-0.2	0.1	0.0-0.2	0.4	0.3-0.7	0.5	0.4-0.7	1.8	1.5-2.1	1.9	1.6-2.2	2.6	1.6-2.2
Meat bouillon cube, chicken bouillon cube	57.2	56.0-58.3	4.3	3.8-4.8	3.2	2.8-3.6	12.4	11.7-13.2	8.7	8.1-9.3	6.7	6.2-7.3	4.0	3.5-4.5	3.6	3.2-4.1
Hamburger, fried chicken pieces etc.	64.7	63.6-65.9	0.2	0.1-0.3	0.5	0.3-0.7	2.9	2.5-3.4	5.7	5.1-6.3	14.5	13.6-15.4	11.1	10.3-11.9	0.4	0.3-0.6
Doner, kebab, etc.	18.2	17.4-19.0	1.6	1.3-2.0	2.0	1.7-2.4	10.0	9.2-10.8	14.8	14.0-15.7	34.3	33.3-35.4	18.7	17.8-19.6	0.4	0.2-0.5
Pita, lahmacun (Turkish pizza), pizza, pancake, etc.	13.3	12.6-14.1	0.4	0.3-0.5	0.6	0.5-0.9	6.8	6.2-7.5	16.0	15.1-17.0	43.4	42.3-44.6	19.0	18.1-19.9	0.4	0.3-0.6
Chips, corn snacks	52.5	51.3-53.6	2.4	2.1-2.9	1.6	1.3-2.0	7.8	7.1-8.5	10.3	9.6-11.1	13.0	12.3-13.8	12.0	11.2-12.8	0.4	0.3-0.5
	1		1		1		1	1	1	1		1	1		1	

3.5.2. Frequency of Food Consumption Among Males In Age Group of 15-18 Years

The results of the analysis of the frequency of food consumption among males aged 15-18 years across Turkey are given in Table 2.35. In this age group, the frequency of those who never consumed pasteurized milk was 82.8%, the frequency of those who never consumed UHT milk was 49.4%, and the frequency of those who never consumed loose milk was 62.5%. The frequency of those who never consumed probiotic milk and dairy products (kefir, etc.) was 91.6%, the frequency of those who never consumed probiotic yoghurt and ayran (diluted yoghurt) was 2.4%, the frequency of those who never consumed probiotic yoghurt was 86.0%, and the frequency of those who never consumed cheese was 4.9%. The frequency of those who consumed pasteurized milk every day was 2.7%, the frequency of those who consumed UHT milk every day was 11.5%, and the frequency of those who consumed loose milk every day was 5.8%. The frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.2%, the frequency of those who consumed yoghurt and ayran (diluted yoghurt) every day was 40.3%, the frequency of those who consumed probiotic yoghurt every day was 1.1%, and the frequency of those who consumed cheese every day was 58.1%.

Among the foods in the meat-eggs-legumes group, 12.4% of males never consumed beef, 34.7% never consumed lamb/mutton, 1.1% never consumed chicken, 88.2% never consumed turkey, 95.0% never consumed goose/duck, 8.9% never consumed fish. Among the foods in this group, the ones consumed every day were beef with a frequency of 4.1%, lamb/mutton with a frequency of 0.2%, chicken with a frequency of 4.1%, and fish with a frequency of 0.2%. Among the foods in the meat-eggs-legumes group, the ones consumed once a week were beef with a frequency of 23.1%, lamb/mutton with a frequency of 18.4%, chicken with a frequency of 33.5%, turkey with a frequency of 2.6%, and fish with a frequency of 23.2%. The frequency of never consuming legumes included in this group was 2.4%, the frequency of consumption of legumes every day was 0.6%, and the frequency of consumption of legumes once a week was 45.1%.

Among males in the age group of 15-18 years, the frequency of those who never consumed eggs was 3.4%, the frequency of those who consumed them every day was 34.3%, and the frequency of those who consumed them 4-5 times per week was 15.7%. The frequency of those who never consumed nuts (hazelnuts, peanuts, pistachios, walnuts, etc.) were 9.0%, the frequency of those who consumed them every day was 10.8%, and the frequency of those who consumed them 4-5 times per week was 15.1%.

In the vegetables and fruits group, the frequency of those who never consumed green leafy vegetables was 8.6%, the frequency of those who consumed them every day was 13.0%, and the frequency of those who consumed them 4-5 times per week was 13.0%. The frequency of those who never consumed other fresh vegetables (leek, cabbage) was 35.1%, the frequency of those who consumed them every day was 0.3%, and the frequency of those who consumed them 4-5 times per week was 1.2%.

The frequency of those who never consumed citrus fruits was 3.6%, the frequency of those who consumed them every day was 6.5%, and the frequency of those who consumed them 4-5 times per week was 7.8%. The frequency of those who never consumed other fresh fruits was 5.3%, the frequency of those who consumed them every day was 29.3%, and the frequency of those who consumed them 4-5 times per week was 11.3%.

While the frequency of never consuming raisins was 36.0%, they were consumed every day with a frequency of 1.5%.

French fries were consumed every day with a frequency of 4.2%.

For males in the age group of 15-18 years, the frequencies of total vegetables consumption were as follows: 1.9% for those who never consumed them, 37.7% for those who consumed them every day, 17.9% for those who consumed them 4-5 times per week, 27.8% for those who consumed them 2-3 times per week, and 10.7% for those who consumed them once a week. The frequencies of total fruits consumption were as follows: 2.6% for those who never consumed them, 45.1% for those who consumed them every day, 16.2% for those who consumed them 4-5 times per week, 22.1% for those who consumed them 2-3 times per week, and 9.7% for those who consumed them once a week.

Of males, 5.7% never consumed white bread, 67.7% never consumed whole grain bread, rye bread, wholemeal bread, and 40.3% never consumed home-made unleavened breads (phyllo dough, etc.), which were included in the bread and cereals group. Among the foods included in the bread and cereals group, the ones consumed every day were white bread with a frequency of 84.6%, whole grain bread, rye bread, wholemeal bread, etc. with a frequency of 6.7%, and home-made unleavened breads (phyllo dough etc.) with a frequency of 10.5%. Among the foods included in the bread and cereals group, the ones consumed every day were rice with a frequency of 4.9%, bulghur with a frequency of 2.0%, pastries, cakes, buns with a frequency of 7.9%, biscuits/crackers with a frequency of 24.2%, and bagel with a frequency of 18.1%.

Among males in the age group of 15-18 years, the frequency of those who never consumed ready-made fruit juices was 18.6%, the frequency of those who consumed them every day was 12.8%, and the frequency of those who consumed them once a week was 16.9%. The frequency of those who never consumed freshly squeezed fruit juices was 53.3%, and the frequency of those who consumed them once a week was 9.6%. Freshly squeezed vegetable juices were never consumed with a frequency of 94.1%. The light and zero cola drinks were never consumed with a frequency of 84.6%, and regular cola drinks were never consumed with a frequency of 16.5%. The frequency of those who consumed black tea every day was 68.9%, while this frequency was 0.9% for green tea and 0.4% for herbal teas. The frequency of never consuming Turkish coffee was 58.5%, while its frequency of everyday consumption was 2.7%.

Among males in the age group of 15-18 years, the frequency of those who never consumed olive oil was 23.6%, the frequency of those who consumed it every day was 38.0%, and the frequency of those who consumed it once a week was 6.7%. The frequency of those who never consumed sunflower oil was 12.1%, the frequency of those who consumed it every day was 54.0%, and the frequency of those who consumed it once a week was 3.0%. The frequency of those who never consumed hard margarines was 50.2%, the frequency of those who consumed them every day was 3.5%, and the frequency of those who consumed them once a week was 8.9%. The frequency of those who never consumed soft margarines was 70.0%, the frequency of those who consumed them every day was 3.0%, and the frequency of those who consumed them soft margarines was 70.0%, the frequency of those who consumed them every day was 3.1%.

The frequency of those who never consumed butter was 14.0%, the frequency of those who consumed it every day was 21.8%, and the frequency of those who consumed it once a week was 10.6%.

The frequency of those who never consumed table sugar was 10.0%, the frequency of those who consumed it every day was 67.0%, and the frequency of those who consumed it once a week was 4.9%. The frequency of not consuming pastry desserts [(tulumba (dough pastry deep fried dipped in syrup), lokma (yeast fritters in thick syrup), baklava (multilayered flaky pastry with nuts)] was 12.2%, and the frequency of consumption once a week was 14.2%.

While hamburgers, fried chicken pieces, etc. were never consumed with a frequency of 39.9%, the frequency of consumption once a week was 8.1%. The frequency of never consuming doner, kebab, etc. was 5.2%, the frequency of everyday consumption was 6.2%, and the frequency of consumption once a week was 19.0%. The frequency of those who never consumed pita, Turkish pizza, pizza, pancake, etc. was 8.6%, the frequency of those who consumed them every day was 1.2%, and the frequency of those who consumed them once a week was 26.0%.

Table 2.35. Distribution of frequency of food consumption among males in the age group of 15-18 years, TNHS 2017

Food Items							MALE	S (aged 15-1	8 years	5)						
	Ν	lever	6-7 t	ry day, imes per veek		i times r week		3 times er week		Once a week		times month		han once nonth	k	oesn't now/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
MILK AND DAIRY PRODUCTS																
Pasteurized milk	82.8	76-6-87.7	2.7	1.3-5.7	2.3	0.9-6.1	8.1	4.7-13.7	1.9	0.7-4.6	1.1	0.4-3.7	1.0	0.3-2.6	-	-
UHT milk	49.4	42.2-56.7	11.5	7.0-18.3	8.7	5.3-13.9	8.2	5.1-13.0	9.4	6.0-14.3	8.3	5.4-12.6	4.5	2.4-8.4	-	-
Loose milk	62.5	55.5-69.1	5.8	2.8-11.3	1.1	0.4-2.9	8.1	5.2-12.3	8.9	5.8-13.4	9.8	6.6-14.4	3.9	2.1-7.1	-	-
Probiotic milk and dairy products (kefir etc.)	91.6	86.9-94.7	0.2	0.0-1.1	-	-	-	-	0.3	0.0-2.3	1.3	0.5-3.4	2.3	1.0-5.0	4.3	2.1-8.8
Yoghurt, ayran (diluted yoghurt)	2.4	0.7-8.0	40.3	33.3-47.6	19.8	14.4-26.6	26.6	20.8-33.2	7.9	4.6-13.2	2.7	1.2-5.7	0.4	0.1-2.9	-	-
Probiotic yoghurt	86.0	80.3-90.3	1.1	0.2-6.0	-	-	1.0	0.4-2.7	1.3	0.4-3.5	0.6	0.1-4.0	0.6	0.1-2.4	9.4	6.0-14.5
Cheese	4.9	2.7-8.6	58.1	50.7-65.2	8.0	4.8-13.1	19.7	14.3-26.4	4.4	2.4-8.0	2.3	0.9-5.6	2.6	0.8-8.7	-	-
Sweetened/fruit/cocoa/chocolate flavored milks	46.6	39.4-53.9	5.7	2.6-12.0	2.8	1.3-5.7	13.9	9.7-19.5	13,6	9.2-19.7	10.7	6.9-16.2	6.5	3.8-10.9	0.3	0.0-2.0
Sweetened/fruit/cocoa/chocolate flavored yoghurts	73.3	66.6-79.1	1.3	0.4-4.7	0.3	0.0-2.3	3.1	1.6-5.9	5.2	3.0-8.8	8.4	5.1-13.7	8.1	5.0-12.9	0.3	0.0-2.0
Cream/clotted cream (kaimak)	53.3	45.9-60.4	1.9	0.7-4.7	0.2	0.0-1.5	11.6	7.7-17.0	12.6	8.7-17.9	12.8	8.7-17.9	7.5	4.5-12.4	0.2	0.0-1.3
lce cream	14.4	9.5-21.2	2.7	0.7-10.1	2.7	1.2-5.9	9.3	6.1-13.9	16.8	12.4-22.4	33.0	26.7-40.1	21.1	15.7-27.9	-	-
Milk desserts (kazandibi (white pudding with blackened surface), sütlaç (rice pudding), pudding, milk pudding	13.9	9.7-19.5	2.5	1.0-5.9	0.6	0.2-2.0	12.3	8.4-17.5	20.3	15.0-26.7	33.8	27.2-41.0	16.7	11.4-23.8	-	-
MEAT-EGGS-LEGUMES																
Beef	12.4	8.2-18.3	4.1	1.9-8.5	3.3	1.6-6.6	18.7	13.8-24.8	23.1	17.5-29.8	28.8	22.5-36.1	8.6	5.3-13.7	1.1	0.4-2.8
Lamb/mutton	34.7	27.9-42.1	0.2	0.0-1.5	0.8	0.2-3.6	10.2	6.5-15.8	18.4	13.1-25.4	20.2	15.2-26.5	12.3	8.7-17.1	3.1	1.5-6.4
Chicken	1.1	0.4-3.4	4.1	2.2-7.3	5.1	2.8-9.3	38.2	31.3-45.7	33.5	26.9-40.8	16.3	11.5-22.6	1.6	0.6-4.2	-	-
Turkey	88.2	81.8-92.5	-	-	-	-	0.2	0.0-1.5	2.6	0.6-10.1	1.4	0.6-3.3	7.0	4.0-12.0	0.6	0.2-2.4
Goose/duck	95.0	90.7-97.3	-	-	-	-	-	-	-	-	2.8	1.1-7.2	1.9	0.8-4.5	0.3	0.0-2.0
Fish	8.9	5.6-14.0	0.2	0.0-1.1	0.3	0.0-2.0	5.5	3.1-9.7	23.2	17.7-29.7	36.2	29.3-43.6	25.0	19.1-32.1	0.7	0.2-2.6
Seafood (calamars, shrimps, mussels, etc.)	83.6	77.9-88.1	0.9	0.1-5.9	0.2	0.0-1.1	0.6	0.1-2.4	1.6	0.7-4.0	6.4	3.8-10.4	6.6	3.8-11.0	0.2	0.0-1.3
Offals (liver, kidney, spleen, etc.)	55.1	47.7-62.2	-	-	-	-	1.3	0.0-1.9	4.1	1.9-8.7	18.0	12.9-24.4	21.3	15.9-27.9	0.3	0.0-1.9
Meat products (salami, sausage, fermented sausage, pastrami, etc.)	20.3	14.5-27.7	5.9	3.4-9.7	3.6	1.9-6.8	20.5	15.4-26.8	22.9	17.1-30.0	20.3	15.3-26.5	6.4	4.0-10.2	-	-
Nuts (hazelnuts, peanuts, pistachios, walnuts, etc.)	9.0	5.0-16.6	10.8	7.2-15.9	5.1	2.8-8.9	27.5	21.2-34.8	22.8	17.4-29.2	18.4	13.6-24.4	6.5	3.7-11.0	-	-
Legumes (dry beans, chickpeas, lentils, etc.)	2.4	1.2-4.9	0.6	0.2-2.5	3.6	1.8-7.1	28.6	22.5-35.5	45.1	37.8-52.6	15.2	10.9-20.7	4.5	2.2-8.9	-	-
Eggs	3.4	1.8-6.4	34.3	27.7-41.5	15.7	11.0-21.8	28.5	22.4-35.6	12.0	7.9-17.9	3.5	1.8-6.9	2.6	0.7-8.5	-	-

Food Items							MA	ALES (aged 2	15-18 y	vears)						
		Never	6-7 t	ry day, imes per veek		5 times r week		3 times er week		Once week		3 times month		han once: nonth		i't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
VEGETABLES AND FRUITS																
Green leafy vegetables	8.6	5.6-13.0	13.0	8.7-19.0	13.0	8.8-18.7	23.1	17.8-29.4	25.6	19.4-33.0	9.5	6.2-14.3	7.2	3.8-13.1	-	-
Other fresh vegetables (leek, cabbage)	35.1	28.4-42.5	0.3	0.0-2.0	1.2	0.4-3.3	9.0	5.3-14.9	20.4	15.2-26.9	22.3	16.7-29.3	11.3	7.9-16.0	0.3	0.0-2.0
Tomato	1.5	0.5-4.7	50.0	42.7-57.4	14.3	10.0-19.8	19.4	14.6-25.2	12.8	8.6-18.7	1.6	0.5-5.0	0.4	0.1-1.7	-	-
Green pepper (village pepper, banana pepper, long pepper, etc.)	13.7	9.8-18.9	28.1	21.5-35.7	10.5	6.7-16.2	19.3	14.4-25.4	16.8	12.0-23.1	7.7	4.6-12.5	3.7	2.0-6.5	0.2	0.0-1.6
Mushroom	48.3	41.0-55.6	-	-	-	-	0.5	0.2-1.8	8.5	5.4-13.3	19.9	14.5-26.5	22.5	17.2-29.0	0.3	0.0-2.0
Corn	22.7	16.9-29.8	0.8	0.1-5.3	0.4	0.1-1.7	6.7	4.0-11.1	16.6	11.4-23.6	29.2	23.2-36.1	23.5	18.0-29.9	-	-
Frozen vegetables/fruits	57.7	50.5-64.7	-	-	0.3	0.0-2.0	0.9	0.2-3.5	9.7	6.4-14.6	19.7	14.4-26.2	7.5	4.7-11.6	4.3	2.4-7.5
Dried vegetables	44.3	37.2-51.6	1.8	0.3-11.7	0.4	0.0-2.5	1.9	0.6-5.3	8.7	5.5-13.4	26.7	20.6-33.8	13.5	9.2-19.4	2.8	1.3-5.6
Dried fruits	45.3	38.0-52.7	0.5	0.1-2.0	0.3	0.1-1.3	6.6	3.7-11.6	11.8	7.8-17.4	16.7	12.4-22.2	17.6	12.8-23.8	1.2	0.5-3.3
Raisin	36.0	29.0-43.6	1.5	0.7-3.3	0.2	0.0-1.7	10.7	6.8-16.4	14.5	10.2-20.2	23.3	17.9-29.7	13.8	9.8-19.1	-	-
Citrus fruits	3.6	1.3-9.8	6.5	3.8-10.8	7.8	4.8-12.4	24.2	18.8-30.7	27.8	21.4-35.1	22.0	16.7-28.5	8.1	4.7-13.6	-	-
Other fresh fruits	5.3	2.4-11.3	29.3	23.2-36.3	11.3	7.8-16.1	24.1	18.5-30.7	16.1	11.7-21.9	9.1	5.2-15.4	4.4	1.9-10.0	0.3	0.0-2.0
Ready-made canned vegetables	85.3	79.3-89.7	0.6	0.2-2.6	-	-	0.8	0.3-2.8	3.5	1.2-9.9	5.0	2.9-8.5	2.0	0.9-4.5	2.7	1.3-5.7
Home-made canned vegetables	49.3	42.1-56.6	0.6	0.2-2.6	0.7	0.2-2.4	8.2	5.2-12.5	12.2	8.3-17.6	23.8	18.1-30.6	2.4	1.2-4.8	2.7	1.3-5.5
French fries	2.1	0.8-5.3	4.2	1.7-10.3	7.6	4.5-12.8	37.3	30.6-44.5	24.1	18.8-30.4	18.6	13.6-24.9	6.1	2.8-12.6	-	-
Vegetables, total	1.9	0.9-4.1	37.7	30.9-45.0	17.9	12.7-24.9	27.8	21.6-34.9	10.7	6.9-16.1	3.4	1.6-7.1	0.7	0.2-2.8	-	-
Fruits, total	2.6	0.6-9.9	45.1	38.0-52.5	16.2	11.5-22.3	22.1	16.8-28.4	9.7	6.1-15.2	1.9	0.7-5.0	2.5	0.7-8.7	-	-

Food Items							MALES	(aged 15-1	8 years	;)
		Never	6-7 t	ery day, imes per veek		5 times r week		times r week		Onc we
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	9
BREAD-CEREALS										
White bread	5.7	2.8-11.0	84.6	78.7-89.1	2.3	1.1-4.9	4.5	2.4-8.2	1.7	0
Whole grain bread, rye bread, wholemeal bread etc.	67.7	60.5-74.1	6.7	3.9-11.1	2.2	0.9-5.0	4.2	2.0-8.8	4.7	2

of 15-18 years, TNHS 2017 (continued)

			v	veek												
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BREAD-CEREALS																
White bread	5.7	2.8-11.0	84.6	78.7-89.1	2.3	1.1-4.9	4.5	2.4-8.2	1.7	0.7-4.1	0.5	0.1-2.2	0.7	0.1-3.5	-	-
Whole grain bread, rye bread, wholemeal bread etc.	67.7	60.5-74.1	6.7	3.9-11.1	2.2	0.9-5.0	4.2	2.0-8.8	4.7	2.6-8.4	5.5	2.9-10.4	8.1	4.9-13.1	0.9	0.2-3.7
Home-made unleavened breads (phyllo dough etc.)	40.3	33.1-47.8	10.5	6.8-15.9	1.9	0.8-4.6	6.9	4.1-11.3	11.5	7.7-16.9	15.6	11.3-21.1	12.3	8.2-18.1	0.9	0.3-3.0
Rice	2.9	1.0-7.6	4.9	2.1-11.0	7.3	4.6-11.4	40.4	33.5-47.7	29.1	23.0-36.1	12.8	8.5-19.0	2.5	0.9-6.8	-	-
Bulghur	4.8	2.4-9.4	2.0	0.8-5.2	3.6	1.9-6.8	33.0	26.7-40.0	34.4	27.6-41.8	19.1	13.7-26.0	3.1	1.5-6.4	-	-
Macaroni, noodles, couscous	3.9	1.6-8.9	2.1	0.8-5.7	5.7	3.4-9.2	35.8	29.2-43.1	35.6	28.9-42.9	13.6	9.2-19.6	3.3	1.3-8.3	-	-
Pastries, cakes, buns	7.9	4.0-15.1	7.9	5.0-12.4	2.0	0.8-4.6	20.4	15.3-26.6	24.1	18.5-30.8	27.1	21.2-33.9	10.6	6.6-16.5	-	-
Cookies	17.8	12.9-23.9	1.4	0.5-4.1	0.2	0.0-1.7	11.6	7.3-17.9	20.0	14.7-26.5	29.8	23.6-36.9	19.2	23.6-36.9	-	-
Tarhana (fermented dried yoghurt and flour mixture)	32.3	25.7-39.8	0.6	0.2-2.0	1.8	0.9-3.7	14.1	10.0-19.6	17.2	12.3-23.7	19.2	14.5-24.9	13.9	9.1-20.6	0.7	0.2-2.3
Biscuits/crackers	6.2	3.4-11.0	24.2	18.5-31.1	12.6	8.6-18.0	27.7	21.7-34.5	17.7	12.4-24.5	5.7	3.4-9.4	6.0	3.2-11.2	-	-
Bagel	9.7	6.2-14.9	18.1	12.8-24.9	8.6	5.0-14.5	19.1	14.1-25.2	22.3	16.8-29.0	10.3	7.1-14.7	11.9	7.8-17.8	-	-
Breakfast cereals (muesli, corn flakes, wheat flakes, etc.).	81.7	75.6-86.5	1.9	0.5-7.4	1.3	0.5-3.8	3.3	1.5-7.1	3.0	1.4-6.4	4.1	2.2-7.3	4.1	2.2-7.6	0.6	0.1-3.9

Once

a week

1-3 times

per month

Less than once Doesn't know/

No response

a month

Food Items							M	ALES (aged 1	L5-18 y	vears)						
		Never	6-7 t	ery day, imes per veek		5 times r week		times r week		Once week		times month		than once nonth		n't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BEVERAGES																
Ready-made fruit juices	18.6	13.2-25.5	12.8	8.8-18.2	13.8	9.3-20.1	22.5	17.2-28.9	16.9	12.0-23.3	8.8	5.8-13.1	6.5	3.5-11.9	-	-
Freshly squeezed fruit juices	53.3	46.0-60.5	-	-	0.4	0.1-2.7	8.8	5.3-14.3	9.6	6.3-14.3	11.3	7.6-16.5	16.6	12.0-22.5	-	-
Freshly squeezed vegetable juices	94.1	89.2-96.9	-	-	-	-	0.4	0.1-2.6	2.2	0.7-6.5	1.4	0.4-4.9	1.9	0.6-5.8	-	-
Light, zero cola drinks	84.6	78.7-89.1	0.2	0.0-1.7	1.3	0.5-3.7	3.0	1.4-6.4	4.4	2.3-8.4	3.5	1.4-8.5	2.7	1.3-5.6	0.2	0.0-1.3
Regular cola drinks	16.5	11.7-22.8	11.3	7.7-16.3	12.5	8.3-18.4	27.7	21.5-34.9	15.1	10.6-21.1	10.1	6.7-15.0	6.7	3.6-12.1	-	-
Ice teas	39.1	32.1-46.5	4.4	2.2-8.6	6.5	3.1-13.0	13.1	9.2-18.3	20.5	15.4-26.8	9.5	6.2-14.3	7.0	4.0-11.9	-	-
Tea (black)	7.7	4.3-13.5	68.9	61.4-75.5	4.5	2.6-7.7	7.4	4.4-12.1	7.9	4.3-14.2	3.3	1.5-6.9	0.3	0.0-2.4	-	-
Green tea	83.6	77.4-88.4	0.9	0.3-3.0	0.8	0.1-5.3	1.5	0.7-3.4	6.6	3.5-12.1	3.4	1.9-6.0	3.2	1.3-7.6	-	-
Herbal teas	58.6	51.3-65.6	0.4	0.1-1.7	0.8	0.1-5.3	4.7	2.6-8.4	8.7	5.2-14.1	14.2	10.1-19.7	12.6	8.4-18.4	-	-
Mineral water, soda	24.0	18.1-31.1	5.2	3.0-8.8	3.8	2.0-7.0	21.3	16.0-27.7	25.0	19.3-31.8	12.0	7.9-17.7	8.8	5.0-14.9	-	-
Instant granulated coffee	32.9	26.2-40.5	4.5	2.7-7.3	6.7	4.0-10.9	17.7	13.0-23.6	14.0	9.6-19.9	13.7	9.7-19.0	10.6	6.4-17.0	-	-
Filter coffee	90.5	85.8-93.8	0.5	0.1-3.4	0.6	0.1-2.3	1.1	0.4-3.0	0.7	0.2-2.8	2.5	1.1-5.6	2.3	1.1-5.0	1.8	0.5-6.2
Turkish coffee	58.5	51.3-65.4	2.7	1.1-6.3	0.9	0.3-3.1	8.4	5.4-12.9	8.4	5.3-13.0	11.8	8.1-16.9	9.3	6.0-14.1	-	-
Energy drinks	70.0	63.2-76.1	-	-	0.1	0.0-0.9	4.1	2.3-7.4	5.6	3.0-10.1	12.6	8.6-18.3	7.5	4.8-11.5	-	-
Alcoholic beverages	84.9	79.0-89.3	-	-	-	-	0.2	0.0-1.6	-	-	5.1	2.8-9.0	9.4	5.9-14.7	-	-

Food Items							MAL	ES (aged 15	i-18 ye	ars)						
	ſ	Never		ery day,		5 times	2-3	times	C	Once	1-3	times	Less t	than once		
				imes per	pe	er week	pe	r week	a	week	per	month	aı	month	No r	esponse
	%	95%CI	v %	veek 95%Cl	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
OILS, FATS, SUGAR, DESSERTS	70	55/661	70	55/001	70	55/661	70	55/661	70	33/661	70	55/661	70	55/001	70	557661
Olive oil	23.6	17.5-31.1	38.0	31.3-45.1	6.8	3.9-11.6	10.8	7.0-16.3	6.7	3.7-11.7	2.8	1.3-5.7	4.1	1.8-9.1	7.3	4.7-11.2
Hazelnut oil	93.2	89.0-95.9	-	-	-	-	0.4	0.1-2.7	-	-	-	-	0.9	0.2-4.8	5.5	3.2-9.2
Sunflower oil	12.1	8.0-17.9	54.0	46.6-61.2	6.2	3.6-10.4	14.0	9.4-20.2	3.0	1.2-7.2	4.3	1.9-9.6	0.5	0.1-2.3	5.9	3.5-9.8
Corn oil	81.4	75.4-86.2	3.0	1.2-7.6	1.3	0.3-5.6	2.8	1.3-5.6	0.5	0.1-1.9	0.3	0.0-2.5	1.5	0.6-3.8	9.2	6.1-13.7
Soybean oil	91.6	86.8-94.8	-	-	-	-	-	-	-	-	-	-	-	-	8.4	5.2-13.2
Canola oil	91.2	86.4-94.4	-	-	-	-	-	-	-	-	0.3	0.0-2.0	0.1	0.0-1.0	8.4	5.2-13.1
Hard margarine	50.2	42.9-57.5	3.5	1.6-7.4	1.4	0.5-4.4	9.7	6.2-14.8	8.9	5.2-14.7	7.8	4.9-12.2	7.9	4.6-3.1	10.6	7.1-15.4
Soft margarine	70.0	63.2-76.1	3.0	1.0-8.8	0.4	0.1-1.7	5.1	3.0-8.6	3.1	1.5-6.3	6.2	3.7-10.1	4.0	2.0-7.7	8.2	5.2-12.6
Butter	14.0	9.4-20.4	21.8	16.4-28.5	6.2	3.7-10.2	30.2	23.6-37.6	10.6	7.1-15.6	9.6	6.1-14.7	4.6	2.6-7.7	3.1	1.5-6.1
Tail fat, tallow	71.5	64.7-77.5	-	-	0.5	0.1-2.0	1.9	0.7-5.4	3.3	1.6-6.7	6.9	4.1-11.2	10.6	6.7-16.3	5.4	3.2-8.8
Table sugar	10.0	6.3-15.5	67.0	59.6-73.7	2.8	1.2-6.3	7.1	4.2-11.9	4.9	2.3-9.9	5.0	2.4-10.3	3.2	1.4-7.5	-	-
Honey, jam, molasses	13.6	9.0-20.0	20.6	15.2-27.3	6.5	4.0-10.4	25.7	19.7-32.7	16.0	11.4-22.1	11.4	7.9-16.2	6.2	3.2-11.4	-	-
Sweets, Turkish Delight, chocolate	14.1	9.6-20.1	12.3	7.9-18.6	7.6	4.7-12.0	32.3	25.7-39.7	13.8	9.6-19.5	12.0	8.4-16.8	7.9	4.7-13.0	-	-
Pastry desserts, syrup sweetened (tulumba, lokma, baklava)	12.2	7.4-19.3	1.4	0.4-5.0	0.5	0.1-2.3	11.1	6.9-17.3	15.7	11.4-21.3	37.4	30.8-44.6	21.7	16.4-28.1	-	-
Pastry products with cream filling (cake, etc.)	15.9	10.7-23.0	0.5	0.1-3.4	1.1	0.3-4.1	3.3	1.7-6.2	13.9	9.7-19.6	38.1	31.3-45.4	27.2	21.2-34.0	-	-
Artificial sweeteners	95.8	91.8-97.9	-	-	-	-	0.2	0.0-1.7	-	-	0.7	0.2-2.8	0.4	0.1-3.0	2.8	1.1-6.8
Instant soups	65.7	58.3-72.4	0.5	0.1-1.9	0.8	0.2-3.5	2.2	0.9-5.5	11.9	7.3-18.8	9.4	6.3-13.9	8.6	5.1-13.9	0.9	0.3-2.6
Smoked products	89.6	84.2-93.3	0.3	0.0-2.0	0.4	0.1-2.6	1.4	0.3-7.0	0.4	0.1-2.6	0.6	0.2-1.9	2.5	1.0-6.2	4.9	2.6-9.0
Meat bouillon cube, chicken bouillon cube	53.7	46.3-60.9	5.1	2.2-11.3	2.8	1.3-5.7	13.2	9.1-18.8	9.0	5.3-15.1	5.8	3.2-10.3	1.9	0.6-5.9	8.5	5.5-12.9
Hamburger, fried chicken pieces etc.	39.9	32.3-46.7	0.3	0.0-2.0	1.4	0.4-4.3	6.6	4.1-10.4	8.1	5.0-12.8	25.1	19.3-31.9	18.9	13.6-25.7	0.4	0.1-2.7
Doner, kebab, etc.	5.2	2.0-12.7	6.2	3.5-10.8	9.6	5.9-15.4	20.8	15.8-26.9	19.0	14.2-25.0	28.9	22.8-35.9	9.8	6.0-15.6	0.4	0.1-2.7
Pita, lahmacun (Turkish pizza), pizza, pancake, etc.	8.6	5.1-14.1	1.2	0.4-3.1	1.0	0.3-3.4	8.8	5.4-14.1	26.0	20.3-32.8	44.4	37.3-51.8	9.9	6.1-15.7	-	-
Chips, corn snacks	21.9	16.1-29.1	5.5	2.9-10.2	5.4	2.9-9.8	18.7	13.9-24.6	17.9	13.1-24.0	19.5	14.2-26.2	11.0	7.2-16.5	-	-

3.5.3. Frequency of Food Consumption Among Males in Age Group of 19-64 Years

The results of the analysis of the frequency of food consumption among males in the age group of 19-64 years across Turkey are given in Table 2.36. In this age group, the frequency of those who never consumed pasteurized milk was 84.3%, the frequency of those who never consumed UHT milk was 65.7%, and the frequency of those who never consumed loose milk was 56.1%. The frequency of those who never consumed probiotic milk and dairy products (kefir, etc.) was 91%, the frequency of those who never consumed yoghurt and ayran (diluted yoghurt) was 0.7%, the frequency of those who never consumed probiotic yoghurt was 87.6%, and the frequency of those who never consumed cheese was 2.1%. The frequency of those who consumed pasteurized milk every day was 1.5%, the frequency of those who consumed UHT milk every day was 3.8%, and the frequency of those who consumed loose milk every day was 0.5%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.5%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.5%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.5%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.5%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.5%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.5%, the frequency of those who consumed probiotic yoghurt every day was 1%, and the frequency of those who consumed cheese every day was 70.2%.

Among the foods in the meat-eggs-legumes group, 7.6% of males in the age group of 19-64 years never consumed beef, 28.3% never consumed lamb/mutton, 4.3% never consumed chicken, 84.5% never consumed turkey, 92.7% never consumed goose/duck, 7.7% never consumed fish. Among the foods in this group, the ones consumed every day were beef with a frequency of 5.2%, lamb/mutton with a frequency of 2%, chicken with a frequency of 3.1%, and fish with a frequency of 0.4%. Among the foods in the meat-eggs-legumes group, the ones consumed 2-3 times per week were beef with a frequency of 24.5%, lamb/mutton with a frequency of 11.5%, chicken with a frequency of 33.2%, turkey with a frequency of 0.4%, and fish with a frequency of 9.9%. The frequency of not consuming legumes in this group was 1.9%, he frequency of everyday consumption of legumes was 1.2%, and the frequency of consumption of legumes 2-3 days a week was 29.6%.

Among males of the age group of 19-64 years, the frequency of those who never consumed eggs was 3.1%, the frequency of those who consumed them every day was 32.5%, and the frequency of those who consumed them 4-5 times per week was 16.8%. The frequency of those who never consumed nuts (hazelnuts, peanuts, pistachios, walnuts, etc.) was 5.8%, the frequency of those who consumed them every day was 15.2%, and the frequency of those who consumed them 4-5 times per week was 19.8%.

In the vegetables and fruits group, the frequency of those who never consumed green leafy vegetables was 5.6%, the frequency of those who consumed them every day was 21.6%, and the frequency of those who consumed them 4-5 times per week was 12.9%. The frequency of those who never consumed other fresh vegetables (leek, cabbage) was 19.4%, the frequency of those who consumed them every day was 1.7%, and the frequency of those who consumed them 4-5 times per week was 2.4%.

The frequency of those who never consumed citrus fruits was 4.5%, the frequency of those who consumed them every day was 9.0%, and the frequency of those who consumed them 4-5 times per week was 8.8%. The frequency of those who never consumed other fresh fruits was 3.8%, the frequency of those who consumed them every day was 28.5%, and the frequency of those who consumed them 4-5 times per week was 14.7%.

While the frequency of not consuming raisins was 30.4%, they were consumed every day with a frequency of 2.3%.

French fries were consumed every day with a frequency of 2.7%.

For males in the age group of 19-64 years, the frequencies of total vegetables consumption were as follows: 0.6% for those who never consumed them, 48.8% for those who consumed them every day, 16.4% for those who consumed them 4-5 times per week, 22.8% for those who consumed them 2-3 times per week, and 7.7% for those who consumed them once a week. The frequencies of total fruits consumption were 1.1% for those who never consumed them, 46.5% for those who consumed them every day, 16.9% for those who consumed them 4-5 times per week, 23.1% for those who consumed them 2-3 times per week, and 7.9% for those who consumed them once a week.

Of males in age group of 19-64 years, 6.6% never consumed white bread, 58.5% never consumed whole grain bread, rye bread, wholemeal bread, and 41.3% never consumed home-made unleavened breads (phyllo dough, etc.), which were included in the bread and cereals group. Among the foods in the bread and cereals group, the ones consumed every day were white bread with a frequency of 75.8%, whole grain bread, rye bread, wholemeal bread, etc. with a frequency of 13.2%, and for home-made unleavened breads (phyllo dough etc.) with a frequency of 8.9%. Among the foods in the bread and cereals group, the ones consumed every day were for rice with a frequency of 3.1%, bulghur with a frequency of 1.3%, pastries, cakes, buns with a frequency of 5.0%, biscuits/crackers with a frequency of 11.5%, and bagel with a frequency of 6.5%.

Among males in the age group of 19-64 years, the frequency of those who never consumed ready-made fruit juices was 32.8%, the frequency of those who consumed them every day was 4.9%, and the frequency of those who consumed them once a week was 13.2%. The frequency of those who never consumed freshly squeezed fruit juices was 47.2%, and the frequency of those who consumed them once a week was 12.1%. Freshly squeezed vegetable juices were never consumed with a frequency of 94.6%. The light and zero cola drinks were never consumed with a frequency of 89.0%, and regular cola drinks were never consumed with a frequency of 36.3%. The frequency of those who consumed black tea every day was 91.5%, while this frequency was 1.3% for green tea and 3.3% for herbal teas. The frequency of never consuming Turkish coffee was 25.0%, while its frequency of everyday consumption was 15.1%.

Among males in the age group of 19-64 years, the frequency of those who never consumed olive oil was 19.7%, the frequency of those who consumed it every day was 42.2%, and the frequency of those who consumed it once a week was 4.8%. The frequency of those who never consumed sunflower oil was 11.9%, the frequency of those who consumed it every day was 61.5%, and the frequency of those who consumed it once a week was 5.0%. The frequency of those who never consumed hard margarines was 57.9%, the frequency of those who consumed them every day was 3.3%, and the frequency of those who consumed them once a week was 7.6%. The frequency of those who never consumed soft margarines was 74.3%, the frequency of those who consumed them every day was 2.9%, and the frequency of those who consumed them once a week was 4.4%.

The frequency of those who never consumed butter was 12.1%, the frequency of those who consumed it every day was 28.2%, and the frequency of those who consumed it once a week was 11.1%.

The frequency of those who never consumed table sugar was 24.8%, the frequency of those who consumed it every day was 66.1%, and the frequency of those who consumed it once a week was 1.7%. The frequency of never consuming pastry desserts [(tulumba (dough pastry deep fried dipped in syrup), lokma (yeast fritters in thick syrup), baklava (multilayered flaky pastry with nuts)] was 15.8%, and the frequency of consumption them once a week was 18.7%.

While hamburgers, fried chicken pieces, etc. were never consumed with a frequency of 61.0%, the frequency of consumption once a week was 7.4%. The frequency of never consuming doner, kebab, etc. was 10.0%, the frequency of consumption every day was 3.0%, and the frequency of consumption once a week was 21.4%. The frequency of those who never consumed pita, Turkish pizza, pizza, pancake, etc. was 9.5%, the frequency of those who consumed them every day was 0.6%, and the frequency of those who consumed them once a week was 22.8%.

Food Items							M	ALES (aged :	19-64 y	vears)						
		Never	6-7 t	ery day, imes per veek		5 times er week	2-3	3 times er week	(Once week		3 times r month		than once month		n't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
MILK AND DAIRY PRODUCTS																
Pasteurized milk	84.3	82.8-85.7	1.5	1.0-2.4	1.0	0.7-1.5	3.3	2.7-3.9	3.5	2.8-4.3	3.2	2.6-3.9	2.6	1.9-3.4	0.7	0.4-1.1
UHT milk	65.7	63.8-67.5	3.8	3.1-4.8	2.5	1.9-3.2	8.5	7.5-9.6	6.8	5.8-7.9	7.2	6.2-8.2	4.8	4.1-5.7	0.8	0.5-1.2
Loose milk	56.1	54.3-58.0	3.5	2.8-4.2	1.9	1.5-2.5	9.7	8.6-10.8	11.2	10.1-12.5	10.5	9.5-11.7	6.5	5.6-7.6	0.5	0.3-0.9
Probiotic milk and dairy products (kefir etc.)	91.0	89.9-92.0	0.5	0.3-0.8	0.2	0.1-0.4	0.8	0.5-1.2	0.7	0.5-1.0	2.4	1.9-3.0	2.6	2.0-3.3	1.8	1.3-2.3
Yoghurt, ayran (diluted yoghurt)	0.7	0.4-1.2	51.6	49.7-53.5	16.6	15.1-18.1	21.8	20.3-23.4	6.4	5.6-7.4	2.3	1.8-3.0	0.4	0.2-0.6	0.2	0.1-0.7
Probiotic yoghurt	87.6	86.2-88.9	1.0	0.7-1.4	0.4	0.2-0.6	1.0	0.7-1.5	0.8	0.5-1.1	1.7	1.2-2.6	2.1	1.5-2.8	5.4	4.6-6.4
Cheese	2.1	1.6-2.8	70.2	68.4-72.0	8.3	7.4-9.4	12.7	11.4-14.1	4.6	3.8-5.6	0.8	0.6-1.2	0.9	0.5-1.8	0.3	0.1-0.7
Sweetened fruit/cocoa/ chocolate flavored milks	79.0	77.2-80.7	1.6	1.2-2.3	0.9	0.6-1.4	4.0	3.1-4.6	3.8	3.1-4.6	4.7	3.8-5.9	5.4	4.6-6.3	0.5	0.3-0.9
Sweetened/fruit/cocoa/ chocolate flavored yoghurts	88.4	86.9-89.7	0.4	0.2-0.7	0.1	0.0-0.2	1.1	0.7-1.6	1.8	1.3-2.4	3.6	2.8-4.7	4.0	3.3-4.9	0.7	0.4-1.1
Cream/clotted cream (kaimak)	48.4	46.5-50.3	4.1	3.2-5.2	1.5	1.2-2.0	8.3	7.3-9.4	11.5	10.4-12.7	13.6	12.3-14.9	12.1	10.9-13.4	0.5	0.2-0.9
Ice cream	17.4	16.0-19.0	0.8	0.6-1.2	0.7	0.4-1.0	6.7	5.8-7.6	14.0	12.6-15.4	30.3	28.6-32.1	29.9	28.2-31.6	0.3	0.1-0.7
Milk desserts (kazandibi (white pudding with blackened surface), sütlaç (rice pudding), pudding, milk pudding	13.0	11.8-14.4	1.2	0.9-1.7	1.7	1.2-2.3	11.5	10.3-12.9	21.1	19.5-22.7	33.7	32.0-35.5	17.4	16.0-18.9	0.3	0.1-0.7
MEAT-EGGS-LEGUMES																
Beef	7.6	6.7-8.7	5.2	4.3-6.3	6.3	5.5-7.2	24.5	23.0-26.1	21.8	20.3-23.5	22.3	20.8-23.9	11.6	10.4-12.9	0.7	0.4-1.1
Lamb/mutton	28.3	26.7-30.1	2.0	1.4-2.8	2.1	1.5-2.7	11.5	10.3-12.8	14.3	13.0-15.6	22.4	20.9-24.1	18.3	17.0-19.8	1.0	0.7-1.6
Chicken	4.3	3.6-5.0	3.1	2.4-3.9	5.9	5.0-7.1	33.2	31.4-35.1	31.2	29.5-32.9	17.7	16.4-19.1	4.2	3.6-4.8	0.5	0.2-0.9
Turkey	84.5	82.9-86.0	-	-	0.3	0.1-0.8	0.4	0.2-0.7	1.0	0.7-1.4	3.9	3.2-4.8	9.4	8.3-10.7	0.5	0.3-0.9
Goose/duck	92.7	91.6-93.7	-	-	0.0	0.0-0.1	0.1	0.0-0.5	0.4	0.2-0.6	1.1	0.8-1.5	5.2	4.4-6.2	0.5	0.2-0.9
Fish	7.7	6.5-9.0	0.4	0.2-0.7	0.5	0.3-0.8	9.9	9.0-11.0	27.3	25.6-29.0	35.8	34.0-37.6	17.9	16.5-19.5	0.5	0.3-1.0
Seafood (calamars, shrimps, mussels, etc.)	77.2	75.5-78.8	0.1	0.0-0.4	0.3	0.2-0.6	1.0	0.7-1.5	3.0	2.4-3.7	8.1	7.2-9.2	9.6	8.4-10.9	0.7	0.4-1.1
Offals (liver, kidney, spleen, etc.)	39.5	37.7-41.5	0.0	0.0-0.3	0.3	0.1-0.6	2.8	2.2-3.6	5.8	5.0-6.7	26.2	24.6-27.9	24.9	23.4-26.5	0.4	0.2-0.8
Meat products (salami, sausage, fermented sausage, pastrami, etc.)	27.9	26.2-29.6	3.6	3.0-4.5	2.3	1.8-3.0	15.5	14.0-17.1	19.8	18.4-21.3	17.9	16.5-19.4	12.5	11.3-13.8	0.4	0.2-0.8
Nuts (hazelnuts, peanuts, pistachios, walnuts, etc.)	5.8	5.0-6.8	15.2	13.9-16.5	9.8	8.7-11.1	27.9	26.2-29.7	19.1	17.7-20.6	15.5	14.2-17.0	6.3	5.4-7.2	0.3	0.2-0.8
Legumes (dry beans, chickpeas, lentils, etc.)	1.9	1.3-2.6	1.2	0.8-1.6	2.9	2.3-3.8	29.6	27.9-31.3	43.7	41.9-45.6	18.7	17.2-20.2	1.7	1.3-2.2	0.4	0.2-0.8
Eggs	3.1	2.5-3.9	32.5	30.7-34.3	16.8	15.3-18.4	32.6	30.9-34.4	10.3	9.2-11.6	3.0	2.3-3.8	1.3	0.9-1.8	0.4	0.2-0.9

Food Items		-		-			MA	LES (aged 1	19-64 y	ears)			-			
		Never	6-7 t	ery day, imes per veek		5 times er week		times r week		nce veek		times month		than once nonth		i't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
VEGETABLES AND FRUITS																
Green leafy vegetables	5.6	4.6-6.7	21.6	20.1-23.2	12.9	11.7-14.2	27.3	25.7-29.0	19.7	18.2-21.3	9.5	8.4-10.7	3.1	2.5-3.8	0.3	0.2-0.7
Other fresh vegetables (leek, cabbage)	19.4	17.8-21.1	1.7	1.3-2.2	2.4	1.9-3.2	13.6	12.4-14.9	23.3	21.7-24.9	26.6	25.0-28.3	12.6	11.4-13.9	0.4	0.2-0.8
Tomato	1.5	1.1-2.1	48.7	46.8-50.6	16.3	14.9-17.8	21.7	20.2-23.4	7.6	6.7-8.6	2.9	2.4-3.6	0.9	0.7-1.3	0.3	0.1-0.7
Green pepper (village pepper, banana pepper, long pepper, etc.)	5.2	4.3-6.3	35.4	33.6-37.2	14.3	13.0-15.8	23.9	22.4-25.6	13.7	12.5-15.1	5.2	4.4-6.0	1.9	1.5-2.5	0.3	0.1-0.7
Mushroom	31.9	30.1-33.7	0.1	0.1-0.3	0.5	0.2-1.3	3.1	2.4-4.0	10.2	9.1-11.4	27.3	25.7-29.0	26.6	25.0-28.3	0.3	0.1-0.7
Corn	26.2	24.5-27.9	0.7	0.4-1.1	0.5	0.3-0.9	4.0	3.3-4.8	10.6	9.4-11.9	26.3	24.6-33.1	31.3	29.6-33.1	0.4	0.2-0.8
Frozen vegetables/fruits	53.5	51.6-55.4	0.3	0.2-0.6	0.2	0.1-0.5	2.8	2.2-3.4	8.3	7.3-9.3	20.5	19.0-22.1	12.2	11.1-13.5	2.2	1.7-2.8
Dried vegetables	44.4	42.5-46.3	0.2	0.1-0.4	0.3	0.1-0.5	2.3	1.8-3.0	9.1	8.0-10.3	25.6	24.0-27.3	16.9	15.6-18.4	1.2	0.8-1.7
Dried fruits	35.2	33.3-37.1	2.5	2.0-3.1	1.4	1.0-1.9	8.0	7.1-8.9	13.8	12.5-15.2	23.1	21.6-24.7	15.4	14.1-16.8	0.7	0.4-1.1
Raisin	30.4	28.6-32.2	2.3	1.9-2.8	1.5	1.1-2.0	9.5	8.4-10.7	13.6	12.5-14.9	24.7	23.0-26.4	17.6	16.2-19.0	0.5	
Citrus fruits	4.5	3.8-5.4	9.0	8.0-10.0	8.8	7.7-9.9	26.2	24.6-27.9	23.7	22.2-25.4	20.7	19.1-22.4	6.7	5.8-7.8	0.3	0.1-0.7
Other fresh fruits	3.8	3.1-4.8	28.5	26.8-30.3	14.7	13.4-16.1	28.0	26.4-29.7	15.0	13.7-16.4	6.3	5.4-7.4	3.1	2.5-3.8	0.5	2.5-3.8
Ready-made canned vegetables	83.3	81.8-84.7	0.3	0.2-0.5	0.1	0.1-0.4	1.2	0.8-1.6	2.3	1.9-2.9	5.8	5.0-6.7	5.8	4.9-6.8	1.2	0.8-1.7
Home-made canned vegetables	39.5	37.6-41.4	1.6	1.0-2.5	1.4	1.1-1.9	8.0	7.1-9.0	17.0	15.7-18.4	23.9	22.3-25.5	6.7	5.8-7.6	1.9	1.5-2.5
French fries	9.7	8.7-10.8	2.7	2.1-3.6	3.5	2.9-4.1	23.7	22.1-25.4	32.4	30.6-34.2	21.0	19.6-22.5	6.6	5.6-7.9	0.4	0.2-0.8
Vegetables, total	0.6	0.4-1.0	48.8	46.9-50.7	16.4	15.0-18.0	22.8	21.2-24.4	7.7	6.7-8.8	2.8	2.2-3.5	0.7	0.4-1.0	0.3	0.1-0.7
Fruits, total	1.1	0.7-1.6	46.5	44.6-48.4	16.9	15.6-18.4	23.1	21.6-24.8	7.9	6.9-9.0	3.3	2.7-4.1	0.9	0.6-1.3	0.2	0.1-0.6

Food Items							MA	ALES (aged 2	19-64 y	vears)						
		Never	6-7 t	ry day, imes per veek		5 times er week		times er week		Once week		3 times month		han once: nonth		n't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BREAD-CEREALS																
White bread	6.6	5.9-7.5	75.8	74.2-77.4	3.8	3.2-4.6	4.9	4.2-5.7	3.8	3.2-4.6	2.3	1.8-2.9	2.5	2.0-3.3	0.2	0.1-0.7
Whole grain bread, rye bread, wholemeal bread etc.	58.5	56.6-60.3	13.2	12.0-14.5	3.2	2.6-3.9	6.0	5.3-7.0	5.2	4.4-6.2	6.0	5.2-6.9	7.5	6.5-8.6	0.3	0.2-0.8
Home-made unleavened breads (phyllo dough etc.)	41.3	39.5-43.2	8.9	7.9-10.1	2.6	2.0-3.4	6.4	5.6-7.3	10.4	9.3-11.7	16.9	15.5-18.4	13.1	11.9-14.4	0.3	0.1-0.7
Rice	4.0	3.4-4.8	3.1	2.6-3.8	8.1	7.0-9.4	43.8	41.9-45.7	26.7	25.0-28.4	11.6	10.6-12.8	2.3	1.9-2.8	0.3	0.1-0.7
Bulghur	4.8	4.0-5.7	1.3	0.9-1.7	4.7	3.9-5.6	41.0	39.1-42.9	31.8	30.0-33.6	13.8	12.6-15.1	2.4	2.0-3.0	0.3	0.1-0.7
Macaroni, noodles, couscous	6.2	5.3-7.2	0.7	0.5-1.1	3.0	2.4-3.7	33.4	31.6-35.3	36.4	34.5-38.3	16.8	15.5-18.2	3.2	2.6-3.9	0.3	0.1-0.7
Pastries, cakes, buns	7.0	6.1-8.0	5.0	4.2-5.8	4.9	4.0-6.0	18.4	16.8-20.0	26.0	24.4-27.7	28.6	26.9-30.3	9.8	8.7-11.0	0.4	0.2-0.8
Cookies	28.6	26.9-30.3	1.2	0.9-2.2	1.4	0.9-2.2	7.4	6.4-8.5	15.5	14.2-17.0	23.9	22.2-25.5	21.6	20.1-23.2	0.3	0.2-0.7
Tarhana (fermented dried yoghurt and flour mixture)	26.8	25.0-28.6	3.1	2.5-3.7	3.6	3.1-4.3	16.7	15.5-18.1	18.0	16.6-19.5	21.0	19.5-22.6	10.4	9.3-11.6	0.4	0.2-0.8
Biscuits/crackers	19.3	17.9-20.8	11.5	10.3-12.8	7.2	6.2-8.3	20.9	19.3-22.5	15.3	13.9-16.8	13.4	12.2-14.6	12.1	11.0-13.3	0.3	0.2-0.8
Bagel	15.3	13.9-16.7	6.5	5.7-7.5	5.1	4.4-6.0	21.6	20.1-23.2	21.5	19.9-23.2	17.9	16.5-19.3	11.8	10.7-13.0	0.3	0.1-0.7
Breakfast cereals (muesli, corn flakes, wheat flakes, etc.).	89.2	87.8-90.4	1.0	0.6-1.7	0.3	0.1-0.5	1.7	1.3-2.3	2.0	1.4-2.7	1.7	1.2-2.4	3.1	2.5-3.9	0.9	0.6-1.4

Food Items	MALES (aged 19-64 years)															
		Never	Every day, 6-7 times per week		4-5 times per week		2-3 times per week			Once week		3 times r month		than once month	Doesn't know, No response	
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BEVERAGES																
Ready-made fruit juices	32.8	31.0-34.5	4.9	4.0-5.9	3.5	2.8-4.3	15.6	14.2-17.2	13.2	11.8-14.6	16.4	15.1-17.8	13.4	12.2-14.6	0.3	0.1-0.7
Freshly squeezed fruit juices	47.2	45.3-49.1	0.8	0.6-1.2	1.0	0.7-1.4	7.3	6.4-8.4	12.1	10.9-13.5	16.7	15.3-18.1	14.5	13.2-15.9	0.3	0.1-0.7
Freshly squeezed vegetable juices	94.6	93.6-95.4	0.1	0.0-0.3	0.1	0.0-0.3	0.7	0.4-1.3	0.6	0.4-0.9	1.4	1.0-2.0	1.9	1.5-2.5	0.5	0.3-0.9
Light, zero cola drinks	89.0	87.7-90.2	0.8	0.5-1.3	0.7	0.4-1.2	1.5	1.1-2.1	2.0	1.5-2.7	2.4	1.9-3.2	3.0	2.4-3.7	0.5	0.3-0.9
Regular cola drinks	36.3	34.4-38.1	6.2	5.4-7.1	5.4	4.4-6.5	15.1	13.8-16.5	12.8	11.5-14.1	14.0	12.7-15.3	10.0	9.1-11.1	0.3	0.1-0.7
Ice teas	65.9	64.0-67.8	1.9	1.3-2.8	1.6	1.2-2.2	7.6	6.6-8.8	7.9	6.7-9.2	8.0	7.1-9.2	6.6	5.8-7.6	0.4	0.2-0.8
Tea (black)	2.3	1.7-3.0	91.5	90.2-92.7	1.8	1.3-2.6	2.0	1.5-2.7	1.2	0.8-1.9	0.4	0.2-0.6	0.4	0.2-0.7	0.4	0.2-0.8
Green tea	77.3	75.6-78.9	1.9	1.5-2.3	0.8	0.6-1.1	3.3	2.5-4.3	3.8	3.2-4.5	5.6	4.8-6.6	6.9	6.0-8.0	0.4	0.2-0.8
Herbal teas	47.3	45.3-49.2	3.3	2.7-4.0	1.3	1.0-1.8	7.7	6.7-8.9	8.7	7.7-9.8	14.5	13.3-15.9	16.8	15.5-18.2	0.4	0.2-0.8
Mineral water, soda	15.7	14.3-17.3	13.3	12.2-14.6	7.8	6.8-9.0	24.2	22.6-25.9	15.7	14.4-17.1	15.3	14.0-16.7	7.5	14.0-16.7	0.4	0.2-0.8
Instant granulated coffee	41.0	39.1-42.8	12.7	11.4-14.1	4.7	3.8-5.7	13.8	12.5-15.2	10.4	9.3-11.5	10.1	9.0-11.3	6.9	6.1-7.9	0.4	0.2-0.8
Filter coffee	86.9	85.5-88.2	2.3	1.8-2.9	0.4	0.2-0.7	2.3	1.7-3.1	2.5	2.0-3.2	2.4	1.9-3.0	2.3	1.8-3.0	0.9	0.6-1.3
Turkish coffee	25.0	23.3-26.8	15.1	13.7-16.5	5.3	4.6-6.1	17.7	16.4-19.2	13.8	12.5-15.2	15.2	14.0-16.6	7.5	6.6-8.5	0.4	0.2-0.8
Energy drinks	84.2	82.6-85.6	0.4	0.2-0.9	0.4	0.2-0.7	1.6	1.1-2.3	2.1	1.6-2.7	4.8	4.1-5.7	6.1	5.2-7.2	0.4	0.2-0.8
Alcoholic beverages	72.6	70.8-74.3	0.8	0.6-1.2	1.0	0.7-1.4	3.7	3.1-4.5	4.6	3.8-5.6	8.3	7.2-9.4	8.6	7.5-9.7	0.4	0.2-0.9

Food Items	MALES (aged 19-64 years)															
		Never	6-7 t	ery day, imes per veek		5 times r week		times er week		Once week		3 times month		than once month	Doesn't know, No response	
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
OILS, FATS, SUGAR, DESSERTS																
Olive oil	19.7	18.2-21.3	42.2	40.4-44.1	7.6	6.6-8.7	13.7	12.4-15.2	4.8	4.1-5.7	4.7	3.9-5.6	3.2	2.6-3.8	4.1	3.3-5.1
Hazelnut oil	93.7	92.7-94.7	0.5	0.3-0.9	0.3	0.1-0.6	0.4	0.2-0.9	0.3	0.2-0.5	0.5	0.3-0.8	0.7	0.5-1.1	3.6	2.9-4.5
Sunflower oil	11.9	10.8-13.1	61.5	59.7-63.4	5.1	4.3-6.0	8.2	7.2-9.2	5.0	4.3-57	3.6	3.0-4.4	1.2	0.9-1.6	3.6	2.9-4.4
Corn oil	83.3	81.8-84.7	3.9	3.2-4.7	1.0	0.7-1.5	2.3	1.9-2.9	1.8	1.4-2.3	1.9	1.4-2.5	1.7	1.2-2.3	4.2	3.4-5.1
Soybean oil	95.6	94.6-96.3	0.1	0.0-0.4	-	-	0.1	0.0-0.3	0.1	0.0-0.3	0.3	0.1-0.7	0.5	0.2-0.9	3.4	2.8-4.3
Canola oil	95.6	94.5-96.4	0.1	0.0-0.3	0.1	0.0-0.2	0.3	0.1-1.4	0.0	0.0-0.1	0.0	0.0-0.1	0.3	0.1-0.8	3.6	2.9-4.4
Hard margarine	57.9	56.0-59.8	3.3	2.6-4.1	1.9	1.2-2.9	6.4	5.6-7.4	7.6	6.7-8.6	11.0	9.8-12.3	7.3	6.4-8.3	4.6	3.8-5.5
Soft margarine	74.3	72.6-75.9	2.9	2.3-3.7	1.0	0.7-1.4	4.4	3.8-5.2	4.4	3.7-5.2	4.6	3.9-5.4	4.3	3.6-5.2	4.0	3.3-5.0
Butter	12.1	10.8-13.4	28.2	26.6-29.9	10.6	9.5-11.8	23.5	21.8-25.2	11.1	10.0-12.3	8.3	7.3-9.4	3.7	3.0-4.5	2.6	2.0-3.3
Tail fat, tallow	71.3	69.5-73.1	1.0	0.6-1.8	0.5	0.3-1.1	2.9	2.2-3.9	3.7	3.1-4.4	8.8	7.7-10.1	8.7	7.7-9.7	3.0	2.3-3.8
Table sugar	24.8	23.2-26.5	66.1	64.2-67.9	1.0	0.7-1.5	2.4	1.8-3.2	1.7	1.3-2.3	1.5	1.2-1.9	1.8	1.4-2.5	0.6	0.3-1.1
Honey, jam, molasses	10.1	9.0-11.4	32.0	30.2-33.8	9.9	8.8-11.1	22.4	20.8-24.0	13.9	12.7-15.3	7.5	6.6-8.5	3.7	3.1-4.5	0.4	0.2-0.8
Sweets, Turkish Delight, chocolate	19.9	18.4-21.4	7.4	6.4-8.7	5.2	4.3-6.1	16.9	15.5-18.5	17.5	16.1-19.0	19.0	17.6-20.5	13.6	12.4-14.9	0.5	0.3-0.9
Pastry desserts, syrup sweetened (tulumba, lokma, baklava)	15.8	14.4-17.3	0.8	0.6-1.2	1.7	1.2-2.5	10.5	9.3-11.8	18.7	17.2-20.3	33.2	31.5-35.0	18.8	17.4-20.3	0.4	0.2-0.8
Pastry products with cream filling (cake, etc.)	30.7	29.0-32.5	0.3	0.1-0.5	0.6	0.3-1.1	3.3	2.6-4.0	9.0	7.9-10.3	26.0	24.4-27.7	29.6	28.0-31.4	0.4	0.2-0.8
Artificial sweeteners	96.7	95.9-97.4	0.3	0.2-0.6	0.1	0.0-0.3	0.1	0.0-0.2	0.1	0.0-0.3	0.4	0.2-0.7	1.1	0.6-1.1	1.3	0.9-1.7
Instant soups	67.6	65.8-69.4	0.4	0.2-0.7	0.8	0.5-1.3	5.1	4.3-6.0	7.4	6.4-8.5	8.6	7.6-9.8	9.2	8.0-10.4	0.8	0.5-1.3
Smoked products	91.8	90.7-92.7	0.1	0.0-0.5	0.1	0.0-0.2	0.7	0.4-1.2	0.7	0.5-1.0	2.2	1.7-2.9	2.0	1.5-2.5	2.5	2.0-3.2
Meat bouillon cube, chicken bouillon cube	52.5	50.6-54.5	3.4	2.9-4.1	3.8	3.1-4.6	14.4	13.0-15.9	8.5	7.6-9.5	6.1	5.3-7.0	4.5	3.7-5.5	6.6	5.7-7.7
Hamburger, fried chicken pieces etc.	61.0	59.0-62.9	0.3	0.2-0.6	0.6	0.4-1.1	3.7	3.1-4.6	7.4	6.4-8.5	15.4	14.0-16.8	11.1	9.9-12.5	0.5	0.3-0.9
Doner, kebab, etc.	10.0	9.0-11.1	3.0	2.3-3.9	3.3	2.7-4.0	16.8	15.3-18.4	21.4	19.9-23.1	33.7	31.9-35.5	11.5	10.4-12.7	0.4	0.2-0.8
Pita, lahmacun (Turkish pizza), pizza, pancake, etc.	9.5	8.5-10.7	0.6	0.4-1.0	1.2	0.8-1.6	11.6	10.3-13.0	22.8	21.2-24.5	41.3	39.5-43.2	12.5	11.3-13.8	0.4	0.2-0.8
Chips, corn snacks	52.6	50.6-54.5	2.0	1.5-2.7	1.6	1.0-2.4	8.7	7.5-10.1	10.6	9.4-11.9	12.5	11.3-13.8	11.6	10.5-12.9	0.4	0.2-0.8

3.5.4. Frequency of Food Consumption Among Males In the Age Group of 65 Years and Over

The results of the analysis of the frequency of food consumption among males in the age group of 65 years and over across Turkey are given in Table 2.37. In this age group, the frequency of those who never consumed pasteurized milk was 89.4%, the frequency of those who never consumed UHT milk was 75.4%, and the frequency of those who never consumed loose milk was 41.2%. The frequency of those who never consumed probiotic milk and dairy products (kefir, etc.) was 92.8%, the frequency of those who never consumed yoghurt and ayran (diluted yoghurt) was 0.2%, the frequency of those who never consumed probiotic yoghurt was 90.0%, and the frequency of those who never consumed cheese was 1.3%. The frequency of those who consumed pasteurized milk every day was 1.7%, the frequency of those who consumed UHT milk every day was 4.0%, and the frequency of those who consumed loose milk every day was 6.2%. The frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.8%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.8%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.8%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.8%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.8%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.8%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.8%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.8%, the frequency of those who consumed probiotic yoghurt every day was 0.7%, and the frequency of those who consumed cheese every day was 83.6%.

Males in the age group of 65 years and over, from the foods included in the meat-eggs-legumes group, never consumed beef with a frequency of 4.1%, lamb/mutton with a frequency of 1.2%, chicken with a frequency of 1.3%, and fish with a frequency of 0.1%. Among the foods in this group, the ones consumed every day were beef with a frequency of 3.2%, lamb/mutton with a frequency of 0.7%, chicken with a frequency of 1.8%. Among foods in the meat-eggs-legumes group, the ones consumed 2-3 times per week were beef with a frequency of 17.7%, lamb/mutton with a frequency of 9.2%, chicken with a frequency of 22.1%, turkey with a frequency of 0.5%, and fish with a frequency of 7.8%. The frequency of never consuming legumes included in this group was 1.8%, the frequency of consumption of legumes every day was 0.3%, and the frequency of consumption of legumes 2-3 times per week was 21.6%.

Among males in the age group 65 years and over, the frequency of those who never consumed eggs was 1.1%, the frequency of those who consumed them every day was 35.9, and the frequency of those who consumed them 4-5 times per week was 17.8%. The frequency of those who never consumed nuts (hazelnuts, peanuts, pistachios, walnuts, etc.) was 14.4%, the frequency of those who consumed them every day was 18.3%, and the frequency of those who consumed them 4-5 times per week was 9%.

In the vegetables and fruits group, the frequency of those who never consumed green leafy vegetables was 2.9%, the frequency of those who consumed them every day was 22%, and the frequency of those who consumed them 4-5 times per week was 14.3%. The frequency of those who never consumed other fresh vegetables (leek, cabbage) was 4.5%, the frequency of those who consumed them every day was 2.7%, and the frequency of those who consumed them 4-5 times per week was 2.9%.

The frequency of those who never consumed citrus fruits was 3.3%, the frequency of those who consumed them every day was 10.9%, and the frequency of those who consumed them 4-5 times per week was 9%. The frequency of those who never consumed other fresh fruits was 3.2%, the frequency of those who consumed them every day was 33.8%, and the frequency of those who consumed them 4-5 times per week was 17.3%.

While the frequency of never consuming raisins was 28.6%, they were consumed every day with a frequency of 4.5%.

French fries were consumed every day with a frequency of 0.9%.

For males in the age group of 65 years and over, the frequencies of total vegetables consumption were as follows: 0.2% for those who never consumed them, 52.7% for those who consumed them every day, 19.1% for those who consumed them 4-5 times per week, 20.3% for those who consumed them 2-3 times per week, and 4.8% for those who consumed them once a week. The frequencies of total fruits consumption were as follows: 0.7% for those who never consumed them, 58.6% for those who consumed them every day, 16.7% for those who consumed them 4-5 times per week, 17% for those who consumed them 2-3 times per week, and 4.5% for those who consumed them once a week.

Among males in the age group of 65 years and over, 14.2% never consumed white bread, 53.6% never consumed whole grain bread, rye bread, wholemeal bread, and 39.7% never consumed home-made unleavened breads (phyllo dough, etc.), which were included in the bread and cereals group. Among the foods in the bread and cereals group, the ones consumed every day were white bread with a frequency of 63.2%,

whole grain bread, rye bread, wholemeal bread, etc. with a frequency of 21.6%, and home-made unleavened breads (phyllo dough etc.) with a frequency of 11.1%. Among the foods in the bread and cereals group, the ones consumed every day were rice with a frequency of 0.7%, bulghur with a frequency of 1.2%, pastries, cakes, buns with a frequency of 0.5%, biscuits/crackers with a frequency of 6.1%, and bagel with a frequency of 2.2%.

Among males in the age group of 65 years and over, the frequency of those who never consumed ready-made fruit juices was 50.3%, the frequency of those who consumed them every day was 2.9%, and the frequency of those who consumed them once a week was 9.1%. The frequency of those who never consumed freshly squeezed fruit juices was 58.2%, and the frequency of those who consumed them once a week was 7.4%. Freshly squeezed vegetable juices were never consumed with a frequency of 92.3%. The light and zero cola drinks were never consumed with a frequency of 95.9%, and regular cola drinks were never consumed with a frequency of 58.2%. The frequency of those who consumed black tea every day was 92.7%, while this frequency was 1.6% for green tea and 2.8% for herbal teas. The frequency of never consuming Turkish coffee was 26.6%, while its frequency of everyday consumption was 15.7%.

Among males in the age group of 65 years and over, the frequency of those who never consumed olive oil was 20.0%, the frequency of those who consumed it every day was 51.9%, and the frequency of those who consumed it once a week was 3.9%. The frequency of those who never consumed sunflower oil was 20.6%, the frequency of those who consumed it every day was 50.8%, and the frequency of those who consumed it once a week was 6.9%. The frequency of those who never consumed hard margarines was 75.6%, the frequency of those who consumed them every day was 1.3%, and the frequency of those who consumed them once a week was 4.4%. The frequency of those who never consumed soft margarines was 84.9%, the frequency of those who consumed them every day was 2.3%, and the frequency of those who consumed them once a week was 2.1%.

The frequency of those who never consumed butter was 11.5%, the frequency of those who consumed it every day was 37.1%, and the frequency of those who consumed it once a week was 9.6%.

The frequency of those who never consumed table sugar was 27.7%, the frequency of those who consumed it every day was 65.3%, and the frequency of those who consumed it once a week was 0.5%. The frequency of never consuming pastry desserts [(tulumba (dough pastry deep fried dipped in syrup), lokma (yeast fritters in thick syrup), baklava (multilayered flaky pastry with nuts)] was 26.0%, and the frequency of consumption once a week was 7.5%.

While hamburgers, fried chicken pieces, etc. were never consumed with a frequency of 84.1%, the frequency of consumption once a week was 1.7%. The frequency of not consuming doner, kebab, etc. was 25.8%, the frequency of everyday consumption was 0.5%, and the frequency of consumption once a week was 8.3%. The frequency of not consuming pita, Turkish pizza, pizza, pancake was 20.1%, the frequency of everyday consumption was 0.1%, and the frequency of consumption once a week was 9.1%.

Table 2.37. Distribution of frequency of food consumption among males in the age group of 65 years and over, TNHS 2017

Food Items							M	ALES (aged	≥65 ye	ars)						
	N	lever		ery day,		5 times		times		Once		3 times		than once		
				imes per	pe	r week	pe	er week	а	week	per month		aı	month	No response	
	%	95%CI	۷ %	veek 95%Cl	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
MILK AND DAIRY PRODUCTS	70	337001	70	557661	70	55/001	70	557001	70	55/001	70	55/661	70	557661	70	55/661
Pasteurized milk	89.4	87.0-91.4	1.7	1.0-3.0	0.4	0.1-1.3	1.9	1.2-3.2	2.4	1.5-3.7	1.5	0.9-2.6	1.5	0.9-2.6	1.1	0.5-2.4
UHT milk	75.4	72.0-78.5	4.0	2.8-5.7	1.5	0.8-2.8	5.1	3.7-6.9	5.5	4.0-7.7	5.7	4.1-7.7	1.9	1.1-3.1	1.0	0.5-2.2
Loose milk	41.2	37.6-44.9	6.2	4.7-8.2	4.7	3.1-7.2	12.5	10.3-15.0	15.9	10.3-15.0	13.2	10.8-16.1	5.7	4.2-7.6	0.5	0.2-1.5
Probiotic milk and dairy products (kefir etc.)	92.8	90.7-94.4	0.8	0.4-1.9	-	-	0.5	0.2-1.2	0.2	0.1-0.7	0.8	0.4-1.5	1.1	0.5-2.2	3.8	2.6-5.4
Yoghurt, ayran (diluted yoghurt)	0.2	0.1-0.6	55.7	52.0-59.4	15.3	12.8-18.1	21.1	18.3-24.2	5.3	3.9-7.2	1.5	0.9-2.4	0.7	0.2-2.0	0.2	0.0-1.0
Probiotic yoghurt	90.0	87.6-92.0	0.7	0.3-1.6	0.1	0.0-0.4	0.5	0.2-1.2	0.2	0.1-0.7	0.1	0.0-0.3	0.6	0.3-1.3	7.9	6.1-10.1
Cheese	1.3	0.7-2.2	83.6	80.8-86.1	5.7	4.2-7.7	6.3	4.7-8.3	1.2	0.6-2.3	1.0	0.5-2.0	0.5	0.2-1.3	0.4	0.1-1.3
Sweetened/fruit/cocoa/chocolate flavored milks	94.8	92.5-96.4	0.3	0.1-1.0	-	-	0.5	0.2-1.3	0.2	0.0-0.8	0.8	0.4-1.7	1.9	0.9-3.9	1.5	0.7-3.0
Sweetened/fruit/cocoa/chocolate flavored yoghurts	96.8	95.2-97.9	0.3	0.1-1.1	-	-	0.4	0.2-1.0	0.1	0.0-1.0	0.2	0.0-0.8	0.6	0.3-1.2	1.5	0.7-3.0
Cream/clotted cream (kaimak)	56.2	52.4-59.9	2.6	1.7-4.1	2.7	1.5-4.6	5.4	3.9-7.6	8.3	6.3-10.9	11.5	9.2-14.3	12.9	10.6-15.7	0.3	0.1-1.0
Ice cream	31.2	27.9-34.8	0.2	0.0-0.9	0.2	0.0-0.7	2.4	1.6-3.7	6.3	4.6-8.5	21.9	19.0-25.1	37.4	33.8-41.1	0.4	0.1-1.2
Milk desserts (kazandibi (white pudding with blackened surface), sütlaç (rice pudding), pudding, milk pudding	18.0	15.4-20.8	0.2	0.1-0.7	0.2	0.1-1.0	4.3	3.0-6.2	15.8	13.1-19.0	37.2	33.6-40.9	23.8	20.7-27.1	0.4	0.2-1.3
MEAT-EGGS-LEGUMES																
Beef	9.0	7.2-11.2	4.1	2.9-5.8	5.3	3.9-7.3	17.7	14.9-21.0	19.4	16.5-22.6	29.4	26.2-32.9	14.4	12.1-17.0	0.6	0.3-1.5
Lamb/mutton	32.6	29.3-36.2	1.2	0.6-2.2	2.0	1.2-3.3	9.2	7.2-11.8	13.8	11.3-16.8	19.5	16.7-22.5	20.7	17.8-23.9	1.0	0.4-2.2
Chicken	6.7	5.2-8.7	1.3	0.7-2.4	3.0	1.9-4.8	22.1	19.2-25.3	33.3	29.8-37.0	26.6	23.4-30.1	6.4	5.0-8.2	0.5	0.2-1.4
Turkey	85.7	82.6-88.3	-	-	-	-	0.5	0.2-1.2	1.3	0.7-2.4	3.1	2.0-4.6	8.5	6.4-11.3	0.9	0.4-1.9
Goose/duck	95.2	93.3-96.5	-	-	-	-	0.1	0.0-0.4	0.1	0.0-0.4	0.5	0.1-1.7	3.6	2.4-5.2	0.6	0.3-1.5
Fish	7.5	5.8-9.8	0.1	0.0-0.9	0.5	0.2-1.3	7.8	6.1-9.9	25.5	22.4-28.8	38.6	35.0-42.4	19.3	16.6-22.4	0.6	0.2-1.5
Seafood (calamars, shrimps, mussels, etc.)	87.9	84.9-90.3	0.3	0.1-1.3	-	-	-	-	1.2	0.6-2.4	2.7	1.6-4.5	6.0	4.4-8.3	1.9	1.0-3.6
Offals (liver, kidney, spleen, etc.)	38.0	34.5-41.7	-	-	-	-	1.9	1.0-3.7	3.5	2.4-5.1	22.9	19.9-26.3	33.1	29.7-36.8	0.5	0.2-1.5
Meat products (salami, sausage, fermented sausage, pastrami, etc.)	47.7	44.0-51.5	1.5	0.9-2.5	1.5	0.7-3.2	6.4	4.9-8.3	9.2	7.3-11.5	17.0	14.3-20.1	16.3	13.5-19.4	0.5	0.2-1.2
Nuts (hazelnuts, peanuts, pistachios, walnuts, etc.)	14.4	12.0-17.2	18.3	15.7-21.2	9.0	7.1-11.3	19.0	16.1-22.1	13.5	11.2-16.2	17.7	14.8-21.0	7.6	5.9-9.6	0.5	0.2-1.4
Legumes (dry beans, chickpeas, lentils, etc.)	1.8	1.0-3.0	0.3	0.1-1.0	1.1	0.6-2.3	21.6	18.6-24.9	47.4	43.6-51.1	25.4	22.3-28.7	1.7	1.1-2.8	0.6	0.3-1.5
Eggs	1.1	0.6-2.0	35.9	32.4-39.6	17.8	15.0-21.0	33.8	30.4-37.4	7.2	5.6-9.3	2.6	1.8-3.8	0.9	0.4-1.8	0.7	0.3-1.7

Food Items	MALES (aged ≥65 years)															
		Never	Every day, 6-7 times per week		4-5 times per week		2-3 times per week			Once a week				than once month	Doesn't know, No response	
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
VEGETABLES AND FRUITS																
Green leafy vegetables	2.9	2.0-4.3	22.0	19.1-25.3	14.3	12.0-17.1	28.9	25.6-32.5	20.4	17.5-23.6	7.4	5.7-9.4	3.5	2.3-5.2	0.6	0.2-1.4
Other fresh vegetables (leek, cabbage)	4.5	3.3-6.1	2.7	1.7-4.2	2.9	1.9-4.5	14.9	12.4-17.8	35.5	31.9-39.2	27.0	23.9-30.3	11.7	9.4-14.3	0.9	0.4-2.0
Tomato	0.8	0.4-1.9	52.1	48.4-55.8	14.9	12.2-18.0	19.0	16.3-22.1	8.1	6.5-10.2	3.2	2.2-4.5	1.2	0.6-2.6	0.6	0.3-1.5
Green pepper (village pepper, banana pepper, long pepper, etc.)	2.3	1.3-4.0	41.7	38.1-45.5	14.2	11.7-17.2	23.8	20.7-27.1	12.4	10.3-14.7	4.2	3.1-5.7	0.8	0.4-1.7	0.6	0.3-1.5
Mushroom	33.0	29.6-36.6	0.2	0.0-0.8	0.3	0.1-1.0	1.3	0.7-2.4	7.3	5.7-9.3	23.9	20.8-27.3	33.3	29.9-36.9	0.7	0.3-1.6
Corn	32.0	28.6-35.6	0.2	0.0-1.1	0.3	0.1-1.0	2.4	1.5-3.9	7.2	5.6-9.4	20.1	17.3-23.2	37.3	33.7-41.0	0.5	0.2-1.4
Frozen vegetables/fruits	53.2	49.5-56.9	0.4	0.1-1.8	0.2	0.0-0.7	2.4	1.4-4.0	10.9	8.7-13.6	21.6	18.8-24.9	8.8	7.0-10.9	2.6	1.5-4.3
Dried fruits	33.7	30.3-37.3	4.1	2.9-5.7	2.3	1.5-3.7	9.3	7.4-11.6	14.6	12.0-17.6	23.5	20.5-26.9	11.2	9.1-13.9	1.1	0.6-2.2
Raisin	28.6	25.3-32.1	4.5	3.1-6.5	3.0	2.0-4.6	9.6	7.8-11.7	14.2	11.7-17.0	24.4	21.4-27.7	15.1	12.5-18.0	0.6	0.3-1.6
Citrus fruits	3.3	2.3-4.8	10.9	8.6-13.7	9.0	7.1-11.4	26.0	22.9-29.3	23.2	20.2-26.5	20.9	18.0-24.2	6.1	4.6-8.1	0.6	0.3-1.5
Other fresh fruits	3.2	2.2-4.6	33.8	30.4-37.4	17.3	14.7-20.4	24.7	21.7-28.1	11.6	9.4-14.2	6.6	4.7-9.2	2.0	1.3-3.3	0.7	0.3-1.5
Ready-made canned vegetables	90.7	88.3-92.7	0.1	0.0-0.6	-	-	0.2	0.0-1.1	0.8	0.4-1.6	3.0	2.1-4.4	3.9	2.6-5.8	1.4	0.7-2.8
Home-made canned vegetables	46.0	42.3-49.7	1.5	0.9-2.6	1.9	1.0-3.8	7.6	5.8-9.9	15.5	13.0-18.5	19.5	16.7-22.7	5.6	4.2-7.5	2.4	1.4-3.9
French fries	26.0	22.7-29.5	0.9	0.5-1.8	2.0	1.2-3.5	13.8	11.4-16.6	22.8	19.9-26.1	24.2	21.3-27.5	9.5	7.6-11.8	0.7	0.3-1.7
Vegetables, total	0.2	0.0-0.8	52.7	48.9-56.4	19.1	16.3-22.3	20.3	17.5-23.4	4.8	3.5-6.6	2.0	1.2-3.2	0.3	0.1-0.8	0.6	0.3-1.4
Fruits, total	0.7	0.3-1.6	58.6	54.8-62.2	16.7	14.1-19.7	17.0	14.4-20.0	4.5	3.1-6.5	1.5	0.9-2.5	0.5	0.2-1.4	0.5	0.2-1.4

Food Items	MALES (aged ≥65 years)															
		Never	Every day, 6-7 times per week		4-5 times per week		2-3 times per week		Once a week		1-3 times per month		Less than once a month			n't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BREAD-CEREALS																
White bread	14.2	11.6-17.3	63.2	59.5-66.8	4.3	3.1-5.9	8.0	6.1-10.4	2.9	2.0-4.4	3.3	2.3-4.8	3.3	2.1-5.1	0.8	0.3-1.8
Whole grain bread, rye bread, wholemeal bread etc.	53.6	49.8-57.3	21.6	18.5-24.9	3.4	2.3-4.9	7.8	6.1-9.9	3.6	2.2-5.8	4.6	3.1-6.7	4.9	3.7-6.5	0.7	0.3-1.6
Home-made unleavened breads (phyllo dough etc.)	39.7	36.1-43.4	11.1	8.8-13.9	1.7	1.0-2.9	5.4	4.1-7.2	8.1	6.3-10.2	17.6	15.0-20.6	15.5	12.8-18.6	1.0	0.5-2.0
Rice	9.0	7.1-11.2	0.7	0.3-1.9	2.4	1.5-3.8	23.9	20.7-27.5	33.9	30.5-37.5	24.8	21.7-28.2	4.8	3.6-6.4	0.5	0.2-1.4
Bulghur	2.2	1.4-3.4	1.2	0.6-2.3	3.9	2.7-5.6	37.6	34.0-41.5	34.4	31.0-38.0	18.0	15.4-21.0	2.1	1.4-3.1	0.5	0.2-1.4
Macaroni, noodles, couscous	5.9	4.5-7.8	0.3	0.1-0.7	1.2	0.6-2.4	24.1	20.9-27.7	37.6	34.1-41.3	22.6	19.7-25.7	7.6	5.7-10.1	0.6	0.3-1.5
Pastries, cakes, buns	11.3	9.3-13.7	0.5	0.2-1.2	1.1	0.6-1.8	9.7	7.4-12.6	21.9	19.0-25.1	34.1	30.7-37.7	20.7	17.7-23.9	0.9	0.4-1.9
Cookies	41.8	38.2-45.5	1.0	0.5-1.9	0.7	0.4-1.4	3.9	2.8-5.5	7.4	5.6-9.6	17.2	14.4-20.3	27.3	24.0-30.8	0.7	0.3-1.7
Tarhana (fermented dried yoghurt and flour mixture)	16.4	13.9-19.3	5.8	4.4-7.8	6.0	4.5-8.0	20.9	18.1-24.0	22.8	19.7-26.2	18.9	16.1-22.2	8.3	6.4-10.6	0.8	0.4-2.0
Biscuits/crackers	27.8	24.5-31.3	6.1	4.6-8.0	4.6	3.3-6.3	12.3	10.2-14.9	15.6	13.0-18.6	15.4	12.9-18.3	17.6	15.0-20.7	0.6	0.3-1.5
Bagel	25.8	22.8-29.1	2.2	1.4-3.4	2.4	1.5-3.9	10.5	8.3-13.3	18.3	15.5-21.5	20.7	17.9-23.8	19.5	16.7-22.6	0.5	0.2-1.4
Breakfast cereals (muesli, corn flakes, wheat flakes, etc.).	95.1	93.2-96.6	0.2	0.0-1.1	-	-	0.3	0.1-0.9	0.4	0.1-1.3	0.4	0.1-1.2	1.3	0.7-2.6	2.3	1.4-3.8

Food Items							Μ	ALES (aged	≥65 ye	ears)						
		Never		Every day, 6-7 times per week		4-5 times per week		2-3 times per week		Once week	1-3 times per month		Less than once a month			i't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BEVERAGES																
Ready-made fruit juices	50.3	46.5-54.0	2.9	1.9-4.3	1.2	0.7-2.1	6.2	4.6-8.2	9.1	7.2-11.5	14.6	12.1-17.5	15.2	12.8-17.9	0.6	0.3-1.5
Freshly squeezed fruit juices	58.2	54.4-61.8	1.0	0.5-2.1	0.8	0.4-1.7	4.5	3.3-6.3	7.4	5.7-9.7	13.5	11.2-16.2	13.8	11.3-16.7	0.7	0.31.6
Freshly squeezed vegetable juices	92.3	89.7-94.2	0.2	0.0-0.7	-	-	0.7	0.0-0.7	0.9	0.5-1.9	1.9	1.1-3.3	2.7	1.6-4.7	1.3	0.6-2.8
Light, zero cola drinks	95.9	94.3-97.1	-	-	-	-	0.3	0.1-1.1	0.3	0.1-0.8	1.5	0.8-2.8	0.9	0.5-1.6	1.1	0.6-2.1
Regular cola drinks	58.2	54.5-61.9	1.4	0.9-2.4	1.8	1.1-3.0	4.4	3.1-6.3	8.9	6.9-11.3	13.1	10.8-15.9	11.5	9.4-13.9	0.6	0.3-1.5
Ice teas	91.6	88.9-93.6	0.3	0.1-1.0	-	-	0.7	0.3-1.5	1.0	0.5-1.9	2.8	1.5-5.2	2.0	1.2-3.4	1.7	1.0-3.0
Tea (black)	1.9	1.1-3.4	92.7	90.4-94.4	2.0	1.2-3.4	1.2	0.6-2.6	0.8	0.3-1.8	0.4	0.1-1.2	0.3	0.1-0.9	0.7	0.3-1.6
Green tea	79.4	76.1-82.4	1.6	0.8-3.0	0.4	0.2-1.1	2.4	1.5-3.9	4.0	2.6-6.1	3.9	2.8-5.6	6.8	5.0-9.2	1.3	0.7-2.5
Herbal teas	43.7	40.0-47.5	2.8	2.0-4.5	3.0	2.0-4.5	7.9	6.0-10.3	9.3	7.4-11.6	14.1	11.8-16.7	18.4	11.8-16.7	0.6	0.3-1.5
Mineral water, soda	29.0	25.7-32.5	9.6	7.6-12.1	5.8	4.1-8.2	14.6	12.3-17.3	14.5	12.0-17.3	13.9	11.5-16.8	11.7	9.5-14.4	0.9	0.4-1.8
Instant granulated coffee	62.9	59.2-66.4	6.5	5.0-8.6	1.9	1.2-3.1	6.7	5.0-9.0	7.9	6.1-10.2	6.0	6.1-10.2	7.0	5.3-9.2	0.9	0.5-1.9
Filter coffee	93.5	91.4-95.2	0.5	0.1-2.0	0.2	0.1-1.0	0.6	0.3-1.4	0.2	0.0-0.6	0.6	0.3-1.3	1.4	0.8-2.6	3.0	1.9-4.7
Turkish coffee	26.6	23.6-29.9	15.7	13.1-18.8	4.9	3.4-6.9	14.4	12.0-17.1	13.7	11.2-16.6	13.8	11.4-16.6	10.1	8.1-12.6	0.8	0.3-1.7
Energy drinks	97.4	96.0-98.3	-	-	-	-	0.1	0.0-0.9	-	-	0.3	0.1-1.2	0.5	0.2-1.4	1.8	1.0-3.0
Alcoholic beverages	87.1	84.3-89.4	1.2	0.7-2.1	0.3	0.1-0.7	1.6	0.9-2.7	1.4	0.8-2.4	4.1	2.7-6.2	3.4	2.3-5.1	0.9	0.4-1.9

Foods							MAL	ES (aged ≥6	5 year	s)						
		Never	6-7 t	ery day, imes per veek		5 times er week		times r week)nce week		times I nonth		an once a onth		n't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
OILS, FATS, SUGAR, DESSERTS																
Olive oil	20.0	17.2-23.2	51.9	48.1-55.6	8.4	6.4-10.9	8.4	6.4-11.0	3.9	2.7-5.5	2.9	1.8-4.4	2.4	1.2-4.7	2.1	1.2-3.7
Hazelnut oil	94.6	92.1-96.4	0.5	0.1-1.7	0.1	0.0-0.5	0.7	0.2-1.6	0.1	0.0-0.5	0.5	0.2-1.6	1.0	0.2-3.8	2.5	1.5-4.2
Sunflower oil	20.6	17.9-23.6	50.8	47.0-54.5	3.7	2.5-5.4	8.6	6.7-11.0	6.9	5.4-9.0	4.1	3.0-5.7	2.8	1.8-4.4	2.4	1.5-4.1
Corn oil	85.7	82.7-88.3	4.0	2.8-5.8	0.9	0.4-1.9	1.7	1.0-2.9	2.0	1.2-3.3	1.5	0.9-2.5	1.3	0.4-3.8	2.9	1.8-4.6
Soybean oil	96.5	94.5-97.8	-	-	-	-	-	-	-	-	-	-	0.2	0.0-1.1	3.4	2.1-5.3
Canola oil	95.8	93.8-97.2	0.3	0.1-1.0	-	-	0.1	0.0-0.7	0.1	0.0-0.4	0.4	0.1-1.6	-	-	3.4	2.2-5.3
Hard margarine	75.6	72.2-78.8	1.3	0.7-2.4	0.8	0.4-1.9	3.1	1.9-5.0	4.4	3.2-6.0	6.1	4.4-8.4	6.1	4.5-8.2	2.6	1.6-4.2
Soft margarine	84.9	82.1-87.4	2.3	1.4-3.9	0.5	0.2-1.0	2.2	1.3-3.7	2.1	1.3-3.5	3.2	2.2-4.7	2.5	1.6-4.0	2.3	1.4-3.9
Butter	11.5	9.5-13.8	37.1	33.5-40.8	9.3	7.3-11.8	18.8	16.0-22.0	9.5	7.5-11.9	7.5	5.8-9.6	4.3	3.1-6.0	2.0	1.1-3.6
Tail fat, tallow	78.0	74.5-81.1	0.2	0.1-0.9	0.1	0.0-0.5	1.2	0.6-2.2	3.1	1.7-5.5	6.4	4.7-8.6	9.2	7.3-11.5	1.9	1.0-3.4
Table sugar	27.7	24.5-31.2	65.3	61.6-68.8	1.5	0.8-2.7	2.0	1.1-3.7	0.5	0.2-1.1	0.7	0.2-1.9	1.3	0.8-2.4	1.0	0.5-2.2
Honey, jam, molasses	10.4	8.5-12.8	44.1	40.4-47.9	10.6	8.6-13.1	14.6	12.2-17.3	8.3	6.5-10.4	7.7	5.9-9.9	3.1	2.1-4.7	1.2	0.6-2.3
Sweets, Turkish Delight, chocolate	39.1	35.5-42.8	3.7	2.4-5.5	2.3	1.4-3.8	6.8	5.1-9.1	9.5	7.4-12.2	19.7	16.9-22.8	17.5	16.9-22.8	1.4	14.8-20.5
Pastry desserts, syrup sweetened (tulumba, lokma, baklava)	26.0	22.8-29.4	0.2	0.1-1.1	0.4	0.2-1.3	2.9	1.7-4.7	7.5	5.8-9.5	26.4	23.2-29.8	35.1	31.7-38.8	1.5	0.8-2.7
Pastry products with cream filling (cake, etc.)	51.1	47.3-54.8	0.1	0.0-0.4	0.3	0.1-1.2	0.8	0.4-1.6	1.8	1.0-3.1	12.7	10.4-15.5	32.0	28.6-35.7	1.3	0.6-2.5
Artificial sweeteners	95.2	93.3-96.6	1.6	1.0-2.7	0.0	0.0-0.3	-	-	0.1	0.0-0.5	0.1	0.0-0.6	0.2	0.1-1.1	2.7	1.6-4.4
Instant soups	68.3	64.7-71.6	0.6	0.2-1.7	0.4	0.1-1.1	4.6	3.2-6.4	7.3	5.6-9.5	9.2	7.2-11.6	8.1	6.3-10.4	1.6	0.9-2.9
Smoked products	91.7	89.3-93.6	-	-	-	-	0.2	0.0-0.7	0.3	0.1-1.1	1.2	0.6-2.5	2.0	1.1-3.5	4.7	3.3-6.7
Meat bouillon cube, chicken bouillon cube	67.1	63.5-70.6	4.2	2.8-6.1	1.5	0.8-2.8	8.2	6.4-10.6	7.0	5.3-9.2	4.5	3.3-6.2	3.3	2.1-5.0	4.2	3.0-5.9
Hamburger, fried chicken pieces etc.	84.1	81.0-86.8	-	-	-	-	0.4	0.1-1.3	1.7	0.9-3.1	5.9	4.2-8.4	6.7	5.0-8.7	1.2	0.6-2.5
Doner, kebab, etc.	25.8	22.8-29.0	0.5	0.2-1.4	0.4	0.2-1.2	2.7	1.7-4.2	8.3	1.7-4.2	34.4	6.4-10.7	26.8	23.6-30.2	1.2	0.6-2.4
Pita, lahmacun (Turkish pizza), pizza, pancake, etc.	20.1	17.3-23.2	0.1	0.0-0.6	0.2	0.0-0.5	1.5	0.9-2.6	9.1	7.2-11.4	39.2	35.6-42.9	28.6	25.3-32.2	1.3	0.6-2.5
Chips, corn snacks	85.8	82.8-88.3	0.4	0.1-1.1	0.2	0.0-0.5	0.8	0.4-1.5	1.5	0.9-2.7	4.0	2.7-5.8	6.0	4.3-8.4	1.3	0.7-2.5

3.5.5. Frequency of Food Consumption Among Males Aged 15 Years and Over

The results of the analysis of the frequency of food consumption among males aged 15 years and over across Turkey are given in Table 2.38. In this age group, the frequency of those who never consumed pasteurized milk was 84.7%, the frequency of those who never consumed UHT milk was 65.2%, and the frequency of those who never consumed loose milk was 55.2%. The frequency of those who never consumed probiotic milk and dairy products (kefir, etc.) was 91.2%, the frequency of those who never consumed probiotic yoghurt and ayran (diluted yoghurt) was 0.8%, the frequency of those who never consumed probiotic yoghurt was 87.7%, and the frequency of those who never consumed cheese was 2.2%. The frequency of those who consumed pasteurized milk every day was 1.6%, the frequency of those who consumed UHT milk every day was 4.5%, and the frequency of those who consumed loose milk every day was 3.9%. The frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.5%, the frequency of those who consumed yoghurt and ayran (diluted yoghurt) every day was 51.1%, the frequency of those who consumed probiotic yoghurt and ayran (diluted yoghurt) every day was 51.1%, the frequency of those who consumed probiotic yoghurt every day was 70.5%.

Of males aged 15 years and over, 8.2% never consumed beef, 29.3% never consumed lamb/mutton, 4.3% never consumed chicken, 84.9% never consumed turkey, 93.1% never consumed goose/duck, 7.8% never consumed fish, which were included in the meat-eggs-legumes group. Among the foods in this group, the ones consumed every day were beef with a frequency of 5.0%, lamb/mutton with a frequency of 1.8%, chicken with a frequency of 3.0%, fish with a frequency of 0.3%. Among the foods in the meat-eggs-legumes group, the ones consumed 2-3 times per week were beef with a frequency of 23.4%, lamb/mutton with a frequency of 11.2%, chicken with a frequency of 32.5%, turkey with a frequency of 0.4%, and fish with a frequency of 9.4%. The frequency of never consuming legumes included in this group was 1.9%, the frequency of consumption of legumes every day was 1.0%, and the frequency of consumption of legumes 2-3 days a week was 28.7%.

Among males aged 15 years and over, the frequency of those who never consumed eggs was 2.9%, the frequency of those who consumed them every day was 32.9%, and the frequency of those who consumed them 4-5 times per week was 16.8%. The frequency of those who never consumed nuts (hazelnuts, peanuts, pistachios, walnuts, etc.) was 6.9%, the frequency of those who consumed them every day was 15.1%, and the frequency of those who consumed them 4-5 times per week was 9.3%.

In the vegetables and fruits group, the frequency of those who never consumed green leafy vegetables was 5.6%, the frequency of those who consumed them every day was 21.0%, and the frequency of those who consumed them 4-5 times per week was 13.0%. The frequency of those who never consumed other fresh vegetables (leek, cabbage) was 19.2%, the frequency of those who consumed them every day was 1.7%, and the frequency of those who consumed them 4-5 times per week was 2.4%.

The frequency of those who never consumed citrus fruits was 4.3%, the frequency of those who consumed them every day was 8.9%, and the frequency of those who consumed them 4-5 times per week was 8.7%. The frequency of those who never consumed other fresh fruits was 3.9%, the frequency of those who consumed them every day was 29.1%, and the frequency of those who consumed them 4-5 times per week was 14.7%.

While the frequency of never consuming raisins was 30.7%, they were consumed every day with a frequency of 2.5%.

French fries were consumed every day with a frequency of 2.7%.

For males aged 15 years and over, the frequencies of total vegetables consumption were as follows: 0.7% for those who never consumed them, 48.2% for those who consumed them every day, 16.8% for those who consumed them 4-5 times per week, 22.9% for those who consumed them 2-3 times per week, and 7.6% for those who consumed them once a week. The frequencies of total fruits consumption were as follows: 1.2% for those who never consumed them, 47.6% for those who consumed them every day, 16.8% for those who consumed them 4-5 times per week, 22.5% for those who consumed them 2-3 times per week, and 7.7% for those who consumed them once a week.

Among males aged 15 years and over, 7.3% never consumed white bread, 58.8% never consumed whole grain bread, rye bread, wholemeal bread, and 41.1% never consumed home-made unleavened breads (phyllo dough, etc.), which were included in the bread and cereals group. Among the foods in the bread and cereals group, the ones consumed every day were white bread with a frequency of 75.3%, whole grain bread, rye bread, wholemeal bread, etc. with a frequency of 13.5%, and home-made unleavened breads (phyllo dough etc.) with a frequency of 9.3%. Among the foods in the bread and cereals group, the ones consumed every day were rice with a frequency of 3.1%, bulghur with a frequency of 1.3%, pastries, cakes, buns with a frequency of 4.8%, biscuits/crackers with a frequency of 12.0%, and bagel with a frequency of 7.1%..

Among males aged 15 years and over, the frequency of those who never consumed ready-made fruit juices was 33.3%, the frequency of those who consumed them every day was 5.4%, and the frequency of those who consumed them once a week was 13.1%. The frequency of those who never consumed freshly squeezed fruit juices was 48.8%, and the frequency of those who consumed them once a week was 11.5%. Freshly squeezed vegetable juices were never consumed with a frequency of 94.3%. The light and zero cola drinks were never consumed with a frequency of 89.3%, and regular cola drinks were never consumed with a frequency of 36.7%. The frequency of those who consumed black tea every day was 89.7%, while this frequency was 1.7% for green tea and 3.0% for herbal teas. The frequency of not consuming Turkish coffee was 27.9%, while its frequency of everyday consumption was 14.1%.

Among males aged 15 years and over, the frequency of those who never consumed olive oil was 20.1%, the frequency of those who consumed it every day was 42.8%, and the frequency of those who consumed it once a week was 4.9%. The frequency of those who never consumed sunflower oil was 12.8%, the frequency of those who consumed it every day was 59.9%, and the frequency of those who consumed it once a week was 5.0%. The frequency of those who never consumed hard margarines was 58.9%, the frequency of those who consumed them every day was 3.1%, and the frequency of those who consumed them once a week was 7.4%. The frequency of those who never consumed soft margarines was 75.0%, the frequency of those who consumed them every day was 2.9%, and the frequency of those who consumed them once a week was 4.1%.

The frequency of those who never consumed butter was 12.2%, the frequency of those who consumed it every day was 28.6%, and the frequency of those who consumed it once a week was 10.9%.

The frequency of those who never consumed table sugar was 23.9%, the frequency of those who consumed it every day was 66.1%, and the frequency of those who consumed it once a week was 1.9%. The frequency of never consuming pastry desserts [(tulumba (dough pastry deep fried dipped in syrup), lokma (yeast fritters in thick syrup), baklava (multilayered flaky pastry with nuts)] was 16.5%, and the frequency of consumption once a week was 17.4%.

While hamburgers, fried chicken pieces, etc. were never consumed with a frequency of 61.4%, the frequency of consumption once a week was 6.9%. The frequency of never consuming doner, kebab, etc. was 11.1%, the frequency of consumption every day was 3.0%, and the frequency of consumption once a week was 20.0%. The frequency of those who never consumed pita, Turkish pizza, pizza, pancake was 10.5%, the frequency of those who consumed them every day was 0.6%, and the frequency of those who consumed them once a week was 21.8%.

Table 2.38. Distribution of frequent	cy of food consumption amo	ong males aged 15 years and c	ver. TNHS 2017
	<i>, , , , , , , , , ,</i>		

Food Items							N	IALES (aged	l ≥15 y	ears)						
		Never	Eve	ery day,	4-	5 times		times		Once	1-3	3 times	Less	than once	Does	n't know/
			6-7 t	imes per	pe	er week	pe	er week	а	week	per	month	aı	month	No r	esponse
				veek									1			
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
MILK AND DAIRY PRODUCTS																
Pasteurized milk	84.7	83.3-85.9	1.6	1.1-2.3		0.8-1.5	3.5	3.0-4.2	3.3	2.7-4.0	2.8	2.3-3.4	2.3	1.8-3.0	0.7	0.4-1.0
UHT milk	65.2	63.5-66.9	4.5	3.7-5.4	2.9	2.3-3.6	8.1	7.2-9.2	6.9	6.0-7.9	7.1	6.3-8.1	4.5	3.8-5.3	0.7	0.5-1.1
Loose milk	55.2	53.5-56.9	3.9	3.3-4.7	2.1	1.8-2.6	9.8	8.9-10.8	11.5	10.5-12.6	10.7	9.8-11.8	6.2	5.5-7.1	0.4	0.3-0.8
Probiotic milk and dairy products (kefir etc.	91.2	90.2-92.2	0.5	0.4-0.8	0.2	0.1-0.3	0.7	0.5-1.0	0.6	0.5-0.9	2.2	1.7-2.7	2.4	1.9-3.1	2.2	1.7-2.7
Yoghurt, ayran (diluted yoghurt)	0.8	0.5-1.3	51.1	49.3-52.8	16.7	15.4-18.1	22.1	20.7-23.6	6.4	5.7-7.3	2.3	1.8-2.9	0.4	0.3-0.6	0.2	0.1-0.6
Probiotic yoghurt	87.7	86.5-88.9	1.0	0.7-1.4	0.3	0.2-0.5	0.9	0.7-1.3	0.7	0.5-1.1	1.5	1.0-2.2	1.8	1.4-2.4	6.0	5.2-6.9
Cheese	2.2	1.7-2.8	70.5	68.9-72.1	8.1	7.2-9.0	12.7	11.5-13.9	4.3	3.6-5.1	1.0	0.7-1.4	1.0	0.6-1.8	0.3	0.1-0.6
Sweetened/fruit/cocoa/ chocolate flavored milks	77.9	76.2-79.4	1.9	1.4-2.5	1.0	0.7-1.4	4.5	3.6-5.5	4.3	3.5-5.5	4.3	3.5-5.1	4.8	4.0-5.9	5.2	4.5-6.0
Sweetened/fruit/cocoa/ chocolate flavored yoghurts	87.9	86.6-89.1	0.5	0.3-0.8	0.1	0.0-0.2	1.2	0.9-1.7	1.9	1.5-2.4	3.7	3.0-4.6	4.0	3.3-4.8	0.7	0.5-1.1
Cream/clotted cream (kaimak)	49.6	47.8-51.3	3.7	3.0-4.7	1.5	1.2-2.0	8.3	7.4-9.3	11.3	10.3-12.4	13.3	12.2-14.5	11.8	10.7-12.9	0.4	0.2-0.8
lce cream	18.5	17.2-19.9	0.9	0.6-1.4	0.8	0.5-1.1	6.5	5.7-7.3	13.5	12.3-14.7	29.8	28.2-31.3	29.9	28.3-31.4	0.3	0.1-0.6
Milk desserts (kazandibi (white pudding with blackened surface), sütlaç (rice pudding), pudding, milk pudding	13.6	12.5-14.8	1.2	0.9-1.6	1.5	1.1-1.9	10.9	9.8-12.1	20.5	19.1-22.0	34.0	32.5-35.7	18.0	16.7-19.3	0.3	0.1-0.6
MEAT-EGGS-LEGUMES																
Beef	8.2	7.2-9.2	5.0	4.2-5.9	5.9	5.2-6.7	23.4	22.0-24.8	21.7	20.3-23.2	23.5	22.1-25.0	11.6	10.5-12.8	0.7	0.5-1.1
Lamb/mutton	29.3	27.7-30.9	1.8	1.3-2.5	1.9	1.5-2.5	11.2	10.1-12.3	14.6	13.4-15.8	22.0	20.6-23.4	18.1	16.9-19.4	1.2	0.9-1.7
Chicken	4.3	3.7-4.9	3.0	2.4-3.7	5.6	4.8-6.6	32.5	30.9-34.2	31.6	30.0-33.2	18.5	17.2-19.8	4.2	3.7-4.8	0.4	0.2-0.8
Turkey	84.9	83.7-86.2	-	-	0.2	0.1-0.7	0.4	0.2-0.7	1.2	0.8-1.7	3.6	3.0-4.4	9.1	8.1-10.3	0.5	0.3-0.9
Goose/duck	93.1	92.2-94.0	-	-	0.0	0.0-0.1	0.1	0.0-0.4	0.3	0.2-0.5	1.2	0.9-1.6	4.8	4.1-5.6	0.5	0.3-0.8
Fish	7.8	6.8-8.9	0.3	0.2-0.6	0.5	0.3-0.8	9.4	8.5-10.3	26.7	25.3-28.3	36.1	34.4-37.7	18.7	17.3-20.1	0.6	0.4-0.9
Seafood (calamars, shrimps, mussels, etc.)	78.8	77.3-80.1	0.2	0.1-0.5	0.3	0.1-0.5	0.9	0.6-1.3	2.7	2.2-3.3	7.4	6.6-8.4	9.0	8.0-10.1	0.8	0.5-1.1
Offals (liver, kidney, spleen, etc.)	40.7	39.0-42.4	0.0	0.0-0.2	0.2	0.1-0.5	2.6	2.1-3.3	5.4	4.7-6.2	25.2	23.8-26.8	25.4	24.0-26.9	0.4	0.2-0.7
Meat products (salami, sausage, fermented sausage, pastrami, etc.)	29.1	27.6-30.7	3.6	3.0-4.3	2.3	1.9-2.9	15.0	13.7-16.4	19.1	17.8-20.4	18.0	16.8-19.4	12.4	11.3-13.5	0.4	0.2-0.7
Nuts (hazelnuts, peanuts, pistachios, walnuts, etc.)	6.9	6.1-7.8	15.1	14.0-16.3	9.3	8.3-10.5	27.0	25.5-28.6	18.9	17.6-20.2	16.0	14.7-17.3	6.4	5.6-7.3	0.3	0.2-0.7
Legumes (dry beans, chickpeas, lentils, etc.)	1.9	1.4-2.5	1.0	0.8-1.4	2.8	2.2-3.6	28.7	27.2-30.3	44.2	42.5-45.9	19.0	17.7-20.4	1.9	1.5-2.4	0.4	0.2-0.7
Eggs	2.9	2.4-3.6	32.9	31.4-34.6	16.8	15.5-18.2	32.4	30.8-34.0	10.2	9.1-11.3	3.0	2.4-3.7	1.3	0.9-1.9	0.4	0.2-0.8

Table 2.38. Distribution of frequency of food consumption among males aged 15 years and over, TNHS 2017 (continued)

Food Items		-		-			M	ALES (aged	≥ 15 y	ears)						
		Never	6-7 t	ery day, imes per veek		5 times er week		times r week		Once week		3 times r month		than once month		n't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
VEGETABLES AND FRUITS																
Green leafy vegetables	5.6	4.7-6.6	21.0	19.6-22.4	13.0	11.9-14.2	27.1	25.7-28.6	20.2	18.9-21.7	9.3	8.3-10.3	3.4	2.8-4.2	0.3	0.2-0.6
Other fresh vegetables (leek, cabbage)	19.2	17.8-20.8	1.7	1.3-2.1	2.4	1.9-3.0	13.4	12.3-14.5	24.2	22.8-25.7	26.3	24.8-27.8	12.4	11.4-13.5	0.4	0.2-0.7
Tomato	1.5	1.1-1.9	49.1	47.4-50.8	16.0	14.8-17.3	21.3	19.9-22.7	8.1	7.2-9.0	2.8	2.4-3.4	0.9	0.7-1.2	0.3	0.1-0.6
Green pepper (village pepper, banana pepper, long pepper, etc.	5.6	4.8-6.6	35.4	33.8-37.0	14.0	12.8-15.3	23.5	22.1-25.0	13.9	12.7-15.1	5.3	4.6-6.1	2.0	1.6-2.4	0.3	0.2-0.6
Mushroom	33.3	31.7-35.0	0.1	0.1-0.3	0.4	0.2-1.1	2.7	2.1-3.4	9.8	8.8-10.8	26.4	24.9-27.9	26.9	25.5-28.4	0.4	0.2-0.7
Corn	26.4	24.9-28.0	0.7	0.4-1.0	0.5	0.3-0.8	4.1	3.4-4.8	10.8	9.7-12.0	25.9	24.4-27.5	31.2	29.7-32.8	0.4	0.2-0.7
Frozen vegetables/fruits	53.8	52.1-55.5	0.3	0.2-0.5	0.2	0.1-0.4	2.6	2.1-3.1	8.6	7.7-9.6	20.6	19.2-22.0	11.5	10.5-12.6	2.4	1.9-2.9
Dried vegetables	44.7	43.0-46.5	0.3	0.1-0.8	0.2	0.1-0.4	2.2	1.8-2.8	8.9	8.0-10.0	25.6	24.1-27.1	16.5	15.3-17.9	1.4	1.0-1.8
Dried fruits	35.9	34.2-37.6	2.5	2.1-3.0	1.4	1.1-1.8	8.0	7.2-8.8	13.7	12.5-14.9	22.6	21.3-24.0	15.2	14.0-16.4	0.8	0.5-1.1
Raisin	30.7	29.1-32.3	2.5	2.1-2.9	1.5	1.2-2.0	9.6	8.6-10.7	13.8	12.7-14.9	24.5	23.0-26.1	17.0	15.8-18.3	0.5	0.3-0.8
Citrus fruits	4.3	3.7-5.2	8.9	8.1-9.9	8.7	7.8-9.7	26.0	24.6-27.5	24.0	22.6-25.5	20.8	19.4-22.4	6.8	5.9-7.7	0.3	0.2-0.6
Other fresh fruits	3.9	3.2-4.8	29.1	27.6-30.7	14.7	13.6-15.9	27.4	25.9-28.9	14.8	13.6-16.0	6.6	5.7-7.6	3.1	2.5-3.8	0.5	0.3-0.9
Ready-made canned vegetables	84.2	82.9-85.4	0.3	0.2-0.5	0.1	0.0-0.3	1.0	0.8-1.4	2.3	1.8-2.9	5.4	4.7-6.2	5.3	4.6-6.2	1.3	1.0-1.8
Home-made canned vegetables	40.9	39.2-42.6	1.5	1.0-2.2	1.4	1.1-1.8	8.0	7.2-8.9	16.5	15.3-17.7	23.5	22.1-24.9	6.2	5.5-7.0	2.0	1.6-2.5
French fries	10.6	9.7-11.6	2.7	2.1-3.5	3.7	3.1-4.3	23.9	22.4-25.4	30.8	29.2-32.4	21.1	19.8-22.4	6.9	5.9-8.0	0.4	0.2-0.7
Vegetables, total	0.7	0.5-1.0	48.2	46.5-49.9	16.8	15.5-18.3	22.9	21.5-24.4	7.6	6.7-8.7	2.7	2.2-3.4	0.6	0.4-0.9	0.3	0.1-0.6
Fruits, total	1.2	0.8-1.7	47.6	45.9-49.3	16.8	15.6-18.1	22.5	21.1-23.9	7.7	6.8-8.7	3.0	2.5-3.7	1.0	0.7-1.4	0.2	0.1-0.5

Food Items							М	ALES (aged	≥ 15 y	ears)						
		Never	6-7 t	ery day, imes per veek		5 times er week		times er week		Once week		3 times r month		han once: nonth		n't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BREAD-CEREALS																
White bread	7.3	6.5-8.1	75.3	73.9-76.7	3.7	3.1-4.5	5.1	4.5-5.9	3.5	3.0-4.2	2.3	1.8-2.8	2.5	2.0-3.1	0.2	0.1-0.6
Whole grain bread, rye bread, wholemeal bread etc.	58.8	57.1-60.4	13.5	12.4-14.6	3.1	2.6-3.7	6.1	5.3-6.9	5.0	4.3-5.9	5.8	5.1-6.7	7.3	6.4-8.3	0.4	0.2-0.8
Home-made unleavened breads (phyllo dough etc.)	41.1	39.4-42.8	9.3	8.3-10.3	2.4	1.9-3.1	6.3	5.6-7.2	10.3	9.3-11.4	16.9	15.6-18.2	13.3	12.2-14.4	0.4	0.3-0.8
Rice	4.4	3.8-5.1	3.1	2.5-3.7	7.5	6.6-8.6	41.6	39.9-43.3	27.6	26.1-29.1	13.0	12.0-14.1	2.5	2.1-3.0	0.3	0.1-0.6
Bulghur	4.6	3.9-5.3	1.3	1.0-1.7	4.5	3.8-5.3	40.0	38.4-41.7	32.3	30.7-33.9	14.6	13.5-15.8	2.5	2.0-3.0	0.3	0.1-0.6
Macaroni, noodles, couscous	6.0	5.2-6.8	0.8	0.6-1.1	3.0	2.5-3.7	32.7	31.1-34.4	36.4	34.8-38.1	17.1	15.9-18.4	3.6	3.1-4.3	0.3	0.2-0.6
Pastries, cakes, buns	7.5	6.7-8.5	4.8	4.1-5.6	4.3	3.6-5.2	17.7	16.3-19.1	25.4	24.0-26.9	29.0	27.5-30.5	10.9	9.9-12.0	0.4	0.2-0.7
Cookies	29.0	27.5-30.5	1.2	0.9-1.6	1.3	0.8-1.9	7.4	6.5-8.5	15.1	13.9-16.4	23.7	22.2-25.2	22.0	20.6-23.4	0.3	0.2-0.7
Tarhana (fermented dried yoghurt and flour mixture)	26.2	24.6-27.9	3.1	2.7-3.7	3.7	3.2-4.3	16.9	15.8-18.1	18.4	17.1-19.8	20.6	19.3-22.0	10.5	9.4-11.6	0.5	0.3-0.8
Biscuits/crackers	19.0	17.8-20.4	12.0	10.9-13.2	7.4	6.5-8.4	20.6	19.2-22.1	15.5	14.2-16.9	12.9	11.9-14.0	12.2	11.2-13.2	0.3	0.2-0.7
Bagel	15.8	14.6-17.1	7.1	6.2-8.0	5.1	4.4-6.0	20.4	19.0-21.8	21.3	19.8-22.8	17.5	16.3-18.8	12.5	11.5-137	0.3	0.1-0.6
Breakfast cereals (muesli, corn flakes, wheat flakes, etc.).	89.2	87.9-90.3	1.0	0.6-1.6	0.3	0.2-0.6	1.7	1.3-2.2	2.0	1.5-2.6	1.8	1.3-2.3	3.1	2.5-3.7	1.0	0.7-1.4

Table 2.38. Distribution of frequency of food consumption among males aged 15 years and over, TNHS 2017 (continued)

Food Items							Μ	ALES (aged	≥15 ye	ears)						
		Never	6-7 t	ery day, imes per veek		5 times er week		3 times er week		Once week		8 times month		han once nonth		n't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BEVERAGES																
Ready-made fruit juices	33.3	31.7-34.8	5.4	4.6-6.3	4.1	3.4-4.9	15.3	14.0-16.7	13.1	11.9-14.4	15.6	14.4-16.9	13.0	12.0-14.1	0.3	0.2-0.6
Freshly squeezed fruit juices	48.8	47.1-50.5	0.8	0.6-1.1	0.9	0.6-1.3	7.2	6.4-8.1	11.5	10.4-12.7	15.9	14.7-17.2	14.6	13.4-15.9	0.3	0.2-0.7
Freshly squeezed vegetable juices	94.3	93.4-95.1	0.1	0.1-0.3	0.1	0.0-0.3	0.7	0.4-1.2	0.8	0.5-1.1	1.5	1.1-2.0	2.0	1.6-2.5	0.5	0.3-0.8
Light, zero cola drinks	89.3	88.1-90.4	0.7	0.4-1.1	0.7	0.4-1.1	1.5	1.2-2.0	2.1	1.6-2.7	2.4	1.9-3.1	2.8	2.3-3.4	0.5	0.3-0.8
Regular cola drinks	36.7	35.1-38.4	6.2	5.4-7.0	5.6	4.7-6.6	15.1	13.9-16.4	12.6	11.5-13.8	13.6	12.5-14.8	9.9	9.0-10.8	0.3	0.2-0.6
lce teas	66.2	64.4-67.9	1.9	1.4-2.7	1.9	1.4-2.5	7.4	6.4-8.5	8.2	7.2-9.5	7.7	6.8-8.7	6.2	5.4-7.1	0.5	0.3-0.8
Tea (black)	2.7	2.1-3.5	89.7	88.5-90.9	2.1	1.6-2.7	2.3	1.8-3.0	1.7	1.2-2.5	0.6	0.4-0.9	0.4	0.2-0.6	0.4	0.2-0.7
Green tea	78.0	76.6-79.4	1.7	1.4-2.2	0.8	0.5-1.1	3.1	2.4-3.9	4.0	3.4-4.7	5.3	4.6-6.1	6.6	5.8-7.5	0.5	0.3-0.8
Herbal teas	47.8	46.1-49.6	3.0	2.5-3.6	1.5	1.2-1.8	7.5	6.6-8.5	8.8	7.9-9.8	14.5	13.3-15.7	16.6	15.4-17.9	0.4	0.2-0.7
Mineral water, soda	17.7	16.4-19.1	12.3	11.3-13.4	7.3	6.4-8.3	23.1	21.7-24.5	16.4	15.2-17.6	14.9	13.7-16.1	8.0	7.1-9.0	0.4	0.2-0.7
Instant granulated coffee	42.4	40.7-44.1	11.4	10.3-12.6	4.6	3.8-5.5	13.4	12.2-14.7	10.4	9.5-11.5	10.0	9.0-11.1	7.2	6.4-8.2	0.4	0.3-0.8
Filter coffee	87.8	86.6-88.9	2.0	1.5-2.5	0.4	0.3-0.7	2.1	1.6-2.7	2.1	1.7-2.7	2.2	1.8-2.8	2.2	1.7-2.8	1.2	0.9-1.6
Turkish coffee	27.9	26.3-29.6	14.1	12.9-15.4	4.9	4.3-5.6	16.6	15.5-17.9	13.3	12.2-14.6	14.8	13.7-16	7.9	7.1-8.8	0.4	0.2-0.7
Energy drinks	84.3	82.9-85.6	0.3	0.2-0.7	0.3	0.2-0.6	1.7	1.2-2.3	2.2	1.7-2.8	5.0	4.3-5.9	5.7	4.9-6.6	0.5	0.3-0.8
Alcoholic beverages	75.0	73.4-76.5	0.8	0.6-1.1	0.8	0.6-1.2	3.2	2.7-3.9	3.9	3.2-4.8	7.6	6.7-8.6	8.1	7.2-9.2	0.4	0.3-0.8

Food Items							Μ	ALES (aged	≥15 ye	ears)						
		Never	Eve	ery day,	4-	5 times	2-3	times	(Once	1-3	8 times	Less t	than once	Doesn	't know/
				imes per	ре	r week	pe	er week	а	week	per	month	а	month	No re	esponse
	0(050/01	1	veek		05%(0)		05%(0)	0 (05%(0)	^	050/01	e (050(0)	0(050(0)
OILS, FATS, SUGAR, DESSERTS	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
Olive oil	20.1	18.7-21.6	42.8	41.1-44.5	7.6	6.7-8.6	13.0	11.8-14.2	4.9	4.2-5.7	4.4	3.7-5.2	3.2	2.6-3.8	4.2	3.5-5.0
Hazelnut oil	20.1 93.8	92.8-94.6	42.8	0.3-0.8	0.2	0.1-0.5	0.4	0.2-0.8	0.2	0.1-0.4	4.4 0.4	0.3-0.7	0.8	0.5-1.1	4.2 3.6	3.0-4.4
Sunflower oil	12.8	92.8-94.8	59.9	58.2-61.5	5.1	4.3-5.9	8.7	7.8-9.7	5.0	4.4-5.7	3.7	3.1-4.4	1.3	1.0-1.6	3.7	3.0-4.4
Corn oil	83.4	82.1-84.6	3.8	3.2-4.5	1.0	4.3-5.9 0.7-1.5	2.3	1.9-2.8	1.7	1.4-2.1	1.7	1.3-2.2	1.5	1.2-2.1	4.5	3.8-5.3
Soybean oil	95.3	94.5-96.1	0.1	0.0-0.4	1.0	0.7-1.5	0.1	0.0-0.3	0.1	0.0-0.2	0.3	0.1-0.6	0.4	0.2-0.8	3.8	3.2-4.6
Canola oil	95.2	94.3-96.0	0.1	0.0-0.2	0.1	0.0-0.2	0.1	0.1-1.2	0.0	0.0-0.2	0.3	0.0-0.2	0.4	0.1-0.7	3.9	3.2-4.0
Hard margarine	58.9	57.2-60.6	3.1	2.5-3.8	1.7	1.2-2.6	6.4	5.6-7.3	7.4	6.6-8.3	10.3	9.3-11.4	7.2	6.4-8.2	4.9	4.2-5.8
Soft margarine	75.0	73.5-76.4	2.9	2.3-3.5	0.9	0.7-1.2	4.3	3.7-4.9	4.1	3.5-4.8	4.6	4.0-5.3	4.1	3.5-4.9	4.2	3.5-5.0
Butter	12.2	11.1-13.4	28.6	27.1-30.1	10.1	9.2-11.2	23.6	22.1-25.1	10.9	9.9-12.0	8.3	7.4-9.3	3.8	3.2-4.5	2.6	2.0-3.2
Tail fat, tallow	72.0	70.4-73.6	0.8	0.5-1.5	0.5	0.3-0.9	2.7	2.1-3.5	3.6	3.1-4.3	8.4	7.4-9.5	8.9	8.0-9.8	3.1	2.5-3.8
Table sugar	23.9	22.4-25.4	66.1	64.4-67.7	1.2	0.9-1.6	2.7	2.2-3.5	1.9	1.4-2.4	1.7	1.3-2.2	1.9	1.5-2.5	0.6	0.4-1.0
Honey, jam, molasses	10.4	9.4-11.6	32.2	30.7-33.9	9.7	8.7-10.8	21.9	20.5-23.3	13.6	12.4-14.8	7.9	7.0-8.8	3.9	3.3-4.6	0.5	0.3-0.8
Sweets, Turkish Delight, chocolate	21.2	19.9-22.6	7.5	6.5-8.6	5.1	4.4-6.0	17.2	15.9-18.7	16.4	15.2-17.7	18.5	17.3-19.8	13.5	12.4-14.7	0.5	0.3-0.9
Pastry desserts, syrup sweetened (tulumba, lokma, baklava)	16.5	15.2-17.8	0.8	0.6-1.2	1.5	1.1-2.1	9.8	8.7-11.0	17.4	16.1-18.8	32.9	31.4-34.5	20.6	19.3-22.0	0.5	0.3-0.8
Pastry products with cream filling (cake, etc.)	31.5	29.9-33.1	0.3	0.1-0.5	0.6	0.4-1.1	3.0	2.5-3.7	8.7	7.7-9.9	25.8	24.3-27.3	29.7	28.1-31.2	0.5	0.3-0.8
Artificial sweeteners	96.5	95.8-97.1	0.4	0.3-0.6	0.0	0.0-0.2	0.1	0.0-0.2	0.1	0.0-0.2	0.4	0.2-0.7	0.9	0.6-1.5	1.5	1.2-2.0
Instant soups	67.5	65.9-69.1	0.4	0.3-0.7	0.8	0.5-1.2	4.8	4.1-5.6	7.8	6.8-8.8	8.8	7.9-9.8	9.0	8.0-10.1	0.9	0.6-1.3
Smoked products	91.6	90.6-92.5	0.1	0.0-0.4	0.1	0.0-0.2	0.7	0.4-1.7	0.6	0.4-0.9	2.0	1.5-2.5	2.0	1.6-2.5	2.9	2.4-3.5
Meat bouillon cube, chicken bouillon cube	54.0	52.3-55.8	3.6	3.1-4.3	3.5	2.9-4.2	13.7	12.5-15.1	8.4	7.5-9.4	5.9	5.2-6.7	4.2	3.5-5.0	6.5	5.7-7.5
Hamburger, fried chicken pieces etc.	61.4	59.7-63.1	0.3	0.2-0.5	0.6	0.4-1.1	3.7	3.0-4.4	6.9	6.0-7.9	15.2	14.0-16.6	11.3	10.2-12.6	0.5	0.3-0.9
Doner, kebab, etc.	11.1	10.2-12.1	3.0	2.3-3.8	3.5	2.9-4.2	15.8	14.5-17.1	20.0	18.6-21.4	33.3	31.8-35.0	12.8	11.8-14.0	0.5	0.3-0.8
Pita, lahmacun (Turkish pizza), pizza, pancake, etc.	10.5	9.5-11.5	0.6	0.4-0.9	1.1	0.8-1.4	10.4	9.3-11.6	21.8	20.3-23.3	41.4	39.7-43.1	13.9	12.8-15.0	0.5	0.3-0.8
Chips, corn snacks	53.2	51.5-55.0	2.2	2.2	1.8	1.2-2.5	8.8	7.7-10.0	10.3	9.2-11.5	12.3	11.2-13.4	11.0	10.0-12.2	0.5	0.3-0.8

Table 2.38. Distribution of frequency of food consumption among males aged 15 years and over, TNHS 2017 (continued)

3.5.6. Frequency of Food Consumption Among Females in Age Group of 15-18 Years

The results of the analysis of the frequency of food consumption among females in the age group of 15-18 years across Turkey are given in Table 2.39. In this age group, the frequency of those who never consumed pasteurized milk was 80.6%, the frequency of those who never consumed UHT milk was 53.9%, and the frequency of those who never consumed loose milk was 64.4%. The frequency of those who never consumed probiotic milk and dairy products (kefir, etc.) was 90.2%, the frequency of those who never consumed yoghurt and ayran (diluted yoghurt) was 4.6%, the frequency of those who never consumed probiotic yoghurt was 81.2%, and the frequency of those who never consumed cheese was 9.9%. The frequency of those who consumed pasteurized milk every day was 4.0%, the frequency of those who consumed UHT milk every day was 8.6%, and the frequency of those who consumed loose milk every day was 1.9%. The frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.7%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.7%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.7%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.7%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.7%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.7%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.7%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.7%, the frequency of those who consumed probiotic yoghurt every day was 1.4%, and the frequency of those who consumed cheese every day was 48.9%.

Among females in the age group of 15-18 years, 25.6% never consumed beef, 48.7% never consumed lamb/mutton, 4.4% never consumed chicken, 90.0% never consumed turkey, 97.7% never consumed goose/duck, 16.4% never consumed fish, which were included in the meat-eggs-legumes group. Among the foods in this group, the ones consumed every day were beef with a frequency of 2.8%, lamb/mutton with a frequency of 1.0%, chicken with a frequency of 1.5%. Among the foods in the meat-eggs-legumes group, the ones consumed 2-3 times per week were beef with a frequency of 13.4%, lamb/mutton with a frequency of 7.4%, chicken with a frequency of 36.3%, turkey with a frequency of 0.3%, and fish with a frequency of 5.2%. The frequency of never consuming legumes included in this group was 4.6%, the frequency of consumption of legumes very day was 1.1%, and the frequency of consumption of legumes 2-3 times per week was 25.5%.

Among females in the age group of 15-18 years, the frequency of those who never consumed eggs was 7.7%, the frequency of those who consumed them every day was 24.4%, and the frequency of those who consumed them 4-5 times per week was 10.1%. The frequency of those who never consumed nuts (hazelnuts, peanuts, pistachios, walnuts, etc.) was 7.6%, the frequency of those who consumed them every day was 13.4%, and the frequency of those who consumed them 4-5 times per week was 7.2%.

In the vegetables and fruits group, the frequency of those who never consumed green leafy vegetables was 14.6%, the frequency of those who consumed them every day was 20.4%, and the frequency of those who consumed them 4-5 times per week was 8.4%. The frequency of those who never consumed other fresh vegetables (leek, cabbage) was 32.0%, the frequency of those who consumed them every day was 2.4%, and the frequency of those who consumed them 4-5 times per week was 1.9%.

The frequency of those who never consumed citrus fruits was 3.3%, the frequency of those who consumed them every day was 9.9%, and the frequency of those who consumed them 4-5 times per week was 6.2%. The frequency of those who never consumed other fresh fruits was 4.1%, the frequency of those who consumed them every day was 35.6%, and the frequency of those who consumed them 4-5 times per week was 15.7%. While the frequency of never consuming raisins was 41.1%, they were consumed every day with a frequency of 2.9%.

French fries were consumed every day with a frequency of 7.8%.

For females in the age group of 15-18 years, the frequencies of total vegetables consumption were as follows: 2.3% for those who never consumed them, 45.2% for those who consumed them every day, 11.9% for those who consumed them 4-5 times per week, 22.4% for those who consumed them 2-3 times per week, and 14.0% for those who consumed them once a week. The frequencies of total fruits consumption were as follows: 0.3% for those who never consumed them, 53.7% for those who consumed them every day, 10.2% for those who consumed them 4-5 times per week, 25.4% for those who consumed them 2-3 times per week, and 7.5% for those who consumed them once a week.

Among females in the age group of 15-18 years, 8.5% never consumed white bread, 65.8% never consumed whole grain bread, rye bread, wholemeal bread, and 38.7% do not consume home-made unleavened breads

(phyllo dough, etc.), which are included in the bread and cereals group. Among the foods in the bread and cereals group, the ones consumed every day were white bread with a frequency of 75.1%, whole grain bread, rye bread, wholemeal bread, etc. with a frequency of 9.9%, and home-made unleavened breads (phyllo dough etc.) with a frequency of 10.4%. Among the foods in the bread and cereals group, the ones consumed every day were rice with a frequency of 2.5%, bulghur with a frequency of 3.3%, pastries, cakes, buns with a frequency of 6.6%, biscuits/crackers with a frequency of 32.5%, and bagel with a frequency of 11.6%..

Among females in the age group of 15-18 years, the frequency of those who never consumed ready-made fruit juices was 21.8%, the frequency of those who consumed them every day was 10.6%, and the frequency of those who consumed them once a week was 14.7%. The frequency of those who never consumed freshly squeezed fruit juices was 57.5%, and the frequency of those who consumed them once a week was 11.4%. Freshly squeezed vegetable juices were never consumed with a frequency of 96.9%. The light and zero cola drinks were never consumed with a frequency of 86.8%, and aregular cola drinks were never consumed with a frequency of 28.5%. The frequency of those who consumed black tea every day was 55.8%, while this frequency was 0.5% for green tea and 2.0% for herbal teas. The frequency of never consuming Turkish coffee was 39.3%, while its frequency of everyday consumption was 8.3%.

Among females in the age group of 15-18 years, the frequency of those who never consumed olive oil was 29.8%, the frequency of those who consumed it every day was 37.9%, and the frequency of those who consumed it once a week was 4.2%. The frequency of those who never consumed sunflower oil was 9.3%, the frequency of those who consumed it every day was 64.0%, and the frequency of those who consumed it once a week was 5.5%. The frequency of those who never consumed hard margarines was 52.2%, the frequency of those who consumed them every day was 2.2%, and the frequency of those who consumed them once a week was 6.1%. The frequency of those who never consumed soft margarines was 72.2%, the frequency of those who consumed them every day was 2.0%, and the frequency of those who consumed them once a week was 4.8%.

The frequency of those who never consumed butter was 14.4%, the frequency of those who consumed it every day was 29.7%, and the frequency of those who consumed it once a week was 10%.

The frequency of those who never consumed table sugar was 24.5%, the frequency of those who consumed it every day was 51.5%, and the frequency of those who consumed it once a week was 5.5%. The frequency of never consuming pastry desserts [(tulumba (dough pastry deep fried dipped in syrup), lokma (yeast fritters in thick syrup), baklava (multilayered flaky pastry with nuts)] was 13.2%, and the frequency of consumption once a week was 12.3%.

While hamburgers, fried chicken pieces, etc. were never consumed with a frequency of 39.2%, the frequency of consumption once a week was 13.8%. The frequency of never consuming doner, kebab, etc. was 12.8%, the frequency of everyday consumption was 1.4%, and the frequency of consumption once a week was 21.6%. The frequency of of those never consumed pita, Turkish pizza, pizza, pancake was 11.4%, the frequency of those who consumed them every day was 0.3%, and the frequency of those who consumed them once a week was 15.7%.

Table 2.39. Distribution of frequency of food consumption among females in the age group of 15-18 years, TNHS 2017

Food Items							FEM	ALES (aged	15-18	years)						
		Never	Eve	ry day,	4-	5 times	2-3	3 times	(Once	1-3	3 times	Less t	han once	Doesr	n't know/
			6-7 t	imes per	pe	r week	pe	er week	а	week	реі	month	a ı	nonth	No r	esponse
			v	veek	1						1	1			1	
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
MILK AND DAIRY PRODUCTS																
Pasteurized milk	80.6	74.7-85.3	4.0	2.2-7.3	1.2	0.4-3.8	3.9	2.1-7.1	3.7	1.8-7.4	4.7	2.3-9.4	0.7	0.2-2.3	1.2	0.4-3.1
UHT milk	53.9	47.2-60.5	8.6	5.6-13.0	4.4	1.9-9.8	11.8	8.1-16.7	8.5	5.4-13.2	7.1	4.2-11.7	4.0	2.3-6.9	1.8	0.7-4.3
Loose milk	64.4	57.7-70.7	1.9	0.3-2.9	2.0	0.8-5.2	8.2	2.2-4.8	8.3	5.2-13.0	9.5	6.3-14.3	4.6	2.6-8.0	0.9	0.3-2.9
Probiotic milk and dairy products (kefir etc.)	90.2	85.2-93.6	0.7	0.2-2.9	-	-	1.2	0.3-4.8	0.9	0.3-2.9	2.8	1.2-6.3	2.2	0.8-6.3	2.0	0.9-4.5
Yoghurt, ayran (diluted yoghurt)	4.6	2.5-8.4	38.6	32.1-45.4	12.6	8.8-17.7	21.8	17.0-27.4	12.1	8.3-17.3	9.9	6.6-14.6	0.5	0.1-3.3	-	-
Probiotic yoghurt	81.2	75.6-85.8	1.4	0.4-4.5	0.7	0.2-3.1	1.4	0.5-3.7	2.3	1.0-5.3	3.4	1.6-7.1	4.1	2.3-7.5	5.4	3.1-9.2
Cheese	9.9	6.2-15.5	48.9	42.2-55.6	5.4	3.2-9.1	18.6	14.1-24.0	11.3	7.8-16.2	4.4	2.4-7.9	1.5	0.5-4.6	-	-
Sweetened/fruit/cocoa/ chocolate flavored milks	36.7	30.5-43.4	11.0	7.1-16.5	7.6	4.7-11.9	15.9	11.5-21.5	15.1	11.0-20.4	8.7	5.6-13.2	5.1	2.8-8.8	-	-
Sweetened/fruit/cocoa/ chocolate flavored yoghurts	62.7	55.8-69.1	1.2	0.5-3.3	2.0	0.9-4.3	6.4	3.3-12.1	11.5	7.9-16.4	6.6	3.8-11.1	9.2	5.8-14.3	0.4	0.1-2.9
Cream/clotted cream (kaimak)	60.0	53.3-66.3	1.0	0.3-3.0	1.0	0.2-4.1	3.6	1.9-6.6	10.5	7.2-15.2	9.9	6.6-14.6	13.5	9.6-18.8	0.5	0.1-3.3
Ice cream	9.8	6.3-14.9	2.2	0.9-5.6	2.1	0.9-4.7	12.5	8.7-17.7	20.0	15.3-25.8	33.8	27.7-40.6	19.5	14.9-25.1	-	-
Milk desserts (kazandibi (white pudding with blackened surface), sütlaç (rice pudding), pudding, milk pudding	14.0	9.9-19.5	0.2	0.0-1.7	1.6	0.5-4.7	8.2	5.3-12.5	21.5	16.6-27.4	38.5	32.1-45.2	16.0	11.6-21.6	-	-
MEAT-EGGS-LEGUMES																
Beef	25.6	20.0-32.1	2.8	1.1-6.6	1.6	0.6-4.0	14.3	10.0-20.0	15.3	11.3-20.4	26.0	20.7-32.3	12.0	8.4-16.9	2.4	1.1-5.2
Lamb/mutton	48.7	42.0-55.4	1.0	0.3-3.3	0.9	0.2-3.6	7.4	4.6-11.6	13.2	9.3-18.2	16.9	12.5-22.4	9.2	6.1-13.6	2.9	1.4-5.7
Chicken	4.4	2.4-7.9	1.5	0.5-5.9	3.6	1.8-7.3	36.3	30.2-43.0	22.9	17.8-29.0	26.7	21.0-33.3	4.2	2.3-7.6	0.2	0.0-1.7
Turkey	90.0	84.9-93.5	-	-	-	-	0.3	0.0-2.3	0.2	0.0-1.4	3.1	1.3-7.0	5.6	3.1-10.0	0.7	0.2-2.6
Goose/duck	97.7	95.3-98.8	-	-	-	-	-	-	-	-	1.0	0.3-3.2	0.6	0.2-1.9	0.7	0.2-2.6
Fish	16.4	12.0-21.9	-	-	-	-	5.2	3.1-8.7	20.7	15.5-27.0	33.6	27.6-40.1	23.0	17.8-29.2	1.2	0.4-3.2
Seafood (calamars, shrimps, mussels, etc.)	84.2	78.8-88.4	0.5	0.1-3.3	-	-	0.6	0.2-2.6	0.1	0.0-0.7	9.1	5.8-13.8	4.2	2.3-7.5	1.4	0.5-3.7
Offals (liver, kidney, spleen, etc.)	76.3	70.3-81.4	-	-	-	-	0.3	0.0-2.3	0.5	0.1-1.9	9.7	6.5-14.3	12.6	8.8-17.7	0.6	0.1-2.4
Meat products (salami, sausage, fermented sausage, pastrami, etc.)	22.5	17.0-29.2	3.3	1.5-6.8	3.2	1.6-6.3	12.3	8.7-17.2	24.7	19.4-30.8	20.2	15.6-25.8	13.6	9.5-19.0	0.2	0.0-1.7
Nuts (hazelnuts, peanuts, pistachios, walnuts, etc.)	7.6	4.7-12.1	13.4	9.8-18.0	7.2	4.5-11.4	19.0	14.1-25.1	21.3	16.2-27.5	20.8	15.9-26.7	10.2	6.7-15.2	0.6	0.1-2.4
Legumes (dry beans, chickpeas, lentils, etc.)	4.6	2.0-10.3	1.1	0.4-3.4	3.0	1.3-6.7	25.5	20.3-31.6	38.2	32.0-44.9	22.7	17.6-28.7	4.6	2.3-9.0	0.2	0.0-1.7
Eggs	7.7	4.8-12.0	24.4	19.0-30.8	10.1	6.5-15.3	28.0	22.5-34.3	18.2	13.6-23.8	8.2	5.3-12.5	3.1	1.3-7.4	0.2	0.0-1.7

Food Items FEMALES (aged 15-18 years) 4-5 times 1-3 times Less than once Doesn't know/ Never Everv dav. 2-3 times Once 6-7 times per per week per week a week per month a month No response week % % % % 95%CI % 95%CI % 95%CI 95%CI 95%CI % 95%CI % 95%CI 95%CI **VEGETABLES AND FRUITS** 17.3-28.9 Green leafy vegetables 14.6 10.1-20.6 20.4 15.7-26.1 8.4 5.4-12.8 22.6 17.2 12.9-22.6 12.0 8.2-17.0 4.3 2.3-7.9 0.5 0.1-2.0 Other fresh vegetables 32.0 26.0-38.8 2.4 1.2-5.0 1.9 0.7-4.7 6.8 4.4-10.4 18.2 13.6-24.0 24.8 19.3-31.2 13.6 9.7-18.7 0.2 0.0-1.7 (leek, cabbage) 49.0 42.3-55.7 14.3-24.3 7.4-15.4 Tomato 2.4 1.1-5.2 13.2 9.3-18.5 18.8 10.7 4.8 2.6-8.8 0.8 0.2-2.5 0.2 0.0-1.7 Green pepper (village pepper, banana pepper, long pepper, 10.5-19.8 20.5 15.6-26.5 21.0 16.2-26.8 10.0 6.6-14.8 20.1 15.4-25.9 14.6 9.1 5.4-14.8 4.0 2.1-7.6 0.7 0.2-3.0 etc.) Mushroom 53.5 46.9-60.1 -0.3 0.0-1.8 2.0 0.9-4.8 5.7 3.3-9.6 22.5 17.7-28.3 15.7 11.5-21.1 0.2 0.0-1.7 -13.0-24.6 0.5 0.1-3.6 0.5-3.7 3.6-10.0 11.2-20.8 34.5 28.5-41.1 23.4 18.4-29.2 0.7 0.2-3.0 Corn 18.1 1.4 6.0 15.4 Frozen vegetables/fruits 58.5 51.8-64.9 0.7 0.1-4.5 -3.0 1.5-6.0 9.2 5.9-14.0 16.1 12.1-21.0 10.5 7.0-15.5 2.1 0.8-5.1 -Dried vegetables 21.6-33.4 42.7 36.2-49.4 -_ 0.6 0.1-2.3 3.3 1.5-6.9 10.9 7.5-15.7 27.1 13.8 9.6-19.4 1.6 0.6-4.0 Dried fruits 45.0 38.4-51.8 1.7 0.6-4.4 1.6 0.5-4.8 10.3 7.0-15.0 8.8 5.7-13.4 17.7 12.9-23.9 14.2 10.2-19.3 0.6 0.2-2.7 Raisin 41.1 34.7-47.8 2.9 1.3-6.5 1.9 0.8-4.9 8.4 5.6-12.3 10.6 7.3-15.1 21.7 16.4-28.2 12.8 8.9-18.0 0.6 0.1-2.4 Citrus fruits 1.7-6.2 6.2 3.5-10.5 28.9 23.3-35.3 19.9-32.1 16.9-28.1 0.0-1.7 3.3 9.9 6.7-14.3 25.5 22.0 3.9 2.2-7.1 0.2 0.8-4.1 Other fresh fruits 4.1 2.3-7.5 35.6 29.3-42.4 15.7 11.5-21.0 23.6 18.5-29.6 8.3-17.5 3.8-10.8 0.5 0.1-2.1 12.2 6.5 1.8 Ready-made canned vegetables 78.9-88.2 0.7 0.1-4.5 0.2-2.8 0.6-3.8 5.0-12.1 2.3-7.5 0.3-3.2 84.1 -0.7 1.5 7.9 4.2 1.0 -Home-made canned vegetables 37.4 31.2-44.1 0.3 0.0-2.0 2.9 1.4-5.7 10.5 7.2-15.1 13.0 8.9-18.0 27.3 21.8-33.6 6.9 4.0-11.6 1.7 0.7-3.8 French fries 2.9-11.3 4.6-13.0 4.0 2.1-7.3 25.8-38.0 28.5 23.0-34.8 18.4 13.9-24.0 1.3-5.7 0.3-3.2 5.8 7.8 31.6 2.8 1.0 Vegetables, total 2.3 1.0-5.2 45.2 38.6-52.0 11.9 8.4-16.6 22.4 17.5-28.3 14.0 9.8-19.6 2.7 1.3-5.5 1.3 0.4-4.2 0.2 0.0-1.7 Fruits, total 0.3 0.0-2.2 53.7 47.0-60.3 10.2 6.9-14.9 25.4 19.9-31.8 7.5 4.9-11.3 2.5 1.2-5.1 0.1 0.0-1.0 0.2 0.0-1.7

Food Items							FEM	ALES (age	d 15-18	3 years)						
		Never	6-7 ti	ry day, mes per veek		5 times r week		times r week		Once week		times month		han once nonth		't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BREAD-CEREALS																
White bread	8.5	5.7-12.6	75.1	68.9-80.4	3.5	1.7-7.2	5.0	3.0-8.3	1.2	0.4-3.1	5.1	2.5-10.0	1.4	0.4-4.7	0.2	0.0-1.7
Whole grain bread, rye bread, wholemeal bread etc.	65.8	59.3-71.8	9.9	6.7-14.5	2.1	1.0-4.2	5.9	3.4-10.2	4.0	2.1-7.7	8.7	5.6-13.4	3.2	1.8-5.8	0.2	0.0-1.7
Home-made unleavened breads (phyllo dough etc.)	38.7	32.5-45.4	10.4	7.0-15.2	2.3	0.9-5.5	5.9	3.4-9.9	10.9	7.3-15.9	22.9	17.5-29.3	8.7	5.7-13.1	0.2	0.0-1.7
Rice	3.2	1.4-7.0	2.5	1.1-5.7	7.4	4.6-11.5	38.2	32.1-44.8	33.8	27.8-40.3	13.6	9.0-19.9	0.9	0.3-2.6	0.4	0.1-1.6
Bulghur	5.7	3.1-10.3	3.3	1.5-7.2	5.0	2.9-8.6	32.4	26.5-38.9	34.0	28.0-40.5	16.1	11.4-22.2	3.0	1.6-5.9	0.4	0.1-1.6
Macaroni, noodles, couscous	3.7	1.9-7.2	0.9	0.3-2.8	5.6	3.2-9.4	40.1	33.8-46.8	32.7	26.7-39.4	13.3	9.5-18.4	3.5	1.5-8.0	0.2	0.0-1.7
Pastries, cakes, buns	6.4	3.9-10.6	6.6	4.0-10.6	8.5	4.8-14.7	16.1	11.9-21.5	23.2	18.0-29.3	30.8	25.1-37.2	8.1	5.1-12.5	0.2	0.0-1.7
Cookies	17.7	12.9-23.7	1.5	0.6-3.6	2.4	1.0-5.9	7.3	4.7-11.1	19.7	14.8-25.7	32.4	26.5-38.9	18.8	14.1-24.7	0.2	0.0-1.7
Tarhana (fermented dried yoghurt and flour mixture)	43.7	37.1-50.6	2.2	1.0-4.5	1.9	0.9-4.3	6.1	3.8-9.7	18.8	14.1-24.7	18.1	13.5-23.8	8.4	5.6-12.5	0.7	0.2-2.9
Biscuits/crackers	3.3	1.8-6.1	32.5	26.3-39.3	13.8	10.0-18.9	27.5	22.0-33.9	11.9	8.0-17.2	8.5	5.6-12.8	1.8	0.7-4.4	0.7	0.2-2.7
Bagel	16.6	11.7-23.0	11.6	7.7-16.9	6.3	3.7-10.3	19.1	14.5-24.8	22.9	17.8-28.9	14.1	10.3-18.9	9.3	6.1-13.9	0.2	0.0-1.7
Breakfast cereals (muesli, corn flakes, wheat flakes, etc.).	76.4	70.3-81.5	2.9	1.3-6.1	-	-	4.4	2.3-8.1	3.8	1.9-7.4	5.3	3.0-9.2	7.0	4.5-10.9	0.2	0.0-1.7

Food Items							FEM	ALES (aged 1	L5-18 y	ears)						
	٦	Never	6-7 t	ery day, imes per week		5 times er week		3 times er week		Once week		times month		than once nonth		't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BEVERAGES																
Ready-made fruit juices	21.8	16.9-27.6	10.6	7.2-15.4	9.6	6.2-14.6	28.8	22.9-35.6	14.7	10.5-20.0	9.9	6.7-14.3	4.4	2.5-7.7	0.2	0.0-1.7
Freshly squeezed fruit juices	57.5	50.8-64.0	1.5	0.6-3.6	1.1	0.2-5.3	2.9	0.9-9.0	11.4	8.1-15.8	13.2	9.3-18.2	11.8	8.2-16.7	0.7	0.2-3.0
Freshly squeezed vegetable juices	96.9	94.1-98.4	-	-	-	-	-	-	0.5	0.1-2.8	1.8	0.7-4.4	0.5	0.1-2.2	0.2	0.0-1.7
Light, zero cola drinks	86.8	81.7-90.7	-	-	-	-	2.5	1.1-5.4	3.4	1.7-6.8	3.6	2.0-6.6	3.5	1.6-7.3	0.2	0.0-1.7
Regular cola drinks	28.5	22.7-35.0	6.9	4.3-10.7	3.2	1.4-7.4	19.9	14.9-26.0	15.8	11.6-21.2	17.4	13.1-22.9	8.1	5.1-12.7	0.2	0.0-1.7
Ice teas	57.1	50.4-63.6	1.4	0.5-3.9	2.2	0.8-5.8	9.1	5.8-14.0	10.0	6.7-14.6	13.4	9.5-18.5	6.6	4.1-10.3	0.2	0.0-1.7
Tea (black)	14.8	10.5-20.5	55.8	49.1-62.3	3.4	1.7-6.7	13.5	9.5-18.9	5.7	3.4-9.5	2.5	1.1-5.2	4.0	2.3-6.9	0.2	0.0-1.7
Green tea	76.8	70.9-81.9	0.5	0.2-1.8	1.1	0.4-3.5	4.6	2.5-8.4	4.3	2.3-8.1	6.3	3.8-10.3	5.6	3.4-9.2	0.7	0.2-2.9
Herbal teas	60.4	53.8-66.6	2.0	0.8-4.5	2.0	0.7-5.5	3.9	2.1-7.0	6.0	3.7-9.7	14.0	10.0-19.2	11.1	7.9-15.4	0.7	0.2-2.9
Mineral water, soda	47.8	41.1-54.5	3.2	1.7-6.2	3.5	1.5-7.8	9.0	5.5-14.4	11.2	7.8-15.8	13.9	10.0-18.8	11.3	7.6-16.5	0.2	0.0-1.7
Instant granulated coffee	31.4	25.7-37.9	13.2	9.4-18.2	6.3	3.6-10.8	19.1	13.9-25.6	16.2	11.9-21.7	8.5	5.6-12.7	4.7	2.7-8.2	0.6	0.1-2.1
Filter coffee	94.1	90.3-96.4	1.3	0.3-5.0	-	-	0.3	0.0-2.3	1.1	0.3-3.7	1.4	0.6-3.4	1.2	0.4-3.3	0.6	0.1-2.4
Turkish coffee	39.3	33.0-46.0	8.3	5.5-12.4	3.6	1.8-7.1	10.5	6.8-16.0	10.9	7.5-15.6	17.5	12.9-23.4	9.3	5.9-14.2	0.6	0.1-2.4
Energy drinks	89.0	83.6-92.7	0.6	0.2-2.6	-	-	-	-	2.7	1.3-5.6	5.4	2.6-10.5	1.8	0.7-4.4	0.6	0.1-2.4
Alcoholic beverages	96.0	92.3-97.9	-	-	-	-	-	-	-	-	1.2	0.3-4.4	2.2	0.9-5.3	0.6	0.1-2.4

Table 2.39. Distribution of free	quency of food consum	nption among females in the a	age group of 15-18 vea	rs. TNHS 2017 (continued)

Food Items							FEMA	ALES (aged	15-18	years)						
		Never	6-7 ti	ry day, mes per eek		times week		times week		Once week		times month		han once: nonth		't know/ sponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
OILS, FATS, SUGAR, DESSERTS																
Olive oil	29.8	23.9-36.4	37.9	31.8-44.5	6.9	4.2-11.0	9.8	6.1-15.2	4.2	2.4-7.4	6.5	3.7-11.0	2.0	0.9-4.4	2.9	1.3-6.0
Hazelnut oil	96.7	93.6-98.4	1.1	0.2-4.7	-	-	-	-	0.3	0.0-2.0	0.2	0.0-1.5	-	-	1.7	0.7-3.9
Sunflower oil	9.3	6.2-13.9	64.0	57.4-70.1	3.8	1.8-7.8	9.9	6.6-14.5	5.5	3.1-9.5	3.9	2.1-7.0	1.2	0.3-4.8	2.5	1.2-5.1
Corn oil	86.2	80.9-90.2	2.6	1.1-6.1	1.0	0.2-4.1	3.0	1.5-6.2	-	-	1.4	0.5-3.7	1.0	0.2-5.0	4.8	2.7-8.4
Soybean oil	96.8	93.6-98.4	-	-	-	-	-	-	-	-	0.3	0.0-2.1	-	-	2.9	1.4-6.1
Canola oil	97.1	93.9-98.6	-	-	-	-	-	-	-	-	-	-	-	-	2.9	1.4-6.1
Hard margarine	52.2	45.5-58.8	2.2	0.8-5.5	3.5	1.6-7.5	7.7	5.0-11.7	6.1	3.8-9.7	16.6	12.2-22.3	8.0	5.2-12.1	3.7	1.9-7.1
Soft margarine	72.2	66.0-77.7	2.0	0.9-4.7	0.7	0.2-2.9	7.2	4.5-11.2	4.8	2.8-8.1	5.8	3.3-10.0	4.7	2.6-8.2	2.6	1.2-5.7
Butter	14.4	10.2-20.0	29.7	23.8-36.2	4.9	2.8-8.4	24.2	18.9-30.4	10.0	6.7-14.8	10.8	7.5-15.3	4.3	2.1-8.5	1.8	0.8-4.2
Tail fat, tallow	76.7	70.6-81.8	1.5	0.4-6.0	0.8	0.2-3.3	2.3	1.0-5.6	5.0	2.9-8.5	6.3	3.8-10.3	4.7	2.5-8.7	2.6	1.3-5.1
Table sugar	24.5	19.1-30.8	51.5	44.8-58.2	2.5	1.1-5.7	7.4	4.5-11.8	5.5	3.1-9.5	4.8	2.6-8.7	3.2	1.7-6.1	0.6	0.1-2.4
Honey, jam, molasses	23.6	18.2-30.1	19.5	14.7-25.3	5.5	3.0-9.8	19.5	14.5-25.6	14.4	10.5-19.4	9.0	6.1-13.3	7.9	5.0-12.1	0.6	0.1-2.4
Sweets, Turkish Delight, chocolate	6.8	3.8-12.1	22.0	17.0-28.1	14.2	10.2-19.3	29.0	23.2-35.6	14.2	10.3-19.3	10.4	7.0-15.2	2.7	1.3-5.7	0.6	0.1-2.4
Pastry desserts, syrup sweetened (tulumba, lokma, baklava)	13.2	9.3-18.2	-	-	2.5	1.1-5.5	7.4	4.7-11.5	12.3	8.1-18.3	42.2	35.8-49.0	21.8	16.8-27.7	0.6	0.1-2.4
Pastry products with cream filling (cake, etc.)	10.0	6.8-14.5	0.6	0.1-2.2	0.3	0.0-2.3	4.3	2.3-7.8	12.9	8.6-18.8	47.7	41.5-54.5	23.7	18.5-29.7	0.6	0.1-2.4
Artificial sweeteners	96.8	94.0-98.3	-	-	0.4	0.1-3.1	-	-	0.7	0.2-2.9	0.3	0.0-2.1	0.4	0.1-2.9	1.4	0.6-3.3
Instant soups	65.1	58.6-71.0	1.1	0.3-3.7	0.9	0.3-3.2	4.5	2.6-7.4	5.8	3.5-9.4	12.1	8.4-17.1	10.0	6.7-14.6	0.6	0.1-2.4
Smoked products	93.5	89.5-96.0	-	-	-	-	-	-	0.2	0.0-1.5	2.5	1.0-6.1	1.8	0.7-4.4	2.0	0.9-4.4
Meat bouillon cube, chicken bouillon cube	51.1	44.4-57.8	4.5	2.3-8.5	4.0	2.1-7.4	15.7	11.4-21.2	8.8	5.6-13.5	10.5	7.2-15.2	3.2	1.6-6.2	2.3	1.1-4.8
Hamburger, fried chicken pieces etc.	39.2	32.7-46.0	-	-	1.9	0.6-5.7	5.0	2.8-8.7	13.8	10.0-18.9	24.3	19.1-30.4	14.9	10.8-20.2	1.0	0.3-3.1
Doner, kebab, etc.	12.8	8.9-18.1	1.4	0.5-3.8	4.3	2.0-8.8	10.1	6.9-14.5	21.6	16.6-27.5	36.5	30.3-43.3	12.8	9.0-18.0	0.6	0.1-2.4
Pita, lahmacun (Turkish pizza), pizza, pancake, etc.	11.4	7.8-16.2	0.3	0.0-1.9	1.5	0.5-4.3	4.6	2.6-7.9	15.7	11.7-20.7	50.7	44.0-57.3	14.9	10.8-20.3	1.0	0.3-3.4
Chips, corn snacks	13.6	9.8-18.5	9.5	6.4-13.9	6.2	3.4-10.8	17.0	12.7-22.3	21.1	15.8-27.6	22.6	17.3-28.9	9.4	6.5-13.6	0.6	0.1-2.4

3.5.7. Frequency of Food Consumption Among Females in Age Group of 19-64 Years

The results of the analysis of the frequency of food consumption among females in the age group of 19-64 years across Turkey are given in Table 2.40. In this age group, the frequency of those who never consumed pasteurized milk was 84.5%, the frequency of those who never consumed UHT milk was 67.7%, and the frequency of those who never consumed loose milk was 61.0%. The frequency of those who never consumed probiotic milk and dairy products (kefir, etc.) was 90.5%, the frequency of those who never consumed yoghurt and ayran (diluted yoghurt) was 1.3%, the frequency of those who never consumed probiotic yoghurt was 87.3%, and the frequency of those who never consumed cheese was 2.0%. The frequency of those who consumed pasteurized milk every day was 2.2%, the frequency of those who consumed UHT milk every day was 4.7%, and the frequency of those who consumed loose milk every day was 3.4%. The frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.9%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.9%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.9%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.9%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.9%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.9%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.9%, the frequency of those who consumed probiotic yoghurt every day was 79.2%.

Females in the age group of 19-64 years, from the foods included in the meat-eggs-legumes group, never consumed beef with a frequency of 10.9%, lamb/mutton with a frequency of 42.3%, chicken with a frequency of 4.5%, turkey with a frequency of 90.3% and fish with a frequency of 8.5%. Among the foods in this group, the ones consumed every day were beef with a frequency of 3.2%, lamb/mutton with a frequency of 0.7%, chicken with a frequency of 1.8%. Among the foods in the meat-egg-legumes group, the ones consumed 2-3 times per week were beef with a frequency of 19.5%, lamb/mutton with a frequency of 7.2%, chicken with a frequency of 25.2%, turkey with a frequency of 0.4%, and fish with a frequency of 7.3%. The frequency of never consuming legumes in this group was 1.7%, the frequency of consumption of legumes every day was 0.9%, and the frequency of consumption of legumes 2-3 times per week was 21.8%.

Among females in the age group of 19-64 years, the frequency of those who never consumed eggs was 3.8%, the frequency of those who consumed them every day was 42.5%, and the frequency of those who consumed them 4-5 times per week was 12.6%. The frequency of those who never consumed nuts (hazelnuts, peanuts, pistachios, walnuts, etc.) was 7.8%, the frequency of those who consumed them every day was 18.7%, and the frequency of those who consumed them 4-5 times per week was 9.0%.

In the vegetables and fruits group, the frequency of those who never consumed green leafy vegetables was 2.5%, the frequency of those who consumed them every day was 29.2%, and the frequency of those who consumed them 4-5 times per week was 13.2%. The frequency of those who never consumed other fresh vegetables (leek, cabbage) was 9.8%, the frequency of those who consumed them every day was 2.5%, and the frequency of those who consumed them 4-5 times per week was 3.2%.

The frequency of those who never consumed citrus fruits was 3.7%, the frequency of those who consumed them every day was 13.6%, and the frequency of those who consumed them 4-5 times per week was 8.8%. The frequency of those who never consumed other fresh fruits was 3.4%, the frequency of those who consumed them every day was 37.0%, and the frequency of those who consumed them 4-5 times per week was 14.5%.

While the frequency of never consuming raisins was 30.4%, they were consumed every day with a frequency of 5.4%.

French fries were consumed every day with a frequency of 2.8%.

For females in the age group of 19-64 years, the frequencies of total vegetables consumption were as follows: 0.3% for those who never consumed them, 58.5% for those who consumed them every day, 13.0% for those who consumed them 4-5 times per week, 19.9% for those who consumed them 2-3 times per week, and 6.0% for those who consumed them once a week. The frequencies of total fruits consumption were as follows: 1.2% for those who never consumed them, 58.8% for those who consumed them every day, 12.5% for those who consumed them 4-5 times per week, 17.4% for those who consumed them 2-3 times per week, and 6.7% for those who consumed them once a week.

Females in the age group of 19-64 years, from the foods included in the bread and cereals group, never consumed white bread with a frequency of 11.6%, whole grain bread, rye bread, wholemeal bread with a frequency of 55.3%, Home-made unleavened breads (phyllo dough, etc.) with a frequency of and 41.9%. Among the foods in the bread and cereals group, the ones consumed every day were white bread with a frequency of 69.4%, whole grain bread, rye bread, wholemeal bread, etc. with a frequency of 16.3%, and home-made unleavened breads (phyllo dough etc.) with a frequency of 9.2%. Among the foods in the bread and cereals group, the ones consumed every day were white bread and cereals group, the ones consumed every day were rice with a frequency of 1.6%, bulghur with a frequency of 1.5%, pastries, cakes, buns with a frequency of 2.3%, biscuits/crackers with a frequency of 10.2%, and bagel with a frequency of 2.8%.

Among females in the age group of 19-64 years, the frequency of those who never consumed ready-made fruit juices was 51.5%, the frequency of those who consumed them every day was 2.2%, and the frequency of those who consumed them once a week was 9.4%. The frequency of those who never consumed freshly squeezed fruit juices was 95.2%, and the frequency of those who consumed them once a week was 10.1%. Freshly squeezed vegetable juices were never consumed with a frequency of 51.9%. The light and zero cola drinks were never consumed with a frequency of 91.8%, and and regular cola drinks were never consumed with a frequency of 45.8%. The frequency of those who consumed black tea every day was 89.7%, while this frequency was 5.6% for green tea and 5.9% for herbal teas. The frequency of never consuming Turkish coffee was 20.2%, while its frequency of everyday consumption was 26.0%.

Among females in the 19-64 years, the frequency of those who never consumed olive oil was 24.5%, the frequency of those who consumed it every day was 46.8%, and the frequency of those who consumed it once a week was 4.4%. These frequencies were 13.5%, 64.2% and 4.9% for sunflower oil, respectively. The frequency of those who never consumed hard margarines was 57.0%, the frequency of those who consumed them every day was 3.0%, and the frequency of those who consumed them once a week was 8.8%. The frequency of those who never consumed soft margarines was 76.6%, the frequency of those who consumed them every day was 2.6%, and the frequency of those who consumed them once a week was 4.3%.

The frequency of those who never consumed butter was 15.5%, the frequency of those who consumed it every day was 33.1%, and the frequency of those who consumed it once a week was 10.6%.

The frequency of those who never consumed table sugar was 32.6%, the frequency of those who consumed it every day was 55.1%, and the frequency of those who consumed it once a week was 2.6%. The frequency of never consuming pastry desserts [(tulumba (dough pastry deep fried dipped in syrup), lokma (yeast fritters in thick syrup), baklava (multilayered flaky pastry with nuts)] was 19.4%, and the frequency of consumption once a week was 11.7%.

While hamburgers, fried chicken pieces, etc. were never consumed with a frequency of 67.7%, the frequency of consumption once a week was 4.0%. The frequency of never consuming doner, kebab, etc. was 23.2%, the frequency of everyday consumption was 0.2%, and the frequency of consumption once a week was 9.7%. The frequency of those who never consumed pita, Turkish pizza, pizza, pancake was 14.3%, the frequency of those who consumed them every day was 0.2%, and the frequency of those who consumed them once a week was 10.7%.

Food Items								LES (aged 1								
	l	Never	6-7 t	ery day, imes per week		5 times er week		3 times er week		Once week		times month		han once nonth		't know/ sponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
MILK AND DAIRY PRODUCTS																
Pasteurized milk	84.5	83.3-85.7	2.2	1.8-2.7	1.1	0.8-1.4	3.8	3.1-4.7	3.0	2.5-3.6	3.0	2.5-3.6	2.1	1.7-2.6	0.3	0.2-0.5
UHT milk	67.7	66.0-69.3	4.7	4.0-5.5	1.8	1.4-2.3	7.5	6.6-8.6	7.4	6.5-8.4	6.4	5.6-7.3	4.2	3.6-4.9	0.4	0.2-0.6
Loose milk	61.0	59.3-62.7	3.4	2.8-4.0	1.8	1.4-2.3	7.7	6.9-8.6	11.4	10.4-12.4	9.5	8.5-10.6	5.0	4.4-5.8	0.2	0.1-0.3
Probiotic milk and dairy products (kefir etc.)	90.5	89.4-91.5	0.9	0.7-1.3	0.5	0.2-1.1	1.1	0.8-1.5	1.1	0.8-1.4	2.3	1.9-2.8	2.1	1.7-2.6	1.5	1.1-2.1
Yoghurt, ayran (diluted yoghurt)	1.3	1.1-1.7	52.5	50.7-54.2	13.6	12.5-14.7	20.9	19.3-22.5	7.6	6.7-8.7	2.9	2.3-3.6	1.1	0.7-1.7	0.1	0.0-0.2
Probiotic yoghurt	87.3	86.1-88.4	1.1	0.8-1.6	0.4	0.3-0.7	1.1	0.8-1.5	1.5	1.2-2.0	1.7	1.2-2.3	1.7	1.2-2.3	5.2	4.5-6.0
Cheese	2.0	1.6-2.5	79.2	77.7-80.7	5.5	4.7-6.4	8.4	7.5-9.5	2.9	2.4-3.6	1.1	0.7-1.7	0.7	0.3-1.3	0.2	0.1-0.5
Sweetened/fruit/cocoa/ chocolate flavored milks	84.2	82.8-85.5	2.0	1.5-2.7	0.7	0.5-1.2	2.5	1.9-3.3	2.8	2.2-3.4	3.3	2.7-4.1	4.0	3.4-4.8	0.4	0.2-0.7
Sweetened/fruit/cocoa/ chocolate flavored yoghurts	89.2	88.1-90.3	0.4	0.2-0.7	0.4	0.2-0.7	1.2	0.8-1.7	1.8	1.4-2.4	3.2	2.6-3.9	3.3	2.7-3.9	0.5	0.3-0.9
Cream/clotted cream (kaimak)	54.6	52.9-56.3	3.0	2.5-3.6	1.2	0.9-1.6	5.8	5.0-6.8	9.9	9.0-11.0	12.2	11.1-13.3	13.1	12.0-14.3	0.2	0.1-0.4
Ice cream	13.8	12.7-15.1	1.1	0.8-1.5	1.1	0.8-1.5	7.8	6.9-8.7	15.4	14.2-16.7	30.6	29.1-32.2	30.0	28.4-31.7	0.2	0.1-0.4
Milk desserts (kazandibi (white pudding with blackened surface), sütlaç (rice pudding), pudding, milk pudding	15.2	14.0-16.4	0.5	0.3-0.8	0.8	0.6-1.1	7.4	6.5-8.4	19.4	17.9-21.1	37.2	35.6-38.9	19.3	18.0-20.7	0.2	0.1-0.5
MEAT-EGGS-LEGUMES																
Beef	10.9	9.9-12.0	3.2	2.7-3.8	3.7	3.1-4.4	19.5	18.0-21.0	21.3	19.9-22.7	26.2	24.7-27.7	14.9	13.7-16.2	0.4	0.2-0.6
Lamb/mutton	42.3	40.5-44.1	0.7	0.5-1.0	1.4	1.0-1.8	7.2	6.4-8.2	11.1	10.2-12.2	19.8	18.4-21.2	16.9	15.6-18.2	0.7	0.4-1.0
Chicken	4.5	3.9-5.3	1.8	1.3-2.4	3.5	3.0-4.2	25.2	23.7-26.7	33.7	32.0-35.5	25.9	24.4-27.4	5.1	4.5-5.9	0.2	0.1-0.3
Turkey	90.3	89.3-91.3	0.0	0.0-0.1	0.0	0.0-0.1	0.4	0.2-0.6	1.0	0.7-1.4	2.2	1.8-2.7	5.8	5.1-6.7	0.3	0.1-0.5
Goose/duck	95.8	95.1-96.4	0.0	0.0-0.1	-	-	0.1	0.0-0.3	0.2	0.1-0.4	0.6	0.4-1.1	3.1	2.6-3.7	0.2	0.1-0.4
Fish	8.5	7.5-9.5	0.0	0.0-0.2	0.3	0.2-0.5	7.3	6.4-8.2	28.9	27.4-30.4	36.3	34.6-38.0	18.5	17.2-19.8	0.3	0.2-0.5
Seafood (calamars, shrimps, mussels, etc.)	87.3	86.2-88.4	0.1	0.0-0.3	0.0	0.0-0.2	0.3	0.2-0.6	1.0	0.7-1.4	4.5	3.9-5.3	6.2	5.4-7.0	0.5	0.4-0.7
Offals (liver, kidney, spleen, etc.)	51.2	49.4-52.9	0.0	0.0-0.2	0.1	0.0-0.2	0.5	0.3-0.8	2.1	1.7-2.6	17.4	16.1-18.7	28.6	27.0-30.2	0.2	0.1-0.3
Meat products (salami, sausage, fermented sausage, pastrami, etc.)	38.5	36.8-40.3	2.9	2.3-3.7	1.9	1.5-2.4	9.3	8.3-10.4	15.4	14.2-16.6	17.9	16.6-19.2	13.9	12.8-15.1	0.2	0.1-0.3
Nuts (hazelnuts, peanuts, pistachios, walnuts, etc.)	7.8	6.9-8.9	18.7	17.4-20.1	9.0	8.1-10.0	21.8	20.3-23.4	17.8	16.5-19.2	16.9	15.7-18.2	7.7	6.9-8.7	0.2	0.1-0.4
Legumes (dry beans, chickpeas, lentils, etc.)	1.7	1.3-2.2	0.9	0.3-0.5	1.4	1.0-1.8	21.8	20.4-23.3	41.1	39.5-42.8	29.5	27.8-31.2	3.7	3.1-4.4	0.1	0.0-0.2
Eggs	3.8	3.1-4.6	42.5	40.8-44.3	12.6	11.5-13.7	27.2	25.7-28.8	9.8	8.8-10.8	2.5	2.0-3.0	1.4	1.0-2.1	0.3	0.1-0.4

Food Items							FEN	MALES (age	d 19-64	4 years)						
		Never	6-7 t	ery day, imes per veek		5 times er week		3 times er week		Once week		3 times ' month		than once month		n't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
VEGETABLES AND FRUITS																
Green leafy vegetables	2.5	2.0-3.1	29.2	27.7-30.7	13.2	12.0-14.5	25.5	24.1-27.0	19.5	18.0-21.1	7.9	7.0-9.0	2.2	1.7-2.7	0.1	0.0-0.2
Other fresh vegetables (leek, cabbage)	9.8	8.7-11.0	2.5	2.0-3.0	3.2	2.7-3.8	14.5	13.4-15.7	29.2	27.6-30.9	28.7	27.1-30.2	11.9	10.8-13.1	0.2	0.1-0.4
Tomato	1.2	0.9-1.7	53.3	51.6-55.1	12.9	11.6-14.3	20.4	19.1-21.8	8.3	7.4-9.3	3.1	2.6-3.7	0.6	0.4-1.0	0.1	0.1-0.3
Green pepper (village pepper, banana pepper, long pepper, etc.)	3.9	3.2-4.8	39.8	38.2-41.5	11.5	10.3-12.9	24.3	22.8-25.8	13.3	12.2-14.4	5.2	4.5-6.0	1.8	1.4-2.4	0.1	0.0-0.2
Mushroom	30.6	29.0-32.2	0.1	0.0-0.2	0.2	0.1-0.5	2.1	1.6-2.6	11.3	10.3-12.5	29.1	27.6-30.7	26.4	24.8-28.0	0.2	0.1-0.3
Corn	23.1	21.5-24.6	0.5	0.3-0.7	0.8	0.5-1.2	4.5	3.9-5.3	11.5	10.5-12.7	27.8	26.3-29.3	31.6	30.0-33.3	0.2	0.1-0.4
Frozen vegetables/fruits	41.0	39.3-42.7	0.2	0.1-0.3	0.4	0.3-0.7	3.7	3.1-4.4	12.7	11.4-14.1	27.1	25.6-28.6	14.5	13.3-15.8	0.5	0.3-0.7
Dried vegetables	43.2	41.4-45.0	0.2	0.1-0.4	0.2	0.1-0.3	2.2	1.7-2.8	8.2	7.4-9.1	29.0	27.5-30.6	16.7	15.6-18.0	0.3	0.1-0.5
Dried fruits	34.8	33.1-36.5	4.8	4.1-5.5	2.2	1.8-2.7	9.8	8.9-10.9	11.9	10.9-13.0	22.4	20.8-24.1	13.8	12.7-15.0	0.2	0.1-0.5
Raisin	30.4	28.8-32.0	5.4	4.7-6.3	2.6	2.0-3.4	10.8	9.5-12.2	13.7	12.6-14.9	22.1	20.8-23.5	14.7	13.6-15.9	0.3	0.1-0.4
Citrus fruits	3.7	3.1-4.4	13.6	12.4-14.8	8.8	7.9-9.8	26.7	25.1-28.3	22.5	21.1-24.0	18.6	17.3-20.0	6.0	5.2-6.9	0.2	0.1-0.4
Other fresh fruits	3.4	2.8-4.1	37.0	35.3-38.7	14.5	13.3-15.8	23.5	22.1-24.9	12.2	11.1-13.4	6.3	5.5-7.2	2.9	2.4-3.6	0.2	0.1-0.4
Ready-made canned vegetables	86.4	85.2-87.5	0.1	0.0-0.2	0.0	0.0-0.1	0.7	0.5-1.0	1.3	1.0-1.7	5.7	5.0-6.5	5.5	4.8-6.4	0.3	0.2-0.5
Home-made canned vegetables	32.8	31.2-34.5	1.9	1.5-2.4	1.6	1.2-2.3	10.9	9.7-12.3	18.6	17.3-19.9	26.8	25.3-28.3	7.0	6.2-7.9	0.3	0.2-0.6
French fries	12.1	11.0-13.2	2.8	2.3-3.5	3.9	3.3-4.7	21.5	20.1-22.9	29.3	27.6-30.9	22.6	21.2-24.0	7.7	6.8-8.6	0.3	0.1-0.4
Vegetables, total	0.3	0.2-0.6	58.5	56.7-60.2	13.0	11.7-14.5	19.9	18.6-21.3	6.0	5.3-6.9	1.9	1.4-2.5	0.3	0.2-0.6	0.1	0.0-0.2
Fruits, total	1.2	0.9-1.7	58.8	57.1-60.6	12.5	11.4-13.6	17.4	16.1-18.8	6.7	5.8-7.6	2.5	1.9-3.1	0.9	0.6-1.3	0.1	0.0-0.2

Food Items							FEMA	LES (aged 1	L9-64 y	ears)						
	l	Never	6-7 t	ery day, imes per veek		5 times er week		times er week		Once week		3 times ' month		than once month		n't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BREAD-CEREALS																
White bread	11.6	10.5-12.7	69.4	67.8-70.9	4.0	3.3-4.8	6.2	5.4-7.0	3.6	3.0-4.3	2.7	2.2-3.3	2.6	2.1-3.1	0.1	0.0-0.2
Whole grain bread, rye bread, wholemeal bread etc.	55.3	53.5-57.0	16.3	15.1-17.6	2.8	2.4-3.4	7.3	6.3-8.4	5.5	4.7-6.3	6.5	5.5-7.8	6.1	5.4-6.9	0.2	0.1-0.3
Home-made unleavened breads (phyllo dough etc.)	41.9	40.2-43.6	9.2	8.3-10.3	1.4	1.0-1.9	4.4	3.8-5.1	10.7	9.6-11.8	18.8	17.3-20.4	13.4	12.3-14.5	0.2	0.1-0.4
Rice	5.0	4.3-5.7	1.6	1.3-2.1	3.8	3.2-4.5	33.5	31.7-35.3	32.2	30.6-33.8	19.1	17.9-20.4	4.6	3.9-5.3	0.2	0.1-0.4
Bulghur	2.4	1.9-2.9	1.5	1.1-2.0	4.1	3.5-4.8	37.9	36.2-39.7	36.4	34.8-38.2	15.0	13.9-16.3	2.5	2.1-3.1	0.1	0.1-0.3
Macaroni, noodles, couscous	3.5	3.0-4.1	1.2	0.8-1.7	2.7	2.2-3.4	30.2	28.5-31.9	38.8	37.1-40.5	19.4	18.1-20.7	3.9	3.3-4.7	0.3	0.1-0.8
Pastries, cakes, buns	8.5	7.6-9.6	2.3	1.8-2.9	1.6	1.3-2.1	9.7	8.8-10.7	24.4	23.0-25.9	38.5	36.7-40.2	14.8	13.6-16.0	0.2	0.1-0.3
Cookies	24.2	22.8-25.7	0.9	0.7-1.3	0.7	0.4-1.1	6.0	5.1-6.9	14.4	13.2-15.6	30.5	28.8-32.2	23.2	21.8-24.7	0.2	0.1-0.3
Tarhana (fermented dried yoghurt and flour mixture)	27.2	25.6-28.8	3.0	2.6-3.6	3.9	3.3-4.5	16.5	15.3-17.6	21.4	20.0-22.8	19.7	18.2-21.3	8.1	7.2-9.2	0.2	0.1-0.3
Biscuits/crackers	20.8	19.4-22.2	10.2	9.2-11.3	7.4	6.5-8.4	18.3	16.9-19.9	15.9	14.7-17.2	15.0	13.8-16.2	12.3	11.2-13.5	0.1	0.1-0.3
Bagel	17.9	16.6-19.2	2.8	2.2-3.4	2.2	1.7-2.7	13.8	12.4-15.2	21.2	19.9-22.6	23.8	22.4-25.3	18.2	16.9-19.6	0.1	0.1-0.3
Breakfast cereals (muesli, corn flakes, wheat flakes, etc.).	88.3	87.2-89.4	0.7	0.4-1.0	0.4	0.2-0.7	2.2	1.7-2.8	1.5	1.2-2.0	2.9	2.4-3.5	3.3	2.7-4.0	0.7	0.5-1.0

Food Items							FEM	ALES (aged	19-64	years)						
		Never	6-7 t	ery day, imes per veek		5 times r week		8 times er week		Once week		times month		han once nonth		n't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BEVERAGES																
Ready-made fruit juices	51.5	49.7-53.2	2.2	1.7-2.8	1.7	1.3-2.3	6.1	5.3-7.1	9.4	8.4-10.5	13.0	11.9-14.2	15.8	14.5-17.2	0.2	0.1-0.3
Freshly squeezed fruit juices	51.9	50.1-53.6	1.1	0.8-1.5	0.6	0.5-0.9	6.8	5.9-7.7	10.1	9.1-11.1	16.2	15.0-17.5	13.1	12.0-14.3	0.2	0.1-0.5
Freshly squeezed vegetable juices	95.2	94.4-95.9	0.2	0.1-0.4	0.1	0.0-0.2	0.4	0.3-0.6	0.8	0.5-1.4	1.2	0.9-1.6	1.8	1.4-2.2	0.3	0.2-0.6
Light, zero cola drinks	91.8	90.7-92.7	0.5	0.3-0.8	0.2	0.1-0.4	1.1	0.8-1.5	1.4	1.0-1.8	2.1	1.7-2.6	2.6	2.0-3.3	0.4	0.3-0.7
Regular cola drinks	45.8	44.0-47.5	3.4	2.8-4.0	2.1	1.7-2.7	8.4	7.4-9.5	11.5	10.5-12.7	16.0	14.6-17.6	12.6	11.5-13.8	0.2	0.1-0.4
Ice teas	78.3	76.5-79.9	0.6	0.4-0.8	1.1	0.7-1.9	2.9	2.4-3.6	4.2	3.5-4.9	7.0	5.9-8.4	5.5	4.7-6.5	0.4	0.2-0.7
Tea (black)	2.8	2.3-3.4	89.7	88.6-90.7	1.7	1.3-2.2	2.8	2.3-3.4	1.5	1.1-1.9	0.8	0.5-1.1	0.6	0.4-0.9	0.2	0.1-0.4
Green tea	69.0	67.3-70.6	5.6	4.8-6.4	1.8	1.4-2.3	5.6	4.8-6.4	5.1	4.4-5.9	5.8	5.1-6.6	7.0	5.8-8.3	0.2	0.1-0.5
Herbal teas	44.2	42.5-46.0	5.9	5.2-6.8	2.5	2.0-3.2	9.7	8.8-10.7	9.4	8.4-10.4	13.2	12.1-14.4	14.8	13.4-16.2	0.2	0.1-0.5
Mineral water, soda	37.6	36.0-39.3	8.6	7.7-9.5	4.0	3.4-4.7	12.7	11.6-13.9	11.7	10.7-12.8	14.1	12.9-15.4	11.0	9.7-12.5	0.2	0.1-0.3
Instant granulated coffee	49.7	48.0-51.5	10.9	9.9-12.0	3.0	2.4-3.7	10.1	9.2-11.2	9.0	8.1-10.0	9.5	8.3-10.8	7.6	6.8-8.5	0.2	0.1-0.3
Filter coffee	91.7	90.6-92.6	1.7	1.2-2.3	0.5	0.3-0.8	1.1	0.8-1.5	1.2	0.9-1.7	1.5	1.0-2.1	1.6	1.2-1.9	0.8	0.6-1.2
Turkish coffee	20.2	18.8-21.7	26.0	24.6-27.5	6.9	6.0-7.9	16.6	15.4-17.9	11.7	10.6-12.8	12.0	10.7-13.4	6.5	5.8-7.3	0.1	0.1-0.2
Energy drinks	96.8	96.1-97.3	0.0	0.0-0.1	0.0	0.0-0.2	0.4	0.2-0.7	0.3	0.2-0.5	0.7	0.5-1.1	1.2	0.9-1.7	0.6	0.4-0.9
Alcoholic beverages	92.4	91.4-93.2	0.0	0.0-0.1	0.1	0.0-0.2	0.8	0.5-1.2	0.7	0.5-1.0	2.7	2.2-3.4	3.1	2.6-3.7	0.2	0.1-0.3

Food Items					_	F	EMALE	S (aged 19-	64 yea	rs)						
		Never		ery day,		5 times		times		Once		3 times		than once		
				imes per veek	pe	r week	pe	r week	а	week	per	month	а	month	No re	esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
OILS, FATS, SUGAR, DESSERTS																
Olive oil	24.5	23.0-26.0	46.8	45.1-48.6	5.6	4.9-6.4	10.7	9.6-11.8	4.4	3.7-5.2	3.9	3.3-4.6	3.5	2.8-4.4	0.6	0.4-0.9
Hazelnut oil	96.2	95.4-96.9	1.1	0.7-1.7	0.1	0.1-0.3	0.3	0.2-0.5	0.4	0.2-0.7	0.5	0.3-0.8	0.8	0.5-1.2	0.6	0.4-1.0
Sunflower oil	13.5	12.4-14.6	64.2	62.6-65.8	4.0	3.4-4.7	6.6	5.8-7.4	4.9	4.3-5.5	4.8	4.2-5.6	1.4	1.1-1.8	0.7	0.4-1.0
Corn oil	87.8	86.5-89.1	4.4	3.8-5.0	1.2	0.5-2.7	1.8	1.5-2.3	1.2	0.9-1.5	1.5	1.2-1.9	1.2	1.0-1.6	0.9	0.6-1.3
Soybean oil	98.7	98.3-99.1	0.0	0.0-0.1	-	-	0.0	0.0-0.1	0.0	0.0-0.1	0.1	0.0-0.2	0.1	0.0-0.3	1.1	0.7-1.5
Canola oil	98.2	97.7-98.7	0.2	0.1-0.5	0.0	0.0-0.1	0.1	0.1-0.4	0.0	0.0-0.1	0.1	0.0-0.1	0.2	0.1-0.5	1.2	0.8-1.6
Hard margarine	57.0	55.2-58.8	3.0	2.5-3.7	1.4	1.1-1.9	6.6	5.5-7.9	8.8	7.8-9.9	13.3	12.2-14.6	9.1	8.2-10.2	0.6	0.4-1.0
Soft margarine	76.6	74.9-78.2	2.6	2.1-3.1	1.2	0.9-1.6	4.3	3.3-5.6	4.3	3.6-5.0	5.2	4.5-6.0	5.3	4.6-6.2	0.6	0.4-0.9
Butter	15.5	14.2-16.9	33.1	31.5-34.7	8.2	7.0-9.5	20.7	19.4-22.0	10.6	9.6-11.7	7.5	6.6-8.5	4.0	3.3-4.9	0.4	0.3-0.7
Tail fat, tallow	79.9	78.5-81.2	0.8	0.6-1.2	0.4	0.2-0.8	1.5	1.2-1.9	2.5	2.0-3.1	6.4	5.6-7.3	7.9	7.0-8.9	0.5	0.3-0.8
Table sugar	32.6	30.9-34.3	55.1	53.4-56.9	1.7	1.3-2.2	2.5	2.0-3.1	2.6	2.1-3.4	3.1	2.5-3.7	2.2	1.8-2.7	0.2	0.1-0.3
Honey, jam, molasses	13.2	12.1-14.5	37.4	35.8-39.0	7.9	6.8-9.2	16.9	15.7-18.2	11.4	10.3-12.6	7.8	6.8-8.8	5.3	4.6-6.2	0.1	0.1-0.3
Sweets, Turkish Delight, chocolate	17.5	16.4-18.8	11.9	10.8-13.1	6.3	5.5-7.3	16.8	15.4-18.3	16.9	15.6-18.2	18.6	17.3-20.0	11.7	10.7-12.7	0.2	0.1-0.4
Pastry desserts, syrup sweetened (tulumba, lokma, baklava)	19.4	18.0-20.8	0.4	0.3-0.6	0.5	0.3-0.8	4.9	4.2-5.8	11.7	10.6-12.8	34.4	32.7-36.1	28.5	27.0-30.1	0.2	0.1-0.4
Pastry products with cream filling (cake, etc.)	27.6	26.1-29.2	0.2	0.1-0.4	0.2	0.1-0.3	2.5	1.9-3.2	7.4	6.5-8.4	29.4	27.8-31.1	32.5	30.8-34.2	0.3	0.1-0.5
Artificial sweeteners	98.0	97.5-98.4	0.3	0.2-0.5	0.0	0.0-0.1	0.1	0.1-0.3	0.1	0.0-0.3	0.2	0.1-0.3	0.3	0.2-0.5	0.9	0.7-1.3
Instant soups	76.7	75.2-78.1	0.2	0.1-0.4	0.4	0.2-0.7	2.3	1.8-2.9	4.3	3.7-5.0	7.9	7.0-8.9	8.1	7.2-9.0	0.2	0.1-0.3
Smoked products	93.7	92.9-94.4	0.1	0.0-0.2	0.1	0.0-0.4	0.2	0.1-0.4	0.4	0.3-0.7	1.4	1.1-1.8	1.9	1.5-2.3	2.2	1.8-2.7
Meat bouillon cube, chicken bouillon cube	59.6	57.9-61.3	5.3	4.6-6.1	2.9	2.4-3.5	11.3	10.3-12.4	9.1	8.2-10.1	7.4	6.5-8.5	3.9	3.2-4.6	0.4	0.3-0.7
Hamburger, fried chicken pieces etc.	67.7	66.0-69.4	0.1	0.0-0.4	0.2	0.1-0.5	2.3	1.7-3.0	4.0	3.3-4.9	14.3	13.1-15.6	11.1	10.1-12.3	0.2	0.1-0.3
Doner, kebab, etc.	23.2	21.8-24.6	0.2	0.1-0.3	0.2	0.1-0.4	4.2	3.4-5.1	9.7	8.7-10.9	37.3	35.7-39.0	25.1	23.6-26.7	0.1	0.1-0.3
Pita, lahmacun (Turkish pizza), pizza, pancake, etc.	14.3	13.2-15.5	0.2	0.1-0.3	0.1	0.1-0.3	3.4	2.7-4.2	10.7	9.6-12.0	46.9	45.1-48.6	24.3	22.7-25.8	0.2	0.1-0.3
Chips, corn snacks	50.4	48.7-52.2	2.5	2.0-3.1	1.1	0.8-1.6	6.7	5.7-7.8	10.4	9.3-11.6	14.3	13.2-15.6	14.4	13.0-15.9	0.2	0.1-0.4

Table 2.40. Distribution of frequency of	food consumption among fema	ales in the age group of 19-64	vears. TNHS 2017 (continued)

3.5.8. Frequency of Food Consumption Among Females in the Age Group of 65 Years and Over

The results of the analysis of the frequency of food consumption among females in the age group of 65 years and over across Turkey are given in Table 2.41. In this age group, the frequency of those who never consumed pasteurized milk was 88.6%, the frequency of those who never consumed UHT milk was 76.7%, and the frequency of those who never consumed loose milk was 47.6%. The frequency of those who never consumed probiotic milk and dairy products (kefir, etc.) was 90.9%, the frequency of those who never consumed yoghurt and ayran (diluted yoghurt) was 2.1%, the frequency of those who never consumed probiotic yoghurt was 90.6%, and the frequency of those who never consumed cheese was 2.0%. The frequency of those who consumed pasteurized milk every day was 2.2%, the frequency of those who consumed UHT milk every day was 5.9%, and the frequency of those who consumed loose milk every day was 5.9%. The frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.9%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.9%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.9%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.9%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.9%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.9%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.9%, the frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 0.9%, the frequency of those who consumed probiotic yoghurt every day was 1.5%, and the frequency of those who consumed cheese every day was 82.5%.

Females in the age group of 65 years and over, from the foods included in the meat-eggs-legumes group, never consumed beef with a frequency of 14.6%, lamb/mutton with a frequency of 36.8%, chicken with a frequency of 8.4%, turkey with a frequency of 89.2% and fish with a frequency of 14.6%. Among the foods in this group, the ones consumed every day were beef with a frequency of 2.4%, lamb/mutton with a frequency of 0.7%, chicken with a frequency of 0.5%. Among the foods in the meat-eggs-legumes group, the ones consumed 2-3 times per week were beef with a frequency of 15.2%, lamb/mutton with a frequency of 9.6%, chicken with a frequency of 17.3%, turkey with a frequency of 0.2%, and fish with a frequency of 7.3%. The frequency of never consuming legumes in this group was 4.2%, the frequency of consumption of legumes every day was 0.2%, and the frequency of consumption of legumes 2-3 days a week was 15.2%.

Among females in the age group of 65 years and over, the frequency of those who never consumed eggs was 3.8%, the frequency of those who consumed them every day was 29.1%, and the frequency of those who consumed them 4-5 times per week was 15.2%. The frequency of those who never consumed nuts (hazelnuts, peanuts, pistachios, walnuts, etc.) was 17.4%, the frequency of those who consumed them every day was 17.7%, and the frequency of those who consumed them 4-5 times per week was 7.6%.

In the vegetables and fruits group, the frequency of those who never consumed green leafy vegetables was 2.4%, the frequency of those who consumed them every day was 27.7%, and the frequency of those who consumed them 4-5 times per week was 10.9%. The frequency of those who never consumed other fresh vegetables (leek, cabbage) was 4.7%, the frequency of those who consumed them every day was 3.3%, and the frequency of those who consumed them 4-5 times per week was 3.2%.

The frequency of those who never consumed citrus fruits was 4.9%, the frequency of those who consumed them every day was 11.7%, and the frequency of those who consumed them 4-5 times per week was 8.5%. The frequency of those who never consumed other fresh vegetables was 4.3%, the frequency of those who consumed them every day was 37.9%, and the frequency of those who consumed them 4-5 times per week was 14.8%.

While the frequency of never consuming raisins was 30.3%, they were consumed every day with a frequency of 4.9%.

French fries were consumed every day with a frequency of 0.5%.

For females in the age group of 65 years and over, the frequencies of total vegetables consumption were as follows: 0.2% for those who never consumed them, 58.8% for those who consumed them every day, 14.1% for those who consumed them 4-5 times per week, 19.6% for those who consumed them 2-3 times per week, and 4.0% for those who consumed them once a week. The frequencies of total fruits consumption were as follows: 0.2% for those who never consumed them, 64.5% for those who consumed them every day, 11.9% for those who consumed them 4-5 times per week, 15.8% for those who consumed them 2-3 times per week, and 4.5% for those who consumed them 4-5 times per week, 15.8% for those who consumed them 2-3 times per week, and 4.5% for those who consumed them 0.2% times per week, 15.8% for those who consumed them 2-3 times per week, and 4.5% for those who consumed them 0.2% times per week, and 4.5% for those who consumed them 0.2% times per week, 0.2% for those who consumed them 0.2% times per week, 0.2% for those who consumed them 0.2% times per week, 0.2% for those 0.2% times per week, 0.2% for those 0.2% times per week, 0.2% times per week, 0.2% times 0.2% times per week, 0.2% times 0.2% times per week, 0.2% times 0.2% times 0.2% times per week, 0.2% times 0.2%

Females aged 65 years and over, from the foods included in the bread and cereals group, never consumed white bread with a frequency of 14.7%, whole grain bread, rye bread, wholemeal bread with a frequency of 55.0%, and home-made unleavened breads (phyllo dough, etc.) with a frequency of 41.6%. Among the foods in the bread and cereals group, the ones consumed every day were white bread with a frequency of 61.8%, whole grain bread, rye bread, wholemeal bread, etc. with a frequency of 21.3%, and home-made unleavened breads (phyllo dough etc.) with a frequency of 11.4%. Among the foods in the bread and cereals group, the ones consumed every of 0.3%, bulghur with a frequency of 0.4%, pastry, cakes, buns with a frequency of 1.0%, biscuits/crackers with a frequency of 3.7%, and bagel with a frequency of 1.0%.

Among females in the age group of 65 years and over, the frequency of those who never consumed readymade fruit juices was 58.1%, the frequency of those who consumed them every day was 1.0%, and the frequency of those who consumed them once a week was 7.7%. The frequency of those who never consumed freshly squeezed fruit juices was 62.0%, and the frequency of those who consumed them once a week was 9.3%. Freshly squeezed vegetable juices were never consumed with a frequency of 96.1%. The light and zero cola drinks were never consumed with a frequency of 97.9%, and regular cola drinks were never consumed with a frequency of 67.2%. The frequency of those who consumed black tea every day was 67.2%, while this frequency was 2.2% for green tea and 3.2% for herbal teas. The frequency of never consuming Turkish coffee was 36.9%, while its frequency of everyday consumption was 15.1%.

Among females in the age group of 65 years and over, the frequency of those who never consumed olive oil was 27.8%, the frequency of those who consumed it every day was 49.0%, and the frequency of those who consumed it once a week was 3.3%. The frequency of those who never consumed sunflower oil was 21.9%, the frequency of those who consumed it every day was 52.6%, and the frequency of those who consumed it once a week was 5.6%. The frequency of those who never consumed hard margarines was 73.8%, the frequency of those who consumed them every day was 1.3%, and the frequency of those who consumed them once a week was 5.6%. The frequency of those who never consumed soft margarines was 86.1%, the frequency of those who consumed them every day was 1.3%, and the frequency of those who consumed them once a week was 2.6%.

The frequency of those who never consumed butter was 16.6%, the frequency of those who consumed it every day was 36.6%, and the frequency of those who consumed it once a week was 10.4%.

The frequency of those who never consumed table sugar was 28.4%, the frequency of those who consumed it every day was 63.0%, and the frequency of those who consumed it once a week was 1.0%. The frequency of never consuming pastry desserts [(tulumba (dough pastry deep fried dipped in syrup), lokma (yeast fritters in thick syrup), baklava (multilayered flaky pastry with nuts)] was 32.0%, and the frequency of consumption once a week was 5.7%.

While hamburgers, fried chicken pieces, etc. were never consumed with a frequency of 88.8%, the frequency of consumption once a week was 1.0%. The frequency of never consuming doner, kebab, etc. was 46.4%, the frequency of consumption once a week was 1.9%. The frequency of those whose never consumed pita, Turkish pizza, pizza, pancake was 31.3%, and the frequency of those who consumed them once a week was 4.4%.

Food Items							FEN	ALES (age	d ≥ 65 [.]	years)						
		Never	Eve	ery day,	4-	5 times	2-3	times	(Once	1-3	3 times	Less t	han once	Doesr	n't know/
			6-7 t	imes per	pe	er week	ре	r week	a	week	per	month	ar	nonth	No r	esponse
			v	veek												
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
MILK AND DAIRY PRODUCTS																
Pasteurized milk	88.6	86.1-90.7	2.2	1.4-3.5	0.4	0.2-1.0	2.8	1.8-4.2	2.3	1.3-4.2	1.4	0.9-2.3	1.3	0.7-2.6	0.9	0.5-1.6
UHT milk	76.7	73.3-79.7	5.9	3.9-8.8	0.5	0.3-1.0	4.2	3.1-5.7	3.4	2.5-4.6	5.7	4.2-7.7	2.8	1.9-4.0	0.8	0.4-1.5
Loose milk	47.6	43.8-51.3	5.9	4.2-8.2	2.5	1.7-3.6	11.6	9.2-14.4	14.6	12.5-17.0	12.6	10.5-15.1	4.6	3.5-6.1	0.6	0.3-1.3
Probiotic milk and dairy products (kefir etc.)	90.9	88.3-92.9	0.9	0.5-1.9	0.1	0.0-0.5	1.3	0.7-2.4	0.7	0.3-1.7	0.8	0.4-1.5	2.3	1.2-4.5	2.9	2.0-4.4
Yoghurt, ayran (diluted yoghurt)	2.1	1.3-3.5	53.6	49.9-57.4	14.8	12.3-17.6	20.2	17.3-23.6	5.4	4.2-6.9	2.6	1.6-4.4	0.7	0.3-1.5	0.5	0.2-1.1
Probiotic yoghurt	90.6	87.9-92.7	1.5	0.5-4.4	0.2	0.1-0.5	0.4	1.1-1.2	0.2	0.1-0.6	0.5	0.2-1.2	0.4	0.2-0.9	6.2	4.8-8.1
Cheese	2.0	1.3-3.2	82.5	79.1-85.4	5.5	4.3-7.1	5.1	3.8-7.0	2.6	1.1-5.9	1.3	0.5-3.7	0.2	0.1-0.6	0.7	0.3-1.4
Sweetened/fruit/cocoa/ chocolate flavored milks	96.9	95.6-97.8	0.1	0.0-0.5	0.5	0.2-1.5	0.1	0.0-0.4	0.4	0.2-1.1	0.3	0.1-0.8	0.7	0.3-1.4	0.9	0.5-1.8
Sweetened/fruit/cocoa/ chocolate flavored yoghurts	97.6	96.4-98.4	0.1	0.0-0.6	0.2	0.0-0.9	0.2	0.1-0.7	0.1	0.0-0.5	0.2	0.1-0.9	0.5	0.3-1.0	1.1	0.6-2.1
Cream/clotted cream (kaimak)	63.3	59.6-66.8	2.2	1.4-3.5	0.8	0.4-1.8	4.3	3.2-5.7	6.4	5.1-8.1	10.1	7.7-13.2	12.0	9.9-14.5	0.8	0.4-1.6
Ice cream	30.5	27.1-34.1	0.2	0.1-0.5	0.3	0.1-1.0	3.2	2.1-4.8	8.8	7.0-11.1	17.8	15.1-20.9	38.4	34.9-42.1	0.7	0.3-1.4
Milk desserts (kazandibi (white pudding with blackened surface), sütlaç (rice pudding), pudding, milk pudding	21.6	18.6-24.8	0.5	0.2-1.7	0.1	0.0-0.5	2.1	1.5-3.1	14.0	11.1-17.5	33.0	29.7-36.4	27.9	24.7-31.4	0.7	0.4-1.4
MEAT-EGGS-LEGUMES																
Beef	14.7	12.2-17.7	2.4	1.5-3.6	2.4	1.6-3.8	15.2	12.9-17.7	20.6	17.8-23.7	28.5	25.0-32.3	15.1	12.7-17.9	1.1	0.6-1.9
Lamb/mutton	36.8	33.2-40.5	0.7	0.3-1.7	0.8	0.4-1.6	9.6	7.3-12.5	12.8	10.2-15.8	18.4	15.9-21.3	20.0	17.5-22.7	0.9	0.5-1.7
Chicken	8.4	6.7-10.4	0.5	0.2-1.4	2.3	1.4-3.7	17.3	14.7-20.2	29.5	26.3-33.0	30.8	27.4-34.5	9.4	7.7-11.6	1.7	0.7-4.5
Turkey	89.2	86.4-91.5	-	-	0.5	0.1-1.7	0.2	0.0-0.9	0.8	0.4-1.6	2.2	1.3-3.7	6.4	4.5-8.8	0.8	0.4-1.5
Goose/duck	95.3	92.8-97.0	-	-	-	-	-	-	0.1	0.0-0.4	0.6	0.2-1.6	3.2	1.8-5.8	0.8	0.4-1.5
Fish	14.6	12.3-17.2	0.0	0.0-0.3	0.1	0.0-0.4	7.3	5.4-9.6	20.6	17.5-24.2	32.6	29.4-36.1	22.7	19.9-25.8	2.0	0.8-4.8
Seafood (calamars, shrimps, mussels, etc.)	94.6	93.1-95.8	0.1	0.0-0.9	-	-	0.0	0.0-0.2	-	-	1.5	1.0-2.5	2.3	1.5-3.4	1.4	0.8-2.3
Offals (liver, kidney, spleen, etc.)	44.2	40.5-48.0	-	-	-	-	0.4	0.1-1.5	1.9	1.1-3.2	16.6	13.9-19.7	36.1	32.8-39.6	0.7	0.4-1.4
Meat products (salami, sausage, fermented sausage, pastrami, etc.)	57.0	53.2-60.7	1.2	0.4-3.5	0.9	0.3-2.1	4.3	3.1-6.1	7.8	6.1-10.0	15.2	12.5-18.3	12.7	10.5-15.2	1.0	0.6-1.7
Nuts (hazelnuts, peanuts, pistachios, walnuts, etc.)	17.4	14.9-20.3	17.7	15.0-20.7	7.6	6.0-9.6	15.5	13.2-18.0	14.4	12.0-17.2	18.6	15.4-22.3	7.8	6.1-10.0	0.9	0.5-1.7
Legumes (dry beans, chickpeas, lentils, etc.)	4.2	3.0-5.8	0.2	0.1-0.6	1.2	0.6-2.4	15.2	12.7-18.2	39.9	36.2-43.6	32.6	29.2-36.2	6.0	4.6-7.8	0.8	0.4-1.5
Eggs	3.8	2.7-5.4	29.1	25.9-32.6	15.2	12.8-17.9	33.6	30.1-37.2	9.7	7.8-12.1	4.6	3.3-6.4	3.0	1.5-5.8	1.0	0.5-1.8

Food Items							FEI	MALES (age	d ≥65 y	/ears)						
		Never	6-7 t	ery day, imes per veek		5 times er week		times er week		Once week		3 times r month		han once: nonth		n't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
VEGETABLES AND FRUITS																
Green leafy vegetables	2.4	1.5-3.7	27.7	24.2-31.5	10.9	9.0-13.1	27.2	24.0-30.7	18.3	15.8-21.2	9.2	7.5-11.2	2.9	2.0-4.2	1.4	0.8-2.5
Other fresh vegetables (leek, cabbage)	4.7	3.1-7.2	3.3	2.2-4.9	3.2	2.0-5.2	15.7	13.3-18.4	31.4	28.0-35.0	28.1	24.9-31.6	12.2	10.2-14.7	1.4	0.7-2.5
Tomato	1.8	1.0-3.1	53.1	49.4-56.8	12.1	9.7-15.0	17.1	14.8-19.8	11.6	9.4-14.3	2.3	1.5-3.3	0.9	0.5-1.7	1.1	0.6-2.0
Green pepper (village pepper, banana pepper, long pepper, etc.)	3.4	2.3-5.1	41.3	37.7-45.0	12.6	10.1-15.5	23.2	20.0-26.7	11.8	9.8-14.2	5.3	3.8-7.4	1.3	0.8-2.0	1.1	0.6-2.1
Mushroom	38.6	34.9-42.4	0.1	0.0-0.9	0.2	0.1-1.0	0.4	0.2-1.1	6.3	4.8-8.2	22.8	19.8-26.1	30.4	27.2-33.8	1.1	0.6-2.0
Corn	28.5	25.4-31.7	0.3	0.1-0.9	0.6	0.2-1.4	2.4	1.5-3.6	9.5	7.4-12.0	22.7	19.8-25.9	35.1	31.5-38.9	1.0	0.6-1.8
Frozen vegetables/fruits	42.8	39.2-46.5	-	-	0.2	0.0-1.1	1.4	0.8-2.3	11.8	9.1-15.0	28.8	25.6-32.1	13.8	11.4-16.6	1.3	0.8-2.1
Dried vegetables	46.2	42.5-50.0	0.4	0.1-1.4	0.0	0.0-0.3	1.2	0.6-2.4	8.7	7.0-11.0	25.6	22.5-28.9	16.7	14.0-19.8	1.1	0.6-1.9
Dried fruits	33.0	29.6-36.6	4.6	3.0-7.0	2.7	1.8-4.0	9.6	7.6-12.1	13.4	11.2-16.0	21.6	18.5-25.2	14.2	12.0-16.6	0.9	0.5-1.6
Raisin	30.3	27.1-33.8	4.9	3.6-6.7	2.8	1.9-4.0	10.8	8.7-13.4	12.8	10.6-15.3	21.7	18.4-25.3	15.8	13.4-18.6	1.0	0.5-2.0
Citrus fruits	4.9	3.1-7.8	11.7	9.5-14.3	8.5	6.3-11.4	23.5	20.5-26.8	24.6	21.6-27.8	19.3	16.7-22.2	6.8	5.4-8.6	0.7	0.4-1.4
Other fresh fruits	4.3	2.6-7.0	37.9	34.5-41.6	14.8	12.4-17.7	22.4	19.2-25.8	11.7	9.7-14.1	5.0	3.8-6.4	3.0	1.9-4.7	0.9	0.5-1.7
Ready-made canned vegetables	92.4	89.4-94.6	0.3		-	-	0.0	0.0-0.3	0.6	0.2-2.0	2.3	1.4-3.8	3.7	2.0-6.7	0.7	0.4-1.4
Home-made canned vegetables	47.9	44.1-51.6	1.0	0.5-2.0	1.1	0.6-2.0	6.0	4.2-8.4	16.3	13.9-19.0	20.5	17.8-23.4	6.6	4.8-9.1	0.8	0.4-1.5
French fries	25.7	22.6-29.1	0.5	0.2-1.4	0.9	0.5-1.6	11.8	9.2-14.9	22.1	19.3-25.3	23.0	20.2-26.1	15.2	12.6-18.3	0.7	0.4-1.4
Vegetables, total	0.2	0.0-1.0	58.8	55.2-62.4	14.1	11.8-16.6	19.6	16.7-22.8	4.0	3.0-5.5	1.4	0.9-2.2	1.0	0.4-2.2	0.9	0.5-1.7
Fruits, total	0.2	0.0-0.6	64.5	60.8-68.0	11.9	9.8-14.3	15.8	13.1-19.0	4.5	3.3-6.1	2.0	1.3-3.1	0.3	0.1-1.0	0.8	0.4-1.6

Food Items							FEN	1ALES (aged	l ≥65 y	ears)						
		Never	6-7 1	ery day, times per week		5 times er week		times er week		Once week		3 times ' month		than once month		i't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BREAD-CEREALS																
White bread	14.7	12.1-17.7	61.8	58.1-60.4	5.0	3.6-6.8	7.1	5.6-9.0	4.0	2.9-5.4	2.2	1.5-3.0	4.6	3.1-6.7	0.8	0.4-1.5
Whole grain bread, rye bread, wholemeal bread etc.	55.0	51.2-58.6	21.3	18.3-24.7	3.0	2.1-4.3	6.9	5.3-9.0	3.4	2.5-4.7	4.0	2.7-5.8	5.5	4.2-7.3	0.8	0.4-1.5
Home-made unleavened breads (phyllo dough etc.)	41.6	38.0-45.3	11.4	9.4-13.7	1.5	1.0-2.3	4.3	3.1-5.9	10.1	8.0-12.6	15.8	13.1-19.1	14.4	11.9-17.4	0.9	0.5-1.6
Rice	9.2	7.3-11.5	0.3	0.1-1.0	1.6	0.9-2.9	21.2	18.1-24.7	30.7	27.6-34.1	27.3	24.1-30.9	8.8	6.9-11.3	0.8	0.4-1.5
Bulghur	3.0	2.0-4.5	0.4	0.2-0.9	2.4	1.6-3.5	33.3	29.8-37.0	37.6	34.1-41.2	20.0	17.1-23.2	2.5	1.6-4.0	0.8	0.4-1.5
Macaroni, noodles, couscous	7.7	6.0-9.8	0.2	0.0-0.7	0.5	0.2-1.0	20.9	17.8-24.5	35.7	32.3-39.2	27.5	24.2-31.0	6.8	5.4-8.6	0.8	0.4-1.5
Pastries, cakes, buns	12.5	10.5-14.9	1.0	0.5-2.1	0.3	0.1-1.0	5.3	3.9-7.2	17.6	14.9-20.6	38.5	34.9-42.3	23.7	20.7-27.0	1.0	0.6-1.8
Cookies	38.9	35.4-42.6	0.3	0.1-0.9	0.1	0.0-0.4	2.4	1.6-3.6	7.6	5.9-9.6	20.5	17.8-23.5	29.3	25.8-33.0	0.9	0.5-1.6
Tarhana (fermented dried yoghurt and flour mixture)	23.4	20.0-27.1	4.4	3.2-6.1	6.0	4.5-8.0	17.1	14.7-19.8	22.7	19.9-25.6	18.5	15.7-21.6	7.2	5.4-9.5	0.7	0.4-1.4
Biscuits/crackers	33.9	30.5-37.5	3.7	2.8-4.9	3.4	2.5-4.6	15.2	12.4-18.5	13.0	10.8-15.5	14.9	12.3-17.9	15.2	12.7-18.1	0.8	0.4-1.5
Bagel	27.2	24.0-30.7	1.0	0.4-2.4	0.5	0.2-1.2	6.8	4.7-9.8	16.1	13.5-18.9	24.9	21.9-28.1	22.8	19.9-26.0	0.8	0.4-1.5
Breakfast cereals (muesli, corn flakes, wheat flakes, etc.).	95.8	94.3-96.9	0.2	010.9	-	-	0.3	0.1-0.8	0.2	0.0-1.0	0.4	0.1-1.1	0.8	0.4-1.6	2.4	1.6-3.5

Food Items		FEMALES (≥65 years)														
		Never	Every day, 6-7 times per week		4-5 times per week		2-3 times per week		Once a week		1-3 times per month		Less than once a month		Doesn't know No respons	
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BEVERAGES																
Ready-made fruit juices	58.1	54.5-61.7	1.0	0.6-1.8	1.0	0.5-1.9	4.9	3.6-6.8	7.7	5.9-9.9	11.0	9.0-13.2	15.6	13.4-18.1	0.7	0.3-1.4
Freshly squeezed fruit juices	62.0	58.3-65.6	0.3	0.2-0.7	1.0	0.3-3.5	3.1	2.2-4.3	9.3	6.9-12.4	11.2	9.1-13.7	12.3	10.2-14.7	0.9	0.4-1.8
Freshly squeezed vegetable juices	96.1	94.5-97.2	0.0	0.0-0.2	-	-	0.3	0.1-1.6	0.3	0.1-1.0	0.9	0.4-2.0	1.3	0.8-2.1	1.1	0.6-2.0
Light, zero cola drinks	97.9	97.0-98.6	-	-	0.1	0.0-0.5	0.1	0.0-0.2	0.2	0.1-1.6	0.4	0.2-1.0	0.5	0.3-1.0	0.8	0.4-1.5
Regular cola drinks	67.2	63.7-70.5	1.0	0.4-2.4	1.0	0.5-2.0	4.2	2.8-6.1	5.0	3.7-6.7	9.7	7.9-11.7	11.3	9.2-13.7	0.7	0.3-1.4
Ice teas	93.5	91.3-95.1	0.1	0.0-0.4	0.0	0.0-0.2	0.4	0.2-0.9	0.8	0.4-1.5	1.8	0.9-3.5	2.4	1.5-3.9	1.1	0.6-2.1
Tea (black)	3.3	2.2-5.0	89.3	86.8-91.3	1.3	0.8-2.1	2.4	1.4-4.0	1.5	0.8-2.7	0.8	0.3-1.8	0.5	0.2-1.1	0.8	0.4-1.6
Green tea	85.8	83.3-87.9	2.2	1.5-3.4	0.4	0.1-1.3	2.5	1.7-3.6	1.9	1.2-2.9	2.7	1.8-3.9	3.4	2.3-4.8	1.2	0.7-2.1
Herbal teas	50.7	46.9-54.4	3.2	2.3-4.4	1.3	0.8-2.2	6.9	5.4-8.9	9.5	7.6-11.9	12.3	10.1-14.9	15.3	12.6-18.5	0.7	0.4-1.4
Mineral water, soda	60.2	56.6-63.8	3.8	2.7-5.4	2.5	1.4-4.5	6.7	5.3-8.6	7.4	5.5-10.0	10.4	8.6-12.5	8.1	6.4-10.2	0.7	0.4-1.4
Instant granulated coffee	69.7	66.2-72.9	3.0	2.1-4.2	1.1	0.6-1.9	6.4	4.9-8.4	6.4	4.9-8.4	5.8	4.1-8.2	6.6	5.0-8.6	1.0	0.5-1.8
Filter coffee	95.8	94.1-97.0	0.2	0.1-0.5	0.1	0.0-0.4	0.4	0.1-1.5	0.5	0.2-1.2	0.2	0.1-0.6	0.7	0.4-1.3	2.2	1.3-3.6
Turkish coffee	36.9	33.2-40.7	15.1	12.8-17.7	2.8	1.9-3.9	10.9	8.7-13.6	10.0	8.3-12.0	14.1	11.6-17.0	9.6	7.8-11.7	0.7	0.3-1.4
Energy drinks	98.7	97.9-99.2	-	-	0.1	0.0-0.5	0.0	0.0-0.3	0.1	0.0-0.5	0.0	0.0-0.2	-	-	1.1	0.6-1.8
Alcoholic beverages	98.0	97.1-98.7	-	-	0.1	0.0-0.4	0.2	0.1-0.6	0.3	0.1-0.7	0.6	0.3-1.2	-	-	0.8	0.4-1.6

Food Items						ĺ	EMAL	ES (aged ≥6	5 years	;)						
	ſ	Vever	Eve	ery day,	4-5	i times	2-3	times	(Once	1-3	3 times	Less t	than once		
				imes per veek	ре	r week	ре	r week	а	week	per	month	а	month	No r	esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
OILS, FATS, SUGAR, DESSERTS																
Olive oil	27.8	24.3-31.6	49.0	45.3-52.7	5.8	4.4-7.5	7.1	5.6-9.0	3.3	2.2-5.1	2.8	1.8-4.3	3.0	1.9-4.7	1.3	0.7-2.4
Hazelnut oil	96.1	94.6-97.2	0.7	0.3-1.5	0.0	0.0-0.3	0.2	0.1-0.9	0.1	0.0-0.3	0.3	0.1-0.9	1.1	0.5-2.1	1.4	0.8-2.4
Sunflower oil	21.9	18.8-25.4	52.6	48.8-56.3	4.2	3.1-5.5	7.1	5.4-9.4	5.6	4.3-7.3	5.1	3.9-6.7	2.2	1.5-3.2	1.3	0.7-2.4
Corn oil	84.2	80.8-87.0	4.8	3.0-7.6	1.3	0.8-2.3	2.1	1.3-3.4	1.5	1.0-2.4	2.6	1.5-4.5	2.1	1.1-3.8	1.4	0.8-2.5
Soybean oil	97.8	96.6-98.6	-	-	-	-	-	-	-	-	-	-	0.1	0.0-0.4	2.1	1.3-3.4
Canola oil	97.2	95.7-98.2	-	-	-	-	-	-	-	-	0.1	0.0-0.5	0.2	0.1-0.7	2.5	1.5-4.0
Hard margarine	73.8	70.0-77.2	1.3	0.7-2.4	1.3	0.5-3.3	3.7	2.1-6.3	5.6	3.6-8.5	6.7	5.3-8.6	6.4	5.0-8.3	1.2	0.6-2.3
Soft margarine	86.1	83.2-88.6	1.3	0.7-2.3	0.8	0.2-2.9	1.7	1.1-2.7	2.6	1.7-3.9	2.5	1.7-3.7	2.9	2.1-4.0	2.1	0.9-4.9
Butter	16.6	13.8-19.9	36.6	33.2-40.2	8.2	6.5-10.2	17.0	14.7-19.7	10.4	8.1-13.3	6.5	4.7-9.1	3.6	2.4-5.3	1.1	0.6-2.1
Tail fat, tallow	80.8	77.3-83.9	0.6	0.3-1.3	0.2	0.1-0.7	0.9	0.5-1.7	3.0	2.0-4.6	5.3	3.8-7.2	7.3	5.3-9.9	2.0	0.8-4.8
Table sugar	28.4	25.1-31.8	63.0	59.4-66.5	1.7	1.1-2.7	1.7	1.0-2.7	1.0	0.5-2.1	1.5	1.0-2.4	1.8	1.2-2.9	0.8	0.4-1.6
Honey, jam, molasses	13.6	11.3-16.2	34.9	31.4-38.6	9.6	7.4-12.4	16.6	14.1-19.6	11.9	9.5-14.7	7.6	6.1-9.4	5.0	3.7-6.7	0.8	0.4-1.5
Sweets, Turkish Delight, chocolate	34.6	31.2-38.2	5.2	3.7-7.2	3.2	2.0-5.2	8.6	6.6-11.1	9.1	7.3-11.3	18.7	16.0-21.7	19.8	16.7-23.2	0.8	0.4-1.5
Pastry desserts, syrup sweetened (tulumba, lokma, baklava)	32.0	28.6-35.5	0.2	0.1-0.8	0.4	0.1-1.7	0.6	0.3-1.2	5.7	4.1-7.7	19.7	16.8-23.0	40.5	36.9-44.2	0.9	0.5-1.6
Pastry products with cream filling (cake, etc.)	50.0	46.3-53.8	0.2	0.0-0.9	-	-	0.4	0.1-1.1	1.9	1.0-3.8	13.6	11.0-16.7	33.1	29.7-36.7	0.8	0.4-1.5
Artificial sweeteners	96.2	94.6-97.4	1.7	1.0-3.0	-	-	0.2	0.0-0.9	0.0	0.0-0.2	0.2	0.0-1.0	0.2	0.1-0.6	1.5	0.9-2.5
Instant soups	77.4	74.1-80.3	0.1	0.0-0.3	0.2	0.1-0.7	1.8	1.1-2.9	4.9	3.5-6.8	7.3	5.5-9.6	7.3	5.7-9.4	1.0	0.5-1.8
Smoked products	94.1	91.1-96.1	-	-	3.1	2.0-4.6	0.0	0.0-0.2	0.3	0.1-1.0	1.9	0.6-5.7	0.7	0.3-1.4	3.1	2.0-4.6
Meat bouillon cube, chicken bouillon cube	70.7	66.9-74.2	2.6	1.7-4.1	1.8	1.1-3.0	7.3	5.6-9.5	7.7	5.5-10.6	5.8	3.9-8.7	3.0	2.1-4.2	1.1	0.6-1.9
Hamburger, fried chicken pieces etc.	88.8	86.0-91.0	-	-	0.8	0.4-1.6	0.2	0.1-0.9	1.0	0.3-2.9	3.2	2.0-5.1	6.0	4.5-8.0	0.8	0.4-1.6
Doner, kebab, etc.	46.4	42.7-50.1	-	-	0.7	0.4-1.4	0.8	0.2-2.9	1.9	1.3-3.0	21.4	18.3-24.8	28.7	25.5-32.2	0.7	0.4-1.4
Pita, lahmacun (Turkish pizza), pizza, pancake, etc.	31.3	28.0-34.8	0.0	0.0-0.2	0.1	0.0-0.4	1.7	0.8-3.5	4.4	3.2-6.1	33.0	29.5-36.7	28.9	25.7-32.3	0.7	0.4-1.4
Chips, corn snacks	85.4	82.7-87.7	0.0	0.0-0.2	0.3	0.1-0.9	0.8	0.4-1.5	2.7	1.5-4.7	4.5	3.3-6.1	5.6	4.3-7.2	0.7	0.4-1.4

3.5.9. Frequency of Food Consumption Among Females Aged 15 Years and Over

The results of the analysis of the frequency of food consumption among females aged 15 years and over across Turkey are given in Table 2.42. In this age group, the frequency of those who never consumed pasteurized milk was 84.7%, the frequency of those who never consumed UHT milk was 67.7%, and the frequency of those who never consumed loose milk was 59.6%. The frequency of those who never consumed probiotic milk and dairy products (kefir, etc.) was 90.5%, the frequency of those who never consumed yoghurt and ayran (diluted yoghurt) was 1.7%, the frequency of those who never consumed probiotic yoghurt was 87.2%, and the frequency of those who never consumed probiotic yoghurt was 87.2%, and the frequency of those who never consumed UHT milk every day was 5.1%, and the frequency of those who consumed loose milk every day was 3.6%. The frequency of those who consumed probiotic milk and dairy products (kefir, etc.) every day was 3.6%. The frequency of those who consumed yoghurt and ayran (diluted yoghurt) every day was 51.5%, the frequency of those who consumed probiotic yoghurt avery day was 77.2%.

Females aged 15 years and over, from the foods included in the meat-eggs-legumes group, never consumed beef with a frequency of 12.6%, lamb/mutton with a frequency of 42.1%, chicken with a frequency of 5.0%, turkey with a frequency of 90.2%, and fish with a frequency of 9.8%. Among the foods in this group, the ones consumed every day were beef with a frequency of 3.0%, lamb/mutton with a frequency of 0.7%, chicken with a frequency of 1.6%. Among the foods in the meat-eggs-legumes group, the ones consumed 2-3 times per week were beef with a frequency of 18.5%, lamb/mutton with a frequency of 7.5%, chicken with a frequency of 25.1%, turkey with a frequency of 0.3%, and fish with a frequency of 7.1%. The frequency of never consuming legumes in this group was 2.2%, the frequency of everyday consumption was 0.8%, and the frequency of consumption 2-3 days a week was 21.3%.

Among females aged 15 years and over, the frequency of those who never consumed eggs was 4.1%, the frequency of those who consumed them every day was 39.4%, and the frequency of those who consumed them 4-5 times per week was 12.7%. The frequency of those who never consumed nuts (hazelnuts, peanuts, pistachios, walnuts, etc.) was 9.0%, the frequency of those who consumed them every day was 18.2%, and the frequency of those who consumed them 4-5 times per week was 8.7%.

The frequency of females aged 15 years and over who consumed meat and meat products across Turkey was 2.7%.

In the vegetables and fruits group, the frequency of those who never consumed green leafy vegetables was 3.5%, the frequency of those who consumed them every day was 28.3%, and the frequency of those who consumed them 4-5 times per week was 12.5%. The frequency of those who never consumed other fresh vegetables (leek, cabbage) was 11.0%, the frequency of those who consumed them every day was 2.6%, and the frequency of those who consumed them 4-5 times per week was 3.1%.

The frequency of those who never consumed citrus fruits was 38%, the frequency of those who consumed them every day was 13.0%, and the frequency of those who consumed them 4-5 times per week was 8.5%. The frequency of those who never consumed other fresh vegetables was 3.6%, the frequency of those who consumed them every day was 37.0%, and the frequency of those who consumed them 4-5 times per week was 14.6%.

While the frequency of not consuming raisins was 31.2%, they were consumed every day with a frequency of 5.2%.

French fries were consumed every day with a frequency of 2.9%.

For females aged 15 years and over, the frequencies of total vegetables consumption were as follows: 0.5% for those who never consumed them, 57.5% for those who consumed them every day, 13.1% for those who consumed them 4-5 times per week, 20.1% for those who consumed them 2-3 times per week, and 6.4% for those who consumed them once a week. The frequencies of total fruits consumption were as follows: 1.0% for those who never consumed them, 59.1% for those who consumed them every day, 12.2% for those who consumed them 4-5 times per week, 17.8% for those who consumed them 2-3 times per week, and 6.5% for those who consumed them once a week.

Females aged 15 years and over, from the foods included in the bread and cereals group, never consumed white bread with a frequency of 11.7%, whole grain bread, rye bread, wholemeal bread with a frequency of 56.0%, and home-made unleavened breads (phyllo dough, etc.) with a frequency of 41.6%. Among the foods in the bread and cereals group, the ones consumed every day were white bread with a frequency of 68.9%, whole grain bread, rye bread, wholemeal bread, etc. with a frequency of 16.4%, and home-made unleavened breads (phyllo dough etc.) with a frequency of 9.6%. Among the foods in the bread and cereals group, the ones consumed every day were white bread and cereals group, the ones consumed every day were rice with a frequency of 1.53%, bulghur with a frequency of 1.5%, pastry, cakes, buns with a frequency of 2.5%, biscuits/crackers with a frequency of 11.2%, and bagel with a frequency of 3.3%.

Among females aged 15 years and over, the frequency of those who never consumed ready-made fruit juices was 49.9%, the frequency of those who consumed them every day was 2.8%, and the frequency of those who consumed them once a week was 9.6%. The frequency of those who never consumed freshly squeezed fruit juices was 53.6%, and the frequency of those who consumed them once a week was 10.1%. Freshly squeezed vegetable juices were never consumed with a frequency of 95.4%. The light and zero cola drinks were never consumed with a frequency of 92.1%, and regular cola drinks were never consumed with a frequency of 47.0%. The frequency of those who consumed black tea every day was 87.0%, while this frequency was 4.8% for green tea and 5.3% for herbal teas. The frequency of never consuming Turkish coffee was 23.8%, while its frequency of everyday consumption was 23.2%.

Among females aged 15 years and over, the frequency of those who never consumed olive oil was 25.3%, the frequency of those who consumed it every day was 46.4%, and the frequency of those who consumed it once a week was 4.3%. These frequencies for sunflower oil were 14.2%, 62.8% and 5.0%, respectively. The frequency of those who never consumed hard margarines was 58.7%, the frequency of those who consumed them every day was 2.7%, and the frequency of those who consumed them once a week was 8.2%. The frequency of those who never consumed soft margarines was 77.4%, the frequency of those who consumed them every day was 2.4%, and the frequency of those who consumed them once a week was 4.1%.

The frequency of those who never consumed butter was 15.5%, the frequency of those who consumed it every day was 33.3%, and the frequency of those who consumed it once a week was 10.5%.

The frequency of those who never consumed table sugar was 31.4%, the frequency of those who consumed it every day was 55.8%, and the frequency of those who consumed it once a week was 2.7 %. The frequency of never consuming pastry desserts [(tulumba (dough pastry deep fried dipped in syrup), lokma (yeast fritters in thick syrup), baklava (multilayered flaky pastry with nuts)] was 20.4%, and the frequency of consumption once a week was 11%.

While hamburgers, fried chicken pieces, etc. were never consumed with a frequency of 68.0%, the frequency of consumption once a week was 4.4%. The frequency of never consuming doner, kebab, etc. was 25.2%, the frequency of consumption once a week was 9.7%. The frequency of those whose never consumed pita, Turkish pizza, pizza, pancake was 16.1%, and the frequency of those who consumed them once a week was 10.4%.

Food Items							FEN	/IALES (ageo	d ≥ 15 y	years)						
		Never	Eve	ry day,	4-!	5 times	2-3	times	(Once	1-3	8 times	Less than once		Doesn't know	
			6-7 t	imes per	ре	r week	pe	er week	а	week	per	month	aı	month	No response	
			v	veek									1			
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
MILK AND DAIRY PRODUCTS																
Pasteurized milk	84.7	83.6-85.8	2.3	1.9-2.8	1.0	0.8-1.3	3.7	3.1-4.4	3.0	2.5-3.6	2.9	2.5-3.5	1.9	1.5-2.3	0.4	0.3-0.6
UHT milk	67.7	66.2-69.1	5.1	4.5-5.9	1.8	1.4-2.3	7.5	6.7-8.4	7.0	6.2-7.9	6.4	5.7-7.2	4.0	3.5-4.6	0.5	0.4-0.8
Loose milk	59.6	58.1-61.1	3.6	3.1-4.1	1.9	1.6-2.3	8.2	7.4-9.1	11.5	10.6-12.5	9.9	9.0-10.9	5.0	4.4-5.6	0.3	0.2-0.4
Probiotic milk and dairy products (kefir etc.)	90.5	89.5-91.4	0.9	0.7-1.2	0.4	0.2-0.9	1.1	0.8-1.5	1.0	0.8-1.3	2.2	1.8-2.6	2.2	1.8-2.6	1.7	1.3-2.2
Yoghurt, ayran (diluted yoghurt)	1.7	1.4-2.1	51.5	49.9-53.1	13.6	12.6-14.7	20.9	19.5-22.3	7.7	6.9-8.6	3.4	2.9-4.1	1.0	0.7-1.5	0.1	0.1-0.2
Probiotic yoghurt	87.2	86.1-88.2	1.2	0.9-1.6	0.4	0.3-0.6	1.0	0.8-1.4	1.4	1.1-1.9	1.7	1.2-2.2	1.7	1.4-2.1	5.4	4.7-6.1
Cheese	2.6	2.1-3.2	77.2	75.8-78.5	5.5	4.8-6.3	8.9	8.0-9.8	3.5	3.0-4.3	1.4	1.0-1.9	0.7	0.4-1.2	0.2	0.1-0.5
Sweetened/fruit/cocoa/ chocolate flavored milks	81.9	80.6-83.2	2.5	2.0-3.2	1.3	0.9-1.7	3.3	2.7-4.0	3.5	2.9-4.1	3.4	2.8-4.1	3.7	3.1-4.4	0.4	0.3-0.7
Sweetened/fruit/cocoa/ chocolate flavored yoghurts	88.1	87.0-89.2	0.4	0.3-0.7	0.5	0.3-0.7	1.5	1.1-2.1	2.4	1.9-3.0	3.1	2.5-3.7	3.4	2.9-4.0	0.6	0.4-0.9
Cream/clotted cream (kaimak)	56.1	54.6-57.6	2.7	2.3-3.2	1.1	0.8-1.5	5.5	4.8-6.2	9.6	8.7-10.5	11.7	10.8-12.75	13.0	12.0-14.1	0.3	0.2-0.5
lce cream	15.5	14.5-16.7	1.1	0.8-1.4	1.1	0.8-1.5	7.6	6.8-8.5	15.0	13.9-16.1	29.3	27.9-30.7	30.2	28.7-31.7	0.2	0.1-0.4
Milk desserts (kazandibi (white pudding with blackened surface), sütlaç (rice pudding), pudding, milk pudding	15.8	14.7-17.0	0.5	0.3-0.7	0.8	0.6-1.1	6.8	6.0-7.7	19.0	17.6-20.4	36.8	35.3-38.3	20.1	18.9-21.3	0.3	0.2-0.5
MEAT-EGGS-LEGUMES																
Beef	12.6	11.6-13.6	3.0	2.6-3.6	3.4	2.9-3.9	18.5	17.3-19.9	20.7	19.5-22.0	26.4	25.1-27.8	14.7	14.7-15.8	0.6	0.4-0.9
Lamb/mutton	42.1	40.6-43.7	0.7	0.5-0.1	1.3	1.0-1.6	7.5	6.7-8.4	11.5	10.6-12.5	19.4	18.2-20.7	16.6	15.5-17.8	0.9	0.6-1.2
Chicken	5.0	4.4-5.7	1.6	1.2-2.1	3.4	2.9-4.0	25.1	23.8-26.5	32.4	30.9-33.9	26.5	25.2-27.9	5.6	5.0-6.3	0.4	0.2-0.7
Turkey	90.2	89.2-91.0	0.0	0.0-0.1	0.1	0.0-0.2	0.3	0.2-0.5	0.9	0.7-1.2	2.2	1.8-2.7	5.9	5.2-6.6	0.4	0.2-0.6
Goose/duck	95.9	95.2-96.5	0.0	0.0-0.0	-	-	0.0	0.0-0.2	0.2	0.1-0.3	0.7	0.4-1.0	2.9	2.5-3.5	0.3	0.2-0.5
Fish	9.8	8.9-10.8	0.0	0.0-0.1	0.3	0.2-0.4	7.1	6.4-7.9	27.2	25.9-28.6	35.6	34.1-37.2	19.3	18.2-20.6	0.6	0.4-0.9
Seafood (calamars, shrimps, mussels, etc.)	88.0	86.9-88.9	0.1	0.0-0.3	0.0	0.0-0.1	0.3	0.2-0.6	0.8	0.6-1.1	4.5	3.9-5.2	5.5	4.9-6.3	0.7	0.5-0.9
Offals (liver, kidney, spleen, etc.)	52.4	50.8-53.9	0.0	0.0-0.1	0.0	0.0-0.1	0.5	0.3-0.7	2.0	1.6-2.4	16.6	15.5-17.8	28.2	26.8-29.7	0.3	0.2-0.4
Meat products (salami, sausage, fermented sausage, pastrami, etc.)	9.0	8.1-9.9	18.2	17.0-19.4	8.7	7.9-9.6	20.8	19.5-22.2	17.7	16.5-18.9	17.5	16.3-18.7	7.9	7.1-8.8	0.3	0.2-0.5
Nuts (hazelnuts, peanuts, pistachios, walnuts, etc.)	2.2	1.8-2.8	0.8	0.5-1.4	1.5	1.1-1.9	21.3	20.0-22.6	40.7	39.2-42.3	29.3	27.9-30.8	4.0	3.4-4.7	0.2	0.1-0.3
Legumes (dry beans, chickpeas, lentils, etc.)	4.2	3.0-5.8	0.2	0.1-0.6	1.2	0.6-2.4	15.2	12.7-18.2	39.9	36.2-43.6	32.6	29.2-36.2	6.0	4.6-7.8	0.8	0.4-1.5
Eggs	4.1	3.5-4.8	39.4	37.0-41.0	12.7	11.8-13.7	28.0	26.7-29.4	10.4	9.5-11.4	3.2	2.7-3.8	1.7	1.3-2.4	0.3	0.2-0.5

Table 2.42. Distribution of frequency of food consumption among females aged 15 years and over, TNHS 2017

Food Items	FEMALES (aged ≥15 years)															
		Never	Every day, 6-7 times per week			5 times r week	2-3 times per week		Once a week		1-3 times per month		Less than once a month			n't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
VEGETABLES AND FRUITS																
Green leafy vegetables	3.5	2.9-4.2	28.3	26.9-29.7	12.5	11.5-13.6	25.5	24.2-26.8	19.2	17.9-20.5	8.4	7.6-9.3	2.4	2.0-3.0	0.3	0.2-0.5
Other fresh vegetables (leek, cabbage)	11.0	9.9-12.1	2.6	2.1-3.1	3.1	2.6-3.7	14.0	13.1-15.1	28.6	27.2-30.1	28.3	26.9-29.7	12.1	11.1-13.2	0.3	0.2-0.5
Tomato	1.4	1.1-1.8	53.0	51.4-54.5	12.8	11.6-14.0	19.9	18.7-21.1	8.9	8.1-9.8	3.1	2.7-3.7	0.7	0.5-1.0	0.3	0.2-0.4
Green pepper (village pepper, banana pepper, long pepper, etc.)	5.2	4.5-6.0	38.5	37.0-40.0	11.5	10.4-12.7	23.8	22.5-25.2	13.2	12.2-14.2	5.5	4.9-6.3	1.9	1.5-2.4	0.3	0.2-0.5
Mushroom	33.4	31.9-34.9	0.1	0.0-0.2	0.2	0.1-0.5	1.9	1.5-2.3	10.3	9.4-11.2	27.8	26.5-29.2	26.0	24.6-27.5	0.3	0.2-0.4
Corn	23.3	22.0-24.7	0.5	0.3-0.7	0.8	0.6-1.2	4.4	3.8-5.0	11.6	10.6-12.6	27.7	26.4-29.1	31.4	29.9-32.9	0.3	0.2-0.5
Frozen vegetables/fruits	42.6	41.1-44.2	0.2	0.1-0.4	0.4	0.2-0.6	3.4	2.9-3.9	12.3	11.1-13.5	26.4	25.1-27.7	14.1	13.0-15.2	0.7	0.5-1.0
Dried vegetables	43.5	42.0-45.1	0.2	0.1-0.4	0.2	0.1-0.3	2.1	1.7-2.7	8.5	7.7-9.3	28.5	27.1-29.9	16.5	15.4-17.6	0.5	0.3-0.7
Dried fruits	35.4	33.9-36.9	4.5	3.9-5.2	2.2	1.8-2.6	9.9	9.0-10.8	11.9	11.0-12.8	22.0	20.6-23.4	13.9	12.9-14.9	0.4	0.2-0.6
Raisin	31.2	29.8-32.7	5.2	4.5-5.9	2.6	2.1-3.2	10.6	9.5-11.8	13.3	12.4-14.4	22.0	20.8-23.3	14.7	13.7-15.8	0.4	0.2-0.6
Citrus fruits	3.8	3.2-4.4	13.0	12.0-14.1	8.5	7.7-9.4	26.5	25.1-27.9	23.0	21.7-24.3	18.9	17.7-20.2	5.9	5.2-6.7	0.3	0.2-0.5
Other fresh fruits	3.6	3.0-4.2	37.0	35.5-38.5	14.6	13.6-15.8	23.3	22.1-24.6	12.1	11.2-13.2	6.2	5.4-7.0	2.9	2.4-3.4	0.3	0.2-0.5
Ready-made canned vegetables	86.9	85.9-87.9	0.1	0.0-0.2	0.1	0.0-0.3	0.6	0.4-0.9	1.2	0.9-1.2	5.5	4.8-6.2	5.2	4.5-6.0	0.4	0.2-0.6
Home-made canned vegetables	35.0	33.6-36.6	1.7	1.3-2.1	1.7	1.3-2.2	10.3	9.2-11.5	17.8	16.7-19.0	26.0	24.7-27.4	6.9	6.2-7.7	0.5	0.4-0.7
French fries	13.2	12.2-14.3	2.9	2.4-3.6	3.6	3.0-4.2	21.1	19.8-22.4	28.3	26.9-29.8	22.3	21.1-23.6	8.2	7.4-9.0	0.4	0.2-0.6
Vegetables, total	0.5	0.3-0.8	57.5	55.9-59.0	13.1	11.9-14.3	20.1	18.9-21.3	6.4	5.7-7.2	1.9	1.5-2.4	0.5	0.3-0.7	0.2	0.1-0.3
Fruits, total	1.0	0.7-1.4	59.1	57.6-60.7	12.2	11.3-13.2	17.8	16.6-19.1	6.5	5.7-7.3	2.4	1.9-3.0	0.7	0.5-1.1	0.2	0.1-0.3

Food Items							FEN	ALES (aged	d ≥15 y	ears)						
		Never	Every day, 6-7 times per week		4-5 times per week		2-3 times per week		Once a week		1-3 times per month		Less than once a month			n't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BREAD-CEREALS																
White bread	11.7	10.7-12.7	68.9	67.5-70.3	4.1	3.5-4.8	6.2	5.5-6.9	3.5	3.0-4.0	2.8	2.3-3.4	2.7	2.3-3.2	0.2	0.1-0.3
Whole grain bread, rye bread, wholemeal bread etc.	56.1	54.5-57.6	16.4	15.3-17.6	2.8	2.4-3.3	7.1	6.3-8.1	5.1	4.5-5.8	6.4	5.5-7.5	5.8	5.2-6.5	0.3	0.2-0.4
Home-made unleavened breads (phyllo dough etc.)	41.6	40.1-43.1	9.6	8.7-10.5	1.5	1.1-2.0	4.5	4.0-5.2	10.6	9.7-11.6	18.8	17.4-20.2	13.1	12.2-14.2	0.3	0.2-0.4
Rice	5.3	4.7-6.0	1.5	1.2-2.0	3.8	3.3-4.4	32.4	30.8-34.0	32.1	30.7-33.6	19.7	18.5-20.9	4.8	4.2-5.5	0.3	0.2-0.5
Bulghur	2.7	2.2-3.3	1.5	1.1-2.0	3.9	3.4-4.5	36.9	35.4-38.5	36.4	34.9-37.9	15.7	14.7-16.9	2.6	2.2-3.3	0.2	0.2-0.4
Macaroni, noodles, couscous	4.0	3.5-4.6	1.0	0.7-1.5	2.7	2.2-3.3	29.9	28.4-31.4	37.9	36.4-39.4	19.9	18.7-21.1	4.3	3.7-4.9	0.4	0.2-0.7
Pastries, cakes, buns	8.9	8.0-9.8	2.5	2.0-3.1	2.0	1.5-2.6	9.7	8.8-10.6	23.5	22.2-24.8	37.9	36.3-39.4	15.3	14.3-16.4	0.3	0.2-0.4
Cookies	25.5	24.2-26.8	0.9	0.7-1.2	0.7	0.5-1.1	5.6	4.9-6.5	14.0	12.9-15.1	29.4	28.0-30.9	23.6	22.4-24.9	0.3	0.2-0.4
Tarhana (fermented dried yoghurt and flour mixture)	28.0	26.6-29.5	3.1	2.7-3.6	4.0	3.5-4.6	15.7	14.7-16.7	21.3	20.1-22.6	19.5	18.1-20.8	8.1	7.2-9.0	0.3	0.2-0.4
Biscuits/crackers	21.0	19.8-22.2	11.2	10.2-12.2	7.4	6.6-8.3	18.7	17.4-20.1	15.2	14.2-16.4	14.4	13.4-15.5	11.8	10.8-12.8	0.3	0.2-0.4
Bagel	18.9	17.7-20.2	3.3	2.7-3.9	2.3	1.9-2.9	13.4	12.2-14.6	20.7	19.5-22.0	23.2	21.9-24.5	18.1	16.9-19.3	0.2	0.1-0.4
Breakfast cereals (muesli, corn flakes, wheat flakes, etc.).	88.3	87.2-89.3	0.8	0.6-1.2	0.3	0.2-0.5	2.1	1.7-2.7	1.5	1.2-2.0	2.8	2.3-3.3	3.3	2.8-3.9	0.8	0.6-1.1

Food Items							FEI	MALES (age	d ≥15 y	/ears)						
		Never	6-7 t	Every day, 6-7 times per week		5 times er week		8 times er week	Once a week		1-3 times per month		Less than once a month			n't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BEVERAGES																
Ready-made fruit juices	49.9	48.3-51.5	2.8	2.3-3.4	2.3	1.8-2.9	7.8	6.9-8.8	9.6	8.7-10.6	12.5	11.6-13.5	14.9	13.8-16.0	0.2	0.1-0.4
Freshly squeezed fruit juices	53.6	52.0-55.1	1.0	0.8-1.4	0.7	0.5-1.1	6.0	5.3-6.8	10.1	9.2-11.0	15.4	14.3-16.5	12.9	11.9-13.9	0.3	0.2-0.6
Freshly squeezed vegetable juices	95.4	94.7-96.0	0.2	0.1-0.3	0.1	0.0-0.2	0.4	0.2-0.6	0.7	0.5-1.2	1.2	0.9-1.6	1.6	1.3-2.0	0.4	0.2-0.7
Light, zero cola drinks	92.1	91.2-92.9	0.4	0.2-0.7	0.1	0.1-0.3	1.1	0.8-1.5	1.4	1.0-1.8	2.0	1.7-2.5	2.4	1.9-3.0	0.5	0.3-0.7
Regular cola drinks	47.0	45.4-48.5	3.4	2.8-3.9	2.1	1.7-2.6	8.8	7.9-9.8	11.1	10.1-12.1	15.4	14.1-16.7	12.1	11.1-13.1	0.2	0.2-0.4
Ice teas	78.4	76.9-79.9	0.6	0.4-0.8	1.1	0.7-1.1	3.1	2.6-3.8	4.2	3.6-4.9	6.9	5.9-8.1	5.2	4.5-6.1	0.5	0.3-0.7
Tea (black)	3.8	3.2-4.5	87.0	85.8-88.0	1.8	1.4-2.3	3.6	3.0-4.3	1.8	1.4-2.3	0.9	0.7-1.2	0.8	0.6-1.2	0.3	0.2-0.4
Green tea	71.6	70.2-73.1	4.8	4.2-5.4	1.6	1.3-2.0	5.1	4.5-5.8	4.6	4.0-5.3	5.4	4.8-6.1	6.4	5.5-7.5	0.4	0.3-0.6
Herbal teas	46.3	44.8-47.9	5.3	4.7-6.0	2.4	1.9-2.9	8.9	8.1-9.8	9.1	8.3-10.0	13.2	12.2-14.2	14.5	13.4-15.8	0.3	0.2-0.5
Mineral water, soda	41.2	39.7-42.7	7.6	6.9-8.4	3.8	3.2-4.4	11.7	10.7-12.7	11.1	10.2-12.1	13.6	12.6-14.8	10.7	9.6-11.9	0.2	0.2-0.4
Instant granulated coffee	50.7	49.1-52.3	10.1	9.2-11.1	3.0	2.5-3.7	10.4	9.5-11.4	9.3	8.5-10.2	8.9	7.9-10.1	7.3	6.6-8.1	0.3	0.2-0.5
Filter coffee	92.3	91.5-93.2	1.5	1.1-2.0	0.4	0.3-0.6	0.9	0.7-1.3	1.1	0.8-1.5	1.3	0.9-1.8	1.4	1.2-1.8	1.0	0.7-1.3
Turkish coffee	23.8	22.5-25.2	23.2	22.0-24.5	6.1	5.4-7.0	15.4	14.3-16.5	11.4	10.5-12.4	12.7	11.5-13.9	7.1	6.4-7.9	0.2	0.1-0.4
Energy drinks	96.4	95.7-97.0	0.1	0.0-0.2	0.0	0.0-0.1	0.3	0.2-0.6	0.4	0.3-0.7	1.0	0.7-1.5	1.1	0.8-1.5	0.6	0.4-0.9
Alcoholic beverages	93.4	92.6-94.1	0.0	0.0-0.1	0.1	0.0-0.1	0.6	0.4-1.0	0.6	0.4-0.9	2.3	1.9-2.8	2.7	2.3-3.3	0.3	0.2-0.4

Foods							FEN	ALES (age	d ≥15 y	years)						
	ĺ	Never		ery day,	4-	5 times	2-3	times	(Once	1-3	3 times	Less than once		Doesn	't know/
				imes per	pe	r week	ре	r week	а	week	per	month	aı	nonth	No response	
	%		v %	veek 95%Cl	%	95%Cl	%	95%CI	%	95%CI	%		%	05%(C)	%	95%CI
OILS, FATS, SUGAR, DESSERTS	70	95%CI	70	95%CI	70	95%CI	70	95%CI	70	95%CI	70	95%CI	70	95%CI	70	95%CI
Olive oil	25.3	24.0-26.7	46.4	44.8-47.9	5.7	5.1-6.4	10.2	9.2-11.2	4.3	3.7-5.0	4.0	3.4-4.6	3.4	2.8-4.1	0.8	0.6-1.2
Hazelnut oil	25.3 96.2	95.5-96.8	46.4	0.7-1.5	0.1	0.0-0.2	0.3	0.2-0.4	4.3 0.4	0.2-0.6	4.0 0.5	0.3-0.7	0.7	0.5-1.1	0.8	0.6-1.2
Sunflower oil	14.2	13.2-15.2	62.8	61.3-64.3	4.0	3.4-4.6	6.9	6.2-7.7	5.0	4.5-5.6	4.8	4.2-5.4	1.5	1.2-1.8	0.8	0.7-1.2
Corn oil	87.3	86.1-88.4	4.3	3.7-4.9	1.2	0.6-2.3	2.0	1.6-2.4	1.1	0.9-1.4	4.8	1.3-2.0	1.3	1.2-1.8	1.3	0.9-1.2
Soybean oil	98.5	98.0-98.8	4.5 0.0	0.0-0.1	-	0.0-2.5	0.0	0.0-0.0	0.0	0.9-1.4	0.1	0.0-0.2	0.1	0.0-0.2	1.3	1.0-1.7
Canola oil					- 0.0	-	0.0	0.0-0.3	0.0		0.1	0.0-0.2	-		-	
	98.0 58.7	97.5-98.4	0.1	0.0-0.4	0.0	0.0-0.1	6.3		8.2	0.0-0.1	-		0.2 8.7	0.1-0.4	1.5 1.0	1.1-1.9 0.7-1.3
Hard margarine		57.1-60.2		2.3-3.3	-	1.2-2.1		5.4-7.5	-	7.3-9.2	12.8	11.8-13.9	-	7.9-9.6	-	
Soft margarine	77.4	76.0-78.8	2.4	2.0-2.8	1.1	0.8-1.5	4.2	3.4-5.3	4.1	3.5-4.7	4.9	4.3-5.7	5.0	4.3-5.7	0.9	0.6-1.3
Butter	15.5	14.4-16.8	33.3	31.8-34.7	7.9	6.9-9.0	20.5	19.3-21.7	10.5	9.6-11.5	7.7	6.8-8.6	4.0	3.4-4.7	0.6	0.4-0.9
Tail fat, tallow	79.7	78.4-81.0	0.9	0.6-1.3	0.4	0.2-0.7	1.5	1.2-1.9	2.8	2.3-3.3	6.3	5.6-7.1	7.6	6.8-8.5	0.9	0.6-1.3
Table sugar	31.4	30.0-33.0	55.8	54.2-57.4	1.8	1.4-2.2	2.8	2.3-3.3	2.7	2.2-3.3	3.0	2.5-3.6	2.3	1.9-2.7	0.3	0.2-0.4
Honey, jam, molasses	14.1	13.0-15.3	35.7	34.2-37.1	7.9	6.9-9.0	17.1	15.9-18.3	11.7	10.7-12.8	7.8	7.0-8.7	5.5	4.8-6.3	0.2	0.2-0.4
Sweets, Turkish Delight, chocolate	18.8	17.7-19.9	11.9	10.9-13.0	6.6	5.8-7.5	16.8	15.5-18.2	15.7	14.6-16.9	18.0	16.8-19.2	11.9	11.0-12.9	0.3	0.2-0.5
Pastry desserts, syrup sweetened (tulumba, lokma, baklava)	20.4	19.2-21.6	0.4	0.2-0.4	0.7	0.5-1.0	4.6	4.0-5.4	11.0	10.0-12.0	33.2	31.7-34.8	29.5	28.1-30.9	0.3	0.2-0.5
Pastry products with cream filling (cake, etc.)	28.9	27.6-30.3	0.2	0.1-0.4	0.2	0.1-0.3	2.4	1.9-3.0	7.2	6.3-8.1	29.0	27.5-30.4	31.8	30.4-33.3	0.4	0.2-0.5
Artificial sweeteners	97.7	97.2-98.0	0.5	0.3-0.7	0.1	0.0-0.2	0.1	0.1-0.3	0.1	0.1-0.3	0.2	0.1-0.3	0.3	0.2-0.5	1.0	0.8-1.4
Instant soups	75.8	74.5-77.1	0.3	0.2-0.5	0.4	0.3-0.7	2.4	1.9-2.9	4.5	3.9-5.1	8.2	7.4-9.1	8.1	7.4-8.9	0.3	0.2-0.4
Smoked products	93.7	93.0-94.4	0.1	0.0-0.2	0.1	0.0-0.3	0.2	0.1-0.3	0.4	0.3-0.6	1.5	1.2-2.0	1.7	1.4-2.1	2.3	1.9-2.8
Meat bouillon cube, chicken bouillon cube	60.3	58.8-61.8	4.9	4.3-5.6	2.8	2.4-3.4	11.1	10.2-12.1	8.9	8.1-9.8	7.5	6.7-8.4	3.7	3.2-4.3	0.7	0.5-0.9
Hamburger, fried chicken pieces etc.	68.0	66.5-69.5	0.1	0.0-0.3	0.3	0.2-0.7	2.2	1.7-2.9	4.4	3.8-5.2	13.7	12.6-14.9	10.8	9.9-11.8	0.3	0.2-0.5
Doner, kebab, etc.	25.2	23.9-26.5	0.2	0.1-0.4	0.5	0.3-0.9	4.2	3.5-5.0	9.7	8.8-10.7	35.3	33.8-36.8	24.6	23.2-26.0	0.2	0.2-0.4
Pita, lahmacun (Turkish pizza), pizza, pancake, etc.	16.1	15.1-17.2	0.2	0.1-0.3	0.2	0.1-0.4	3.3	2.7-4.0	10.4	9.4-11.4	45.5	43.9-47.0	24.1	22.7-25.5	0.3	0.2-0.5
Chips, corn snacks	51.7	50.1-53.3	2.7	2.2-3.3	1.4	1.1-1.9	6.8	5.9-7.7	10.3	9.3-11.4	13.8	12.8-14.9	12.9	11.8-14.2	0.3	0.2-0.5

3.5.10. Frequency of Food Consumption Among Pregnant Women

A total of 167 pregnant women were included among the samples in the Turkey Nutrition and Health Survey. The data on frequencies of food consumption of pregnant women are given in Table 2.43. While 83.9% of pregnant women never consumed pasteurized milk, %4.4 of them consumed it every day. The frequency of never consuming UHT milk was 56.3%, and the frequency of its everyday consumption was 10.2%. The frequency of never consuming loose milk was 52.5%, and the frequency of its everyday consumption was 5.4%. 90.1% of pregnant women never consumed probiotic milk and dairy products. The frequency of those who consumed yoghurt and ayran (diluted yoghurt) every day was 57.1%, and the frequency of those who consumed cheese every day was 89.0%. The frequency of never consuming fruit/cocoa/chocolate flavored milks was 84.4%, and the frequency of never consuming fruit/chocolate flavored yoghurts was 89.9%. The frequency of everyday ice cream consumption was 2.7%, and the frequency of its consumption once a week was 21.5%.

Among the foods in the meat group, while beef was never consumed with a frequency of 13.9%, it was consumed 2-3 times per week with a frequency of 18.5%, and once a week with a frequency of 27.3%. For chicken, these frequencies were 3.7%, 26.4% and 35.6%, respectively. While fish was never consumed with a frequency of 12.3%, the frequency of its consumption 2-3 times per week was 9.1%, the frequency of its consumption 2-3 times per week was 9.1%, the frequency of its consumption once a week was 36.2%. The frequency of everyday consumption of nuts was 24.9%, and the frequency of consumption nuts once a week was 14.0%. The frequency of consumption of legumes 2-3 times per week was 20.5%, and the frequency of their consumption once a week was 40.4%. Eggs were consumed every day with a frequency of 53.2%, and 4-5 times per week with a frequency of 13.7%.

Among pregnant women, while the frequency of everyday consumption of vegetables was 64.3%, this frequency was 78.8% for fruits.

The frequency of those who never consumed white bread was 5.2%, the frequency of those who consumed it every day was 79.7%. Whole grain bread, rye bread, wholemeal bread etc. were never consumed by 61.5% of pregnant women. While tarhana (fermented dried yoghurt and flour mixture) was never consumed with a frequency of 29.6%, it was consumed a few times a month with a frequency of 18.9%.

Freshly squeezed fruit juices were never consumed with a frequency of 38.9%, this frequency was 96.1% for freshly squeezed vegetable juices. The frequency of everyday consumption of freshly squeezed fruit juices was 3.5%, while their consumption frequency was 7.5% for 2-3 times a week. The frequencies of everyday consumption were 82.3% for black tea, 1.4% for herbal teas, 0.7% for green tea, 12.6% for Turkish coffee. The frequencies of everyday consumption were 41.3% for olive oil, 72.3% for sunflower oil, 36.6% for butter.

Table sugar was never consumed with a frequency of 30.3%, honey, jam, molasses were never consumed with a frequency of 10.9%, and artificial sweeteners were never consumed with a frequency of 98.9%.

Foods Items							I	PREGNANT	WOMI	EN						
		Never	6-7 ti	ry day, imes per veek		5 times er week		times r week		Once week		3 times month		han once nonth		n't know response
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
MILK AND DAIRY PRODUCTS																
Pasteurized milk	83.9	76.2-89.4	4.4	1.9-10.0	2.2	0.9-5.2	2.2	0.6-9.1	2.3	0.6-9.1	4.3	1.7-10.3	0.7	0.1-4.7	-	-
UHT milk	56.3	47.2-65.1	10.2	5.6-17.7	3.0	1.3-6.8	12.9	7.6-21.2	6.4	3.0-13.1	6.2	3.4-11.0	4.9	2.1-11.4	-	-
Loose milk	52.5	43.5-61.4	5.4	2.8-10.3	3.6	1.6-7.9	12.2	6.8-20.9	12.4	7.8-19.2	11.3	6.6-18.6	2.5	0.8-7.8	-	-
Probiotic milk and dairy products (kefir etc.)	90.1	83.1-94.3	1.2	0.3-5.0	-	-	-	-	0.6	0.1-4.0	2.9	1.0-8.2	2.7	0.8-9.0	2.5	0.9-7.1
Yoghurt, ayran (diluted yoghurt)	0.2	0.0-1.2	57.1	47.9-65.8	14.9	9.4-22.7	22.4	15.5-31.4	2.8	1.2-6.7	1.8	0.2-11.6	0.8	0.1-5.7	-	-
Probiotic yoghurt	89.3	82.7-93.6	-	-	0.4	0.0-2.6	0.4	0.1-3.2	0.7	0.2-2.7	1.1	0.3-4.3	-	-	8.2	4.4-14.7
Cheese	0.2	0.0-1.2	89.0	82.0-93.4	5.1	2.8-9.3	1.6	0.6-4.6	3.7	1.1-11.9	-	-	0.5	0.1-3.3	-	-
Sweetened/fruit/cocoa/chocolate flavored milks	84.4	77.2-89.6	1.2	0.4-3.8	0.5	0.1-3.5	0.6	0.1-2.4	2.9	1.2-6.8	0.2	0.0-1.2	9.7	5.5-16.5	0.6	0.1-4.5
Sweetened/fruit/cocoa/chocolate flavored yoghurts	89.9	83.5-94.0	0.3	0.0-2.3	-	-	0.2	0.0-1.8	1.4	0.5-4.0	2.2	0.8-6.1	5.2	2.3-11.4	0.6	0.1-4.5
Cream/clotted cream (kaimak)	49.5	40.5-58.4	3.2	1.3-8.0	0.8	0.1-5.6	5.8	2.9-11.3	10.9	6.6-17.7	18.2	12.3-26.1	10.4	5.8-18.1	1.1	0.3-4.4
Ice cream	15.0	9.1-23.8	2.7	0.7-10.1	1.0	0.3-3.3	7.7	4.5-12.8	21.5	15.2-29.4	26.6	19.4-35.3	25.5	18.6-33.9	-	-
Milk desserts (kazandibi (white pudding with blackened surface), sütlaç (rice pudding), pudding, milk pudding	12.5	7.5-19.9	0.3	0.0-2.2	-	-	14.3	9.2-21.6	22.4	16.0-30.6	37.6	29.3-46.8	12.8	7.9-20.2	-	-
MEAT-EGGS-LEGUMES																
Beef	13.9	8.4-22.2	1.1	0.3-3.9	1.2	0.4-3.9	18.5	12.9-25.8	27.3	19.9-36.2	27.7	20.4-36.4	10.3	6.0-17.1	-	-
Lamb/mutton	38.6	30.3-47.6	0.2	0.0-1.3	0.7	0.1-5.2	8.3	4.7-14.2	14.8	9.4-22.4	21.2	14.4-30.0	16.2	10.6-24.0	-	-
Chicken	3.7	1.8-7.6	1.1	0.3-4.6	0.7	0.2-2.7	26.4	19.1-35.1	35.6	27.4-44.7	26.8	19.7-35.3	5.8	2.7-12.1	-	-
Turkey	91.3	82.7-95.8	-	-	-	-	-	-	1.8	0.3-12.0	2.0	0.5-7.9	4.9	1.9-12.2	-	-
Goose/duck	97.1	91.5-99.1	-	-	-	-	-	-	-	-	0.6	0.1-4.1	2.3	0.6-8.2	-	-
Fish	12.3	7.1-20.4	-	-	0.6	0.1-4.5	9.1	5.1-15.9	36.2	28.0-45.2	24.8	18.1-33.0	16.9	11.2-24.8	-	-
Seafood (calamars, shrimps, mussels, etc.)	89.6	82.9-93.9	-	-	-	-	-	-	-	-	3.5	1.4-8.6	6.2	3.0-12.2	0.7	0.1-4.7
Offals (liver, kidney, spleen, etc.)	60.4	51.3-68.9	-	-	-	-	0.7	0.1-4.7	0.2	0.0-1.2	19.3	12.8-28.1	18.7	12.9-26.3	0.7	0.1-4.7
Meat products (salami, sausage, fermented sausage, pastrami, etc.)	37.7	29.6-46.6	2.1	0.6-7.3	2.2	0.5-8.8	4.4	2.2-8.8	16.2	10.4-24.4	20.4	14.2-28.4	16.9	10.8-25.4	-	-
Nuts (hazelnuts, peanuts, pistachios, walnuts, etc.)	3.1	1.2-7.7	24.9	18.0-33.3	12.2	7.5-19.0	26.6	19.3-35.4	14.0	8.4-22.5	13.8	9.0-20.4	5.5	2.4-12.1	-	-
Legumes (dry beans, chickpeas, lentils, etc.)	2.0	0.3-11.4	-	-	1.6	0.3-8.2	20.5	14.3-28.5	40.4	32.2-49.3	32.1	24.0-41.3	3.4	1.2-9.3	-	-
Eggs	5.0	2.3-10.5	53.2	44.2-62.0	13.7	8.9-20.7	21.2	15.0-29.1	4.2	1.6-10.7	1.8	0.5-6.2	0.9	0.1-6.3	-	-

Food Items								PREGNANT	wom	EN						
		Never	6-7 t	ery day, imes per veek		5 times r week		8 times er week		Once week		3 times r month		than once month		't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
VEGETABLES AND FRUITS																
Green leafy vegetables	1.5	0.4-5.3	34.7	26.5-44.0	13.1	8.4-19.8	28.5	21.1-37.2	14.2	9.1-21.5	8.1	4.3-14.7	-	-	-	-
Other fresh vegetables (leek, cabbage)	7.8	4.6-12.9	5.1	2.2-11.7	3.2	1.3-7.8	17.2	11.2-25.5	23.9	17.5-31.8	34.8	26.6-44.0	7.9	4.1-14.9	-	-
Tomato	-	-	66.3	57.7-73.9	10.1	6.0-16.5	14.1	9.4-20.6	7.8	4.1-14.3	1.8	0.6-5.0	-	-	-	-
Green pepper (village pepper, banana pepper, long pepper, etc.)	2.8	1.1-6.6	41.5	33.0-50.6	10.4	6.2-17.1	21.9	15.5-29.9	15.5	9.9-23.6	3.2	1.3-7.4	4.7	1.7-12.4	-	-
Mushroom	39.7	31.1-49.1	-	-	-	-	0.2	0.0-1.4	11.1	6.6-18.0	25.3	18.4-33.6	23.7	17.2-31.8	-	-
Corn	29.0	21.1-38.5	-	-	-	-	6.6	3.3-12.5	11.5	7.0-18.1	33.2	25.5-42.0	19.8	13.8-27.4	-	-
Frozen vegetables/fruits	39.6	31.2-48.7	0.7	0.1-5.2	-	-	3.1	0.9-10.2	13.2	8.5-20.1	33.7	25.7-42.8	8.9	5.1-15.2	0.7	0.1-4.7
Dried vegetables	47.4	38.6-56.4	-	-	-	-	2.4	0.9-6.4	10.1	5.3-18.2	22.8	16.7-30.3	17.3	11.6-25.0	-	-
Dried fruits	34.6	26.3-43.9	7.7	4.4-13.0	3.8	1.6-8.9	12.5	7.5-20.3	11.6	7.1-18.6	19.6	13.6-27.4	10.1	6.2-16.1	-	-
Raisin	18.2	12.3-26.3	8.7	4.6-15.9	3.7	1.8-7.5	14.2	8.6-22.4	16.5	11.0-23.8	23.6	16.7-32.3	14.4	9.5-21.4	0.7	0.1-4.7
Citrus fruits	1.4	0.3-5.5	17.0	11.4-24.6	6.6	3.5-12.0	32.6	24.7-41.5	23.2	16.4-31.8	16.1	10.2-24.4	3.2	1.3-7.4	-	-
Other fresh fruits	2.6	0.6-10.9	57.6	48.6-66.2	11.9	7.1-19.1	15.8	10.4-23.2	6.2	3.3-11.2	2.7	1.1-6.8	3.3	1.2-9.1	-	-
Ready-made canned vegetables	85.9	79.1-90.7	0.4	0.0-2.6	-	-	0.7	0.1-5.2	0.7	0.4-4.6	8.9	5.1-15.2	2.8	1.2-6.2	0.7	0.1-4.7
Home-made canned vegetables	30.1	22.4-39.1	0.5	0.1-2.2	3.1	1.1-8.3	12.2	7.5-19.3	24.0	17.4-32.2	21.7	15.1-30.1	7.7	3.9-14.6	0.7	0.1-4.7
French fries	5.3	2.2-12.2	3.8	1.6-8.8	4.3	1.8-9.6	26.4	19.3-34.9	35.3	27.3-44.3	18.5	12.3-26.7	5.8	2.7-12.0	0.7	0.1-4.7
Vegetables, total	-	-	64.3	55.4-72.3	13.4	8.7-20.1	17.9	12.1-25.8	3.1	0.9-10.5	1.0	0.2-4.1	0.2	0.0-1.2	-	-
Fruits, total	-	-	78.8	70.7-85.2	13.5	8.7-20.3	4.9	2.4-9.9	2.8	0.7-10.6		-	-	-	-	-

Food Items								PREGNANT	r wow	IEN						
		Never	6-7 t	ery day, imes per veek		5 times er week		ð times er week		Once week		3 times r month		han once nonth		n't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BREAD-CEREALS																
White bread	5.2	2.2-11.9	79.7	71.5-86.0	3.2	1.3-7.5	2.0	0.7-5.4	2.1	0.8-5.5	4.1	1.6-10.1	3.7	1.3-9.6	-	-
Whole grain bread, rye bread, wholemeal bread etc.	61.5	52.7-69.7	12.1	7.5-19.0	1.2	0.4-3.7	3.7	1.6-8.6	3.5	1.8-6.9	7.2	3.8-13.3	10.7	6.2-17.7	-	-
Home-made unleavened breads (phyllo dough etc.)	41.9	33.4-50.9	8.7	4.6-15.9	-	-	3.9	1.6-8.9	6.9	4.0-11.7	20.5	14.1-28.9	18.0	11.8-26.6	-	-
Rice	5.7	2.4-12.9	-	-	2.6	1.0-6.4	33.3	25.4-42.3	31.3	23.8-39.9	23.5	16.6-32.1	3.7	1.3-10.2	-	-
Bulghur	2.6	1.0-6.6	-	-	2.7	1.2-6.3	42.1	33.5-51.5	34.1	26.3-42.8	14.3	9.1-21.9	4.1	1.5-11.1	-	-
Macaroni, noodles, couscous	0.5	0.1-2.2	0.3	0.0-2.4	3.0	1.2-7.2	37.5	29.1-46.7	35.1	27.3-43.9	21.6	15.1-29.9	2.0	0.3-10.5	-	-
Pastries, cakes, buns	12.8	7.6-20.7	1.9	0.4-9.1	0.5	0.1-3.4	10.2	6.0-16.9	25.3	18.4-33.8	37.0	28.9-45.9	12.2	7.2-20.1	-	-
Cookies	25.8	18.5-34.9	1.9	0.4-9.1	0.4	0.1-3.1	2.0	0.8-4.9	20.6	14.3-28.7	24.9	18.2-33.0	24.3	17.4-32.9	-	-
Tarhana (fermented dried yoghurt and flour mixture)	29.6	21.6-39.0	2.9	1.1-7.7	3.1	1.4-6.6	17.6	12.1-24.9	17.6	12.1-24.9	18.9	12.8-26.9	10.3	6.0-17.4	-	-
Biscuits/crackers	21.2	14.4-30.2	16.2	10.3-24.5	6.5	3.3-12.2	11.4	7.4-17.3	15.6	10.2-23.0	13.2	8.5-20.0	15.8	10.2-23.7	-	-
Bagel	13.8	8.3-22.0	5.2	2.0-13.1	1.7	0.7-4.4	12.5	8.2-18.7	25.7	18.7-34.2	24.8	17.8-33.5	16.2	10.7-23.7	-	-
Breakfast cereals (muesli, corn flakes, wheat flakes, etc.).	87.6	79.9-92.6	-	-	0.4	0.0-2.6	1.9	0.5-7.0	1.6	0.6-4.6	4.2	1.7-10.3	4.2	1.5-11.2	-	-

Food Items								PREGNANT	WOM	EN						
		Never	6-7 t	ery day, imes per veek		5 times er week		8 times er week		Once week		3 times ⁻ month		han once nonth		n't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BEVERAGES																
Ready-made fruit juices	32.1	24.5-40.8	5.0	2.2-10.9	3.5	1.3-9.5	9.2	5.3-15.6	13.4	7.8-22.0	21.2	14.5-29.9	15.5	10.5-22.3	-	-
Freshly squeezed fruit juices	38.9	30.6-47.8	3.5	1.2-10.3	2.7	0.8-8.7	7.5	4.1-13.4	17.4	11.6-25.5	16.8	11.1-24.7	13.1	8.1-20.4	-	-
Freshly squeezed vegetable juices	96.1	90.5-98.4	-	-	-	-	1.7	0.4-7.0	0.6	0.1-3.9	-	-	1.7	0.4-6.8	-	-
Light, zero cola drinks	96.4	90.8-98.6	-	-	-	-	-	-	0.4	0.1-2.9	2.1	0.6-7.0	1.2	0.2-7.8	-	-
Regular cola drinks	57.2	48.2-65.8	3.3	1.3-8.4	2.7	1.1-6.5	4.3	2.0-8.9	12.0	6.7-20.5	10.6	6.4-17.1	9.9	5.9-16.4	-	-
Ice teas	75.5	66.4-82.8	0.8	0.1-5.8	-	-	2.9	0.9-9.0	6.8	3.0-14.7	9.5	5.2-16.8	4.5	2.1-9.3	-	-

juices	96.1	90.5-98.4	-	-	-	-	1.7	0.4-7.0	0.6	0.1-3.9	-	-	1.7	0.4-6.8	-	-
Light, zero cola drinks	96.4	90.8-98.6	-	-	-	-	-	-	0.4	0.1-2.9	2.1	0.6-7.0	1.2	0.2-7.8	-	-
Regular cola drinks	57.2	48.2-65.8	3.3	1.3-8.4	2.7	1.1-6.5	4.3	2.0-8.9	12.0	6.7-20.5	10.6	6.4-17.1	9.9	5.9-16.4	-	-
Ice teas	75.5	66.4-82.8	0.8	0.1-5.8	-	-	2.9	0.9-9.0	6.8	3.0-14.7	9.5	5.2-16.8	4.5	2.1-9.3	-	-
Tea (black)	4.9	2.1-10.9	82.3	74.1-88.3	2.3	0.9-5.8	7.2	3.3-15.0	1.4	0.4-4.4	1.1	0.2-5.0	0.7	0.2-3.2	-	-
Green tea	76.1	67.7-83.0	0.7	0.2-2.8	0.6	0.1-4.5	1.8	0.6-5.3	7.1	3.6-13.5	5.3	2.6-10.5	8.3	4.3-15.6	-	-
Herbal teas	58.7	49.7-67.0	1.4	0.4-4.5	2.3	0.6-7.7	6.4	3.2-12.4	9.9	5.8-16.6	11.7	7.6-17.6	9.6	5.4-16.5	-	-
Mineral water, soda	32.2	24.4-41.1	14.8	9.3-22.8	6.5	3.3-12.4	13.1	8.1-20.5	12.8	7.7-20.6	8.1	4.8-13.4	12.5	7.8-19.6	-	-
Instant granulated coffee	54.0	45.0-62.8	5.7	2.7-11.7	1.4	0.3-6.8	11.2	7.2-17.1	11.2	6.2-19.3	3.3	1.6-7.0	11.6	6.8-18.9	1.5	0.2-10
Filter coffee	91.9	85.1-95.8	1.5	0.2-10.2	-	-	1.4	0.3-5.8	0.4	0.0-2.6	0.9	0.2-4.3	2.4	0.8-7.1	1.5	0.2-10.2
Turkish coffee	24.5	17.5-33.2	12.6	7.6-20.1	3.6	1.6-8.2	22.3	16.0-30.4	16.4	10.7-24.3	13.2	7.9-21.1	7.4	4.0-13.2	-	-
Energy drinks	98.1	93.1-99.5	-	-	-	-	-	-	1.2	0.2-7.8	-	-	0.7	0.2-3.0	-	-
Alcoholic beverages	97.3	92.8-99.0	-	-	-	-	-	-	-	-	-	-	2.7	1.0-7.2	-	-

Food Items							PREC	SNANT WO	MEN							
	I	Never	6-7 t	ery day, imes per week		5 times r week		times r week		Once week		3 times ⁻ month		han once month		't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
OILS, FATS, SUGAR, DESSERTS																
Olive oil	23.6	16.7-32.4	41.3	32.9-50.2	7.9	4.0-14.8	11.1	6.6-18.1	6.8	3.3-13.6	5.5	2.6-11.3	3.7	1.4-9.8	-	-
Hazelnut oil	99.7	97.8-100.0	-	-	0.3	0.0-2.2	-	-	-	-	-	-	-	-	-	-
Sunflower oil	9.0	5.4-14.6	72.3	64.1-79.3	4.1	1.9-8.5	5.0	2.4-10.0	3.0	1.1-8.3	5.0	2.3-10.5	1.6	0.3-7.0	-	-
Corn oil	88.5	82.1-92.8	4.2	1.9-8.9	0.8	0.1-5.8	2.7	1.0-7.4	1.5	0.3-6.5	1.1	0.3-4.3	0.9	0.3-3.0	0.3	0.0-2.1
Soybean oil	100.0	0.0-100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Canola oil	100.0	0.0-100.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hard margarine	54.7	45.7-63.4	4.0	1.5-10.4	2.6	0.9-6.8	9.8	5.5-17.0	7.6	4.5-12.6	13.6	8.6-20.8	7.8	4.4-13.3	-	-
Soft margarine	78.4	70.0-84.9	3.7	1.6-8.0	2.4	0.8-7.4	6.0	2.7-12.9	2.4	0.8-7.1	2.8	1.1-6.8	4.3	1.7-10.5	-	-
Butter	12.8	8.1-19.7	36.6	28.4-45.7	7.1	3.7-13.2	24.5	17.5-33.2	11.7	6.8-19.6	2.2	1.0-4.7	5.0	2.4-10.2	-	-
Tail fat, tallow	77.9	69.7-84.4	-	-	0.9	0.1-6.0	0.4	0.1-3.2	2.4	0.9-6.4	8.1	4.4-14.5	10.3	6.0-17.2	-	-
Table sugar	30.3	22.6-39.3	55.2	46.1-63.9	2.6	0.9-7.1	4.5	1.6-11.7	2.2	0.9-5.7	0.9	0.2-3.7	3.6	1.6-7.9	0.7	0.1-4.0
Honey, jam, molasses	10.9	6.0-19.1	51.3	42.3-60.1	8.5	4.5-15.4	11.9	7.6-18.0	9.6	5.4-16.5	2.7	1.2-6.3	4.5	1.7-11.2	0.7	0.1-4.7
Sweets, Turkish Delight, chocolate	16.1	10.5-24.0	12.3	7.3-20.0	6.4	3.3-12.1	17.4	11.8-24.9	21.2	14.5-30.0	14.6	9.6-21.4	11.4	6.7-18.7	0.7	0.1-4.7
Pastry desserts, syrup sweetened (tulumba, lokma, baklava)	17.4	11.2-26.1	-	-	-	-	1.9	0.6-5.7	20.0	13.8-28.0	36.1	28.0-45.0	23.9	17.1-32.4	0.7	0.4-4.7
Pastry products with cream filling (cake, etc.)	26.0	18.6-35.0	-	-	-	-	1.2	0.3-4.8	8.0	4.2-14.7	28.4	21.0-37.1	35.7	27.8-44.6	0.7	0.1-4.7
Artificial sweeteners	98.9	95.9-99.7	-	-	-	-	-	-	-	-	0.2	0.0-1.2	-	-	1.0	0.2-4.2
Instant soups	78.6	69.9-85.3	-	-	-	-	3.0	1.3-7.1	2.2	0.7-7.0	8.6	4.3-16.3	6.9	3.4-13.5	0.7	0.4-4.7
Smoked products	94.5	88.3-97.5	-	-	-	-	0.7	0.1-4.6	-	-	-	-	1.5	0.3-6.6	3.3	1.1-9.2
Meat bouillon cube, chicken bouillon cube	61.3	52.0-69.8	3.8	1.2-11.3	1.5	0.3-6.6	11.9	7.2-18.9	8.4	4.4-15.5	8.7	4.5-16.2	3.8	1.5-9.1	0.7	0.1-4.7
Hamburger, fried chicken pieces etc.	64.2	55.1-72.4	-	-	-	-	1.1	0.3-4.8	3.8	1.6-8.5	17.3	11.1-26.0	12.9	11.1-26.0	0.7	0.1-4.7
Doner, kebab, etc.	13.4	8.9-19.8	-	-	0.5	0.1-3.4	1.8	0.3-12.1	8.9	4.9-15.6	50.6	41.7-59.5	24.1	17.0-32.8	0.7	0.1-4.7
Pita, lahmacun (Turkish pizza), pizza, pancake, etc.	7.4	3.7-14.1	-	-	-	-	0.3	0.0-2.1	17.6	11.6-25.6	56.0	47.0-64.7	18.1	12.4-25.7	0.7	0.1-4.7
Chips, corn snacks	45.1	36.3-54.1	2.8	1.1-7.1	1.6	0.3-7.2	7.2	3.7-13.6	10.6	6.0-18.0	14.6	9.8-21.2	17.5	11.6-25.7	0.7	0.1-4.7

3.5.11. Frequency of Food Consumption Among Lactating Women

A total of 414 lactating women were included among the samples in the Turkey Nutrition and Health Survey. The data on frequencies of food consumption of pregnant women are given in Table 2.44. While %81.1 of lactating women never consumed pasteurized milk, %3.3 of them consumed it every day. The frequency of never consuming UHT milk was 71.1%, and the frequency of its everyday consumption was 4.0%. The frequency of never consuming loose milk was 60.4%, and the frequency of its everyday consumption was 4.8%. 93.1% of lactating women never consumed probiotic milk and dairy products. The frequency of those who consumed yoghurt and ayran (diluted yoghurt) every day was 57.6%, and the frequency of those who consumed cheese every day was 82.2%. The frequency of never consuming fruit/cocolate flavored milks was 91.1%. The frequency of everyday ice cream consumption was 0.5%, and the frequency of its consumption once a week was 22.1%.

Among the foods in meat group, while beef was never consumed with a frequency of 16.0%, it was consumed 2-3 times per week with a frequency of 19.6%, and once a week with a frequency of 24.5%. For chicken, these frequencies were 2.7%, 26.8% and 33.0%, respectively. While fish was never consumed with a frequency of 11.2%, the frequency of its consumption 2-3 times per week was 7.1%, the frequency of its consumption once a week was 27.7%. The frequency of everyday consumption of nuts was 15.1%, and the frequency of nuts consumption once a week was 15.9%. The frequency of legumes consumption 2-3 times per week was 20.8%, and the frequency of their consumption once a week was 41.8%.. Eggs were consumed every day with a frequency of 57.0%, and 4-5 times per week with a frequency of 9.3%.

Among lactating women, while the frequency of everyday consumption of vegetables was 57.4%, this frequency was 60.5% for fruits.

The frequency of those who never consumed white bread was 6.9%, the frequency of those who consumed it every day was 79.5%. Whole grain bread, rye bread, wholemeal bread etc. were never consumed by 67.9% of lactating women. While tarhana (fermented dried yoghurt and flour mixture) was never consumed with a frequency of 32.4%, it was consumed a few times a month with a frequency of 13.6%.

Freshly squeezed fruit juices were never consumed with a frequency of 55.0%, this frequency was 96.6% for freshly squeezed vegetable juices. The frequency of everyday consumption of freshly squeezed fruit juices was 1.3%, while their consumption frequency was 8.6% for 2-3 times per week. The frequencies of everyday consumption were 88.4% for black tea, 6.2% for herbal teas, 1.0% for green tea, 20.2% for Turkish coffee. The frequencies of everyday consumption were 36.0% for olive oil, 73.5% for sunflower oil, 37.3% for butter.

Table sugar was never consumed with a frequency of 22.1%, honey, jam, molasses were never consumed with a frequency of 10.3%, and artificial sweeteners were never consumed with a frequency of 99.3%.

Food Items							LA	CTATING W	VOME	N						
	I	Never	6-7 t	ery day, imes per week		5 times r week		times r week		Once week		B times month		han once month		't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
MILK AND DAIRY PRODUCTS																
Pasteurized milk	81.1	75.9-85.3	3.3	1.5-6.9	1.7	0.7-4.2	4.4	2.5-7.7	2.9	1.5-5.4	3.1	1.7-5.6	3.1	1.6-5.8	0.4	0.1-1.8
UHT milk	71.1	65.3-76.2	4.0	2.4-6.4	1.8	0.9-3.7	3.5	2.1-5.9	7.9	5.1-12.2	5.6	3.1-12.2	5.7	3.6-8.7	0.4	0.1-1.8
Loose milk	60.4	54.4-66.2	4.8	2.8-7.9	1.3	0.6-2.7	10.4	7.1-14.9	11.0	7.8-15.1	6.7	4.4-9.8	5.1	3.0-8.6	0.4	0.1-1.8
Probiotic milk and dairy products (kefir etc.)	93.1	89.3-95.6	0.7	0.1-4.0	0.1	0.0-0.5	1.3	0.3-5.1	0.6	0.1-2.5	1.3	0.5-3.7	1.2	0.5-2.5	1.7	0.8-3.6
Yoghurt, ayran (diluted yoghurt)	2.1	1.0-4.2	57.6	51.5-63.5	11.7	8.5-15.8	15.2	11.6-19.7	8.8	5.6-13.7	2.5	1.2-5.4	1.4	0.5-4.2	0.7	0.2-2.1
Probiotic yoghurt	89.6	85.0-92.9	1.3	0.5-3.2	0.2	0.0-1.4	1.0	0.2-5.4	2.0	0.6-5.8	0.6	0.2-1.9	0.6	0.2-1.5	4.8	2.8-8.1
Cheese	1.7	0.8-3.8	82.2	76.6-86.7	4.8	2.5-8.8	7.7	4.7-12.2	2.4	1.0-5.7	0.4	0.1-2.3	0.3	0.1-1.1	0.5	0.1-1.9
Sweetened/fruit/cocoa/chocolate flavored milks	85.8	81.4-89.4	0.9	0.3-2.3	1.4	0.4-4.6	2.3	1.1-4.9	2.1	1.0-4.3	3.0	1.5-5.9	3.6	2.2-6.0	0.8	0.3-2.6
Sweetened/fruit/cocoa/chocolate flavored yoghurts	91.1	87.2-93.9	0.1	0.0-1.0	-	-	0.6	0.2-2.0	1.2	0.5-2.7	2.1	0.9-5.1	4.0	2.2-7.1	0.8	0.3-2.6
Cream/clotted cream (kaimak)	49.7	43.5-55.8	5.1	3.1-8.4	1.0	0.4-2.6	7.3	4.6-11.2	15.5	11.4-20.6	11.2	7.9-15.7	9.6	6.4-14.1	0.7	0.2-2.2
lce cream	15.7	11.4-21.1	0.5	0.1-1.9	0.7	0.1-4.0	8.4	5.5-12.6	22.1	17.1-28.0	30.4	25.2-36.2	21.8	17.4-27.0	0.5	0.1-1.9
Milk desserts (kazandibi (white pudding with blackened surface), sütlaç (rice pudding), pudding, milk pudding	18.1	13.5-23.8	0.2	0.0-1.6	2.6	1.1-5.7	7.0	4.3-11.0	22.0	17.5-27.3	34.1	28.4-40.2	15.5	11.8-20.3	0.5	0.1-1.9
MEAT-EGGS-LEGUMES																
Beef	16.0	11.6-21.6	2.3	1.1-5.0	3.3	1.8-5.8	19.6	15.0-25.2	24.5	19.5-30.4	19.1	15.0-24.0	14.7	11.0-19.3	0.5	0.1-1.9
Lamb/mutton	36.3	30.6-42.4	0.3	0.1-1.1	0.8	0.3-1.8	10.2	6.9-14.6	15.8	11.9-20.7	15.5	11.9-20.7	20.7	15.7-26.9	0.5	0.1-1.9
Chicken	2.7	1.5-5.0	2.8	1.3-6.1	3.9	2.2-6.7	26.8	21.6-32.7	33.0	27.4-39.2	26.6	21.6-32.3	3.7	2.1-6.6	0.5	0.1-1.9
Turkey	89.9	85.4-93.1	-	-	-	-	-	-	0.6	0.1-3.3	3.0	1.4-6.3	6.0	3.7-9.8	0.5	0.1-1.9
Goose/duck	95.1	92.3-97.0	-	-	-	-	-	-	-	-	1.0	0.3-3.2	3.4	1.9-5.8	0.5	0.1-1.9
Fish	11.2	7.8-15.8	0.2	0.0-1.2	0.8	0.2-3.1	7.1	4.5-10.9	27.7	22.5-33.6	31.7	26.3-37.6	20.9	16.2-26.6	0.5	0.1-1.9
Seafood (calamars, shrimps, mussels, etc.)	88.4	83.6-92.0	0.2	0.0-1.2	-	-	0.8	0.1-5.8	0.3	0.0-2.2	3.2	1.7-6.0	6.2	3.7-10.5	0.8	0.3-2.2
Offals (liver, kidney, spleen, etc.)	54.4	48.2-60.4	-	-	-	-	1.3	0.3-4.5	3.0	1.6-5.8	15.0	11.3-19.8	25.9	21.0-31.4	0.4	0.1-1.8
Meat products (salami, sausage, fermented sausage, pastrami, etc.)	33.4	27.9-39.4	4.9	2.7-8.9	3.4	1.4-7.8	8.1	5.6-11.6	21.4	16.5-27.3	17.3	13.3-22.2	11.1	7.9-15.3	0.5	0.1-1.9
Nuts (hazelnuts, peanuts, pistachios, walnuts, etc.)	12.0	7.9-17.7	15.1	11.5-19.5	8.8	5.6-13.5	22.1	17.5-27.5	15.9	12.0-20.8	17.2	13.3-22.0	8.5	5.5-13.0	0.5	0.1-1.9
Legumes (dry beans, chickpeas, lentils, etc.)	3.6	1.7-7.5	0.9	0.3-2.8	1.3	0.3-5.1	20.8	16.2-26.3	41.8	35.8-48.0	27.8	22.8-33.5	3.4	1.6-6.9	0.5	0.1-1.9
Eggs	2.5	1.0-6.1	57.0	50.8-63.0	9.3	6.3-13.5	20.4	16.0-25.7	9.1	6.0-13.6	0.3	0.1-1.4	0.5	0.2-1.5	0.8	0.2-2.5

Foods								LACTATING	WOM	EN						
		Never	6-7 t	ery day, imes per week		5 times er week		3 times er week		Once week		3 times r month		than once month		n't know/ response
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
VEGETABLES AND FRUITS																
Green leafy vegetables	5.3	2.6-10.4	28.0	23.0-33.7	12.3	8.6-17.3	25.1	20.5-30.4	18.5	14.0-24.0	6.9	4.2-11.3	3.5	1.8-6.8	0.3	0.0-2.0
Other fresh vegetables (leek, cabbage)	17.9	13.1-24.0	2.8	1.4-5.7	2.8	1.5-5.0	11.7	8.6-15.8	23.4	18.8-28.8	28.8	23.6-34.7	12.2	8.7-17.0	0.3	0.0-2.0
Tomato	1.1	0.5-2.8	59.0	52.9-64.9	13.5	9.6-18.6	15.6	11.8-20.4	8.0	5.3-11.8	0.6	0.2-1.9	1.8	0.7-4.4	0.3	0.0-2.0
Green pepper (village pepper, banana pepper, long pepper, etc.)	4.2	2.3-7.6	46.3	40.2-52.5	12.7	8.9-17.8	20.1	15.8-25.4	11.7	8.4-16.1	3.1	1.9-5.3	1.5	0.7-3.4	0.3	0.0-2.0
Mushroom	39.1	33.1-45.5	0.3	0.0-1.8	0.2	0.0-1.5	1.5	0.3-6.2	14.0	10.1-19.1	20.8	16.8-25.5	23.8	19.0-29.3	0.3	0.0-2.0
Corn	29.0	23.3-35.4	1.1	0.5-2.4	0.2	0.0-1.3	4.0	2.2-7.2	11.8	8.1-16.8	27.1	22.2-32.7	26.6	21.8-32.0	0.3	0.0-2.0
Frozen vegetables/fruits	47.1	41.0-53.4	0.1	0.0-0.7	0.6	0.1-2.6	3.5	2.0-6.1	10.9	7.7-15.3	24.7	19.8-30.2	12.8	9.2-17.4	0.3	0.0-2.0
Dried vegetables	43.0	36.9-49.3	-	-	-	-	2.6	1.0-7.0	9.6	6.4-14.2	26.8	21.8-32.4	17.7	13.8-22.5	0.3	0.0-2.0
Dried fruits	40.0	33.9-46.4	3.9	2.3-6.7	2.3	1.3-4.2	10.8	7.5-15.3	10.6	7.9-14.2	18.4	14.1-23.7	13.7	10.0-18.4	0.3	0.0-2.0
Raisin	29.3	23.6-35.7	5.4	3.2-8.9	2.1	0.8-5.9	12.9	9.4-17.5	18.0	14.0-22.8	20.5	16.3-25.5	11.3	7.9-15.9	0.4	0.1-1.8
Citrus fruits	5.3	3.1-9.0	13.0	9.3-17.7	11.3	7.3-17.0	23.3	18.9-28.4	18.5	14.3-23.7	19.8	15.4-24.9	8.6	5.4-13.3	0.3	0.0-2.0
Other fresh fruits	4.9	2.6-9.0	35.6	30.0	12.3	8.7-17.2	20.3	16.1-25.2	14.4	10.4-19.5	8.8	5.8-13.1	3.3	1.4-7.4	0.5	0.1-1.9
Ready-made canned vegetables	88.8	84.8-91.9	0.1	0.0-1.1	-	-	0.3	0.1-1.0	2.1	0.8-5.0	4.5	2.7-7.5	3.7	2.2-6.3	0.4	0.1-1.8
Home-made canned vegetables	36.9	31.0-43.3	2.0	0.9-4.2	0.8	0.3-2.0	16.5	12.3-21.8	15.8	12.1-20.5	19.9	15.8-24.9	7.5	4.6-11.8	0.6	0.2-1.8
French fries	6.9	4.2-11.0	4.8	2.4-9.3	8.1	5.5-11.8	25.1	20.0-31.0	33.1	27.5-39.2	17.3	13.4-22.0	4.2	2.6-6.8	0.5	0.1-1.8
Vegetables, total	0.2	0.0-0.8	57.4	51.1-63.5	10.5	6.8-15.7	21.2	16.5-26.9	8.4	5.4-13.0	1.9	1.0-3.8	0.1	0.0-0.5	0.3	0.0-2.0
Fruits, total	2.0	0.9-4.3	60.5	54.2-66.5	11.4	7.9-16.2	14.5	10.9-19.2	8.8	5.4-14.2	1.3	0.6-3.1	1.1	0.4-2.8	0.3	0.0-2.0

Food Items								LACTATING	WOM	EN						
		Never	6-7 t	ery day, imes per week	-	5 times er week		8 times er week		Once week		3 times r month		than once month		n't know/ response
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BREAD-CEREALS																
White bread	6.9	4.4-10.7	79.5	74.2-83.9	2.1	1.1-4.2	5.5	3.4-8.9	3.5	1.7-6.9	0.8	0.3-2.4	1.3	0.6-3.1	0.3	0.0-2.0
Whole grain bread, rye bread, wholemeal bread etc.	67.9	62.0-73.0	11.5	8.3-15.9	1.5	0.6-3.6	5.1	2.8-9.2	3.7	2.3-6.0	5.3	3.4-8.2	4.6	2.7-7.8	0.3	0.0-2.0
Home-made unleavened breads (phyllo dough etc.)	40.9	34.8-47.2	11.0	7.5-15.8	1.7	0.8-3.7	4.2	2.2-7.8	11.7	8.4-16.2	18.7	14.6-23.6	11.5	8.4-15.7	0.3	0.0-2.0
Rice	2.3	1.2-4.4	1.7	0.6-4.9	4.3	2.2-8.1	41.4	35.4-47.6	33.2	27.5-39.4	13.6	10.0-18.1	3.3	1.9-5.8	0.3	0.0-2.0
Bulghur	1.9	0.7-5.0	2.3	1.0-5.3	5.8	3.3-9.8	38.1	32.4-44.2	36.7	30.9-42.9	12.7	9.1-17.4	2.2	0.9-5.1	0.3	0.0-2.0
Macaroni, noodles, couscous	2.2	1.0-4.4	0.5	0.1-2.0	2.9	1.2-6.7	37.3	31.6-43.5	39.0	33.0-45.3	15.9	12.2-20.5	1.9	0.8-4.6	0.3	0.0-2.0
Pastries, cakes, buns	10.5	6.8-15.9	1.1	0.4-2.8	1.6	0.7-3.7	8.9	5.6-13.9	27.3	22.2-33.1	38.1	32.4-44.1	12.2	9.0-16.4	0.3	0.0-2.0
Cookies	23.9	18.6-30.1	1.2	0.5-3.1	0.5	0.1-2.6	7.1	4.2-11.7	19.0	14.3-24.8	29.5	24.6-35.0	18.5	14.5-23.3	0.3	0.0-2.0
Tarhana (fermented dried yoghurt and flour mixture)	32.4	26.7-38.7	5.7	3.3-9.6	4.4	2.6-7.1	14.6	11.3-18.7	20.4	15.7-26.2	13.6	10.1-18.0	8.4	5.4-12.9	0.6	0.1-2.3
Biscuits/crackers	12.2	8.6-17.1	12.0	8.8-16.2	6.9	4.3-10.8	24.9	19.8-30.7	20.3	15.7-25.7	12.8	9.1-17.6	10.7	7.4-15.1	0.3	0.0-2.0
Bagel	24.4	19.1-30.7	2.2	1.1-4.3	0.7	0.3-1.9	11.0	7.5-15.9	18.5	14.6-23.2	25.4	20.6-30.9	17.5	13.2-22.8	0.3	0.0-2.0
Breakfast cereals (muesli, corn flakes, wheat flakes, etc.).	93.1	89.3-95.6	0.2	0.0-1.6	0.2	0.0-0.7	1.4	0.5-3.4	0.4	0.1-1.2	2.2	1.0-4.8	2.3	0.9-5.8	0.3	0.0-2.0

Food Items								LACTATING	S WON	1EN						
		Never	6-7 t	ery day, imes per week	-	5 times er week		times r week		Once week		3 times month		than once month		sn't know/ response
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
BEVERAGES																
Ready-made fruit juices	41.0	35.1-47.2	4.1	2.5-6.7	3.3	1.3-8.2	7.6	4.9-11.7	14.9	10.9-20.1	13.6	10.2-17.9	15.1	11.1-20.4	0.3	0.0-2.0
Freshly squeezed fruit juices	55.0	48.9-61.0	1.3	0.5-3.4	1.3	0.5-3.3	8.6	5.8-12.5	8.7	6.1-12.2	13.7	10.0-18.4	11.2	7.8-15.7	0.3	0.0-2.0
Freshly squeezed vegetable juices	96.6	93.7-98.2	0.2	0.0-1.6	-	-	0.2	0.0-1.4	0.5	0.2-1.8	0.9	0.3-3.2	1.1	0.3-4.2	0.4	0.1-1.8
Light, zero cola drinks	93.9	90.1-96.3	0.2	0.0-1.1	-	-	0.8	0.3-2.1	1.5	0.5-4.7	1.8	0.6-5.3	0.6	0.2-1.7	1.3	0.5-3.3
Regular cola drinks	39.3	33.5-45.4	5.3	3.2-8.7	2.5	1.4-4.5	11.5	7.8-16.6	12.6	9.5-16.5	16.8	12.2-22.7	11.7	8.2-16.4	0.3	0.0-2.0
Ice teas	82.3	77.8-86.1	0.6	0.2-1.4	0.7	0.2-2.1	1.4	0.7-2.9	3.8	2.3-6.2	5.9	3.9-8.7	5.0	2.9-8.5	0.4	0.1-1.8
Tea (black)	4.2	2.1-8.4	88.4	84.0-91.7	1.8	0.9-3.4	2.5	1.3-4.7	2.1	1.1-4.1	0.2	0.0-1.5	0.5	0.1-2.0	0.3	0.0-2.0
Green tea	81.9	76.9-86.0	1.0	0.4-2.9	0.3	0.1-1.3	3.9	2.1-7.2	2.6	1.4-4.9	6.2	3.9-9.8	3.8	2.1-6.7	0.3	0.0-2.0
Herbal teas	54.4	48.2-60.4	6.2	4.2-9.0	1.8	1.0-3.5	11.6	8.2-16.3	7.1	4.8-10.3	8.9	6.3-12.4	9.8	6.6-14.3	0.3	0.0-2.0
Mineral water, soda	44.0	37.8-50.3	6.8	4.4-10.5	2.5	1.3-4.7	12.3	9.3-16.2	9.3	6.5-13.1	16.5	12.1-22.0	8.3	5.9-11.7	0.3	0.0-2.0
Instant granulated coffee	53.2	47.0-59.2	8.9	5.7-13.5	4.2	2.3-7.7	9.3	6.6-13.0	7.0	4.9-10.0	9.1	6.3-12.8	8.0	5.4-11.8	0.3	0.0-2.0
Filter coffee	96.5	94.0-98.0	1.0	0.3-2.7	-	-	0.5	0.1-2.1	0.3	0.1-1.1	0.9	0.2-3.2	0.6	0.2-1.8	0.3	0.0-2.0
Turkish coffee	29.7	24.1-36.0	20.2	15.8-25.6	4.5	2.8-7.2	15.1	11.3-19.9	8.9	6.2-12.7	15.5	11.5-20.6	5.7	3.4-9.3	0.3	0.0-2.0
Energy drinks	98.5	95.3-99.5	-	-	-	-	0.8	0.1-5.4	-	-	-	-	0.4	0.1-1.7	0.4	0.1-1.8
Alcoholic beverages	97.7	94.2-99.1	-	-	-	-	0.8	0.1-5.4	0.6	0.1-4.3	0.4	0.1-1.9	0.2	0.0-1.1	0.3	0.0-2.0

Food Items								LACTATING	WOM	EN						
		Never	6-7 t	ery day, imes per week		5 times er week		8 times er week		Once week		3 times r month		han once month		't know/ esponse
	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI	%	95%CI
OILS, FATS, SUGAR, DESSERTS																
Olive oil	36.4	30.5-42.8	36.0	30.5-41.9	5.1	2.9-8.6	9.1	6.1-13.2	2.8	1.5-5.1	4.3	2.5-7.2	5.8	3.2-10.3	0.6	0.1-2.3
Hazelnut oil	95.7	92.0-97.8	1.1	0.3-3.6	-	-	0.2	0.0-1.1	0.4	0.1-1.7	1.6	0.4-6.1	0.8	0.3-2.2	0.3	0.0-2.0
Sunflower oil	8.1	5.6-11.5	73.5	68.0-78.4	4.7	2.7-8.1	5.1	3.3-7.7	3.1	1.8-5.2	4.3	2.1-8.5	1.0	0.4-3.0	0.3	0.0-2.0
Corn oil	91.3	87.8-93.9	3.3	1.8-5.8	1.0	0.3-2.8	1.5	0.6-3.7	1.1	0.4-3.1	0.9	0.4-2.1	0.6	0.2-1.9	0.3	0.0-2.0
Soybean oil	99.3	98.0-99.8	-	-	-	-	0.1	0.0-0.8	-	-	0.2	0.0-1.2	-	-	0.4	0.1-1.8
Canola oil	98.7	97.2-99.4	-	-	0.2	0.0-1.4	0.1	0.0-0.8	-	-	0.2	0.0-1.2	0.4	0.1-1.7	0.4	0.1-1.8
Hard margarine	52.5	46.3-58.6	3.9	2.4-6.3	1.1	0.3-3.6	9.7	6.3-14.7	11.9	8.1-17.0	12.5	9.0-17.0	8.2	5.7-11.8	0.3	0.0-2.0
Soft margarine	72.4	66.4-77.7	3.3	1.9-5.9	0.8	0.3-2.3	5.8	3.3-10.1	5.9	3.2-10.6	7.9	5.3-11.8	3.5	2.0-6.0	0.4	0.1-1.8
Butter	18.3	13.4-24.4	37.3	31.7-43.2	6.0	3.8-9.4	20.0	15.3-25.7	6.8	4.4-10.3	8.2	5.3-12.5	3.1	1.7-5.7	0.3	0.0-2.0
Tail fat, tallow	74.7	69.2-79.6	0.9	0.3-2.7	1.0	0.3-3.1	2.8	1.3-5.7	3.8	2.0-7.3	8.1	5.6-11.6	8.4	5.6-12.4	0.3	0.0-2.0
Table sugar	22.1	17.6-27.5	65.7	59.6-71.3	2.3	1.0-5.4	0.7	0.3-1.8	4.8	2.4-9.6	2.4	1.2-4.9	1.5	0.6-3.4	0.4	0.1-1.9
Honey, jam, molasses	10.3	6.8-15.4	42.7	36.8-48.8	5.9	3.8-9.0	19.5	14.9-25.1	9.5	6.5-13.8	7.8	5.0-11.8	4.0	2.0-7.8	0.3	0.0-2.0
Sweets, Turkish Delight, chocolate	12.4	8.9-17.1	17.6	13.6-22.4	8.8	5.7-13.4	18.2	13.5-24.0	18.1	14.0-23.0	16.1	11.9-21.4	8.6	6.0-12.3	0.3	0.0-2.0
Pastry desserts, syrup sweetened (tulumba, lokma, baklava)	17.7	13.1-23.4	0.5	0.2-1.4	0.5	0.1-3.3	4.5	2.9-7.0	13.2	9.4-18.4	40.1	34.3-46.3	23.2	18.5-28.7	0.3	0.0-2.0
Pastry products with cream filling (cake, etc.)	25.2	19.8-31.5	-	-	-	-	1.2	0.6-2.5	8.0	5.0-12.6	39.0	33.2-45.2	26.3	21.6-31.5	0.3	0.0-2.0
Artificial sweeteners	99.3	97.9-99.7	-	-	-	-	0.1	0.0-1.0	-	-	0.2	0.0-1.3	-	-	0.4	0.1-1.8
Instant soups	74.2	68.4-79.3	0.4	0.1-1.7	0.3	0.0-2.0	2.5	1.3-4.7	5.5	3.0-9.9	8.8	5.8-13.1	8.0	5.4-11.7	0.3	0.0-2.0
Smoked products	95.2	92.6-96.9	-	-	-	-	0.2	0.0-1.2	0.8	0.3-2.3	1.4	0.6-3.2	1.1	0.5-2.6	1.4	0.6-3.0
Meat bouillon cube, chicken bouillon cube	54.2	48.0-60.3	8.2	5.5-12.2	4.1	2.0-8.1	13.8	10.4-18.1	9.8	6.7-14.1	5.6	3.3-9.3	4.0	2.1-7.3	0.3	0.0-2.0
Hamburger, fried chicken pieces etc.	70.3	64.3-75.6	0.2	0.0-1.3	0.1	0.0-0.7	1.5	0.5-4.2	2.2	1.0-4.8	12.0	8.5-16.6	13.5	9.8-18.4	0.3	0.0-2.0
Doner, kebab, etc.	20.5	16.0-25.9	0.2	0.0-1.3	0.1	0.0-0.7	3.4	1.7-6.7	13.1	9.0-18.6	37.9	32.3-43.9	24.6	19.5-30.5	0.3	0.0-2.0
Pita, lahmacun (Turkish pizza), pizza, pancake, etc.	17.6	13.2-23.1	-	-	0.3	0.1-1.1	2.8	1.5-5.1	12.9	8.8-18.6	43.0	37.1-49.2	23.1	18.5-28.4	0.3	0.0-2.0
Chips, corn snacks	41.2	35.2-47.5	3.5	1.8-6.6	2.4	0.9-6.2	5.9	3.7-9.2	15.3	11.1-20.6	15.5	11.5-20.4	16.0	12.5-20.2	0.3	0.0-2.0

3.6. Food Security

The findings related to food security are given in Table 2.45 and Table 2.46. The frequency of individuals who were worried they would not be able to have enough food due to lack of money or other resources during the last year was 23.4%, the frequency of those who were unable to eat healthy and nutritious foods was 22.7%, the frequency of those who experienced decrease in the food variety they consumed was 22.8%, the frequency of those who had to skip meal was 13.1%, the frequency of those who consumed less food than required was 16.5%, the frequency of those who were not able to eat despite being hungry was 8.4%. Considering the frequency of not being able to eat despite being hungry due to economic reasons in the last year, 42.6% of individuals responded "Some months, but not every month". The frequency of individuals who were not able to eat a whole day due to lack of money or other resources during the last year was 2.6%. The frequency of running out of food in household was 16.2%.

Table 2.45. Change TNHS 2017	s occurred in food consur	nption in the last year du	ue to lack of money	and other resources,
Food cocurity (Duo				

Food security (Due to lack of money		No			Yes	;	Do	oesn't l	know	No response		
and other resources during the last year)	N	%	95% Cl	N	%	95% Cl	N	%	95% Cl	N	%	95% Cl
Worrying about not being able to have enough food	9721	75.8	74.9-76.8	3161	23.4	22.4-24.3	78	0.7	0.5-0.9	26	0.1	0.1-0.2
Inability to eat healthy and nutritious foods	9818	76.4	75.4-77.3	3051	22.7	21.7-23.6	80	0.7	0.6-1.0	36	0.2	0.1-0.3
Decrease in the food variety consumed	9849	76.5	75.4-77.4	3030	22.8	21.9-23.8	65	0.5	0.4-0.6	41	0.2	0.2-0.3
Having to skip meal	11167	86.2	85.4-87.0	1727	13.1	12.4-13.9	54	0.4	0.3-0.6	37	0.2	0.1-0.3
Consuming less food than required	10678	82.8	82.0-83.7	2207	16.5	15.6-17.3	61	0.5	0.3-0.7	39	0.2	0.2-0.3
Running out of food in household	10758	83.2	82.3-84.0	2134	16.2	15.4-17.0	57	0.5	0.3-0.6	36	0.2	0.1-0.3
Not being able to eat despite being hungry	11814	90.9	90.2-91.6	1076	8.4	7.8-9.1	50	0.4	0.3-0.6	45	0.2	0.2-0.3

Table 2.46. Frequency of not being able to eat due to economic reasons despite being hungry during the last year, TNHS 2017

	N	%	95%Cl
Frequency of not being able to eat			
Only 1 or 2 times	275	28.1	24.5-32.1
Some months, but not every month	445	42.6	38.6-46.6
Almost every month	296	24.3	21.3-27.6
l don't know	39	3.4	2.3-5.0
No response	21	1.6	0.9-2.6
Total	1076	100.0	100.0-100.0
Not being able to eat a whole day due to lack of money or other resources in the last year			
No	12631	97.4	97.1-97.8
Yes	354	2.6	2.2-2.9
Total	12985	100.0	100.0-100.0
Frequency			
Only 1 or 2 times	131	38.4	32.1-45.1
Some months, but not every month	134	38.1	31.7-45.0
Almost every month	63	18.1	12.9-24.9
l don't know	18	3.6	2.1-6.0
No response	8	1.8	0.8-4.0
Total	354	100.0	100.0-100.0

3.7. Use of Food Supplements

The use of food supplements by individuals is shown in Table 2.47 and Table 2.48.

In total, 6.1% of individuals aged 15-18 years, 9.7% of individuals aged 19-64 years, 14.3% of individuals aged 65 years and over, and overall 9.9% of individuals aged 15 years and over used food supplements.

Use of food supplements		MALE	S		FEMA	LES	OVERALL			
	N	%	95% Cl	Ν	%	95% Cl	Ν	%	95% Cl	
15-18 years										
No	236	91.9	86.4-95.2	260	95.9	92.9-97.7	496	93.9	90.9-95.9	
Yes	17	8.1	4.8-13.6	13	4.1	2.3-7.1	30	6.1	4.1-9.1	
19-64 years										
No	4337	94.2	93.1-95.2	4815	86.4	85.1-87.5	9152	90.3	89.5-91.1	
Yes	259	5.8	4.8-6.9	789	13.6	12.5-14.9	1048	9.7	8.9-10.5	
≥65 years										
No	885	90.6	88.1-92.6	1059	81.8	78.9-84.4	1944	85.7	83.7-87.4	
Yes	91	9.4	7.4-11.9	225	18.2	15.6-21.1	316	14.3	12.6-16.3	
≥15 years										
No	5458	93.7	92.7-94.5	6134	86.6	85.5-87.6	11592	90.1	89.4-90.8	
Yes	367	6.3	5.5-7.3	1027	13.4	12.4-14.5	1394	9.9	9.2-10.6	

Table 2.47. Use of food supplements in individuals aged 15 years and over by gender, TNHS 2017

Concerning the most frequently used food supplements in all age groups, top two food supplements that were most frequently used were multivitamin (1.2%) and calcium (1.2%) in the age group of 15-18 years, vitamin B_{12} (2.9%) and vitamin D (2.2%) in the age group of 19-64 years, and likewise vitamin B_{12} (5.5%) and vitamin D (2.8%) in the age group of 65 years and over (Table 2.48).

Table 2.48. Use of food supplements in individuals by age groups and gender, TNHS 2017

		MALE	S		FEMAL	ES		OVERA	LL
	Ν	%	95% Cl	N	%	95% Cl	N	%	95% Cl
15-18 years old									
Vitamin D	2	0.4	0.1-2.7	1	0.2	0.0-1.6	3	0.3	0.1-1.3
B group vitamins	0	0.0	0.0-0.0	0	0.0	0.0-0.0	0	0.0	0.0-0.0
Vitamin B ₁₂	0	0.0	0.0-0.0	5	0.9	0.3-2.7	5	0.4	0.1-1.4
Folate/folic acid	0	0.0	0.0-0.0	0	0.0	0.0-0.0	0	0.0	0.0-0.0
Multivitamin-mineral	9	1.6	0.5-5.4	4	0.8	0.2-3.2	13	1.2	0.5-3.1
Iron	0	0.0	0.0-0.0	5	0.9	0.3-2.9	5	0.5	0.1-1.4
Calcium	13	2.4	0.7-8.1	0	0.0	0.0-0.0	13	1.2	0.4-4.2
Omega-3	6	1.0	0.3-3.3	0	0.0	0.0-0.0	6	0.5	0.2-1.7
Vegetable oil, capsules (black seed oil, sesame oil, etc.)	0	0.0	0.0-0.0	1	0.3	0.0-2.0	1	0.1	0.0-1.0
19-64 years old									
Vitamin D	24	0.4	0.3–0.7	212	4.1	3.5-4.8	236	2.2	1.9-2.6
B group vitamins	17	0.3	0.2-0.5	45	0.9	0.6-1.3	62	0.6	0.4-0.8
Vitamin B ₁₂	86	1.6	1.2-2.1	221	4.2	3.6-5.0	307	2.9	2.5-3.4
Folate/folic acid	6	0.1	0.0-0.2	58	1.1	0.8-1.6	64	0.6	0.4-0.8
Multivitamin-mineral	71	1.3	1.0-1.8	84	1.6	1.2-2.1	155	1.5	1.2-1.8
Iron	12	0.2	0.1-0.6	194	3.7	3.1-4.4	206	2.0	1.7-2.3
Calcium	3	0.1	0.0-0.2	32	0.6	0.4-0.9	35	0.3	0.2-0.5
Omega-3	23	0.4	0.3-0.7	31	0.6	0.4-0.9	54	0.5	0.4-0.7
Vegetable oil, capsules (black seed oil, sesame oil, etc.)	6	0.1	0.1-0.2	10	0.2	0.1-0.4	16	0.2	0.1-0.3
≥65 years old									
Vitamin D	5	0.8	0.3-2.0	35	4.4	3.2-5.9	40	2.8	2.1-3.7
B group vitamins	3	0.5	0.2-1.0	13	1.7	1.0-2.7	16	1.1	0.7-1.6
Vitamin B ₁₂	30	4.8	3.5-6.6	48	6.0	4.6-7.8	78	5.5	4.5-6.7
Folate/folic acid	4	0.6	0.2-2.3	2	0.2	0.0-0.8	6	0.4	0.1-1.1
Multivitamin-mineral	6	0.9	0.4-2.0	21	2.7	1.8-4.0	27	1.9	1.3-2.7
Iron	4	0.6	0.3-1.4	12	1.5	0.9-2.7	16	1.1	0.7-1.8
Calcium	1	0.1	0.0-0.6	18	2.2	1.5-3.4	19	1.3	0.9-2.0
Omega-3	4	0.7	0.2-1.9	14	1.8	0.8-3.8	18	1.3	0.7-2.5
Vegetable oil, capsules (black seed oil, sesame oil, etc.)	1	0.2	0.0-0.6	4	0.5	0.1-2.1	5	0.4	0.1-1.2

3.8. 24-Hour Dietary Recall

Table 2.49 shows the distribution of food consumption recall by days for individuals aged 15 years and over. It is seen that the first 24-hour dietary recall frequently was performed for Monday (21.8%), Tuesday (21.0%), Wednesday (21.3%) and Thursday (18.2%). The reason for applying the questionnaire on Sunday with a frequency of 17.4% is that individuals were given an appointment for Monday and the 24-hour dietary recall was questioned retrospectively for the previous day. On the other hand, Friday and Saturday were the days in which food consumption recall was at least. This situation came up due to the fact that Family Health Centers conducted study by making an appointment for applying the questionnaire.

Food record	М	Males (N=5754)			males (N=7100)	Overall (N=12854)			
	Ν	%	95% Cl	N	%	95% Cl	Ν	%	95% Cl	
Monday	1250	22.4	21.0-24.0	1536	21.2	20.0-22.4	2786	21.8	20.8-22.8	
Tuesday	1218	20.5	19.2-21.9	1531	21.4	20.2-22.8	2749	21.0	20.1-21.9	
Wednesday	1220	21.6	20.2-23.1	1490	20.9	19.7-22.2	2710	21.3	20.3-22.2	
Thursday	1063	18.1	16.8-19.4	1282	18.3	17.0-19.7	2345	18.2	17.3-19.1	
Friday	9	0.3	0.1-0.6	27	0.5	0.3-0.9	36	0.4	0.3-0.6	
Saturday	2	0.0	0.0-0.1	3	0.0	0.0-0.1	5	0.0	0.0-0.1	
Sunday	992	17.1	15.8-18.4	1231	17.6	16.5-18.8	2223	17.4	16.5-18.2	

Table 2.50 shows the findings about where the food was eaten and where it was prepared in individuals aged 15 years and over. It was determined that 65.5% of the males ate breakfast at home, 14.9% ate at the workplace, and 12.7% did not eat breakfast. In total, 81.0% of the males ate dinner at home.

In total, 79.8% of the females ate breakfast at home, and 12.2% did not eat breakfast. The frequency of eating dinner at home for females was 86.9%.

Food consumption	Brea	kfast		Mid	-Mornir	ng Snack	Lur	nch	I	Mid-Aft Sna	ernoon ack		Dini	ner			Night Si	nack
	Ν	%	95%CI	Ν	%	95%CI	Ν	%	95%CI	Ν	%	95%CI	Ν	%	95%CI	Ν	%	95%CI
MALES (N=5754)																		
Place where it was e	aten																	
l didn't eat	623	12.7	11.5-13.9	4289	73.3	71.7-74.8	1452	23.0	21.6-24.4	3548	61.9	60.2-63.6	349	6.0	5.2-6.9	2224	37.9	36.2-39.5
At home	3978	65.5	63.8-67.2	598	9.0	8.1-10.0	1893	30.1	28.6-31.6	1099	17.4	16.2-18.8	4756	81.0	79.5-82.3	3252	56.3	54.6-58.0
In the car	18	0.3	0.2-0.5	33	0.6	0.4-0.8	22	0.3	0.2-0.5	36	0.6	0.4-0.9	11	0.2	0.1-0.4	13	0.2	0.1-0.4
At the workplace	800	14.9	13.7-16.2	559	10.8	9.7-12.0	1438	26.8	25.3-28.4	719	13.2	12.1-14.4	284	5.3	4.5-6.1	124	2.3	1.8-2.8
In restaurant	165	3.0	2.4-3.7	39	1.0	0.6-1.6	604	11.7	10.5-12.9	120	2.5	2.0-3.1	256	5.4	4.6-6.3	49	1.1	0.8-1.6
On the street	47	0.8	0.5-1.1	61	1.2	0.8-1.7	84	1.6	1.2-2.2	86	1.4	1.0-1.8	12	0.2	0.1-0.5	14	0.3	0.2-0.7
At school	31	1.0	0.6-1.5	100	3.1	2.5-3.9	137	4.2	3.4-5.0	46	1.5	1.1-2.0	4	0.1	0.0-0.3	1	0.0	0.0-0.3
In dormitory	31	0.9	0.7-1.3	3	0.1	0.0-0.2	15	0.5	0.3-0.9	4	0.1	0.1-0.4	31	1.0	0.7-1.6	26	0.9	0.6-1.4
Other	61	1.0	0.7-1.3	73	1.0	0.8-1.3	110	1.8	1.4-2.2	96	1.4	1.1-1.8	52	0.8	0.6-1.2	51	1.0	0.7-1.5
Place where it was pr	repared																	
At home	3986	76.6	74.9-78.2	676	37.0	33.9-40.3	1920	40.1	38.2-42.1	1145	46.2	43.5-48.9	4645	85.7	88.4-87.0	3113	87.7	86.2-89.1
Outside	5064	23.4	21.8-25.1	847	63.0	59.7-66.1	2325	59.9	57.9-61.8	1107	53.8	51.1-56.5	674	14.3	13.0-15.6	397	12.3	10.9-13.8
FEMALES (N=7100)																		
Place where it was e	aten																	
l didn't eat	756	12.2	11.2-13.3	4680	67.1	65.6-68.5	2453	34.0	32.5-35.5	3396	48.5	46.9-50.0	572	7.8	7.0-8.6	2844	40.7	39.2-42.3
At home	5844	79.8	78.5-81.1	1880	24.0	22.7-25.3	3510	47.0	45.4-48.5	2957	40.1	38.6-41.7	6220	86.9	85.8-87.9	4132	57.2	55.6-58.8
In the car	7	0.1	0.0-0.2	6	0.1	0.0-0.2	7	0.1	0.1-0.3	19	0.4	0.2-0.6	5	0.1	0.0-0.3	3	0.0	0.0-0.1
At the workplace	301	4.3	3.8-4.9	295	4.3	3.7-4.9	521	7.7	7.0-8.6	380	5.2	4.7-5.9	74	1.1	0.8-1.4	15	0.2	0.1-0.3
In restaurant	38	0.5	0.3-0.7	12	0.2	0.1-0.4	172	2.7	2.3-3.3	61	1.1	0.8-1.7	107	1.8	1.4-2.3	14	0.3	0.1-0.6
On the street	16	0.3	0.2-0.5	25	0.3	0.2-0.5	39	0.5	0.3-0.7	67	1.1	0.8-1.5	10	0.2	0.1-0.4	2	0.0	0.0-0.1
At school	52	1.3	0.9-1.9	113	2.9	2.3-3.6	193	5.3	4.5-6.2	64	1.5	1.1-2.1	2	0.0	0.0-0.1	-	-	-
In dormitory	33	0.8	0.5-1.3	10	0.4	0.2-0.8	24	0.5	0.3-0.8	11	0.3	0.1-0.5	53	1.3	1.0-1.9	44	0.9	0.7-1.3
Other	53	0.7	0.5-0.9	79	0.9	0.7-1.2	181	2.2	1.8-2.6	145	1.7	1.4-2.1	57	0.8	0.6-1.1	46	0.6	0.4-0.9
Place where it was pro	epared																	
At home	5825	91.4	90.4-92.4	1981	73.4	70.9-75.8	3606	72.8	71.0-74.6	2943	77.3	75.3-79.1	6091	93.5	92.5-94.3	4011	93.1	92.0-94.1
Outside	449	8.6	7.6-9.6	533	26.6	24.29.1	1041	27.2	25.4-29.0	765	22.7	20.9-24.7	365	6.5	5.7-7.5	271	6.9	5.9-8.0

Table 2. 50. Distribution of the first 24-hour dietary recall of individuals aged 15 years and by places where they eat and where foods were prepared,	
TNHS 2017	

3.8.1. Intakes of Energy and Nutrients

In accordance with the recommendation of the European Food Safety Authority (EFSA, 2009; EFSA, 2014b), a 24-hour dietary recall method was applied twice to the age group of 15 years and over with an interval of approximately two weeks (10-14 days), and daily amounts of food and beverage consumed and intakes of energy and nutrients of individuals were calculated. Questionnaires were administered to a total of 12 453 individuals (males: 5,570; 44,7%; females: 6,883; 55.3%) by dietitians using face-to-face interview technique. All of the foods, food items and beverages consumed in 24 hours in main meals and snacks were recorded into the questionnaire according to their types and amounts. The second food record was administered on telephone or by face-to-face interview technique after making appointment with individuals. The amounts of foods and beverages consumed were determined (in gram or mL), and the intakes of energy and nutrients provided and the amounts of food and beverages consumed were calculated by dietitians on the computer with the help of the BEBIS software.

Intakes of Energy and Nutrients

The mean (\bar{x}), standard deviation (SD) and 95% Confidence Interval (CI) values of daily intakes of energy and nutrients by gender for age groups of 15-18 years, 19-64 years, \geq 65 years, \geq 15 years, \geq 18 years and \geq 19 years and over (average of two different days) are given in Table 2.51 and Table 2.52.

Energy Intakes

The mean (\bar{x}), standard deviation (SD) and 95% Confidence Interval (CI) values of daily energy intakes by gender across Turkey are given in Table 2.51 and Table 2.52.

Daily energy intake for males was 2359.0 \pm 810.45 kcal in the age group of 15-18 years, 2249.0 \pm 760.90 kcal in the age group of 19-64 years, 1729.6 \pm 631.83 kcal in the age group of 65 years and over, 2209.3 \pm 770.05 kcal in the age group of \geq 15 years, 2203.6 \pm 769.27 kcal in the age group of \geq 18 years, and 2196.0 \pm 765.03 kcal in the age group of \geq 19 years and over.

Daily energy intake for females was 1713.9±587.74 kcal in the age group of 15-18 years, 1657.6±569.58 kcal in the age group of 19-64 years, 1351.3±482.33 kcal in the age group of 65 years and over, 1624.8±570.48 kcal in the age group of \geq 15 years, 1620.2±567.80 kcal in the age group of \geq 18 years, and 1617.0±568.33 kcal in the age group of \geq 19 years and over.

Percentage of Energy From Macronutrients

The percentage of energy obtained from macronutrients for males and females is given in Table 2.51 and Table 2.52.

For males in all age groups, minimum 14.4% to maximum 15.4% of daily energy was obtained from protein (SD= ±3.09% to 3.43%), minimum 31.7% to maximum 33.6% of daily energy was obtained from fats (±7.89% to 8.31%), and minimum 50.7% to maximum 53.9% of daily energy was obtained from carbohydrate (±8.12% and 9.49%). The percentage of energy obtained from saturated fats was 10.9-11.4%, the percentage of energy obtained from sucrose was 7.1-7.7%, and the percentage of energy obtained from fructose was 2.2-3.8%. The percentage of energy obtained from fructose was higher (3.8%) in males aged 65 years and over.

For females in all age groups, minimum 14.0% to maximum 15.1% of daily energy was obtained from protein (SD= $\pm 3.31\%$ to 3.53%), minimum 33.6% to maximum 35.6% of daily energy was obtained from fat ($\pm 7.72\%$ and 8.54%), and minimum 49.6% to maximum 52.3% of daily energy was obtained from carbohydrate s ($\pm 8.85\%$ to 9.54%). The percentage of energy obtained from saturated fats was 11.3-11.6%, the percentage of energy obtained from sucrose was 7.4-8.1%, and the percentage of energy obtained from fructose was 2.6-4.9%. The percentage of energy obtained from fructose was higher (4.9%) in females aged 65 years and over.

In all age groups, the percentage of total protein intake derived from plant protein was minimum 57.6% and maximum 60.9% in males, and it ranged between minimum 58.9% and maximum 62.9% in females.

Total and Plant Protein Intake

The mean (\bar{x}), standard deviation (SD) and 95% Confidence Interval (CI) values of daily intakes of total and plant protein across Turkey are shown in Tables 2.51 and 2.52.

The mean (±SD) daily intakes of total protein and plant protein for males were 81.9 ± 32.71 grams and 47.7 ± 19.34 grams, respectively, in the age group of 15-18 years, 83.4 ± 30.31 grams and 45.7 ± 17.77 grams in the age group of 19-64 years, 63.1 ± 24.55 grams and 35.8 ± 14.17 grams in the age group of 65 years and over, 81.3 ± 30.59 grams and 44.9 ± 17.85 grams in the age group of ≥15 years, 81.3 ± 30.37 grams and 44.8 ± 17.73 grams in the age group of ≥18 years, and 81.3 ± 30.39 grams and 44.7 ± 17.69 grams in the age group of 19 years and over (Table 2.51).

Daily intakes of total protein and plant protein for females were 57.9±22.12 grams and 34.1±12.95 grams, respectively, in the age group of 15-18 years, while these values were found to be similar as 58.6±21.40 grams and 33.9±13.17 grams in the age group of 19-64 years, they were lower as 49.1±19.32 grams and 27.5±11.18 grams in the age group of 65 years and over. Total protein and plant protein intakes were found as similar; i.e. 57.4±21.44 grams and 33.1±13.10 grams, respectively, in the age group of 15 years and over, 57.4±21.35 grams and 33.1±13.08 grams in the age group of 18 years and over, and 57.4±21.38 grams and 33.1±13.11 grams in the age group of 159 years and over (Table 2.52).

Intakes of Total Fat, Saturated Fatty Acid, Monounsaturated Fatty Acid, Polyunsaturated Fatty Acid

The mean (\bar{x}), standard deviation (SD) and 95% Confidence Interval (CI) values of daily total fat, saturated fatty acid, monounsaturated fatty acid, polyunsaturated fatty acid intakes across Turkey are given in Tables 2.51 and 2.52.

Total Fat Intake

The mean (±SD) daily intakes of total fat for males was 85.3 ± 40.86 grams in the age group of 15-18 years, 85.1 ± 35.66 grams in the age group of 19-64 years, 65.4 ± 29.90 grams in the age group 65 years and over, 83.2 ± 36.07 grams in the age group of 15 years and over, 83.3 ± 36.09 grams in the age group of 18 years and over, and 83.0 ± 35.62 grams in the age group of 19 years and over (Table 2.51).

Daily intakes of total fat for females were 66.3±30.08 grams in the age group of 15-18 years, 66.4±27.76 grams in the age group of 19-64 years, and 52.3±22.91 grams in the age group of 65 years and over, i.e. lower compared to other age groups. Total daily fat intakes were 64.7±27.80 grams in the age group 15 and over, 64.6±27.52 grams in the age group 18 and over, and 64.6±27.59 grams in the age group 19 and over, and subject levels were similar in all age groups (Table 2.52).

Intakes of Saturated Fatty Acid (SFA), Monounsaturated Fatty Acid (MUFA), Polyunsaturated Fatty Acid (PUFA) *Saturated Fatty Acid*: Daily intake of saturated fatty acid for males was 29.3±18.54 grams in the age group of 15-18 years, 27.8±12.92 grams in the age group of 19-64 years, 27.4±13.43 grams in the age group of 15 years and over, 27.3±13.12 grams in the age group of 18 years and over, 27.2±12.87 grams in the age group of 19 years and over, and 21.7±11.00 grams in the age group of 65 years and over.

Daily intake of saturated fatty acid for females was 22.2±11.41 grams in the age group of 15-18 years, 21.1±9.53 grams in the age group of 19-64 years, 20.7±9.63 grams in the age group of 15 years and over, 20.6±9.48 grams in the age group of 18 years and over, 20.6±9.45 grams in the age group of 19 years and over, and 17.2±8.17 grams in the age group of 65 years and over.

MUFA and PUFA: Intakes of MUFA and PUFA for males were 28.2±13.95 grams and 20.3±11.65 grams, respectively, in the age group of 15-18 years, 29.4±13.86 grams and 20.5±11.75 grams in the age group of 19-64 years, 28.8±13.86 grams and 19.9±11.66 grams in the age group of 15 years and over, 28.9±13.91 grams and 19.9±11.75 grams in the age group of 18 years and over, and 28.8±13.85 grams and 19.8±11.66 grams in the age group of 19 years and over. Intake levels were lower in males in the age group of 65 years and over (MUFA: 23.9±12.79 grams, and PUFA: 14.2±9.12 grams).

Intakes of MUFA and PUFA for females were 22.1±11.45 grams and 16.2±9.09 grams, respectively, in the age group of 15-18 years, 23.2±10.81 grams and 16.3±9.68 grams in the age group of 19-64 years, 22.5±10.82 grams and 15.8±9.54 grams in the age group of 15 years and over, 22.5±10.71 grams and 15.8±9.54 grams in the age group of 18 years and over, and 22.6±10.76 grams and 15.8±9.58 grams in the age group of 19 years and over. Intake levels were lower in females in the age group of 65 years and over (MUFA: 18.4±9.45 grams, and PUFA: 12.1±8.04 grams).

Intakes of Omega-3, Omega-6, Ratio of Omega-6/Omega-3, Alpha-Linolenic Acid (ALA), Linoleic Acid (LA), Eicosapentaenoic Acid and Docosahexaenoic Acid (EPA+DHA)

Omega-3 Fatty Acid: Intake of Omega-3 fatty acid ranged from 1.3 grams to 1.6 grams (±1.29-1.44 g) for males and 1.1 grams to 1.3 grams (±1.04-1.29 g) for females in all age groups. These intake levels in the age group of 65 years and over were 1.3±1.02 grams for males, and 1.0±0.92 grams for females.

Omega-6 Fatty Acid: Intake of Omega-6 fatty acid ranged from 17.8 to 18.4 grams (±10.70-10.90 g) for males in all age groups, and 14.3 ile 14.8 grams (±8.62-8.97 g) for females. These intake levels in the age group of 65 years and over were 12.7 ±8.52 grams for males, and 10.9 ±7.55 grams for females.

Ratio of Omega-6/Omega-3: Ratio of Omega-6/Omega-3 fatty acid ranged from 15.1 to 16.9 (±10.21-12.56) for males, and 16.0 to 16.9 (±10.04-10.65) for females in all age groups. These ratios in the age group of 65 years and over were 13.6±10.66 for males and 15.0±11.87 for females.

Alpha-Linolenic Acid (ALA): The percentage of energy from ALA in all age groups was 0.5% (±0.30%-0.36%) for males, ranged from 0.5% to 0.6% (±0.34-0.45%) for females. TÜBER (2015) and EFSA (2017) recommend the contribution of ALA to energy as 0.5% for all age groups.

Linoleic Acid (LA): The percentage of energy from LA in all age groups ranged from 6.5% to 7.1% (±3.28% to 3.44%) for males, and 7.0% to 7.8% (±3.22% to 3.82%) for females. TÜBER (2015) and EFSA (2017) recommend the contribution of LA to energy as 4% for all age groups.

Eicosapentaenoic Acid and Docosahexaenoic Acid (EPA+DHA): Intakes of EPA+DHA in all age groups ranged from 0.2 grams to 0.3 grams (±0.47-0.89 g) for males, and was 0.2 grams (±0.39-0.64 g) for females. TÜBER (2015) and EFSA (2017) recommend an adequate intake of EPA+DHA as 250 mg/day for all age groups.

Cholesterol Intake

Daily intake of cholesterol for males was 289.2±214.76 mg in the age group of 15-18 years, 298.4±200.60 mg in the age group of 19-64 years, 290.2±198.60 mg in the age group of 15 years and over, 290.3±198.04 mg in the age group of 18 years and over, 290.3±197.12 mg in the age group of 19 years and over, and 219.4±145.32 mg in the age group of 65 years and over.

Daily intake of cholesterol for females was 191.9±127.76 mg in the age group of 15-18 years, 217.3±136.58 mg in the age group of 19-64 years, 209.5±134.88 mg in the age group of 15 years and over, 210.3±135.06 mg in the age group of 18 years and over, 211.0±135.63 mg in the age group of 19 years and over, and 169.5±121.39 mg in the age group of 65 years and over.

TÜBER (2015) and EFSA (2017, 2009) recommend that daily cholesterol intake should not exceed 300 mg for adults in all age groups.

Carbohydrate Intake

Total Carbohydrate Intake

Daily intakes of carbohydrate for males was 309.5±109.36 grams in the age group of 15-18 years, 279.7±111.16 grams in the age group of 19-64 years, 276.1±111.27 grams in the age group of 15 years and over, 274.5±111.32 grams in the age group of 18 years and over, 273.2±110.97 grams in the age group of 19 years and over, and 215.9±91.08 grams in the age group of 65 years and over.

Daily intake of carbohydrate for females was 217.9±80.63 grams in the age group of 15-18 years, 201.8±80.32 grams in the age group of 19-64 years, 198.9±80.25 grams in the age group of 15 years and over, 198.1±80.21 grams in the age group of 18 years and over, 197.2±80.01 grams in the age group of 19 years and over, and 167.2±71.06 grams in the age group of 65 years and over.

Sucrose and Fructose Intake

Daily intake of sucrose ranged from a minimum of 43.2 grams to a maximum of 44.6 grams (±30.00 to 33.55) for males in the age groups of \geq 15 years, \geq 18 years, \geq 19 years and over. In the age group of 65 years and over, daily intake of sucrose was 31.4±25.86 grams, which was lower compared to other age groups.

Daily intake of dietary fructose ranged from a minimum of 12.9 grams to a maximum of 14.6 grams (\pm 10.84 to 13.62) for males in the age groups of \geq 15 years, \geq 18 years, \geq 19 years and over. In the age group of 65 years and over, daily intake of fructose was 16.1 \pm 13.60 grams, which was higher compared to other age groups.

Daily intake of sucrose ranged from a minimum of 32.5 grams in minimum to a maximum of 32.7 grams (±25.17 to 25.38) for females in the age groups of \geq 15 years, \geq 18 years, \geq 19 years and over. In the age group of 65 years and over, daily intake of sucrose was 25.1±20.36 grams, which was lower compared to other age groups.

Daily intake of dietary fructose ranged from a minimum of 12.8 grams to a maximum of 13.0 grams (\pm 10.15 to 10.18) for males in the age groups of \geq 15 years, \geq 18 years, \geq 19 years and over. In the age group of 65 years and over, daily intake of fructose was 13.7 \pm 11.15 grams, which was higher compared to other age groups.

Fibre Intake

Daily intake of fibre for males was 23.8±9.75 grams in the age group of 15-18 years, 24.6±10.95 grams in the age group of 19-64 years, 24.4±10.81 grams in the age group of 15 years and over, 24.5±10.86 grams in the age group of 18 years and over, 24.4±10.89 grams in the age group of 19 years and over, and 22.9±10.24 grams in the age group of 65 years and over. Intake of water-soluble fibre ranged from a minimum of 7.3±3.40 grams in minimum to a maximum of 8.4±3.86 grams; intake of water-insoluble fibre ranged from a minimum of 14.8±6.42 grams to a maximum of 16.0±7.68 grams.

Daily intake of fibre for females was 18.1±7.13 grams in the age group of 15-18 years, 20.6±8.65 grams in the age group of 19-64 years, 20.1±8.56 grams in the age group of 15 years and over, 20.2±8.59 grams in the age group of 18 years and over, 20.3±8.65 grams in the age group of 19 years and over, and 18.6±8.44 grams in the age group of 65 years and over. Intake of water-soluble fibre ranged from a minimum of 6.1±2.50 grams to a maximum of 8.4±3.84 grams; intake of water-insoluble fibre ranged from a minimum of 11.4±4.93 grams to a maximum of 13.5±6.25 grams.

Table 2.51. Arithmetic mean (x̄), standard deviation (SD) and 95% CI (Confidence interval) values of daily average intakes of energy and macronutrients of males by age groups, TNHS2017

Energy and	1	L5-18 years (I	N:245)	1	.9-64 years (N:4	4407)	≥65 years (N:918)			
Macronutrients	x	SD	95%Cl	x	SD	95%CI	x	SD	95%CI	
Energy (kcal)	2359.0	810.45	2237.6-2480.4	2249.0	760.90	2218.9-2279.0	1729.6	631.83	1679.8-1779.4	
Protein (g)	81.9	32.71	77.0-86.9	83.4	30.31	82.1-84.6	63.1	24.55	61.3-65.0	
Protein (E%)	14.4	3.10	13.9-14.8	15.4	3.43	15.3-15.6	15.1	3.09	14.9-15.4	
Plant protein (g)	47.7	19.34	45.0-50.4	45.7	17.77	45.0-46.4	35.8	14.17	34.8-36.9	
Plant protein (TP%)	60.9	14.78	58.8-63.1	57.6	15.18	57.0-58.1	59.5	15.59	58.4-60.7	
Fat (g)	85.3	40.86	79.1-91.4	85.1	35.66	83.7-86.4	65.4	29.90	62.9-67.7	
Fat E%	31.7	7.89	30.5-32.9	33.5	7.99	33.2-33.8	33.6	8.31	32.9-34.2	
Saturated fatty acid (g)	29.3	18.54	26.6-32.1	27.8	12.92	27.3-28.3	21.7	11.00	20.9-22.5	
Saturated fatty acid (E%)	10.9	4.04	10.3-11.4	11.2	3.59	11.0-11.3	11.4	3.91	11.1-11.7	
MUFA (g)	28.2	13.95	26.1-30.3	29.4	13.86	28.9-30.0	23.9	12.79	22.9-24.9	
PUFA (g)	20.3	11.65	18.5-22.1	20.5	11.75	20.0-20.9	14.2	9.12	13.5-15.0	
Omega-3 (g)	1.6	1.29	1.4-1.7	1.6	1.47	1.6-1.7	1.3	1.02	1.2-1.3	
Omega-6 (g)	18.3	10.70	16.6-20.0	18.4	10.91	18.0-18.8	12.7	8.52	12.0-13.4	
Ratio of Omega 6/ Omega 3	16.9	12.56	15.0-18.7	15.3	10.21	14.8-15.7	13.6	10.66	12.9-14.4	
ALA (E%)	0.5	0.34	0.4-0.5	0.5	0.34	0.5-0.5	0.5	0.36	0.5-0.6	
LA (E%)	6.9	3.44	6.3-7.5	7.1	3.28	7.0-7.3	6.5	3.34	6.2-6.7	
EPA+DHA (g)	0.2	0.47	0.2-0.3	0.3	0.89	0.3-0.4	0.2	0.52	0.2-0.2	
Cholesterol (mg)	289.2	214.76	257.8-320.7	298.4	200.60	290.0-306.7	219.4	145.32	208.4-230.5	
Carbohydrate (g)	309.5	109.36	293.5-325.5	279.7	111.16	275.3-284.0	215.9	91.08	208.9-222.9	
Carbohydrate (E%)	53.9	8	52.7-55.1	50.7	9.22	50.3-51.0	51.0	9.49	50.3-51.7	
Sucrose (g)	43.9	30.00	39.4-48.3	44.6	33.55	43.2-45.9	31.4	25.86	29.5-33.3	
Sucrose (E%)	7.3	4.34	6.6-7.9	7.7	4.93	7.5-7.9	7.1	5.08	6.8-7.5	
Fructose (g)	12.9	10.84	11.1-14.6	14.4	13.61	13.9-15.0	16.1	13.60	15.1-17.1	
Fructose (E%)	2.2	1.69	1.9-2.4	2.6	2.05	2.5-2.7	3.8	2.78	3.6-4.0	
Fibre (g)	23.8	9.75	22.4-25.2	24.6	10.95	24.2-25.0	22.9	10.24	22.2-23.7	
Water-soluble (g)	8.4	3.51	7.9-8.9	8.4	3.86	8.2-8.5	7.3	3.40	7.0-7.5	
Water-insoluble(g)	14.8	6.42	13.8-15.7	16.0	7.68	15.7-16.3	15.3	7.52	14.7-15.8	

Table 2.51. Arithmetic mean (x), standard deviation (SD) and 95% CI (Confidence interval) values of daily average intakes of energy and macronutrients
of males by age groups, TNHS2017 (continued)

Energy and Macronutrients		≥15 years (N	l: 5570)	:	≥18 years (N: 5	420)		≥19 years (N: 5	325)
	x	SD	95%CI	x	SD	95%CI	x	SD	95%Cl
Energy (kcal)	2209.3	770.05	2181.9-2236.8	2203.6	769.27	2175.7-2231.5	2196.0	765.03	2168.2-2223.9
Protein (g)	81.3	30.59	80.2-82.5	81.3	30.37	80.2-82.5	81.3	30.39	80.1-82.4
Protein (E%)	15.3	3.38	15.2-15.4	15.4	3.38	15.2-15.5	15.4	3.40	15.3-15.5
Plant protein (g)	44.9	17.85	44.3-45.6	44.8	17.73	44.1-45.4	44.7	17.69	44.0-45.3
Plant protein (TP %)	58.0	15.22	57.5-58.5	57.9	15.25	57.3-58.4	57.8	15.23	57.2-58.3
Fat (g)	83.2	36.07	82.0-84.5	83.3	36.09	82.0-84.6	83.0	35.62	81.8-84.3
Fat E%	33.4	8.03	33.1-33.7	33.5	8.04	33.2-33.8	33.6	8.03	33.3-33.8
Saturated fatty acid (g)	27.4	13.43	26.9-27.9	27.3	13.12	26.8-27.8	27.2	12.87	26.7-27.7
Saturated fatty acid (E%)	11.1	3.66	11.0-11.3	11.2	3.63	11.0-11.3	11.2	3.62	11.0-11.3
MUFA (g)	28.8	13.86	28.3-29.3	28.9	13.91	28.4-29.4	28.8	13.85	28.4-29.3
PUFA (g)	19.9	11.66	19.5-20.3	19.9	11.75	19.5-20.3	19.8	11.66	19.4-20.2
Omega-3 (g)	1.6	1.42	1.51.6	1.6	1.43	1.5-1.6	1.6	1.44	1.5-1.6
Omega-6 (g)	17.9	10.81	17.5-18.3	17.9	10.90	17.5-18.3	17.8	10.83	17.5-18.2
Ratio of Omega 6/ Omega 3	15.2	10.48	14.9-15.6	15.2	10.42	14.8-15.6	15.1	10.27	14.7-15.5
ALA (E%)	0.5	0.34	0.5-0.5	0.5	0.34	0.5-0.5	0.5	0.34	0.5-0.5
LA (E%)	7.1	3.31	6.9-7.2	7.1	3.30	6.9-7.2	7.1	3.29	6.9-7.2
EPA+DHA (g)	0.3	0.84	0.3-0.3	0.3	0.85	0.3-0.4	0.3	0.86	0.3-0.4
Cholesterol (mg)	290.2	198.60	282.8-297.7	290.3	198.04	282.7-297.8	290.3	197.12	282.7-297.9
Carbohydrate (g)	276.1	111.27	272.2-280.1	274.5	111.32	270.5-278.5	273.2	110.97	269.2-277.2
Carbohydrate (E%)	51.0	9.20	50.6-51.3	50.8	9.25	50.5-51.1	50.7	9.25	50.4-51.0
Sucrose (g)	43.3	32.84	42.1-44.4	43.3	33.10	42.1-44.4	43.2	33.08	42.0-44.4
Sucrose (E%)	7.6	4.90	7.5-7.8	7.6	4.93	7.5-7.8	7.7	4.95	7.5-7.8
Fructose (g)	14.5	13.42	13.9-14.9	14.6	13.57	14.1-15.1	14.6	13.62	14.1-15.1
Fructose (E%)	2.7	2.13	2.6-2.8	2.7	2.15	2.6-2.8	2.7	2.16	2.7-2.8
Fibre (g)	24.4	10.81	24.0-24.8	24.5	10.86	24.1-24.8	24.4	10.89	24.1-24.8
Water-soluble(g)	8.3	3.81	8.1-8.4	8.3	3.81	8.1-8.4	8.3	3.83	8.1-8.4
Water-insoluble(g)	15.8	7.58	15.5-16.1	15.9	7.63	15.6-16.2	15.9	7.66	15.6-16.2

TP: Total protein

Table 2.52. Arithmetic mean (x̄), standard deviation (SD) and 95% CI (Confidence interval) values of daily average intakes of energy and macronutrients of females by age groups, TNHS 2017

Energy and		L5-18 years (N:245)	1	19-64 years (N:	4407)	≥65 years (N:918)				
Macronutrients	x	SD	95%CI	x	SD	95%CI	x	SD	95%Cl		
Energy (kcal)	1713.9	587.74	1634.5-1793.3	1657.6	569.58	1636.2-1679.1	1351.3	482.33	1316.9-1385.6		
Protein (g)	57.9	22.12	55.0-60.7	58.6	21.40	57.9-59.4	49.1	19.32	47.7-50.5		
Protein (E%)	14.0	3.31	13.6-14.5	14.8	3.32	14.6-14.9	15.1	3.53	14.8-15.3		
Plant protein (g)	34.1	12.95	32.4-35.8	33.9	13.17	33.4-34.4	27.5	11.18	26.6-28.3		
Plant protein (TP%)	62.9	17.05	60.6-65.2	60.8	15.41	60.2-61.3	58.9	15.45	57.8-60.0		
Fat (g)	66.3	30.08	62.4-70.2	66.4	27.76	65.4-67.5	52.3	22.91	50.7-53.9		
Fat E%	33.6	7.72	32.5-34.7	35.6	7.91	35.2-35.8	34.4	8.54	33.8-35.0		
Saturated fatty acid (g)	22.2	11.41	20.7-23.6	21.1	9.53	20.8-21.5	17.2	8.17	16.7-17.8		
Saturated fatty acid (E%)	11.3	3.62	10.9-11.8	11.5	3.63	11.4-11.6	11.6	3.88	11.3-11.9		
MUFA (g)	22.1	11.45	20.6-23.6	23.2	10.81	22.8-23.6	18.4	9.45	17.8-19.0		
PUFA (g)	16.2	9.09	15.0-17.4	16.3	9.68	16.0-16.7	12.1	8.04	11.5-12.7		
Omega-3 (g)	1.1	1.04	1.0-1.3	1.3	1.23	1.2-1.3	1.0	0.92	0.9-1.1		
Omega-6 (g)	14.8	8.62	13.7-16.0	14.8	9.05	14.5-15.1	10.9	7.55	10.3-11.5		
Ratio of Omega 6/ Omega 3	16.9	10.04	15.6-18.2	16.1	10.65	15.7-16.4	15.0	11.87	14.1-15.8		
ALA (E%)	0.5	0.34	0.4-0.5	0.6	0.45	0.6-0.6	0.5	0.39	0.5-0.6		
LA (E%)	7.5	3.22	7.1-8.0	7.8	3.44	7.6-7.9	7.0	3.82	6.7-7.3		
EPA+DHA (g)	0.2	0.64	0.1-0.3	0.2	0.52	0.2-0.2	0.2	0.39	0.1-0.2		
Cholesterol (mg)	191.9	127.76	175.7-208.2	217.3	136.58	212.3-222.3	169.5	121.39	160.8-178.3		
Carbohydrate (g)	217.9	80.63	206.3-229.5	201.8	80.32	198.8-204.8	167.2	71.06	162.2-172.3		
Carbohydrate (E%)	52.3	8.85	51.1-53.6	49.6	8.97	49.3-49.9	50.5	9.54	49.9-51.2		
Sucrose (g)	32.3	26.08	31.1-39.4	33.6	25.64	32.8-34.5	25.1	20.36	23.7-26.5		
Sucrose (E%)	8.1	5.08	7.3-8.8	7.9	5.11	7.7-8.1	7.4	4.98	7.0-7.7		
Fructose (g)	10.6	9.54	9.3-11.8	12.9	10.02	12.5-13.2	13.7	11.15	12.9-14.6		
Fructose (E%)	2.6	2.38	2.3-2.9	3.2	2.33	3.1-3.3	4.9	2.99	3.8-4.4		
Fibre (g)	18.1	7.13	17.2-19.0	20.6	8.65	20.2-20.9	18.6	8.44	18.0-19.2		
Water-soluble (g)	6.1	2.50	5.8-6.5	6.6	3.09	6.5-6.7	5.8	2.81	5.6-6.0		
Water-insoluble (g)	11.4	4.93	10.8-12.0	13.6	6.00	13.4-13.8	12.6	7.62	12.1-13.0		

Table 2.52. Arithmetic mean (x), standard deviation (SD) and 95% CI (Confidence interval) values of daily average intakes of energy and macronutrients of
females by age groups, TNHS 2017 (continued)

Energy and Macronutrients	acronutrients ≥		883)	:	≥18 years (N: 6	743)	≥19 years (N: 6622)				
	x	SD	95%CI	x	SD	95%Cl	x	SD	95%Cl		
Energy (kcal)	1624.8*	570.48	1605.7-1643.8	1620.2*	567.80	1600.9-1639.4	1617.0*	568.33	1597.4-1636.5		
Protein (g)	57.4	21.44	56.7-58.1	57.4	21.35	56.7-58.0	57.4	21.38	56.7-58.1		
Protein (E%)	14.7	3.35	14.6-14.8	14.8	3.35	14.7-14.9	14.8	3.35	14.7-14.9		
Plant protein (g)	33.1	13.10	32.7-33.6	33.1	13.08	32.7-33.5	33.1	13.11	32.6-33.5		
Plant protein (TP%)	60.7	15.57	60.2-61.2	60.6	15.48	60.1-61.1	60.5	15.42	60.0-61.0		
Fat (g)	64.7	27.80	63.8-65.6	64.6	27.52	63.6-65.5	64.6	27.59	63.6-65.5		
Fat (E%)	35.3	7.99	35.0-35.5	35.3	7.99	35.1-35.6	35.4	8.01	35.2-35.6		
Saturated fatty acid (g)	20.7	9.63	20.4-21.0	20.6	9.48	20.3-20.9	20.6	9.45	20.3-20.9		
Saturated fatty acid (E%)	11.5	3.66	11.4-11.6	11.5	3.66	11.4-11.6	11.5	3.67	11.4-11.6		
MUFA (g)	22.5	10.82	22.1-22.9	22.5	10.71	22.2-22.9	22.6	10.76	22.2-22.9		
PUFA (g)	15.8	9.54	15.5-16.1	15.8	9.54	15.4-16.1	15.8	9.58	15.4-16.1		
Omega-3 (g)	1.2	1.18	1.2-1.3	1.2	1.18	1.2-1.3	1.2	1.20	1.2-1.3		
Omega-6 (g)	14.3	8.94	14.0-14.6	14.3	8.93	14.0-14.6	14.3	8.97	13.9-14.6		
Ratio of Omega 6/ Omega 3	16.0	10.76	15.6-16.3	16.0	10.80	15.6-16.3	15.9	10.82	15.6-16.3		
ALA(E%)	0.6	0.44	0.5-0.6	0.6	0.44	0.5-0.6	0.6	0.44	0.5-0.6		
LA (E%)	7.7	3.48	7.5-7.8	7.7	3.50	7.5-7.8	7.7	3.50	7.6-7.8		
EPA+DHA (g)	0.2	0.52	0.2-0.2	0.2	0.50	0.2-0.2	0.2	0.50	0.2-0.2		
Cholesterol (mg)	209.5	134.88	205.1-213.8	210.3	135.06	205.9-214.8	211.0	135.63	206.5-215.5		
Carbohydrate (g)	198.9	80.25	196.2-201.6	198.1	80.21	195.4-200.8	197.2	80.01	194.5-199.9		
Carbohydrate (E%)	49.9	9.06	49.7-50.2	49.8	9.05	49.6-50.1	49.7	9.05	49.5-50.0		
Sucrose (g)	32.7	25.26	31.9-33.5	32.7	25.38	31.9-33.5	32.5	25.17	31.7-33.3		
Sucrose (E%)	7.9	5.10	7.7-8.0	7.9	5.09	7.7-8.0	7.8	5.10	7.7-8.0		
Fructose (g)	12.8	10.15	12.5-13.1	12.9	10.16	12.6-13.2	13.0	10.18	12.7-13.3		
Fructose (E%)	3.3	2.45	3.2-3.3	3.3	2.45	3.2-3.4	3.3	2.45	3.3-3.4		
Fibre (g)	20.1	8.56	19.8-20.4	20.2	8.59	19.9-20.5	20.3	8.65	20.0-20.6		
Water-soluble (g)	6.5	3.02	6.4-6.6	6.5	3.04	6.4-6.6	6.5	3.06	6.4-6.6		
Water-insoluble (g)	13.3	6.18	13.1-13.5	13.4	6.21	13.2-13.6	13.5	6.25	13.3-13.7		

Vitamin and Mineral Intakes

The mean (\bar{x}), standard deviation (SD) and 95% Confidence Interval (CI) of daily intakes of vitamins and minerals per capita for age groups of 15-18 years, 19-64 years, \geq 65 years, \geq 15 years, \geq 18 years and \geq 19 years by gender (as the average of two different days for six age groups) are given In Table 2.53 and Table 2.54.

Vitamin Intakes

Vitamin A

Daily intake of vitamin A for males was 927.0±1347.16 mcg in the age group of 15-18 years, 1458.9±3132.27 mcg in the age group of 19-64 years, 1390.4±3023.82 mcg in the age group of 15 years and over, 1424.6±3099.33 mcg in the age group of 18 years and over, 1431.5±3126.25 mcg in the age group of 19 years and over, and 1190.6±3064.82 mcg in the age group of 65 years and over.

Daily intake of vitamin A for females was 791.6±956.70 mcg in the age group of 15-18 years, 1137.7±2377.60 mcg in the age group of 19-64 years, 1087.2±2269.56 mcg in the age group of 15 years and over, 1099.67±2310.67 mcg in the age group of 18 years and over, 1113.0±2347.99 mcg in the age group of 19 years and over, and 951.6±2138.84 mcg in the age group of 65 years and over.

Also, daily intakes of carotene and retinol are given in Table 2.53 and Table 2.54.

Vitamin E

Daily intake of vitamin E for males was 18.5±11.43 mg in the age group of 15-18 years, 20.0±11.63 mg in the age group of 19-64 years, 19.4±11.51 mg in the age group of 15 years and over, 19.5±11.57 mg in the age group of 18 years and over, 19.5±11.52 mg in the age group of 19 years and over, and 14.9±9.37 mg in the age group of 65 years and over.

Daily intake of vitamin E for females was 15.8±9.90 mg in the age group of 15-18 years, 17.0±9.94 mg in the age group of 19-64 years, 16.5±9.86 mg in the age group of 15 years and over, 16.5±9.85 mg in the age group of 18 years and over, 16.6±9.85 mg in the age group of 19 years and over, and 13.4±8.61 mg in the age group of 65 years and over.

Vitamin D

Daily intake of vitamin D for males was 2.4±3.72 mcg in the age group of 15-18 years, 3.7±8.77 mcg in the age group of 19-64 years, 3.5±8.58 mcg in the age group of 15 years and over, 3.6±8.76 mcg in the age group of 18 years and over, 3.7±8.88 mcg in the age group of 19 years and over, and 3.5±9.78 mcg in the age group of 65 years and over.

Daily intake of vitamin D for females was 2.0±4.92 mcg in the age group of 15-18 years, 3.1±13.02 mcg in the age group of 19-64 years, 2.9±12.02 mcg in the age group of 15 years and over, 3.0±12.24 mcg in the age group of 18 years and over, 3.0±12.45 mcg in the age group of 19 years and over, and 2.7±7.73 mcg in the age group of 65 years and over.

Vitamin B1 (Thiamine)

Daily intake of vitamin B_1 for males was 1.0±0.40 mg in the age group of 15-18 years, 1.0±0.42 mg in the age group of 19-64 years, and 1.0±0.41 mg in the age group of 15 years and over, 18 and above, and 19 and above, and 0.9±0.35 mg in the age group of 65 years and over.

Daily intake of vitamin B_1 for females was 0.8 ± 0.31 mg in the age group of 15-18 years, 0.8 ± 0.34 mg in the age group of 19-64 years, and 0.8 ± 0.33 mg in the age group of 15 years and over, 18 and above and 19 and above, and 0.7 ± 0.30 mg in the age group of 65 years and over.

Vitamin B₂ (Riboflavin)

Daily intake of vitamin B_2 for males was 1.3±0.63 mg in the age group of 15-18 years, 1.5±0.73 mg in the age group of 19-64 years, 1.4±0.72 mg in the age group of 15 years and over, 1.4±0.73 mg in the age group of 18 years and over and 19 and above, and 1.2±0.66 mg in the age group of 65 years and over.

Daily intake of vitamin B_2 for females was 1.0±0.47 mg in the age group of 15-18 years, 1.1±0.53 mg in the age group of 19-64 years, and 1.1±0.52 mg in the age group of 15 years and over, 18 and above and 19 and above, and 1.0±0.45 mg in the age group of 65 years and over.

Niacin

Daily intake of niacin for males was 15.2±7.79 mg in the age group of 15-18 years, 17.1±10.02 mg in the age group of 19-64 years, 16.5±9.80 mg in the age group of 15 years and over, 16.6±9.88 mg in the age group of 18 years and over, 16.7±9.95 mg in the age group of 19 years and over, and 12.3±8.12 mg in the age group of 65 years and over.

Daily intake of niacin for females was 11.1±6.71 mg in the age group of 15-18 years, 11.8±6.81 mg in the age group of 19-64 years, 11.5±6.93 mg in the age group of 15 years and over, 11.5±6.97 mg in the age group of 18 years and over, 11.5±6.95 mg in the age group of 19 years and over, and 9.8±7.58 mg in the age group of 65 years and over.

Vitamin B₆

Daily intake of vitamin B_6 for males was 1.3±0.86 mg in the age group of 15-18 years, 1.4±0.69 mg in the age group of 19-64 years, 1.4±0.70 mg in the age group of 15 years and over, 1.4±0.68 mg in the age group of 18 years and over and 19 years and over, and 1.2±0.56 mg in the age group of 65 years and over.

Daily intake of vitamin B_6 for females was 1.0±0.49 mg in the age group of 15-18 years, 1.1±0.49 mg in the age group of 19-64 years, 1.1±0.49 mg in the age group of 15 years and over, 1.1±0.48 mg in the age group of 18 years and over, 1.1±0.49 mg in the age group of 19 years and over, and 1.0±0.47 mg in the age group of 65 years and over.

Folate

Daily intake of folate for males was 303.5±122.64 mcg in the age group of 15-18 years, 355.7±159.80 mcg in the age group of 19-64 years, 348.4±157.12 mcg in the age group of 15 years and over, 351.2±158.10 mcg in the age group of 18 years and over, 352.4±159.21 mcg in the age group of 19 years and over, and 323.2±150.99 mcg in the age group of 65 years and over.

Daily intake of folate for females was 232.8±102.82 mcg in the age group of 15-18 years, 295.2±127.27 mcg in the age group of 19-64 years, 286.7±126.06 mcg in the age group of 15 years and over, 289.1±126.45 mcg in the age group of 18 years and over, 291.5±126.81 mcg in the age group of 19 years and over, and 266.9±121.17 mcg in the age group of 65 years and over.

Vitamin B₁₂ (Cobalamin)

Daily intake of vitamin B_{12} for males was 4.8±4.16 mcg in the age group of 15-18 years, 6.7±10.99 mcg in the age group of 19-64 years, 6.4±10.47 mcg in the age group of 15 years and over, 6.5±10.71 mcg in the age group of 18 years and over, 6.51±10.85 mcg in the age group of 19 years and over, and 4.6±9.25 mcg in the age group of 65 years and over.

Daily intake of vitamin B_{12} for females was 3.1±3.05 mcg in the age group of 15-18 years, 3.9±5.92 mcg in the age group of 19-64 years, 3.7±5.49 mcg in the age group of 15 years and over, 3.7±5.55 mcg in the age group of 18 years and over, 3.8±5.65 mcg in the age group of 19 years and over, and 2.9±3.21 mcg in the age group of 65 years and over.

Vitamin C

Daily intake of vitamin C for males was 95.5±71.97 mg in the age group of 15-18 years, 116.8±97.68 mg in the age group of 19-64 years, 115.1±96.13 mg in the age group of 15 years and over, 128.2±116.4 mg in the age group of 18 years and over, 116.9±97.80 mg in the age group of 19 years and over, and 117.9±98.96 mg in the age group of 65 years and over.

Daily intake of vitamin C for females was 84.2±57.35 mg in the age group of 15-18 years, 113.9±91.76 mg in the age group of 19-64 years, 111.8±90.48 mg in the age group of 15 years and over, 113.1±91.53 mg in the age group of 18 years and over, 114.2±92.43 mg in the age group of 19 years and over, and 116.5±96.70 mg in the age group of 65 years and over.

Mineral Intakes

Calcium

Daily intake of calcium for males was 872.7±347.57 mg in the age group of 15-18 years, 894.7±344.75 mg in the age group of 19-64 years, 880.9±342.08 mg in the age group of 15 years and over, 881.5±343.33 mg in the age group of 18 years and over, 881.6±341.61 mg in the age group of 19 years and over, and 766.2±288.11 mg in the age group of 65 years and over.

Daily intake of calcium for females was 668.3±297.43 mg in the age group of 15-18 years, 731.8±275.39 mg in the age group of 19-64 years, 716.9±276.86 mg in the age group of 15 years and over, 719.6±276.84 mg in the age group of 18 years and over, 721.2±274.61 mg in the age group of 19 years and over, and 651.4±258.99 mg in the age group of 65 years and over.

Magnesium

Daily intake of magnesium for males was 311.5±120.09 mg in the age group of 15-18 years, 330.3±123.75 mg in the age group of 19-64 years, 323.3±123.14 mg in the age group of 15 years and over, 324.3±123.13 mg in the age group of 18 years and over, 324.3±123.37 mg in the age group of 19 years and over, and 271.6±106.30 mg in the age group of 65 years and over.

Daily intake of magnesium for females was 246.5±93.35 mg in the age group of 15-18 years, 266.4±97.56 mg in the age group of 19-64 years, 259.2±97.25 mg in the age group of 15 years and over, 259.8±97.37 mg in the age group of 18 years and over, 260.3±97.52 mg in the age group of 19 years and over, and 220.1±87.23 mg in the age group of 65 years and over.

Iron

Daily intake of iron for males was 11.4±5.04 mg in the age group of 15-18 years, 12.1±4.88 mg in the age group of 19-64 years, 11.8±4.88 mg in the age group of 15 years and over, 11.9±4.85 mg in the age group of 18 years and over, 11.9±4.87 mg in the age group of 19 years and over, and 10.0±4.35 mg in the age group of 65 years and over.

Daily intake of iron for females was 9.0±3.70 mg in the age group of 15-18 years, 9.6±3.81 mg in the age group of 19-64 years, 9.4±3.82 mg in the age group of 15 years and over, 9.4±3.82 mg in the age group of 18 years and over, 9.4±3.63 mg in the age group of 19 years and over, and 8.0±3.70 mg in the age group of 65 years and over.

Zinc

Daily intake of zinc for males was 10.7±4.29 mg in the age group of 15-18 years, 11.6±4.44 mg in the age group of 19-64 years, 11.3±4.46 mg in the age group of 15 years and over, 11.3±4.45 mg in the age group of 18 years and over, 11.3±4.47 mg in the age group of 19 years and over, and 9.0±4.05 mg in the age group of 65 years and over.

Daily intake of zinc for females was 7.7±3.20 mg in the age group of 15-18 years, 8.4±3.16 mg in the age group of 19-64 years, 8.2±3.18 mg in the age group of 15 years and over, 8.2±3.15 mg in the age group of 18 years and over, 8.2±3.17 mg in the age group of 19 years and over, and 6.9±2.84 mg in the age group of 65 years and over.

Potassium

Daily intake of potassium for males was 2592.3±1016.26 mg in the age group of 15-18 years, 2722.1±1029.06 mg in the age group of 19-64 years, 2676.2±1025.40 mg in the age group of 15 years and over, 2684.4±1024.72 mg in the age group of 18 years and over, 2683.7±1026.0 mg in the age group of 19 years and over, and 2344.8±932.86 mg in the age group of 65 years and over.

Daily intake of potassium for females was 2073.5±798.64 mg in the age group of 15-18 years, 2251.5±843.13 mg in the age group of 19-64 years, 2205.6±844.24 mg in the age group of 15 years and over, 2210.5±845.03 mg in the age group of 18 years and over, 2217.1±847.19 mg in the age group of 19 years and over, and 1992.3±839.79 mg in the age group of 65 years and over.

Phosphorus

Daily intake of phosphorus for males was 1224.8±476.68 mg in the age group of 15-18 years, 1251.6±445.13 mg in the age group of 19-64 years, 1226.4±447.93 mg in the age group of 15 years and over, 1227.1±445.19 mg in the age group of 18 years and over, 1226.5±445.33 mg in the age group of 19 years and over, and 1003.0±378.43 mg in the age group of 65 years and over.

Daily intake of phosphorus for females was 911.5±337.53 mg in the age group of 15-18 years, 946.4±338.07 mg in the age group of 19-64 years, 926.0±338.79 mg in the age group of 15 years and over, 926.7±338.75 mg in the age group of 18 years and over, 927.3±338.90 mg in the age group of 19 years and over, and 802.2±317.25 mg in the age group of 65 years and over.

Sodium

Daily intake of sodium for males was 4871.4±1922.12 mg in the age group of 15-18 years, 4805.7±1885.07 mg in the age group of 19-64 years, 4744.3±1878.22 mg in the age group of 15 years and over, 4738.6±1874.26 mg in the age group of 18 years and over, 4733.1±1874.04 mg in the age group of 19 years and over, and 4093.3±1641.82 mg in the age group of 65 years and over.

Daily intake of sodium for females was 3380.9±1392.10 mg in the age group of 15-18 years, 3692.6±1461.57 mg in the age group of 19-64 years, 3617.3±1449.47 mg in the age group of 15 years and over, 3626.7±1446.77 mg in the age group of 18 years and over, 3638.0±1452.66 mg in the age group of 19 years and over, and 3281.3±1340.28 mg in the age group of 65 years and over.

Copper

Daily intake of copper for males was 1.8±0.75 mg in the age group of 15-18 years, 2.0±0.95 mg in the age group of 19-64 years, 1.9±0.95 mg in the age group of 15 years and over, 2.0±0.96 mg in the age group of 18 years and over and 19 and above, and 1.6±1.02 mg in the age group of 65 years and over.

Daily intake of copper for females was 1.4 ± 0.53 mg in the age group of 15-18 years, 1.5 ± 0.69 mg in the age group of 19-64 years, 1.5 ± 0.67 mg in the age group of 15 years and over, 1.5 ± 0.68 mg in the age group of 18 years and over, 1.5 ± 0.69 mg in the age group of 19 years and over, and 1.2 ± 0.56 mg in the age group of 65 years and over.

Iodine

Daily intake of iodine for males was 162.3±72.45 mcg in the age group of 15-18 years, 161.3±76.75 mcg in the age group of 19-64 years, 157.4±75.92 mcg in the age group of 15 years and over, 157.3±76.08 mcg in the age group of 18 years and over, 156.9±76.21 mcg in the age group of 19 years and over, and 118.6±58.79 mcg in the age group of 65 years and over.

Daily intake of iodine for females was 129.1±62.59 mcg in the age group of 15-18 years, 123.7±58.97 mcg in the age group of 19-64 years, 121.4±59.05 mcg in the age group of 15 years and over, 120.9±58.48 mcg in the age group of 18 years and over, 120.8±58.69 mcg in the age group of 19 years and over, and 101.6±53.03 mcg in the age group of 65 years and over.

Status of Meeting Daily Dietary Reference Values (DRV) for Micronutrients

The intakes of micronutrients by age and gender of the population was assessed by the amounts of AR (average requirement) and AI (adequate intake) out of the recommended EFSA DRV values (EFSA, 2017; EFSA, 2018) (See Table 1.7). If the status of recommended daily allowance for vitamins and minerals is 100% and above, it means that the recommended amount is met for males and females, and if it is below 100%, it means the recommended amounts are not met.

Status of Meeting the Recommended Daily Allowance for Vitamins

Males in the age group of 15 years and over met 243.8% of recommended daily allowance for vitamin A, 149.1% of recommended daily allowance for vitamin E, 139.4% of recommended daily allowance for folate, 128.2% of recommended daily allowance for vitamin C, 137.8% of recommended daily allowance for niacin, 318.7% of recommended daily allowance for vitamin B₁₂, 100.4% of recommended daily allowance for vitamin B₁, and 109.3% of recommended daily allowance for B2. For males, the status of meeting the vitamin B6 intake was 91.6%, and status of meeting the vitamin D intake was 23.7%.

Females in the age group of 15 years and over met 212.4% of recommended daily allowance for vitamin A, 150% of recommended daily allowance for vitamin E, 110.1% of recommended daily allowance for folate, 135.0% of recommended daily allowance for vitamin C, 185.4% of recommended daily allowance for vitamin B_{12} , 104.7% of recommended daily allowance for niacin. For females, the status of meeting the vitamin B_6 intake was 83.2%, the status of meeting the vitamin B1 intake was 87.7%, the status of meeting the vitamin B_2 intake was 82.0%, and status of meeting the vitamin D intake was 16.9%.

Status of Meeting the Recommended Daily Allowance for Minerals

Males in the age group of 15 years and over, who participated in the study, met 93.1% of recommended daily allowance for magnesium, 89.1% of recommended daily allowance for zinc, and 76.4% of recommended daily allowance for potassium. Males met 113.52% of recommended daily allowance with calcium intake, 107.5% of recommended daily allowance with iron intake, 221.4% of recommended daily allowance with phosphorus intake, and 122.7% of recommended daily allowance with copper intake.

The statuses of meeting the recommended daily allowances of females with daily intakes were 167.4% for phosphorus, 113.4% for copper, 92.8% for calcium, 87.7% for magnesium, 71.5% for iron, 78.0% for zinc and 62.5% for potassium.

Micronutrients		15-18 y	ears (N:245)			19-64 ye	ars (N:4407)		≥65 years (N:918)				
	x	SD	95%Cl	DRV %	x	SD	95%CI	DRV %	x	SD	95%CI	DRV %	
Vitamin A (mcg)	927.0	1347.16	763.3-1090.6	161.2	1458.9	3132.27	1323.8-1576.6	255.9	1190.6	3064.82	959.1-1422.0	208.9	
Retinol (mcg)	525.9	1287.47	371.4-680.4	-	874.0	3076.45	745.5-994.3	-	618.9	2980.72	393.3-844.5	-	
Carotene (mcg)	2.3	2.10	2.1-2.6	-	3.4	3.76	3.2-3.5	-	3.1	4.04	2.9-3.4	-	
Vitamin E (mg)	18.5	11.43	16.7-20.3	142.4	20.0	11.63	19.5-20.5	153.7	14.9	9.37	14.1-15.6	114.6	
Vitamin D (mcg)	2.4	3.72	1.9-2.8	15.8	3.7	8.77	3.4-3.9	24.5	3.5	9.78	2.6-4.3	23.1	
Vitamin B ₁ (mg)	1.0	0.40	0.9-1.1	100.0	1.0	0.42	1.0-1.0	102.1	0.9	0.35	0.8-0.9	85.7	
Vitamin B ₂ (mg)	1.3	0.63	1.2-1.4	98.1	1.5	0.73	1.4-1.5	112.3	1.2	0.66	1.2-1.3	92.5	
Niacin (mg)	15.2	7.79	14.1-16.4	126.7	17.1	10.02	16.7-17.5	142.9	12.3	8.12	11.7-12.9	102.6	
Vitamin B ₆ (mg)	1.3	0.86	1.2-1.5	89.8	1.4	0.69	1.3-1.4	93.5	1.2	0.56	1.1-1.2	76.7	
Folate (mcg)	303.5	122.64	286.5-320.5	121.4	355.7	159.80	347.8-360.7	142.3	323.2	150.99	312.1-334.3	129.3	
Vitamin B ₁₂ (mcg)	4.8	4.16	4.3-5.3	239.6	6.7	10.99	6.2-7.1	336.5	4.6	9.25	3.9-5.3	230.9	
Vitamin C (mg)	95.5	71.97	82.2-108.8	110.0	116.8	97.68	112.7-119.9	129.7	117.9	98.96	110.5-125.2	130.9	
Calcium (mg)	872.7	347.57	822.4-922.9	94.8	894.7	344.75	879.0-909.2	116.7	766.2	288.11	744.7-787.7	102.2	
Magnesium (mg)	311.5	120.09	294.3-328.7	98.2	330.3	123.75	325.1-335.0	94.4	271.6	106.30	263.8-279.5	77.6	
Iron (mg)	11.4	5.04	10.7-12.2	104.1	12.1	4.88	11.9-12.3	109.7	10.0	4.35	9.7-10.4	91.3	
Zinc (mg)	10.7	4.29	10.0-11.3	88.1	11.6	4.44	11.4-11.7	91.2	9.0	4.05	8.7-9.3	71.1	
Potassium (mg)	2592.3	1016.26	2444.6-2739.9	74.1	2722.1	1029.06	2680.5-2762.5	77.8	2344.8	932.86	2276.1-2413.6	67.0	
Phosphorus (mg)	1224.8	476.68	1155.7-1294.0	203.0	1251.9	445.29	1233.3-1269.9	227.6	1003.0	378.43	974.3-1031.6	182.4	
Sodium (mg)	4871.4	1922.12	4575.5-5167.4	-	4805.7	1885.07	4731.2-4880.2	-	4093.3	1641.82	3970.2-4216.4	-	
Copper (mg)	1.8	0.75	1.7-1.9	128.1	2.0	0.95	1.9-2.0	124.4	1.6	1.02	1.6-1.7	102.3	
Iodine (mcg)	162.3	72.45	151.4-173.1	118.5	161.3	76.75	158.4-164.7	107.5	118.6	58.79	113.9-123.4	79.1	

Table 2.53. Arithmetic mean (x̄), standard deviation (SD), 95% CI (Confidence interval) and DRV meeting (%) values of daily average intakes of micronutrients of males by age groups, TNHS 2017

Table 2.53. Arithmetic mean (x̄), standard deviation (SD), 95% CI (Confidence interval) and DRV meeting (%) values of daily average intakes of micronutrients of males by age groups, TNHS 2017 (continued)

Micronutrients		≥15 y	/ears (N: 5570)			≥18 ye	ears (N: 5420)		≥19 years (N:5325)					
	x	SD	95%CI	DRV %	x	SD	95%CI	DRV %	x	SD	95%CI	DRV %		
Vitamin A (mcg)	1390.4	3023.82	1279.9-1500.9	243.8	1424.6	3099.33	1308.4-1540.8	249.9	1431.5	3126.25	1312.3-1550.7	251.1		
Retinol (mcg)	821.8	2964.02	713.2-930.4	-	845.1	3041.27	730.7-959.5	-	848.0	3067.54	730.7-965.3	-		
Carotene (mcg)	3.3	3.69	3.1-3.4	-	3.3	3.75	3.2-3.5	-	3.3	3.79	3.2-3.5	-		
Vitamin E(mg)	19.4	11.51	18.9-19.8	149.1	19.5	11.57	19.1-19.9	150.0	19.5	11.52	19.0-19.9	149.7		
Vitamin D (mcg)	3.5	8.58	3.3-3.8	23.7	3.6	8.76	3.3-3.9	24.1	3.7	8.88	3.4-3.9	24.4		
Vitamin B_1 (mg)	1.0	0.41	0.9-1.0	100.4	1.0	0.41	0.9-1.0	100.6	1.0	0.41	0.9-1.0	100.4		
Vitamin B ₂ (mg)	1.4	0.72	1.4-1.5	109.3	1.4	0.73	1.4-1.5	110.2	1.4	0.73	1.4-1.5	110.3		
Niacin (mg)	16.5	9.80	16.2-16.9	137.8	16.6	9.88	16.3-17.0	138.5	16.7	9.95	16.3-17.0	138.8		
Vitamin B ₆ (mg)	1.4	0.70	1.4-1.4	91.6	1.4	0.68	1.4-1.4	91.8	1.4	0.68	1.4-1.4	91.8		
Folate (mcg)	348.4	157.12	342.7-354.1	139.4	351.2	158.10	345.2-357.1	140.5	352.4	159.21	346.4-358.4	141.0		
Vitamin B ₁₂ (mcg)	6.4	10.47	6.0-6.8	318.7	6.5	10.71	6.1-6.9	323.4	6.51	10.85	6.1-6.9	325.8		
Vitamin C (mg)	115.1	96.13	111.8-118.4	128.2	116.4	96.92	113.9-119.7	129.4	116.9	97.80	113.5-120.3	129.9		
Calcium (mg)	880.9	342.08	867.5-894.3	113.5	881.5	343.33	867.6-895.3	114.8	881.6	341.61	867.7-895.5	115.2		
Magnesium (mg)	323.3	123.14	318.8-327.8	93.1	324.3	123.13	319.7-328.9	92.7	324.3	123.37	319.7-328.9	92.7		
Iron (mg)	11.8	4.88	11.7-12.0	107.5	11.9	4.85	11.7-12.0	107.8	11.9	4.87	11.7-12.0	107.8		
Zinc (mg)	11.3	4.46	11.1-11.4	89.1	11.3	4.45	11.1-11.5	89.0	11.3	4.47	11.1-11.5	89.1		
Potassium (mg)	2676.2	1025.40	2639.3-2713.2	76.4	2684.4	1024.72	2646.6-2722.1	76.7	2683.7	1026.0	2645.7-2721.7	76.7		
Fosfor(mg)	1226.4	447.93	1209.7-1243.1	221.4	1227.1	445.19	1210.1-1244.0	223.1	1226.5	445.33	1209.5-1243.6	223.0		
Sodium (mg)	4744.3	1878.22	4677.2-4811.5	-	4738.6	1874.26	4670.8-4806.4	-	4733.1	1874.04	4664.8-4801.3	-		
Copper (mg)	1.9	0.95	1.9-2.0	122.7	2.0	0.96	1.9-2.0	122.1	2.0	0.96	1.9-2.0	122.2		
Iodine (mcg)	157.4	75.92	154.5-160.2	105.8	157.3	76.08	154.4-160.3	104.9	156.9	76.21	153.9-159.9	104.6		

Micronutrients		15-18 y	ears (N:261)			19-64 ye	ars (N:5389)		≥65 years (N:1233)				
	x	SD	95%CI	DRV %	x	SD	95%CI	DRV %	x	SD	95%CI	DRV %	
Vitamin A (mcg)	791.6	956.70	662.8-920.47	161.6	1137.7	2377.60	1064.9-1210.5	220.3	951.6	2138.84	825.6-1077.7	194.2	
Retinol (mcg)	365.5	838.29	252.6-478.3	-	539.4	2276.20	470.9-607.9	-	366.8	2070.70	246.6-487.1	-	
Carotene (mcg)	2.5	2.84	2.1-2.9	-	3.5	3.98	3.3-3.6	-	3.3	3.38	3.0-3.5	-	
Vitamin E(mg)	15.8	9.90	14.5-17.1	143.9	17.0	9.94	16.7-17.4	155.0	13.4	8.61	12.7-14.0	121.6	
Vitamin D (mcg)	2.0	4.92	1.4-2.5	13.0	3.1	13.02	2.5-3.6	20.5	2.7	7.73	2.1-3.2	17.7	
Vitamin B_1 (mg)	0.8	0.31	0.7-0.8	85.5	0.8	0.34	0.8-0.8	89.6	0.7	0.30	0.7-0.7	76.5	
Vitamin B ² (mg)	1.0	0.47	0.9-1.1	74.2	1.1	0.53	1.1-1.1	83.8	1.0	0.45	0.9-1.0	75.2	
Niacin (mg)	11.1	6.71	10.3-11.9	101.1	11.8	6.81	11.6-12.0	107.4	9.8	7.58	9.2-10.3	88.9	
Vitamin B ₆ (mg)	1.0	0.49	0.9-1.1	78.1	1.1	0.49	1.1-1.1	85.0	1.0	0.47	0.9-1.0	74.5	
Folate (mcg)	232.8	102.82	218.9-246.7	93.1	295.2	127.24	290.9-299.5	112.3	266.9	121.17	258.2-275.5	106.8	
Vitamin B ₁₂ (mcg)	3.1	3.05	2.7-3.5	156.7	3.9	5.92	3.7-4.1	194.6	2.9	3.21	2.7-3.1	144.7	
Vitamin C (mg)	84.2	57.35	76.5-91.9	108.9	113.9	91.76	110.9-116.8	136.0	116.5	96.70	109.1-123.9	145.6	
Calcium (mg)	668.3	297.43	626.0-710.5	73.5	731.8	275.39	722.1-741.6	95.7	651.4	258.99	632.8-670.0	86.8	
Magnesium (mg)	246.5	93.35	235.1-258.8	90.7	266.4	97.56	262.8-270.1	88.8	220.1	87.23	213.9-226.3	73.4	
Iron (mg)	9.0	3.70	8.5-9.5	63.2	9.6	3.81	9.5-9.7	72.2	8.0	3.70	7.7-8.3	72.6	
Zinc (mg)	7.7	3.20	7.3-8.1	76.6	8.4	3.16	8.3-8.5	79.7	6.9	2.84	6.7-7.1	67.5	
Potassium (mg)	2073.5	798.64	1967.4-2179.6	59.2	2251.5	843.13	2221.4-2281.7	63.6	1992.3	839.79	1932.4-2052.2	56.9	
Phosphorus (mg)	911.5	337.53	868.2-954.8	153.5	946.4	338.07	934.4-958.4	172.1	802.2	317.25	779.5-825.0	145.9	
Sodium (mg)	3380.9	1392.10	3199.1-3562.8	-	3692.6	1461.57	3639.4-3745.8	-	3281.3	1340.28	3171.8-3390.8	-	
Copper (mg)	1.4	0.53	1.3-1.4	114.2	1.5	0.69	1.5-1.6	116.1	1.2	0.56	1.2-1.3	95.2	
lodine (mcg)	129.1	62.59	120.7-137.5	93.3	123.7	58.97	121.6-125.7	80.0	101.6	53.03	97.9-105.3	67.7	

Table 2.54. Arithmetic mean (x̄), standard deviation (SD), 95% CI (Confidence interval) and DRV meeting (%) values of daily average intakes of micronutrients of females by age groups, TNHS 2017

Table 2.54. Arithmetic mean (x̄), standard deviation (SD), 95% CI (Confidence interval) and DRV meeting (%) values of daily average intakes of micronutrients of females by age groups, TNHS 2017 (continued)

Micronutrients		≥15 ye	ars (N: 6883)		≥18 yea	ars (N: 6743)		≥19 years (N: 6622)				
	x	SD	95%Cl	DRV %	x	SD	95%Cl	DRV %	x	SD	95%Cl	DRV %
Vitamin A (mcg)	1087.2	2269.56	1026.1-1148.3	212.4	1099.9	2310.67	1036.6-1163.2	214.6	1113.0	2347.99	1047.7-1178.4	216.8
Retinol (mcg)	504.3	2171.65	447.0-561.7	-	510.6	2213.43	451.0-570.1	-	516.5	2250.60	454.9-578.0	-
Carotene (mcg)	3.4	3.84	3.2-3.5	-	3.4	3.88	3.3-3.5	-	3.4	3.91	3.3-3.6	-
Vitamin E(mg)	16.5	9.86	16.2-16.8	150.0	16.5	9.85	16.2-16.9	150.4	16.6	9.85	16.2-16.9	150.6
Vitamin D (mcg)	2.9	12.02	2.5-3.4	19.6	3.0	12.24	2.5-3.4	19.9	3.0	12.45	2.6-3.5	20.1
Vitamin B ₁ (mg)	0.8	0.33	0.8-0.8	87.7	0.8	0.33	0.8-0.8	87.7	0.8	0.33	0.8-0.8	87.9
Vitamin B ₂ (mg)	1.1	0.52	1.1-1.1	82.0	1.1	0.52	1.1-1.1	82.4	1.1	0.52	1.1-1.1	82.7
Niacin (mg)	11.5	6.93	11.3-11.7	104.7	11.5	6.97	11.3-11.7	104.8	11.5	6.95	11.3-11.7	104.9
Vitamin B ₆ (mg)	1.1	0.49	1.1-1.1	83.2	1.1	0.48	1.1-1.1	83.3	1.1	0.49	1.1-1.1	83.6
Folate (mcg)	286.7	126.06	282.9-289.8	110.1	289.1	126.45	285.2-292.9	110.8	291.5	126.81	287.6-295.3	111.6
Vitamin B ₁₂ (mcg)	3.7	5.49	3.6-3.9	185.4	3.7	5.55	3.6-3.9	185.9	3.8	5.65	3.6-3.9	187.9
Vitamin C (mg)	111.8	90.48	109.2-114.4	135.0	113.1	91.53	110.4-115.7	136.1	114.2	92.43	111.5-117.0	137.3
Calcium (mg)	716.9	276.86	708.1-725.7	92.8	719.6	276.84	710.6-728.6	93.9	721.2	274.61	712.3-730.0	94.5
Magnesium (mg)	259.2	97.25	256.0-262.4	87.7	259.8	97.37	256.5-263.1	86.6	260.3	97.52	257.0-263.6	86.7
Iron (mg)	9.4	3.82	9.2-9.5	71.5	9.4	3.82	9.3-9.5	71.6	9.4	3.83	9.3-9.5	72.2
Zinc (mg)	8.2	3.18	8.1-8.3	78.0	8.2	3.15	8.1-8.3	77.9	8.2	3.17	8.1-8.3	78.1
Potassium (mg)	2205.6	844.24	2178.8-2232.4	62.5	2210.5	845.03	2183.4- 2237.6	62.6	2217.1	847.19	2189.6-2244.7	62.8
Phosphorus (mg)	926.0	338.79	915.3-936.7	167.4	926.7	338.75	915.6-937.5	168.5	927.3	338.90	916.3-938.2	168.6
Sodium (mg)	3617.3	1449.47	3570.2-3664.4	-	3626.7	1446.77	3579.0-3674.5	-	3638.0	1452.66	3589.5-3686.5	-
Copper (mg)	1.5	0.67	1.5-1.5	113.4	1.5	0.68	1.5-1.5	112.9	1.5	0.69	1.5-1.5	113.3
lodine (mcg)	121.4	59.05	119.6-123.3	79.6	120.9	58.48	119.1-122.7	78.5	120.8	58.69	118.9-122.6	78.4

3.8.2. Amounts of Foods Consumed Food Consumption in Males

The mean and standard deviation values of daily dietary intakes of males aged 15 years and over by age groups are given in Table 2.55.

For males in the age group of 15-18 years, daily average consumption of milk was 63.4±162.40 mL, daily average consumption of yoghurt was 121.3±109.76 grams, daily average consumption of cheese was 37.2±36.01 grams, and daily average consumption of total foods included in the milk and dairy group was 225.3±197.14 grams.

For males in this age group, daily average consumption of red meat was 41.7±50.06 grams, daily average consumption of fish was 8.0±44.74 grams, daily average consumption of eggs was 34.3±40.23 grams, daily average consumption of legumes was 18.3±36.71 grams, and daily average consumption of total foods included in the meat group was 159.0±114.36 grams.

Daily average consumption of bread was 254.8±159.39 grams, daily average consumption of cereals was 93.3±78.71 grams, and daily average consumption of total foods included in the bread group was 383.4±163.72 grams.

Daily average consumption of fresh vegetables was 243.0±168.38 grams, and daily average consumption of fresh fruits was 136.5±205.11 grams.

Daily average consumption of olive oil was 4.0±6.76 mL, daily average consumption of oil was 18.0±16.38 mL, daily average consumption of butter was 4.6±10.51 grams, and total consumption of fats and oils group was 49.2±29.50 grams.

Daily average consumption of table sugar was 17.0±19.27 grams, and daily average consumption of total foods included in the sugar group was 29.8±29.33 grams. Daily average consumption of salt was 11.9±4.76 grams.

Daily average consumption of water was 1310.4±970.10 mL, daily average consumption of black tea was 221.5±261.89 mL, daily average consumption of coffee is 12.3±50.74 mL, and total consumption of non-alcoholic beverages was 1696.1±1033.01 mL.

For males in the age group of 19-64 years, daily average consumption of milk was 34.5±72.81 mL, daily average consumption of yoghurt was 127.3±121.33 grams, daily average consumption of cheese was 42.2±37.92 grams, and daily average consumption of total foods included in the milk and dairy group was 206.1±153.26 grams.

For males in this age group, daily average consumption of red meat was 52.2±59.37 grams, daily average consumption of fish was 17.1±61.25 grams, daily average consumption of eggs was 36.0±41.17 grams, daily average consumption of legume is 19.2±28.56 grams, and daily average consumption of total foods included in the meat group was 183.5±120.00 grams.

Daily average consumption of bread was 227.8±143.72 grams, and daily average consumption of cereals was 84.4±71.08 grams, and daily average consumption of total foods included in the bread group was 331.9±155.81 grams.

Daily average consumption of fresh vegetables was 259.2±168.53 grams, and daily average consumption of fresh fruits was 160.7±218.54 grams.

Daily average consumption of olive oil was 5.1±9.44 mL, daily average consumption of oil was 18.6±16.33 mL, daily average consumption of butter was 5.4±10.5 grams, and total consumption of fats and oils group was 55.9±34.04 grams.

Daily average consumption of table sugar was 24.4±27.47 grams, and daily average consumption of total foods included in the sugar group was 36.2±35.51 grams. Daily average consumption of salt was 11.7±4.63 grams.

Daily average consumption of water/mineral water/soda was 1260.6±883.3 mL, daily average consumption of black tea was 570.3±473.23 mL, daily average consumption of coffee was 28.8±95.09 mL, and total consumption of non-alcoholic beverages was 1932.8±990.53 mL.

For males in the age group of 65 years and over, daily average consumption of milk was 28.4±64.10 mL, daily average consumption of yoghurt was 113.3±122.00 grams, daily average consumption of cheese was 41.5±31.75 grams, and daily average consumption of total foods included in the milk and dairy group was 184.7±145.03 grams.

For males in this age group, daily average consumption of red meat was 38.1±53.64 grams, daily average consumption of fish was 11.6±46.23 grams, daily average consumption of eggs was 29.2±30.03 grams, daily average consumption of legumes was 16.7±24.03 grams, and daily average consumption of total foods included in the meat group was 123.7±89.08 grams.

Daily average consumption of bread was 188.5±125.35 grams, daily average consumption of cereals was 49.9±47.29 grams, and daily average consumption of total foods included in the bread group was 248.0±130.00 grams.

Daily average consumption of fresh vegetables was 252.8±180.31 grams, and daily average consumption of fresh fruits was 203.2±203.39 grams.

Daily average consumption of olive oil was 6.8±10.63 mL, daily average consumption of oil was 12.4±13.56 mL, daily average consumption of butter was 5.1±8.61 grams, and total consumption of fats and oils group was 51.2±31.21 grams.

Daily average consumption of table sugar was 17.6±21.80 grams, and daily average consumption of total foods included in the sugar group was 27.9±29.83 grams. Daily average consumption of salt was 10.0±4.04 grams.

Daily average consumption of water/mineral water/soda was 1024.8±666.20 mL, daily average consumption of black tea was 423.5±308.50 mL, daily average consumption of coffee was 13.1±43.25 mL, and total consumption of non-alcoholic beverages was 1474.0±733.29 mL.

Table 2.55. Arithmetic mean (x̄), standard deviation (SD) and 95% CI (Confidence interval) values of the daily dietary intake of males aged 15 years and over by age groups, TNHS 2017

Food Items 15-18 years (N:245)						l: 4407)	≥65 years (N: 918)			
	x	SD	95%Cl	x	SD	95%CI	x	SD	95%Cl	
MILK AND DAIRY PRODUCTS										
Milk	63.4	162.40	39.1-87.6	34.5	72.81	31.3-37.7	28.4	64.10	23.7-33.1	
Yoghurt	121.3	109.76	105.2-137.4	127.3	121.33	122.3-132.3	113.3	122.00	103.9-122.7	
Cheese	37.2	36.01	32.2-42.2	42.2	37.92	40.9-43.9	41.5	31.75	39.2-43.7	
Kefir	-	-	-	0.4	7.60	0.2-0.6	0.2	5.67	0.0-0.5	
Total	225.3	197.14	196.3-254.4	206.1	153.26	199.6-212.6	184.7	145.03	173.7-195.6	
MEAT, EGGS, LEGUMES, SEEDS										
Red meat	41.7	50.06	34.7-48.7	52.2	59.37	49.6-54.7	38.1	53.64	34.0-42.1	
Poultry (chicken, turkey, etc.)	41.1	59.10	32.8-49.5	39.4	66.72	36.6-42.2	15.9	38.76	13.2-18.7	
Fish	8.0	44.74	2.42-13.53	17.1	61.25	14.9-19.3	11.6	46.23	8.0-15.1	
Offals	1.0	7.37	0.2-21.8	3.9	17.93	3.1-4.6	2.4	16.59	1.1-3.7	
Eggs	34.3	40.23	28.7-39.9	36.0	41.17	34.3-37.7	29.2	30.03	27.0-31.5	
Meat products (salami, sausage, etc.)	8.1	20.92	5.4-10.9	4.1	12.38	3.7-4.6	2.3	12.89	1.4-3.3	
Legumes	18.3	36.71	13.7-22.9	19.2	28.56	18.1-20.3	16.7	24.03	15.0-18.5	
Seeds	6.4	14.99	4.5-8.4	11.7	29.26	10.5-12.8	7.5	18.48	6.3-8.8	
Total	159.0	114.36	142.4-175.6	183.5	120.00	178.77-188.31	123.7	89.08	117.1-130.4	
BREAD AND CEREALS										
Bread	254.8	159.39	231.1-278.4	227.8	143.72	222.4-233.1	188.5	125.35	178.8-198.2	
Cereals	93.3	78.71	81.7-105.0	84.4	71.08	81.4-87.3	49.9	47.29	46.2-53.6	
Buns etc.	35.3	67.87	26.3-44.3	19.8	41.93	18.1-21.4	9.6	26.44	7.2-12.0	
Total	383.4	163.72	360.0-406.9	331.9	155.81	325.9-337.9	248.0	130.00	237.9-258.0	
FRESH VEGETABLES (Total)	243.0	168.38	217.6-268.5	259.6	168.53	253.2-266.0	252.8	180.31	239.2-266.2	
Potato	61.2	91.46	49.2-73.3	40.4	65.49	38.0-42.7	29.0	54.30	24.7-33.3	
FRESH FRUITS (Total)	136.5	205.11	110.7-168.2	160.7	218.54	152.2-169.3	203.2	203.39	188.6-217.7	
Dried fruits	1.5	6.23	0.7-2.3	2.1	8.97	1.81-2.44	3.1	12.90	2.2-3.9	

Table 2.55. Arithmetic mean (x̄), standard deviation (SD) and 95% CI (Confidence interval) values of the daily dietary intake of males aged 15 years and over by age groups, TNHS 2017 (continued)

Food Items	1	5-18 years (N	1:245)	19	9-64 years (I	N: 4407)	≥65 years (N: 918)			
	x	SD	95%CI	x	SD	95%CI	x	SD	95%Cl	
FATS AND OILS										
Olive oil	4.0	6.76	3.1-4.9	5.1	9.44	4.8-5.4	6.8	10.63	6.0-7.6	
Oils (except olive oil)	18.0	16.38	15.5-20.6	18.6	16.33	18.0-19.3	12.4	13.56	11.3-13.5	
Hard margarine	10.7	15.12	8.4-13.1	8.6	13.23	8.1-9.1	4.4	8.94	3.6-5.2	
Soft margarine	0.1	3.26	0.0-0.4	0.1	1.61	0.1-0.2	0.0	0.20	0.0-0.1	
Butter	4.6	10.51	3.2-6.1	5.4	10.5	4.9-5.8	5.1	8.61	4.5-5.7	
Olive	10.5	15.05	8.5-12.5	17.3	25.10	16.3-18.3	22.2	23.31	20.5-24.0	
Mayonnaise	0.9	3.76	0.4-1.4	0.4	2.38	0.3-0.5	0.0	0.23	0.0-0.1	
Tahini	0.2	2.15	0.0-0.5	0.5	3.12	0.4-0.6	0.3	1.59	0.1-0.4	
Total	49.2	29.50	44.7-53.6	55.9	34.04	54.6-57.2	51.2	31.21	48.9-53.5	
SUGAR AND DESSERTS										
Table sugar	17.0	19.27	14.4-19.6	24.4	27.47	23.3-25.5	17.6	21.80	15.9-19.2	
Total	29.8	29.33	25.4-34.1	36.2	35.51	34.9-37.6	27.9	29.83	25.7-30.1	
SALT	11.9	4.76	11.1-12.6	11.7	4.63	11.6-11.9	10.0	4.04	9.7-10.3	
BEVERAGES										
Water, mineral water, soda	1310.4	970.10	1158.6-1462.6	1260.6	883.3	1222.0-1299.1	1024.8	666.20	974.1-1075.5	
Coffee	12.3	50.74	4.8-19.9	28.8	95.09	25.4-32.2	13.1	43.25	10.1-16.0	
Black tea	221.5	261.89	187.2-255.8	570.3	473.23	552.7-587.8	423.5	308.50	400.9-446.2	
Herbal teas	0.3	5.47	0.0-0.89	1.6	16.4	1.0-2.1	3.0	33.86	0.8-5.1	
Non-alcoholic beverages, sugar-free	0.2	6.06	0.0-0.7	1.7	21.11	1.0-2.4	-	-	-	
Non-alcoholic beverages, (including water)	1696.1	1033.01	1538.4-1853.9	1932.8	990.53	1891.7-1973.9	1474.0	733.29	1420.3-1527.8	
Alcoholic beverages	2.0	37.27	0.0-5.8	14.3	123.82	10.3-18.3	3.7	31.1	1.9-5.5	

Food Consumption in Females

The mean and standard deviation values of daily dietary intakes of females aged 15 years and over by age group are given in Table 2.56.

For females in the age group of 15-18 years, daily average consumption of milk was 64.4±111.34 mL, daily average consumption of yoghurt was 96.9±105.46 grams, daily average consumption of cheese was 24.2±25.97 grams, and daily average consumption of total foods included in the milk and dairy group was 187.4±156.83 grams.

For females in this age group, daily average consumption of red meat was 28.1±46.11 grams, daily average consumption of fish was 6.2±32.00 grams, daily average consumption of eggs was 20.3±23.00 grams, daily average consumption of legumes was 15.9±21.57 grams, and daily average consumption of total foods included in the meat group was 109.0±79.95 grams.

Daily average consumption of bread was 138.4±91.10 grams, daily average consumption of cereals was 74.2±62.94 grams, and daily average consumption of total foods included in the bread group was 249.4±110.86 grams.

Daily average consumption of fresh vegetables was 210.2±156.51 grams, and daily average consumption of fresh fruits was 136.7±173.40 grams.

Daily average consumption of olive oil was 3.8±7.41 mL, daily average consumption of oil was 15.5±13.54 mL, daily average consumption of butter was 3.2±8.19 grams, and total consumption of fats and oils group was 37.4±22.26 grams.

Daily average consumption of table sugar was 13.5±20.19 grams, and daily average consumption of total foods included in the sugar group was 25.0±30.08 grams. Daily average consumption of salt was 8.2±3.46 grams.

Daily average consumption of water/mineral water/soda was 1071.1±746.13 mL, daily average consumption of black tea was 142.6±174.19 mL, daily average consumption of coffee was 18.9±54.94 mL, and daily average consumption of total non-alcoholic beverages was 1297.4±753.04 mL.

For females in the age group of 19-64 years, daily average consumption of milk was 29.7±61.03 mL, daily average consumption of yoghurt was 100.6±105.90 grams, daily average consumption of cheese was 37.2±29.01 grams, and daily average consumption of total foods included in the milk and dairy group was 169.7±131.15 grams.

For females in this age group, daily average consumption of red meat was 28.9±38.95 grams, daily average consumption of fish was 10.9±42.23 grams, daily average consumption of eggs was 29.6±27.93 grams, daily average consumption of legumes was 15.2±23.03 grams, and daily average consumption of total foods included in the meat group was 117.9±80.35 grams.

Daily average consumption of bread was 134.5±96.70 grams, and daily average consumption of cereals was 67.6±54.60 grams, and daily average consumption of total foods included in the bread group was 219.4±111.25 grams.

Daily average consumption of fresh vegetables was 260.0±161.66 grams, and daily average consumption of fresh fruits was 152.6±159.78 grams.

Daily average consumption of olive oil is 5.4±8.66 mL, daily average consumption of oil was 15.7±13.88 mL, daily average consumption of butter was 4.1±6.54 grams, and total consumption of foods included in fats and oils group was 47.3±26.29 grams.

Daily average consumption of table sugar was 17.6±21.36 grams, and daily average consumption of foods total included in the sugar group was 27.5±27.90 grams. Daily average consumption of salt was 9.0±3.55 grams.

Daily average consumption of water/mineral water/soda was 1126.9±764.24 mL, daily average consumption of black tea was 459.1±401.64 mL, daily average consumption of coffee was 29.6±73.53 mL, and total consumption of non-alcoholic beverages 1649.9±841.47 mL.

For females in the age group of 65 years and over, daily average consumption of milk was 30.8±69.90 mL, daily average consumption of yoghurt was 98.9±111.79 grams, daily average consumption of cheese was 36.9±27.15 grams, and daily average consumption of total foods included in the milk and dairy group was 168.6±137.87 grams.

For females in this age group, daily average consumption of red meat was 24.5±36.01 grams, daily average consumption of fish was 10.9±41.06 grams, daily average consumption of eggs was 23.4±25.13 grams, daily average consumption of legumes was 11.7±21.67 grams, and daily average consumption of total foods included in the meat group was 89.8±73.98 grams.

Daily average consumption of bread was 127.2±86.04 grams, and daily average consumption of cereals was 44.5±43.38 grams, and daily average consumption of total foods included in the bread group was 180.6±97.15 grams.

Daily average consumption of fresh vegetables was 250.5±174.12 grams, and daily average consumption of fresh fruits was 182.3±184.77 grams.

Daily average consumption of olive oil was 5.2±9.61 mL, daily average consumption of oil was 11.8±12.76 mL, daily average consumption of butter was 3.5±6.84 grams, and total consumption of foods included in fats and oils group was 39.4±24.45 grams.

Daily average consumption of table sugar was 13.1±16.33 grams, and daily average consumption of total foods included in the sugar group of nutrients is 20.2±22.91 grams. Daily average consumption of salt was 8.0±3.26 grams.

Daily average consumption of water/mineral water/soda was 928.4±666.81 mL, daily average consumption of black tea was 316.2±261.72 mL, daily average consumption of coffee was 11.5±38.65 mL, and total consumption of non-alcoholic beverages was 1267.2±715.51 mL.

Table 2.56. Arithmetic mean (x̄), standard deviation (SD) and 95% CI (Confidence interval) values of the daily dietary intakes of females aged 15 years and over by age groups, TNHS 2017

Food Items	1	5-18 years (N	l:261)	19	9-64 years (N	I: 5389)	≥65 ye)	
	x	SD	95%CI	x	SD	95%CI	x	SD	95%CI
MILK AND DAIRY PRODUCTS									
Milk	64.4	111.34	49.6-79.2	29.7	61.03	27.6-31.9	30.8	69.90	25.9-35.8
Yoghurt	96.9	105.46	81.1-112.6	100.6	105.90	96.7-104.4	98.9	111.79	90.9-106.9
Cheese	24.2	25.97	20.8-27.5	37.2	29.01	36.1-38.2	36.9	27.15	34.6-39.3
Kefir	0.2	4.42	0.0-0.6	1.0	13.86	0.3-1.6	0.8	10.06	0.2-1.4
Total	187.4	156.83	165.5-209.3	169.7	131.15	165.0-174.4	168.6	137.87	158.8-178.5
MEAT, EGGS, LEGUMES, SEEDS									
Red meat	28.1	46.11	22.1-34.1	28.9	39.95	27.5-30.4	24.5	36.01	22.1-27.0
Poultry (chicken, turkey, etc.)	27.0	49.69	21.0-33.1	19.7	44.27	18.1-21.3	11.0	31.42	8.8-13.2
Fish	6.2	32.00	2.5-9.9	10.9	42.23	9.5-12.4	10.9	41.06	8.0-13.9
Offals	0.4	3.64	0.0-0.9	1.6	10.57	1.3-1.9	1.0	7.99	0.5-1.4
Eggs	20.3	23.00	17.3-23.3	29.6	27.93	28.5-30.6	23.4	25.13	21.5-25.2
Meat products (salami, sausage, etc.)	3.9	12.64	2.5-5.3	2.4	8.17	2.0-2.8	1.2	7.72	0.5-1.9
Legumes	15.9	21.57	13.0-18.9	15.2	23.03	14.4-16.0	11.7	21.67	10.1-13.2
Seeds	7.2	16.61	5.0-9.4	9.7	18.55	9.0-10.3	6.1	15.56	4.9-7.2
Total	109.0	79.95	98.9-119.0	117.9	80.35	115.1-120.8	89.8	73.98	84.5-95.0
BREAD AND CEREALS									
Bread	138.4	91.10	125.7-151.0	134.5	96.70	130.7-138.3	127.2	86.04	119.5-134.9
Cereals	74.2	62.94	65.4-83.1	67.9	54.60	65.9-69.9	44.5	43.38	41.2-47.7
Buns etc.	36.8	46.34	30.5-43.1	17.0	32.63	15.9-18.1	9.0	29.81	6.8-11.2
Total	249.4	110.86	234.3-264.4	219.4	111.25	215.0-223.8	180.6	97.15	172.5-188.7
FRESH VEGETABLES (Total)	210.2	156.51	190.1-230.3	260.0	161.66	254.4-265.5	250.5	174.12	236.8-264.3
Potato	46.4	76.77	36.9-55.9	36.8	55.96	34.7-38.9	27.5	53.75	23.5-31.4
FRESH FRUITS (Total)	136.7	173.40	114.1-159.4	152.6	159.78	147.2-158.1	182.3	184.77	168.3-196.3
Dried fruits	1.7	6.95	0.8-2.7	23.3	12.99	2.8-3.28	2.5	8.23	1.9-3.1

Table 2.56. Arithmetic mean (x̄), standard deviation (SD) and 95% CI (Confidence interval) values of the daily dietary intakes of females aged 15 years and over by age groups, TNHS 2017 (continued)

Food Items	15	5-18 years (N	l:261)	19	9-64 years (N	N: 5389)	≥65 yea	ars (N: 1233)
	x	SD	95%Cl	x	SD	95%Cl	x	SD	95%Cl
FATS AND OILS									
Olive oil	3.8	7.41	2.7-4.8	5.4	8.66	5.1-5.8	5.2	9.61	4.6-5.8
Oils (except olive oil)	15.5	13.54	13.7-17.3	15.7	13.88	15.2-16.2	11.8	12.76	10.8-12.8
Hard margarine	6.6	9.74	5.2-7.9	5.4	9.39	5.1-5.7	3.2	7.23	2.6-3.7
Soft margarine	-	-	-	0.1	0.50	0.0-0.1	0.0	0.48	0.0-0.1
Butter	3.2	8.19	2.2-4.3	4.1	6.54	3.8-4.3	3.5	6.84	3.0-4.0
Olive	7.6	12.0	5.8-9.3	16.1	17.78	15.5-16.7	15.5	17.29	14.2-16.7
Mayonnaise	0.6	2.59	0.3-0.9	0.2	1.33	0.2-0.3	0.0	0.52	0.0-0.1
Tahini	0.2	1.43	0.1-0.4	0.4	2.02	0.3-0.5	0.2	1.28	0.1-0.3
Total	37.4	22.26	34.6-40.3	47.3	26.29	46.4-48.3	39.4	24.45	37.6-41.1
SUGAR AND DESSERTS									
Table sugar	13.5	20.19	9.8-17.2	17.6	21.36	16.8-18.3	13.1	16.33	12.1-14.1
Total	25.0	30.08	20.3-29.7	27.5	27.90	26.5-28.5	20.2	22.91	18.7-21.6
SALT	8.2	3.46	7.7-8.3	9.0	3.55	8.8-9.1	8.0	3.26	7.8-8.3
BEVERAGES									
Water, mineral water, soda	1071.1	746.13	966.1-1176.2	1126.9	764.24	1100.1-1153.6	928.4	666.81	877.4-979.4
Coffee	18.9	54.94	10.9-26.9	29.6	73.53	27.1-32.0	11.5	38.65	8.8-14.3
Black tea	142.6	174.19	119.3-165.9	459.1	401.64	445.5-472.6	316.2	261.72	296.0-336.4
Herbal teas	1.6	16.87	0.0-3.8	4.7	38.95	3.5-5.9	5.0	36.53	1.4-8.5
Non-alcoholic beverages, sugar-free	-	-	-	0.5	11.26	0.2-0.8	0.1	2.24	0.0-0.2
Non-alcoholic beverages (including water)	1297.4	753.04	1194.4-1400.3	1649.9	841.47	1621.0-1678.9	1267.2	715.51	1213.6-1320.8
Alcoholic beverages	-	-	-	1.7	26.21	1.0-2.5	0.4	16.36	0.0-1.2

Food Consumption in All Individuals Aged 15 Years and Over

The mean and standard deviation values of daily food intakes of all individuals aged 15 years and over by gender are given in Table 2.57.

For males aged 15 years and over, daily average consumption of milk was 36.3±83.49 mL, daily average consumption of yoghurt was 125.5±120.54 grams, daily average consumption of cheese was 41.9±37.25 grams, and daily average consumption of total foods included in the milk and dairy group was 205.7±156.76 grams.

For males, daily average consumption of red meat was 50.0±58.33 grams, daily average consumption of fish was 15.8±58.87 grams, daily average consumption of eggs was 35.2±40.22 grams, daily average consumption of legumes was 18.9±28.93 grams, and daily average consumption of total foods included in the meat group of nutrients was 175.9±118.37 grams.

For males, daily average consumption of bread was 226.3±144.14 grams, daily average consumption of cereals was 81.9±70.65 grams, and daily average consumption of total foods included in the bread group was .2±156.99 grams.

For males, daily average consumption of fresh vegetables was 257.6±169.70 grams, and daily average consumption of fresh fruits was 162.7±216.56 grams.

For males, daily average consumption of olive oil was 5.2±9.39 mL, daily average consumption of oil was 18.0±16.20 mL, daily average consumption of butter was 5.3±10.30 grams, total consumption of fats and oils group was 54.9±33.50 grams.

For males, daily average consumption of table sugar was 23.2±26.54 grams, and daily average consumption of total foods included in the sugar group was 34.9±34.66 grams. Daily average consumption of salt is 11.6±4.62 grams.

For males, daily average consumption of water/mineral water/soda was 1242.5±875.58 mL, daily average consumption of black tea was 528.1±457.55 mL, daily average consumption of coffee was 26.0±88.77 mL, and total consumption of non-alcoholic beverages was 1870.5±983.25 mL.

For females aged 15 years and over, daily average consumption of milk was 32.7±68.18 mL, daily average consumption of yoghurt was 100.1±106.59 grams, daily average consumption of cheese was 36.1±28.77 grams, and daily average consumption of total foods included in the milk and dairy group was 171.3±134.29 grams.

For females, daily average consumption of red meat was 28.3±40.04 grams, daily average consumption of fish was 10.5±41.37 grams, daily average consumption of eggs was 28.1±27.41 grams, daily average consumption of legumes was 14.8±22.78 grams, and daily average consumption of total foods included in the meat group was 113.8±80.09 grams.

For females, daily average consumption of bread was 133.9±91.04 grams, and daily average consumption of cereals was 65.5±54.67 grams, and daily average consumption of total foods included in the bread group was 217.1±110.71 grams.

For females, daily average consumption of fresh vegetables was 254.8±163.37 grams, and daily average consumption of fresh fruits was 155.0±164.49 grams.

For females, daily average consumption of olive oil was 5.3±8.70 mL, daily average consumption of oil was 15.2±13.78 mL, daily average consumption of butter was 3.9±6.73 grams, and total consumption of fats and oils group was 45.6±26.01 grams.

Food females, daily average consumption of table sugar was 16.7±20.79 grams, and daily average consumption of total foods included in the sugar group was 26.4±27.63 grams. Daily average consumption of salt was 8.8±3.52 grams.

For females, daily average consumption of water/mineral water/soda was 1098.2±754.27 mL, daily average consumption of black tea was 416.2±384.89 mL, daily average consumption of coffee was 26.5±69.11 mL, and total consumption of non-alcoholic beverages was 1574.9±833.59 mL.

For all individuals aged 15 years and over, daily average consumption of milk was 34.5 ± 76.19 mL, daily average consumption of yoghurt was 112.7 ± 114.45 grams, daily average consumption of cheese was 39.0 ± 33.38 grams, and daily average consumption of total foods included in the milk and dairy group was 188.2 ± 146.91 grams.

Daily average consumption of red meat was 39.1±51.14 grams, daily average consumption of fish was 13.2±50.89 grams, daily average consumption of eggs was 31.6±34.56 grams, daily average consumption of legumes was 16.8±26.10 grams, and daily average consumption of total foods included in the meat group was 144.7±105.62 grams.

Daily average consumption of bread was 179.8±130.39 grams, daily average consumption of cereals was 73.6±63.65 grams, and daily average consumption of total foods included in the bread group was 272.3±146.64 grams.

Daily average consumption of fresh vegetables was 256.2±166.54 grams, and daily average consumption of fresh fruits was 158.8±192.18 grams.

Daily average consumption of olive oil was 5.2±9.05 mL, daily average consumption of oil was 16.6±15.09 mL, daily average consumption of butter was 5.0±8.71 grams, and total consumption of fats and oils group was 50.2±30.33 grams.

Daily average consumption of table sugar was 19.9±20.04 grams, and daily average consumption of total foods included in the sugar group was 30.6±31.61 grams. Daily average consumption of salt was 10.2±4.34 grams.

Daily average consumption of water/mineral water/soda was 1169.9±819.98 mL, daily average consumption of black tea was 416.4±403.37 mL, daily average consumption of coffee was 26.2±79.49 mL, and total consumption of non-alcoholic beverages was 1721.8±922.94 mL.

The comparison between daily average dietary consumption levels of individuals aged 19 years and over (person/day/g/mL) based on the data provided in TNHS 2010 and TNHS 2017 is given in APPENDIX-8. According to TNHS 2010, it was found that there was an increase in consumption of meat group, eggs, legumes, seeds, total oils and fats, and that there was a decrease in consumption of foods from vegetables, fruits, bread and cereals groups. No change was observed in consumption levels of milk and dairy products.

Table 2.57. Arithmetic mean (x), standard deviation (SD) and 95% CI (Confidence interval) values of the daily dietary intakes of all individuals aged 15	
years and over, TNHS 2017	

Food Items	MALES (aged ≥15 yea	rs) (N:5570)	FEMALES	FEMALES (aged ≥15 years) (N: 6883)			OVERALL (aged ≥15 years) (N: 12453)		
	x	SD	95%CI	x	SD	95%CI	x	SD	95%CI	
MILK AND DAIRY PRODUCTS										
Milk	36.3	83.49	32.9-39.6	32.7	68.18	30.5-34.8	34.5	76.19	32.5-36.4	
Yoghurt	125.5	120.54	121.1-129.9	100.1	106.59	96.6-103.6	112.7	114.45	109.9-115.5	
Cheese	41.9	37.25	40.6-43.2	36.1	28.77	35.2-37.0	39.0	33.38	38.2-39.8	
Kefir	0.3	7.12	0.2-0.5	0.9	12.93	0.4-1.4	0.6	10.46	0.3-0.9	
Total	205.7	156.76	199.7-211.6	171.0	134.29	166.7-175.3	188.2	146.91	184.5-191.9	
MEAT, EGGS, LEGUMES, SEEDS										
Red meat	50.0	58.33	47.8-52.2	28.3	40.04	27.0-29.6	39.1	51.14	37.8-40.4	
Poultry (chicken, turkey, etc.)	32.4	64.37	34.9-39.8	19.2	43.53	17.9-20.6	28.2	55.63	26.8-29.7	
Fish	15.8	58.87	114.0-17.7	10.5	41.37	9.3-11.8	13.2	50.89	12.0-14.3	
Offals	3.5	17.21	2.9-4.1	1.4	9.90	1.1-1.7	2.5	14.05	2.1-2.8	
Eggs	35.2	40.22	33.7-36.7	28.1	27.41	27.2-29.0	31.6	34.56	30.8-32.5	
Meat products (salami, sausage, etc.)	4.3	13.38	3.8-4.7	2.4	8.58	2.0-2.7	3.3	11.27	3.0-3.6	
Legumes	18.9	28.93	17.9-19.9	14.8	22.78	14.1-15.6	16.8	26.10	16.2-17.5	
Seeds	10.9	27.56	9.9-11.8	9.0	18.10	8.5-9.6	9.9	23.30	9.4-10.5	
Total	175.9	118.37	171.7-180.2	113.8	80.09	111.2-116.3	144.7	105.62	142.1-147.3	
BREAD AND CEREALS										
Bread	226.3	144.14	221.3-231.2	133.9	91.04	130.6-137.3	179.8	130.39	176.7-183.0	
Cereals	81.9	70.65	79.2-84.5	65.5	54.67	63.7-67.4	73.7	63.65	72.0-75.3	
Buns etc.	20.1	43.82	18.5-21.6	17.7	34.19	16.6-18.7	18.9	39.29	17.9-19.8	
Total	328.2	156.99	322.8-333.7	217.1	110.71	213.2-221.0	272.3	146.64	268.8-275.9	
FRESH VEGETABLES (Total)	257.6	169.70	251.8-263.4	254.8	163.37	249.8-259.9	256.2	166.54	252.4-260.1	
Potato	41.0	67.39	38.8-43.2	36.5	57.79	34.5-38.4	38.7	62.79	37.3-40.2	
FRESH FRUITS (Total)	162.7	216.56	155.1-170.4	155.0	164.49	150.0-160.0	158.8	192.18	154.3-163.4	
Dried fruits	2.2	9.23	1.9-2.4	3.1	12.12	2.7-3.5	2.6	10.79	2.4-2.9	

Table 2.57. Arithmetic mean (x̄), standard deviation (SD) and 95% CI (Confidence interval) values of the daily dietary intakes of all individuals aged 15 years and over, TNHS 2017 (continued)

Food Items	MALES	MALES (aged ≥15 years) (N:5570)			FEMALES (aged ≥15 years) (N: 6883)			OVERALL (aged ≥15 years) (N: 12453)		
	x	SD	95%CI	x	SD	95%Cl	x	SD	95%CI	
FATS AND OILS										
Olive oil	5.2	9.39	4.9-5.4	5.3	8.70	5.0-5.6	5.2	9.05	5.0-5.4	
Oils (except olive oil)	18.0	16.20	17.4-18.6	15.2	13.78	14.8-15.7	16.6	15.09	16.2-17.0	
Hard margarine	8.4	13.13	7.9-8.8	5.2	9.22	4.9-5.5	6.8	11.44	6.5-7.0	
Soft margarine	0.1	1.74	0.0-0.2	0.0	0.48	0.0-0.1	0.1	1.27	0.0-0.1	
Butter	5.3	10.30	4.9-5.7	3.9	6.73	3.7-4.1	5.0	8.71	4.4-4.8	
Olive	17.2	24.39	16.4-18.1	15.3	17.48	14.8-15.9	16.3	21.22	15.8-16.8	
Mayonnaise	0.4	2.42	0.3-0.5	0.2	1.41	0.2-0.3	0.3	1.98	0.2-0.3	
Tahini	0.5	2.94	0.4-0.6	0.4	1.90	0.3-0.5	0.4	2.47	0.4-0.5	
Total	54.9	33.50	53.8-56.1	45.6	26.01	44.7-46.4	50.2	30.33	49.5-50.9	
SUGAR AND DESSERTS										
Table sugar	23.2	26.54	22.2-24.1	16.7	20.79	16.0-17.4	19.9	20.04	19.3-20.5	
Total	34.9	34.66	33.7-36.1	26.4	27.63	25.5-27.3	30.6	31.61	29.9-31.4	
SALT	11.6	4.62	11.4-11.8	8.8	3.52	8.7-8.9	10.2	4.34	10.1-10.3	
BEVERAGES										
Water, mineral water, soda	1242.5	875.58	1208.0-1277.1	1098.2	754.27	1074.4-1121.9	1169.9	819.98	1148.8-1191.0	
Coffee	26.0	88.77	23.1-28.9	26.5	69.11	24.4-28.6	26.2	79.49	24.5-28.0	
Black tea	528.1	457.55	512.8-543.4	416.2	384.89	404.5-427.9	416.4	403.37	407.6-425.2	
Herbal teas	1.6	18.21	1.1-2.1	4.5	37.36	3.4-5.5	2.8	27.99	2.3-3.3	
Non-alcoholic beverages, sugar-free	1.4	19.26	0.8-2.0	0.4	10.09	0.2-0.7	0.9	15.36	0.6-1.2	
Non-alcoholic beverages, (including water)	1870.5	983.25	1833.7-1907.3	1574.9	833.59	1549.3-1600.5	1721.8	922.94	1699.1-1744.6	
Alcoholic beverages	12.3	113.43	9.0-15.6	1.4	24.10	0.8-2.0	6.8	81.96	5.1-8.5	

3.8.3. Intakes of Energy and Nutrients For Pregnant and Lactating Women

The mean (\bar{x}), standard deviation (SD) and 95% Confidence Interval (CI) values of daily intakes of energy and macronutrients per capita for pregnant and lactating women are given in Table 2.58.

For pregnant women, mean daily energy intake was 1904.3±641.38 kcal, mean daily protein intake was 68.6±25.77 g (58.5±13.23% of it was plant protein), mean daily oil intake was 74.7±31.22 g, and mean daily oil carbohydrate intake was 233.6±84.71 g. 50.2±7.65% of energy from carbohydrate, 14.9±3.19% of energy from protein, and 34.8±6.89% of energy from fat.

For pregnant women, mean saturated oil intake was 24.2±10.38 g, mean monounsaturated fatty acid intake was 25.2±11.71 g, mean polyunsaturated fatty acid intake was 18.4±10.40 g, mean Omega-3 fatty acid intake was 1.3±1.00 g, mean Omega-6 fatty acid intake was 16.8±10.23 g, and mean cholesterol intake was 252.6±160.26 mg. Percentage of energy from ALA and LA was 0.5±0.42% and 7.7±3.22%, respectively.

For pregnant women, mean sucrose intake was 35.9±24.27 g (7.3±4.09% of total energy), mean fructose intake was 16.2±13.17 g (3.5±2.56% of total energy), mean consumption of fibre was 23.4±9.76 g, mean consumption of water-soluble fibre was 7.6±3.43 g, and mean consumption of water-insoluble fibre was 15.3±6.84 g.

For lactating women, mean daily energy intake was 1928.2±637.91 kcal, mean daily protein intake was 65.9±22.57 g (61.5±14.55% of it was plant protein), mean daily fat intake was 75.6 ±32.86 g, and mean daily protein intake was 240.8±87.75 g. 51.2±8.56% of energy from carbohydrate, 14.2±2.94% of energy from protein, and 34.5±8.11% of energy from fat.

For lactating women, mean saturated oil intake level was 24.3±11.20 g, mean monounsaturated fatty acid intake was 25.7±12.31 g, mean polyunsaturated fatty acid intake was 18.8±11.70 g, mean Omega-3 fatty acid intake was 1.3±0.97 g, mean Omega-6 fatty acid intake level was 17.1±11.11 g, and mean cholesterol intake was 252.1±154.66 mg. Percentage of energy from ALA and LA was 0.5±0.32% and 7.6±3.54%, respectively.

For lactating women, mean sucrose intake was 43.0±27.52 g (8.9±5.16% of total energy), mean fructose intake was 14.9±11.41 g (3.2±2.25% of total energy), mean consumption of fibre was 23.1±9.22 g, mean consumption of water-soluble fibre was 7.5±3.16 g, and mean consumption of water-insoluble fibre was 15.1±6.49 g.

Micronutrient Intakes of Pregnant and Lactating Women

The mean (\bar{x}) , standard deviation (SD) and 95% Confidence Interval (CI) values of daily intakes of micronutrients per capita for pregnant and lactating women are given in Table 2.59.

For pregnant women, mean daily dietary intake of vitamin A was 1142.8 ±1281.13 mcg, mean daily dietary intake of carotene was 4.0±4.05 mg, mean daily dietary intake of vitamin E was 20.1±11.77 mg, mean daily dietary intake of vitamin D was 4.3±21.97 mcg, mean daily dietary intake of vitamin B₁ was 0.9±0.35 mg, mean daily dietary intake of vitamin B₂ was 1.3±0.52 mg, mean daily dietary intake of niacin was 12.8±6.99 mg, mean daily dietary intake of vitamin B₆ was 1.3±0.59 mg, mean daily dietary intake of folate was 329.4±144.06 mcg, mean daily dietary intake of vitamin B₁₂ was 4.3±4.88 mcg, and mean daily dietary intake of vitamin C was 129.5±81.99 mg.

For pregnant women, mean daily dietary intake of calcium was 879.8±312.72 mg, mean daily dietary intake of magnesium was 296.7±112.05 mg, mean daily dietary intake of iron was 10.7±4.73 mg, mean daily dietary intake of zinc was 9.4±3.76 mg, mean daily dietary intake of sodium was 4295.0±1771.14 mg, mean daily dietary intake of potassium was 2616.1±945.12 mg, average daily dietary intake of phosphorus was 1105.4±399.63 mg, mean daily dietary intake of copper was 1.7±0.73 mg, and mean daily dietary intake of iodine was 139.6±62.64 mcg.

For lactating women, mean daily dietary intake of vitamin A was 1378.1 ± 4763.41 mcg, mean daily dietary intake of carotene was 3.7 ± 3.92 mg, mean daily dietary intake of vitamin E was 20.1 ± 12.31 mg, mean daily dietary intake of vitamin D was 2.8 ± 5.33 mcg, mean daily dietary intake of vitamin B₁ was 0.9 ± 0.44 mg, mean daily dietary intake of vitamin B₂ was 1.3 ± 0.74 mg, mean daily dietary intake of niacin was 13.0 ± 7.29 mg, mean daily dietary intake of vitamin B₆ was 1.2 ± 0.50 mg, mean daily dietary intake of folate was 326.7 ± 137.96 mcg, mean daily dietary intake of vitamin B₁₂ was 4.2 ± 6.09 mcg, and mean daily dietary intake of vitamin C was 124.7 ± 116.49 mg.

For lactating women, mean daily dietary intake of calcium was 834.4±317.72 mg, mean daily dietary intake of magnesium was 295.9±107.66 mg, mean daily dietary intake of iron was 10.7±4.10 mg, mean daily dietary intake of zinc was 9.3±3.32 mg, mean daily dietary intake of sodium was 4268.5±1735.45 mg, mean daily dietary intake of potassium was 2488.0±915.28 mg, mean daily dietary intake of phosphorus was 1062.8±361.50 mg, mean daily dietary intake of copper was 1.8±0.74 mg, and mean daily dietary intake of iodine was 135.1±66.43 mcg.

Energy and Macronutrients		REGNANT WOR	MEN (N:159)		TATING WOM	EN (N:396)
	x	SD	95%CI	x	SD	95%CI
Energy (kcal)	1904.3	641.38	1795.1-2013.6	1928.2	637.91	1830.3-2026.1
Protein (g)	68.6	25.77	64.2-72.9	65.9	22.57	62.9-69.1
Protein E%	14.9	3.19	14.2-15.5	14.2	2.94	13.9-14.6
Plant protein (g)	38.1	13.71	37.8-40.5	39.0	15.52	36.8-41.3
Plant protein (TP%)	58.5	13.23	56.1-60.8	61.5	14.55	59.7-63.4
Fat (g)	74.7	31.22	69.2-80.2	75.6	32.86	70.4-80.7
Fat E%	34.8	6.89	33.5-36.1	34.5	8.11	33.5-35.5
Saturated fatty acid (g)	24.2	10.38	22.4-26.0	24.3	11.20	22.7-25.9
Saturated fatty acid (E%)	11.4	3.11	10.9-12.0	11.3	3.77	10.9-11.8
MUFA (g)	25.2	11.71	23.1-27.3	25.7	12.31	23.9-27.6
PUFA (g)	18.4	10.40	16.6-20.2	18.8	11.70	16.9-20.6
Omega-3 (g)	1.3	1.00	1.2-1.5	1.3	0.97	1.2-1.4
Omega-6 (g)	16.8	10.23	14.8-18.8	17.1	11.11	15.4-18.8
ALA (E%)	0.5	0.42	0.4-0.6	0.5	0.32	0.5-0.6
LA (E%)	7.7	3.22	7.2-8.3	7.6	3.54	7.2-8.1
EPA+DHA (mg)	0.3	0.68	0.2-0.4	0.2	0.42	0.2-0.3
Cholesterol (mg)	252.6	160.26	224.6-280.9	252.1	154.66	233.2-271.0
Carbohydrate (g)	233.6	84.71	218.8-248.4	240.8	87.75	228.4-253.3
Carbohydrate E%	50.2	7.65	48.8-51.7	51.2	8.56	50.2-52.2
Sucrose (g)	35.9	24.27	31.6-40.4	43.0	27.52	39.6-46.5
Sucrose (E%)	7.4	4.09	6.6-8.1	8.9	5.16	8.3-9.5
Fructose (g)	16.2	13.17	14.1-18.4	14.9	11.41	13.5-16.4
Fructose (E%)	3.5	2.56	3.0-3.9	3.2	2.25	2.9-3.5
Fibre (g)	23.4	9.76	21.8-25.0	23.1	9.22	21.8-24.4
Water-soluble (g)	7.6	3.43	7.0-8.2	7.5	3.16	7.0-7.9
Water-insoluble (g)	15.3	6.84	14.1-16.4	15.1	6.49	14.3-16.0

Table 2.58. Arithmetic mean (\bar{x}), standard deviation (SD) and 95% CI (Confidence interval) values of daily
intakes of energy and macronutrients of pregnant and lactating women, TNHS 2017

Table 2.59. Arithmetic mean (\bar{x}), standard deviation (SD) and 95% CI (Confidence interval) values of daily micronutrient intakes of pregnant and lactating women, TNHS 2017

Microputrionto	PREG			LACTA	LACTATING WOMEN (N:396)				
Micronutrients	x	SD	95%CI	x	SD	95%CI			
Vitamins									
Vitamin A (mcg)	1142.8	1281.13	961.0-1324.7	1378.1	4763.41	859.6-1896.6			
Carotene (mcg)	4.0	4.05	3.3-4.9	3.7	3.92	3.3-4.2			
Vitamin E (mg)	20.1	11.77	18.0-22.2	20.1	12.31	18.3-21.8			
Vitamin D (mcg)	4.3	21.97	1.2-7.3	2.8	5.33	2.3-3.4			
Vitamin B_1 (mg)	0.9	0.35	0.9-1.0	0.9	0.44	0.8-0.9			
Vitamin B_2 (mg)	1.3	0.52	1.2-1.4	1.3	0.74	1.2-1.4			
Niacin (mg)	12.8	6.99	11.5-14.1	13.0	7.29	12.2-13.8			
Vitamin B ₆ (mg)	1.3	0.59	1.2-1.4	1.2	0.50	1.2-1.3			
Folate (mcg)	329.4	144.06	303.4-355.4	326.7	137.96	308.3-345.2			
Vitamin B ₁₂ (mcg)	4.3	4.88	3.6-4.9	4.2	6.09	3.5-4.9			
Vitamin C (mg)	129.5	81.99	115.3-143.7	124.7	116.49	111.2-138.3			
Minerals									
Calcium (mg)	879.8	312.72	825.3-934.3	834.4	317.72	789.9-878.8			
Magnesium (mg)	296.7	112.05	278.7-314.8	295.9	107.66	281.2-310.6			
Iron (mg)	10.7	4.73	9.9-11.5	10.7	4.10	10.2-11.3			
Zinc (mg)	9.4	3.76	8.8-10.1	9.3	3.32	8.9-9.8			
Sodium (mg)	4295.0	1771.14	3968.7-4621.2	4268.5	1735.45	4010.3-4526.7			
Potassium (mg)	2616.1	945.12	2456.8-2775.4	2488.0	915.28	2362.7-2613.4			
Phosphorus (mg)	1105.4	399.63	1039.5-1171.	1062.8	361.50	1014.3-1111.4			
Copper (mg)	1.7	0.73	1.5-1.8	1.8	0.74	1.7-1.9			
lodine (mcg)	139.6	62.64	129.7-149.6	135.1	66.43	126.1-144.2			

Food Consumption Status in Pregnant and Lactating Women

The mean and standard deviation values of daily dietary intakes of pregnant and lactating women are given in Table 2.60.

Food Consumption in Pregnant Women

For pregnant women, daily average consumption of milk was 47.8±77.18 mL, daily average consumption of yoghurt was 137.3±129.45 grams, daily average consumption of cheese was 39.2±28.93 grams, daily average consumption of kefir was 0.6±8.37 mL, and daily average consumption of total foods included in the milk and dairy group was 231.2±155.08 grams.

For pregnant women, daily average consumption of red meat was 31.6±41.86 grams, daily average consumption of poultry was 25.8±55.80 grams, daily average consumption of fish was 14.0±43.51 grams, daily average consumption of offals was 1.1±6.95 grams, daily average consumption of eggs was 30.3±29.07 grams, daily average consumption of meat products was 1.3±6.44 grams, daily average consumption of legumes was 15.8±26.05 grams, daily average consumption of seeds was 9.2±15.03 grams, and daily average consumption of total foods included in the meat group was 135.3±100.70 grams.

For pregnant women, daily average consumption of bread was 151.3±84.17 grams, daily average consumption of cereals was 78.7±64.03 grams, daily average consumption of buns etc. was 22.1±37.83 grams, and daily average consumption of total foods included in the bread group was 252.0±108.92 grams.

For pregnant women, daily average consumption of fresh vegetables was 288.5±159.57 grams, and daily average consumption of potato was 41.7±63.61 grams.

For pregnant women, daily average consumption of fresh fruits was 218.7±214.76 grams, and daily average consumption of dried fruits was 2.4±8.12 grams.

For pregnant women, daily average consumption of olive oil was 3.4±5.40 mL, daily average consumption of oil was 19.4±15.39 mL, daily average consumption of hard margarine was 5.6±8.86 grams, daily average consumption of butter was 4.1±6.09 grams, daily average consumption of olive was 16.4±17.11 grams, daily average consumption of mayonnaise was 0.1±0.60 grams, daily average consumption of tahini was 0.5±2.04 grams, and total consumption of fats and oils group was 53.1±35.97 grams.

For pregnant women, daily average consumption of table sugar was 14.1±15.26 grams, and daily average consumption of total foods included in the sugar group was 28.0±27.95 grams. Daily average consumption of salt in pregnant women was 10.4±4.29 grams.

For pregnant women, daily average consumption of water, mineral water and soda was 1205.6±877.30 mL, daily average consumption of black tea was 323.3±334.54 mL, daily average consumption of herbal teas was 2.7±23.17 mL, daily average consumption of coffee was 10.7±31.43 mL, daily average consumption of sugary non-alcoholic beverages was 1715.7±966.60 mL, and total consumption of sugar-free non-alcoholic beverages was 1.2±10.69 mL.

Food Consumption in Lactating Women

For lactating women, daily average consumption of milk was 27.4±62.82 mL, daily average consumption of yoghurt was 111.7±110.34 grams, daily average consumption of cheese was 38.3±33.98 grams, and daily average consumption of total foods included in the milk and dairy group was 183.9±136.39 grams.

For lactating women, daily average consumption of red meat was 28.9±41.79 grams, daily average consumption of poultry was 19.6±35.11 grams, daily average consumption of fish was 11.1±38.39 grams, daily average consumption of offals was 2.0±16.43 grams, daily average consumption of eggs was 30.6±27.55 grams, daily average consumption of meat products was 2.9±9.52 grams, daily average consumption of legumes was 11.7±17.75 grams, daily average consumption of seeds was 9.5±21.19 grams, and daily average consumption of total foods included in the meat group was 125.8±77.00 grams.

For lactating women, daily average consumption of bread was 172.2±136.06 grams, daily average consumption of cereals was 75.4±61.60 grams, daily average consumption of buns etc. was 20.9±34.94 grams, and daily average consumption of total foods included in the bread group was 268.6±142.69 grams.

For lactating women, daily average consumption of fresh vegetables was 296.1±176.52 grams, and daily average consumption of potato was 42.4±56.93 grams.

For lactating women, daily average consumption of fresh fruits was 168.8±179.05 grams, and consumption of dried fruits was 4.7±15.25 grams.

For lactating women, daily average consumption of olive oil was 4.1±7.41 mL, daily average consumption of oil was 19.5±16.91 mL, daily average consumption of hard margarine was 5.6±10.49 grams, daily average consumption of soft margarine was 0.1±0.78 grams, daily average consumption of butter was 4.5±7.18 grams, daily average consumption of olive was 16.6±17.60 grams, daily average consumption of mayonnaise was 0.2±1.30 grams, daily average consumption of tahini was 0.6±2.42 grams, and total consumption of fats and oils group was 55.1±30.26 grams.

For lactating women, daily average consumption of table sugar was 20.7±20.69 grams, and daily average consumption of total foods included in the sugar group was 37.6±31.15 grams. Daily average consumption of salt in lactating women was 10.4±4.21 grams.

For lactating women, daily average consumption of water, mineral water and soda was 1127.2±881.81 mL, daily average consumption of black tea was 452.9±533.40 mL, daily average consumption of herbal teas was 3.6±33.58 mL, daily average consumption of coffee was 20.4±51.55 mL, and daily average consumption of sugary non-alcoholic beverages was 1863.8±969.55 mL.

Foods		PREGNA		N	LACTATING WOMEN					
	N	x	SD	95%CI	N	x	SD	95%CI		
MILK AND DAIRY PRODUCTS										
Milk	159	47.8	77.18	35.4-60.1	396	27.4	62.82	18.7-36.1		
Yoghurt	159	137.3	129.45	113.4-161.2	396	111.7	110.34	36.3-127-3		
Cheese	163	39.2	28.93	33.9-44.6	411	38.3	33.98	33.4-43.1		
Kefir	163	0.6	8.37	0.0-1.7	411	-	-	-		
Total	159	231.2	155.08	204.3-257.9	396	183.9	136.39	165.1-202.7		
MEAT, EGGS, LEGUMES, SEEDS										
Red meat	159	31.6	41.86	24.3-38.9	396	28.9	41.79	22.7-35.3		
Poultry (chicken, turkey, etc.)	163	25.8	55.80	13.1-38.5	411	19.6	35.11	15.6-23.7		
Fish	159	14.0	43.51	7.4-20.6	396	11.1	38.39	7.0-15.3		
Offals	159	1.1	6.95	0.0-2.2	396	2.0	16.43	0.3-3.7		
Eggs	163	30.3	29.07	25.2-35.3	411	30.6	27.55	26.8-34.3		
Meat products (salami, sausage, etc.)	159	1.3	6.44	0.3-2.3	396	2.9	9.52	1.7-4.2		
Legumes	163	15.8	26.05	11.2-20.4	411	11.7	17.75	9.6-13.8		
Seeds	159	9.2	15.03	6.3-12.1	396	9.5	21.19	6.5-12.4		
Total	159	135.3	100.70	116.8-153.9	396	125.8	77.00	116.9-134.8		
BREAD AND CEREALS										
Bread	159	151.3	84.17	136.8-165.9	396	172.2	136.06	152.2-192.3		
Cereals	159	78.7	64.03	67.2-90.1	396	75.4	61.60	66.2-84.7		
Buns etc.	159	22.1	37.83	15.0-29.1	396	20.9	34.94	17.0-24.9		
Total	159	252.0	108.92	233.5-270.5	396	268.6	142.69	247.5-289.7		
FRESH VEGETABLES (Total)	159	288.5	159.57	259.1-317.9	396	296.1	176.52	273.8-318.4		
Potato	159	41.7	63.61	29.4-53.9	396	42.4	56.93	35.4-49.5		
FRESH FRUITS (Total)	159	218.7	214.76	183.5-253.8	396	168.8	179.05	148.5-189.1		
Dried fruits	163	2.4	8.12	0.9-3.7	411	4.7	15.25	2.5-6.8		

Table 2.60. Arithmetic mean (x̄), standard deviation (SD) and 95% CI (Confidence Interval) values of	f daily
nutrient intakes of pregnant and lactating women, TNHS 2017	

Table 2.60. Arithmetic mean (\bar{x}), standard deviation (SS) and 95% CI (Confidence Interval) values of daily nutrient intakes of pregnant and lactating women, TNHS 2017 (continued)

Foods	PREGNANT WOMEN				LACTATING WOMEN			
	Ν	x	SD	95%CI	N	x	SD	95%CI
FATS AND OILS								
Olive oil	163	3.4	5.40	2.5-4.2	411	4.1	7.41	3.3-4.9
Oils (except olive oil)	159	19.4	15.39	16.7-22.1	396	19.5	16.91	17.1-21.8
Hard margarine	159	5.6	8.86	4.1-7.0	396	5.6	10.49	3.9-7.2
Soft margarine	163	0	0	0	411	0.1	0.78	0-0.2
Butter	163	4.1	6.09	3.0-5.2	411	4.5	7.18	3.7-5.4
Olive	163	16.4	17.11	13.1-19.7	411	16.6	17.60	14.0-19.3
Mayonnaise	163	0.1	0.60	0-0.2	411	0.2	1.30	0.1-0.4
Tahini	163	0.5	2.04	0.2-0.8	411	0.6	2.42	0.3-0.9
Total	159	53.1	35.97	46.0-60.1	396	55.1	30.26	50.4-59.9
SUGAR AND DESSERTS								
Table sugar	163	14.1	15.26	11.4-16.8	411	20.7	20.69	18.2-23.2
Total	159	28.0	27.95	22.8-33.2	396	37.6	31.15	33.7-41.7
SALT	159	10.4	4.29	9.6-11.2	396	10.4	4.21	9.7-11.0
BEVERAGES								
Water, mineral water, soda	163	1205.6	877.30	1046.3-1364.9	411	1127.2	881.81	1023.9-1230.3
Non-alcoholic beverages (including water)	159	1715.7	966.60	1533.6-1897.7	396	1863.8	969.55	1746.2-1981.4
Non-alcoholic beverages (sugar- free)	163	1.2	10.69	0-3.4	411	0	0	0-0
Coffee	159	10.7	31.43	5.5-15.8	396	20.4	51.55	13.9-26.8
Black tea	163	323.3	334.54	254.2-392.5	411	452.9	533.4	386.3-519.4
Herbal teas	163	2.7	23.17	0-5.7	411	3.6	33.58	0.9-6.4

4. CONCLUSIONS and RECOMMENDATIONS

4.1. Conclusions

- 1. Mean body weights in males by age groups were 79.7±15.65 kg for age of 15 years and over; 80.9±15.18 kg for age of 19 years and over; 81.2±15.34 kg for ages of 19 to 64 years, and 78.8±13.50 kg for age of 65 years and over, respectively.
- Mean heights in males by age groups were 172.0±7.61 cm for age of 15 years and over, 172.0±7.61 cm for age of 19 year and over, 172.6±7.46 kg/m² for ages of 19 to 64 years, 166.0±6.69 cm for age of 65 years and over, respectively.
- Mean Body Mass Index in males was 26.9±5.29 kg/m² for age of 15 years and over, 27.4±5.15 kg/m² for age of 19 years and over, 27.3±5.21 kg/m² for ages of 19 to 64 years, 28.4±4.52 kg/m² for age of 65 years and over, respectively.
- 4. Mean waist circumferences in males by age groups were 94.4±13.64 cm for age of 15 years and over, 95.7±13.04 cm for age of 19 years and over, 95.0±12.93 cm for ages of 19 to 64 years, and 102.2±12.18 cm for age of 65 years and over, respectively.
- 5. Mean hip circumferences in males by age groups were 103.1±9.03 cm for age of 15 years and over, 103.7±8.68 cm for age of 19 years and over, 103.6±8.70 cm for ages of 19 to 64 years, and 104.6±8.43 cm for age of 65 years and over, respectively.
- 6. Mean neck circumferences in males were 38.9±3.51 cm for age of 15 years and over, 39.2±3.42 for age of 19 years and over, 39.1±3.40 for ages of 19 to 64 years, and 39.8±3.47 cm for age of 65 years and over, respectively
- 7. Mean waist-hip ratios in males by age groups were 0.91±0.08 for age 15 years and over, 0.92±0.07 for age of 19 years and over, 0.91±0.07 for ages of 19 to 64 years, 0.98±0.08 'for age of 65 years and over, respectively.
- 8. Mean waist-height ratios in males by age groups were 0.55±0.08 for age of 15 years and over, 0.56±0.08 for age of 19 years and over, is 0.55±0.08 for ages of 19 to 64 years, and is 0.61±0.07 'for age of 65 years and over.
- Mean body weights in females by age groups were 70.7±16.17, 19 kg for age of 15 years and over; 71.9±15.85 kg for age of 19 years and over; 71.6±15.82, 65 kg for ages of 19 to 64 years, and 73.6±15.96 kg for age of 65 years and over, respectively.
- 10. Mean heights in females by age groups were 157.6±7.12 cm for age of 15 years and over, 157.2±7.09 cm for age of 19 years and over, 158.1±6.72 cm for ages of 19 to 64 years, and 151.3±6.59 cm for age of 65 years and over, respectively.
- 11. Mean Body Mass Index in females was 28.6±7.08 kg/m² for age of 17 years and over, 29.2±6.95 kg/m² for age of 19 years and over, 28.8±6.92 kg/m² for ages of 19 to 64 years, 32.1±6.41 kg/m² for age of 65 years and over.
- 12. Mean waist circumferences in females by age groups were 90.4±16.26 cm for age of 15 years and over, 91.9±15.90 cm for age of 19 years and over, 90.2±15.50 cm for ages of 19 to 64 years, and 102.7±14.08 cm for age of 65 years and over, respectively.
- 13. Mean hip circumferences in females by age groups were 106.3±12.81 cm for age of 15 and over, 107.4±12.59 cm for age of 19 years and over, 106.6±12.43 cm for ages of 19 to 64 years, and 111.9±12.71 cm for age of 65 years and over, respectively.
- 14. Mean neck circumferences in females were 34.6±3.53 cm for age of 15 years and over, 34.9±3.49 for age of 19 years and over, 34.7±3.46 for ages of 19 to 64 years, and 36.0±3.48 cm for age of 65 years and over, respectively.
- 15. Mean waist-hip ratios in females by age groups were 0.85±0.07 for age of 15 years and over, 0.85±0.09 for age of 19 years and over, 0.84±0.08 for ages of 19 to 64 years, and 0.91±0.08 for age of 65 years and over, respectively.
- 16. Mean waist-height ratios in females by age groups were 0.57±0.07 for age of 15 years and over, 0.59±0.11 for age of 19 years and over, 0.57±0.11 for ages of 19-64 years, and 0.68±0.09 for age of 65 years and over, respectively.
- 17. Mean Body Mass Index in all individuals by age groups was 27.8±6.27 kg/m² for age of 15 years and over, 28.3±6.15 kg/m² for age of 19 years and over, 28.0±6.12 kg/m² for ages of 19 to 64 years, and 30.4±5.93 kg/m² for age of 65 years and over, respectively.
- 18. Mean waist-height ratios in all individuals by age groups were 0.56±0.10 for age of 15 years and over, 0.57±0.09 for age of 19 years and over, 0.56±0.09 for ages of 19 to 64 years, and 0.65±0.09 for age of 65 years and over, respectively.
- 19. Risk of cardiovascular disease according to waist circumference values in individuals aged 15 years and over was determined as 21.3% increased risk and 39.9% high risk.
- 20. Risk of cardiovascular disease in relation to waist-hip ratio values in individuals aged 15 years and over was determined as 54.2% high risk.
- 21. Among individuals aged 15 years and over, 1.7% were underweight, 32.8% were of normal weight, 34.0% were overweight, 27.8% were obese (BMI: ≥30 kg/m²) and 3.7% were morbid obese (BMI: ≥40 kg/m²).

- 22. Mean PAL of all individuals aged 15 years and over was 1.77±0.27 (M: 1.79±0.32; F: 1.75±0.21), and mean PAL of all individuals in the age group of 19 years and over was 1.78±0.27 (M: 1.80±0.32; F: 1.76±0.32).
- 23. When males and females were assessed together according to the EFSA classification, it was found that the percentages of those with a PAL value of 1.60 and below in the age groups of ≥15 years, ≥19 years, 19-64 years and ≥65 years were 24.9% (M: 26.9%; F: 22.9%), 24.4% (M: 26.8%; F: 22.0%), 21.1% (M: 24.6%; F: 17.5%), and 48.4% (M: 44.8%; F: 60.0%), respectively.
- 24. When males and females were evaluated together according to EFSA classification, the percentages of those with PAL values between 1.61 1.80 (moderately active lifestyle) was found as 36.3% in the age group of ≥15 years (M: 33.9%, F: 38.7%), as 35.3% in the age group of ≥19 years (M: 33.0%, F: 37.5%), as 35.5% in the age group of 19-64 years (M: 32.6%, F: 38.4%), and as 33.9% in the age group of ≥65 years (M: 36.9%, F: 31.6%).
- 25. The percentage of those, who have an active (PAL=1.81-2.0) and very active (PAL≥2.0) lifestyles according to EFSA classification, was 25.0% (M: 21.7%, F: 28.3%) and 13.8% (M: 17.5%, F: 10.1%) in the age group of ≥15 years, and is 25.9% (M: 22.0%, F: 29.7%) and 14.5% (M: 18.2%, F: 10.8%) in the age group of ≥19 years, respectively.
- 26. When males and females were assessed together according to FAO/WHO/UNU classification, the percentage of those with PAL value of 1.69 and below (sedentary/light active lifestyle) was found as 41.8% in the age group of ≥15 years (M: 44.2%, F: 39.5%), as 39.9% in the age group of ≥19 years (M: 43.0%, F: 36.7%), as 36.4% in the age group of 19-64 years (M: 40.6%, F: 32.0%), and as 70.1% in the age group of ≥65 years (M: 63.3%, F: 68.4%).
- 27. The percentage of those with PAL values between 1.70 and 1.99 (active/moderately active lifestyle) according to FAO/WHO/UNU classification, was found as 43.4% in the age group of ≥15 years (M: 37.5%, F: 49.4%), as 44.6% in the age group of ≥19 years (M: 37.8%, F: 51.3%), as 46.5% in the age group of 19-64 years (M: 38.5%, F: 54.7%), and as 30.1% in the age group of ≥65 years (M: 31.7%, F: 28.8%), respectively.
- 28. The percentage of those with PAL value between 2.00 and 2.40 and PAL value >2.4 (very active lifestyle) according to FAO/WHO/UNU classification, was found as 12.0% (M: 13.5%, F: 10.5%) and 2.7% (M: 4.9%, F: 0.6%) in the age group of ≥15, as 12.6% (M: 13.9%, F: 11.3%) and 2.9% (M: 5.2%, F: 0.6%) in the age group of ≥19, as 13.9% (M: 15.1%, F: 12.7%) and 3.2% (M: 5.8%, F: 0.7%) in the age group of 19-64, and as 3.3% (M: 4.4%, F: 2.5%) and 0.4% (M: 0.7%, F: 0.2%) in the age group of ≥65, respectively.
- 29. When consumption of main meals of individuals aged 15 years and over was assessed, it was found that 85% of them (males: 83.6%, females: 86.4%) had breakfast.
- 30. When lunch consumption of individuals aged 15 years and over was assessed, it was found that 75.3% of them (males: 83.1%, females: 67.6%) had lunch, and 24.7% of them (males: 16.9%, females: 32.4%) skipped lunch.
- 31. When dinner consumption of individuals aged 15 years and over was assessed, it was found that 96.3% of them (males: 97.0%, females: 95.7%) had dinner, and 3.7% of them (males: 3.0%, females: 4.3%) skipped dinner.
- 32. Among individuals aged 15 years and over mid-morning snack consumption was 39.8% (males: 35.7%, females: 43.9%), mid-afternoon snack consumption was 51.2% (males: 42.6%, females: 59.7%), and night snack (supper) consumption was 64.5% (males: 66.3%, females: 62.7%).
- 33. Mean water consumption of individuals was 1594.3±968.99 mL (1766.4±1039.56 mL for males, 1423.8±860.38 mL for females). 45.2% of individuals prefer gallon bottled water, 45.1% prefer tap water, 8.5% prefer spring water, and 1.1% prefer well water.
- 34. Among individuals aged 15 years and over, frequency of those who are vegetarian was 0.7% (males: 0.2%, females: 1.2%). 45.0% of vegetarians were semi-half vegetarians, 33.4% were lacto-ovo vegetarians, 11.7% were ovo-vegetarian, 7.1% were pescatarians, and 2.8% were lacto-vegetarians.
- 35. Among all individuals (aged 15 years and over), the frequency of adding salt while preparing or cooking a meal was 91.9%, while the frequency of those who did not add salt was 6.6%.
- 36. When those who add salt without tasting the food at the table were examined, the frequency of those who said "I always add salt/without tasting" was 10.5%, the frequency of those who said "I add salt rarely occasionally" was 13.4%, and the frequency of those who said "I never add salt" was 76.1%. The frequency of males who said "I always add salt/without tasting" was higher compared to females (12.4% and 8.5%, respectively).

- 37. Considering the distribution of the type of salt used at the table/in salt shaker, 66.5% of the individuals stated that they preferred to use "iodized table salt", 5.0% preferred to use "grinding table salt/Himalayan salt", 2.6% preferred to use "non-iodized table salt", 0.1% preferred to use "liquid salt", 1.4% "other salt", while 24.4% stated that they did not have salt on the table and did not use salt.
- 38. 65.9% of all individuals aged 15 years and over (64.4% of males, 67.3% of females) consumed edible herbs. Considering the age distribution, herb consumption was the most common (66.4%) among individuals in the age group of 51-64 years.
- 39. 56.4% (males: 56.2%, females: 56.5%) of all individuals (aged 15 years and over), who participated in the study, shop for food and beverages themselves.
- 40. The issues that individuals first pay attention to when shopping include the expiry date (40.6%), the brand's reliability and recognition (31.0%), price (24.5%), nutrition facts label and contents/ingredients (9.4%), health and nutrition claims (4.5%), statements/pictures/damages on the package (2.4%), registration/approval number of Ministry of Agriculture and Forestry (1.7%), and promotion (1.7%). The frequency of individuals who do not pay attention was 2.5%.
- 41. Average age of marriage for women was 20.5±4.46 years.
- 42. While the average age at first pregnancy of women was 21.6±4.34 years, the frequency of those who experienced their first pregnancy at the age of 18 and below was 23.9%, the frequency of those who experienced their first pregnancy between ages of 19 to 35 was 75.3%, and the frequency of those who experienced their first pregnancy at the age of 35 years and over was 0.8%.
- 43. While the average number of pregnancies was 3.6±2.43, the frequency of those who had one pregnancy was 12.7%, the frequency of those who had two pregnancies was 26.3%, the frequency of those who had three pregnancies was 20.8%, the frequency of those who had four pregnancies was 14.7%, and the frequency of those who had five and above pregnancies was 25.8%.
- 44. The frequency of women who were still breastfeed was 8.6%. The mean duration of breastfeeding was 9.6±6.82 months; the frequency of those who breastfeed for three or less months was 23.4%, the frequency of those who breastfeed for 4-6 months was 29.7%, the frequency of those who breastfeed for 7-12 months was 20.0%, the frequency of those who breastfeed for 13-18 months was 6.8%, and the frequency of those who breastfeed for 19-24 months was 17.7%.
- 45. It was determined that 3.4% of the women were pregnant and the mean gestational age was 21.2±10.69 weeks. It was determined that frequency of those whose gestational age was ≤4 weeks was 1%; the frequency of those whose gestational age was 5-12 weeks was 26.8%; the frequency of those whose gestational age was 13-20 weeks was 21.1%, the frequency of those whose gestational age was 21-28 weeks was 21.2%; the frequency of those whose gestational age was 29-36 weeks was 20.7%, and the frequency of those whose gestational age was 37 and more weeks was 7.8%.
- 46. Across Turkey, the frequency of those who consumed pasteurized milk every day was 2.1%, the frequency of those who consumed UHT milk every day was 4.8%, and the frequency of those who consumed loose milk every day was 3.7%.
- 47. The frequency of those who consume yoghurt, ayran (diluted yoghurt) every day was 51.3%, and the frequency of those who consumed cheese every day was 73.9%.
- 48. Across Turkey, the frequency of those who never consumed eggs was 3.5%, the frequency of those who consumed them every day was 36.2%, and the frequency of those who consumed them 4-5 times per week was 14.8%.
- 49. Among the foods in the meat-eggs-legumes group, the ones consumed 2-3 times per week were beef with a frequency of 20.9%, lamb/mutton with a frequency of 9.3%, chicken with a frequency of 28.8%, turkey with a frequency of 0.4%, goose/duck with a frequency of 0.1%, and fish with a frequency of 8.2%.
- 50. The frequency of never consuming legumes was 2.1%, the frequency of everyday consumption of legumes was 0.9%, and the frequency of consumption of legumes 2-3 days a week was 25.0%.
- 51. Across Turkey, the frequencies of total vegetables consumption were as follows: 0.6% for those who never consumed them, 52.9% for those who consumed them every day, 14.9% for those who consumed them 4-5 times per week, 21.5% for those who consumed them 2-3 times per week, and 7.0% for those who consumed them once a week.
- 52. Across Turkey, the frequencies of total fruits consumption were as follows: 1.1% for those who never consumed them, 53.4% for those who consumed them every day, 14.5% for those who consumed them 4-5 times per week, 20.1% for those who consumed them 2-3 times per week, and 7.1% for those who consumed them once a week.
- 53. While the frequency of never consuming raisins was 30.9%, they were consumed every day with a frequency of 3.8%.
- 54. While the frequency of those who consumed French fries every day was 2.8%, this frequency was 22.5% for those who consumed them 3-4 times per week, 29.6% for those who consumed them 1-2 times per week, and 21.7% for those who consumed them every 15 days. 11.9% of individuals never consumed French fries.
- 55. Among the foods included in the bread and cereals group, the ones consumed by individuals every day were white bread with a frequency of 72.1%, whole grain bread, rye bread, wholemeal bread, etc. with a frequency of 15% for, and home-made unleavened breads (phyllo dough etc.) with a frequency of 9.4%.
- 56. Among the foods in the bread and cereals group, the ones consumed every day were rice with a frequency of 2.3%, bulghur with a frequency of 1.4%, pastries, cakes, buns with a frequency of 3.6%, biscuits/crackers with a frequency of 11.6%, and bagel with a frequency of 5.1%.

- 57. Across Turkey, the frequency of those who never consumed ready-made fruit juices was 41.6%, the frequency of those who consumed them every day was 4.1%, and the frequency of those who consumed them once a week was 11.4%.
- 58. The frequency of those who never consumed freshly squeezed fruit juices was 51.2%, the frequency of those who consumed them every day was %0.9, and the frequency of those who consumed them once a week was 10.8%.
- 59. The light and zero cola drinks were never consumed with a frequency of 90.7%, and regular cola drinks were never consumed with a frequency of 41.9%.
- 60. The frequency of those who consumed black tea every day was 88.3%, while this frequency was 3.3% for green tea and 4.1% for herbal teas.
- 61. The frequency of never consuming Turkish coffee was 25.8%, while its frequency of everyday consumption was 18.7%.
- 62. Across Turkey, the frequency of those who never consumed olive oil was 22.7%, the frequency of those who consumed it every day was 44.6%, and the frequency of those who consumed it once a week was 4.6%.
- 63. Among all individuals, the frequency of those who never consumed hard margarines was 58.8%, the frequency of those who consumed them every day was 2.9%, and the frequency of those who consumed them once a week was 7.8%.
- 64. Among all individuals, the frequency of those who never consumed soft margarines was 76.2%, the frequency of those who consumed them every day was 2.6%, and the frequency of those who consumed them once a week was 4.1%.
- 65. Among all individuals, the frequency of those who never consumed butter was 13.9%, the frequency of those who consumed it every day was 30.9%, and the frequency of those who consumed it once a week was 10.7%.
- 66. Across Turkey, the frequency of those who never consumed table sugar was 27.7%, the frequency of those who consumed it every day was 60.9%, and the frequency of those who consumed it once a week was 2.3%.
- 67. A total of 167 pregnant women were included among samples in the Turkey Nutrition and Health Survey.
- 68. While %83.9 of pregnant women never consumed pasteurized milk, %4.4 of them consumed it every day. The frequency of never consuming UHT milk was 56.3%, and the frequency of its everyday consumption was 10.2%. The frequency of never consuming loose milk was 52.5%, and the frequency of its everyday consumption was 5.4%.
- 69. The frequency of pregnant women who consumed yoghurt, ayran (diluted yoghurt) every day was 57.1%, and the frequency of pregnant women who consumed cheese every day was 89.0%. The frequency of never consuming fruit/cocoa/chocolate flavored milks was 84.4%, and the frequency of never consuming fruit/chocolate flavored yoghurts was 89.9%. The frequency of everyday ice cream consumption was 2.7%, and the frequency of its consumption once a week was 21.5%.
- 70. Among pregnant women, from the meat group, beef was never consumed with a frequency of 13.9%, while it was consumed 2-3 times a week with a frequency of 18.5%, and once a week with a frequency of 27.3%. Chicken was never consumed with a frequency of 3.7%, while it was consumed 2-3 times a week with a frequency of 26.4%, and once a week with a frequency of 35.6%. While fish was never consumed with a frequency of 12.3%, the frequency of its consumption 2-3 times per week was 9.1%, the frequency of its consumption once a week was 36.2%.
- 71. Among pregnant women, the frequency of everyday consumption of nuts was 24.9%, and the frequency of consumption nuts once a week was 14.0%.
- 72. Among pregnant women, the frequency of consumption of legumes 2-3 times per week was 20.5%, and the frequency of their consumption once a week was 40.4%..
- 73. Pregnant women consumed eggs every day with a frequency of 53.2%, and 4-5 times per week with a frequency of 13.7%.
- 74. Among pregnant women, while the frequency of everyday consumption of vegetables was 64.3%, this frequency was 78.8% for fruits.
- 75. Among pregnant women, the frequency of those who never consumed white bread was 5.2%, the frequency of those who consumed it every day was 79.7%. Whole grain bread, rye bread, wholemeal bread etc. were never consumed by 61.5% of pregnant women.
- 76. Black tea was consumed every day by pregnant women with a frequency of 82.3%, herbal teas with a frequency of 1.4%, green tea with a frequency of 0.7%, Turkish coffee with a frequency of 12.6%.
- 77. Among pregnant women, the frequency of everyday consumption of freshly squeezed fruit juices was 3.5%, while their consumption frequency was 7.5% for 2-3 times a week.
- 78. Pregnant women consumed olive oil every day with a frequency of 41.3%, sunflower oil with a frequency of 72.3%, and butter with a frequency of 36.6%.
- 79. Among pregnant women, table sugar was never consumed with a frequency of 30.3%, honey, jam, molasses with a frequency of 10.9%, artificial sweeteners with a frequency of 98.9%.
- 80. A total of 414 lactating women were included among the samples in the Turkey Nutrition and Health Survey.
- 81. While 81.1% of lactating women never consumed pasteurized milk, 3.3% of them consumed it every day. The frequency of never consuming UHT milk was 71.1%, and the frequency of its everyday consumption was 4.0%. The frequency of never consuming loose milk was 60.4%, and the frequency of its everyday consumption was 4.8%.

- 82. While lactating women never consumed beef with a frequency of 16.0%, it was consumed 2-3 times per week with a frequency of 19.6%, and it was consumed once a week with a frequency of 24.5%. While chicken was never consumed with a frequency of 2.7%, it was consumed 2-3 times per week with a frequency of 26.8%, and it was consumed once a week with a frequency of 33.0%.
- 83. While fish was never consumed among lactating women with a frequency of 11.2%, the frequency of its consumption 2-3 times per week was 7.1%, the frequency of its consumption once a week was 27.7%.
- 84. Among lactating women, the frequency of everyday consumption of nuts was 15.1%, and the frequency of nuts consumption once a week was 15.9%
- 85. Among lactating women, the frequency of legumes consumption 2-3 times per week was 20.8%, and the frequency of their consumption once a week was 41.8%.
- 86. Among lactating women, eggs were consumed every day with a frequency of 57.0%, and 4-5 times per week with a frequency of 9.3%.
- 87. Among lactating women, while the frequency of everyday consumption of vegetables was 57.4%, this frequency was 60.5% for fruits.
- 88. Among lactating women, the frequency of those who never consumed white bread was 6.9%, the frequency of those who consumed them every day was 79.5%. Whole grain bread, rye bread, wholemeal bread etc. were not consumed by 67.9% of lactating women.
- 89. Among lactating women, black tea was consumed every day with a frequency of 88.4%, herbal teas were consumed with a frequency of 6.2%, green tea was consumed with a frequency of 1.0%, Turkish coffee was consumed with a frequency of 20.2%.
- 90. Among lactating women, olive oil was consumed every day with a frequency of 36.0%, sunflower oil was consumed with a frequency of 37.3%.
- 91. Among lactating women, table sugar was never consumed with a frequency of 22.1%, honey, jam, molasses were never consumed a frequency of 10.3%, artificial sweeteners were never consumed with a frequency of 99.3%.
- 92. In terms of food security, The frequency of individuals who were worried they would not be able to have enough food due to lack of money or other resources during the last year was 23.4%, the frequency of those who were unable to eat healthy and nutritious foods was 22.7%, the frequency of those who experienced decrease in the food variety they consumed was 22.8%, the frequency of those who had to skip meal was 13.1%, the frequency of those who consumed food less than required was 16.5%, the frequency of those who were not able to eat despite being hungry was 8.4%.
- 93. Considering the frequency of not being able to eat despite being hungry due to economic reasons in the last year, 42.6% of individuals responded "Some months, but not every month". The frequency of individuals who were not able to eat a whole day due to lack of money or other resources during the last year was 2.6%. The frequency of running out of foods in household was 16.2%.
- 94.9.9% of individuals aged 15 years and over used food supplements.
- 95. Top two food supplements that were most frequently used were multivitamin (1.2%) and calcium (1.2%) in the age group of 15-18 years, vitamin B₁₂ (2.9%) and vitamin D (2.2%) in the age group of 19-64 years, and likewise vitamin B₁₂ (5.5%) and vitamin D (2.8%) in the age group of 65 years and over
- 96.24-hour dietary recall were applied to a total of 12,453 subjects (Males: 5570, 44.7%; Females: 6883, 55.3%) by dietitians using face-to-face interview technique, and by phone or face-to-face interview two weeks (10-14 days) later.
- 97. Daily energy intake for males was 2359.0±810.45 kcal in the age group of 15-18 years, 2249.0±760.90 kcal in the age group of 19-64 years, 1729.6±631.83 kcal in the age group of 65 years and over, 2209.3±770.05 kcal in the age group of ≥15 years, 2203.6±769.27 kcal in the age group of ≥18 years, and 2196.0±765.03 kcal in the age group of ≥19 years and over.
- 98. Daily energy intake for females was 1713.9±587.74 kcal in the age group of 15-18 years, 1657.6±569.58 kcal in the age group of 19-64 years, 1351.3±482.33 kcal in the age group of 65 years and over, 1624.8±570.48 kcal in the age group of ≥15 years, 1620.2±567.80 kcal in the age group of ≥18 years, and 1617.0±568.33 kcal in the age group of ≥19 and over.
- 99. For males In all age groups, minimum 14.4% to maximum 15.4% of daily energy was obtained from protein (SD= ±3.09% to 3.43%), minimum 31.7% to maximum 33.6% of daily energy was obtained from fats (±7.89% to 8.31%), and minimum 50.7% to maximum 53.9% of daily energy was obtained from carbohydrate s (±8.12% and 9.49%).

- 100. In males, the percentage of energy obtained from saturated fats was 10.9-11.4%, the percentage of energy obtained from sucrose was 7.1-7.7%, and the percentage of energy obtained from fructose was 2.2- 3.8%. The percentage of energy obtained from fructose was higher (3.8%) in males aged 65 years and over.
- 101. For females in all age groups, minimum 14.0% to maximum 15.1% of daily energy was obtained from protein (SD= ±3.31% to 3.53%), minimum 33.6% to maximum 35.6% of daily energy was obtained from fat (±7.72% and 8.54%), and minimum 49.6% to maximum 52.3% of daily energy was obtained from carbohydrate. (±8.85% to 9.54%).
- 102. In males, the percentage of energy obtained from saturated fats was 11.3-11.6%, the percentage of energy obtained from sucrose was 7.4- 8.1%, and the percentage of energy obtained from fructose was 2.6-4.9%. The percentage of energy obtained from fructose was higher (4.9%) in females aged 65 years and over.
- 103. Intakes of total protein and plant protein for males were 81.3±30.59 grams and 44.9±17.85 grams in the age group of ≥15 years, 81.3±30.37 grams and 44.8±17.73 grams in the age group of ≥18 years, and 81.3±30.39 grams and 44.7±17.69 grams in the age group of 19 years and over.
- 104. Intakes of total protein and plant protein for females were similar as 57.4±21.44 grams and 33.1±13.10 grams, respectively in the age group of 15 years and over, 57.4±21.35 grams and 33.1±13.08 grams respectively in the age group of 18 years and over, and 57.4±21.38 and 33.1±13.11 grams, respectively in the age group of 19 years and over.
- 105. Intake of Omega-3 fatty acid ranged from 1.3 grams to 1.6 grams (±1.29-1.44 g) for males and 1.1 grams to 1.3 grams (±1.04-1.29 g) for females in all age groups. These intake levels in the age group of 65 years and over were 1.3±1.02 grams for males, and 1.0±0.92 grams for females.
- 106. Omega-6 fatty acid ranged from 17.8 to 18.4 grams (±10.70-10.90 g) for males, and 14.3 to 14.8 grams (±8.62-8.97 g) for females in all age groups. These intake levels in the age group of 65 years and over were 12.7 ±8.52 grams for males, and 10.9 ±7.55 grams for females.
- 107. Ratio of Omega-6/Omega-3 fatty acid in all age groups ranges from 15.1 to 16.9 (±10.21-12.56) among males, and 16.0 grams to 16.9 (±10.04-10.65) among females. These ratios in the age group of 65 years and over were 13.6±10.66 for males, and 15.0±11.87 for females.
- 108. Daily fibre intake was 24.4±10.81 grams in age group of 15 years and over, 24.5±10.86 grams in the age group of 18 year and over, and 24.4±10.89 grams in the age group of 19 years and over.
- 109. The percentage of energy from ALA in all age groups was 0.5% (\pm 0.30%-0.36%) for males, ranged from 0.5% to 0.6% (\pm 0.34-0.45%) for females.
- 110. The percentage of energy from LA in all age groups ranged from 6.5% to 7.1% (±3.28% to 3.44%) for males, and 7.0% to 7.8% (±3.22% to 3.82%) for females.
- 111. Intakes of EPA+DHA in all age groups ranged from 0.2 grams to 0.3 grams (±0.47-0.89 g) for males, and was 0.2 grams (±0.39-0.64 g) for females.
- 112. Daily intake of cholesterol was 290.2±198.60 mg for males aged 15 years and over, and 209.5±134.88 mg for females aged 15 years and over.
- 113. Daily intake of fibre intake for males aged 15 years and over was 24.4±10.81 grams. Daily intake of watersoluble fibre ranged from a minimum of 7.3±3.40 grams to a maximum of 8.4±3.86 grams; daily intake of water-insoluble fibre ranged from a minimum of 14.8±6.42 grams to a maximum of 16.0±7.68 grams.
- 114. Daily intake of fibre intake for females aged 15 years and over was 20.1±8.56 grams. Daily intake of watersoluble fibre ranged from a minimum of 6.1±2.50 grams to a maximum of 8.4±3.84 grams; daily intakeof water-insoluble fibre ranged from a minimum of 11.4±4.93 grams to a maximum of 13.5±6.25 grams.
- 115. For males aged 15 years and over, intake levels of vitamin A (243.8%), vitamin E (149.1%), folate (139.4%), vitamin C (128.2%), niacin (137.8%) and vitamin B_{12} (318.7%) were above the daily requirement; intake levels of vitamin B_6 (91.6%) and vitamin D (23.7%) were below the daily requirement.
- 116. For females aged 15 years and over, intakes levels vitamin A (212.4%), vitamin E (150.0%), folate (110.1%), vitamin C (135.0%) and vitamin B_{12} (185.4%) were above the daily requirement; intake levels of vitamin B6 (83.2%), vitamin B_1 (87.7%), vitamin B_2 (82.0%) and vitamin D (16.9%) intakes were below the daily requirement.

- 117. For males aged 15 years and over, intake levels of magnesium (93.1%), zinc (89.1%) and potassium (76.4%) were below the requirement; intake levels of calcium (113.5%), iron (107.5%), phosphorus (221.4%), copper (122.7%) were above the requirement.
- 118. For females aged 15 years and over, intake levels of phosphorus (167.4%) and copper (113.4%) were above the requirement; intake levels of calcium (92.8%), magnesium (87.7%), iron (71.5%), zinc (78.0%) and potassium (62.5%) were below the requirement.
- 119. Daily average energy intake for pregnant women was 1904.3±641.38 kcal, and 50.2%±7.65% of energy from carbohydrate, 14.9%±3.19% of energy from protein, and 34.8%±6.89% of energy from fat.
- 120. Daily average energy intake for lactating women was 1928.2±637.91 kcal, and 51.2%±8.56% of energy from carbohydrate, 14.2%±2.94% of energy from protein, and 34.5%±8.11% of energy from fat.
- 121. Daily average consumption of milk for all individuals aged 15 years and over was 34.5±76.19 mL, daily average consumption of yoghurt was 112.7±114.45 grams, daily average consumption of cheese was 39.0±33.38 grams, daily average consumption of total foods included in the milk and dairy group was 188.2±146.91 grams.
- 122. Daily average consumption of red meat was 39.1±51.14 grams, daily average consumption of fish was 13.2±50.89 grams, daily average consumption of eggs was 31.6±34.56 grams, daily average consumption of legumes was 16.8±26.10 grams, and daily average consumption of total foods included in the meat group was 144.7±105.62 grams.
- 123. Daily average consumption of bread was 179.8±130.39 grams, daily average consumption of cereals was 73.6±63.65 grams, and daily average consumption of total foods included in the bread group was 272.3±146.64 grams.
- 124. Daily average consumption of fresh vegetables was 256.2±166.54 grams, and daily average consumption of fresh fruits was 158.8±192.18 grams.
- 125. Daily average consumption of olive oil was 5.2±9.05 mL, daily average consumption of oil was 16.6±15.09 mL, daily average consumption of butter was 5.0±8.71 grams, and total consumption of foods in fats and oils group was 50.2±30.33 grams.
- 126. Daily average consumption of table sugar is 19.9±20.04 grams, and daily average consumption of total foods included in the sugar group was 30.6±31.61 grams.
- 127. Daily average consumption of salt was 10.2±4.34 grams.
- 128. Daily average consumption of water/mineral water/soda was 1169.9±819.98 mL, daily average consumption of black tea was 416.4±403.37 mL, daily average consumption of coffee was 26.2±79.49 mL, and total consumption of non-alcoholic beverages was 1721.8±922.94 mL.
- 129. In pregnant women, daily average consumption of milk was 47.8±77.18 mL, daily average consumption of yoghurt was 137.3±129.45 grams, daily average consumption of cheese was 39.2±28.93 grams, and daily average consumption of total foods included in the milk and dairy group was 231.2±155.08 grams.
- 130. In pregnant women, daily average consumption of red meat was 31.6±41.86 grams, daily average consumption of poultry was 25.8±55.80 grams, daily average consumption of fish was 14.0±43.51 grams, daily average consumption of offals was1.1±6.95 grams, and daily average consumption of eggs was 30.3±29.07 grams.
- 131. In pregnant women, daily average consumption of legumes was 15.8±26.05 grams, daily average consumption of seeds was 9.2±15.03 grams, and daily average consumption of total foods included in the meat group was 135.3±100.70 grams.
- 132. In pregnant women, daily average consumption of bread was 151.3±84.17 grams, daily average consumption of cereals was 78.7±64.03 grams, daily average consumption of buns etc. was 22.1±37.83 grams, and daily average consumption of total foods included in the bread group was 252.0±108.92 grams.
- 133. In pregnant women, daily average consumption of fresh vegetables was 288.5±159.57 grams.
- 134. In pregnant women, daily average consumption of fresh fruits was 218.7±214.76 grams, and daily average consumption of dried fruits was 2.4±8.12 grams.
- 135. In pregnant women, daily average consumption of table sugar was 14.1±15.26 grams, and daily average consumption of total foods included in the sugar group was 28.0±27.95 grams.
- 136. In pregnant women, daily average consumption of salt was 10.4±4.29 grams.
- 137. In pregnant women, daily average consumption of olive oil was 3.4±5.40 mL, daily average consumption of oil was 19.4±15.39 mL, daily average consumption of hard margarine was 5.6±8.86 grams, daily average consumption of butter was 4.1±6.09 grams, and daily average consumption of olive was 16.4±17.11 grams.

- 138. In pregnant women, daily average consumption of water/mineral water/soda was 1205.6±877.30 mL, daily average consumption of black tea was 323.3±334.54 mL, daily average consumption of herbal teas was 2.7±23.17 mL, daily average consumption of coffee was 10.7±31.43 mL, daily average consumption of sugary non-alcoholic beverages was 1715.7±966.60 mL, and total consumption of sugar-free non-alcoholic beverages was 1.2±10.69 mL.
- 139. In lactating women, daily average consumption of milk was 27.4±62.82 mL, daily average consumption of yoghurt was 111.7±110.34 grams, daily average consumption of cheese was 38.3±33.98 grams, and daily average consumption of total foods included in the milk and dairy group was 183.9±136.39 grams.
- 140. In lactating women, daily average consumption of red meat is 28.9±41.79 grams, daily average consumption of poultry was 19.6±35.11 grams, daily average consumption of fish was 11.1±38.39 grams, and daily average consumption of eggs wag 30.6±27.55 grams.
- 141. In lactating women, daily average consumption of legumes was 11.7±17.75 grams, daily average consumption of seeds was 9.5±21.19 grams, and daily average consumption of total foods included in the meat group was 125.8±77.00 grams.
- 142. In lactating women, daily average consumption of bread was 172.2±136.06 grams, daily average consumption of cereals was 75.4±61.60 grams, daily average consumption of buns etc. was 20.9±34.94 grams, and daily average consumption of total foods included in the bread group was 268.6±142.69 grams.
- 143. In lactating women, daily average consumption of fresh vegetables was 296.1±176.52 grams.
- 144. In lactating women, daily average consumption of fresh fruits was 168.8±179.05 grams, and daily average consumption of dried fruits was 4.7±15.25 grams.
- 145. In lactating women, daily average consumption of table sugar was 20.7±20.69 grams, and total daily average consumption of total foods included to the sugar group was 37.6±31.15 grams.
- 146. In lactating women, daily average consumption of salt was 10.4±4.21 grams
- 147. In lactating women, daily average consumption of olive oil was 4.1±7.41 mL, daily average consumption of oil was 19.5±16.91 mL, daily average consumption of hard margarine was 5.6±10.49 grams, daily average consumption of soft margarine was 0.1±0.78 grams, consumption of butter was 4.5±7.18 grams, and daily average consumption of olive was 16.6±17.60 grams.
- 148. In pregnant women, daily average consumption of water/mineral water/soda was 1127.2±881.81 mL, daily average consumption of black tea was 452.9±533.40 mL, daily average consumption of herbal teas was 3.6±33.58 mL, daily average consumption of coffee was 20.4±51.55 mL, and daily average consumption of sugary non-alcoholic beverages was 1863.8±969.55 mL.

4.2. RECOMMENDATIONS

In the direction of the results obtained from TNHS 2017, we recommend below actions to be taken;

- ✓ To update the Turkey Dietary Guidelines,
- ✓ To take preventive measures that are directed towards reducing the prevalence of overweight and obesity:
 - To plan activities that are directed towards increasing awareness level of the population and individuals,
 - To create healthy nutrition environments,
 - To create supportive environments that may increase physical activity (afforested pedestrian paths, bike paths and wide park areas),
 - To ensure that individuals adopt the healthy nutritional habits by nutrition and active life training programs beginning from kindergartens in order to ensure that they gain healthy nutritional habits, and to implement "School Lunch Program" in schools in order to make a contribution to nutrition,
 - To ensure that concepts related with healthy nutrition, food groups, nutrients and active life are included more intensely to the programs of formal and non-formal educational institutions, and to ensure that evidence-based data is used more commonly in the social area within the scope of such trainings/awareness raising activities,
- \checkmark To expand the family dietitian practices are throughout the country,
- To increase the number of dietitians employed within the body of various institutions, such as Ministry of Health, Ministry of National Education, and Ministry of Agriculture and Forestry etc.,
- ✓ To initiate initiatives that are directed towards the food market (healthy production methods, labeling, geographical marking and taxation etc.),

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- ✓ To establish collaboration with government agencies, academic institutions, food industry, small producers/farmers and non-governmental organizations in studies on healthy nutrition and active life,
- ✓ To support local and seasonal production and consumption, and to provide government support to ensure that practices are implemented across the country,
- ✓ To conduct Nutrition and Health surveys across the country periodically (in every 5 years), and to support such studies by follow-up studies,
- ✓ To establish food fortification programs that are directed towards vitamin and mineral deficiencies (for example, fortification of bread by iron and folic acid, and fortification of milk by vitamin D), and
- ✓ To review, update food and ensure sustainability of food and nutrition plans and policies.

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CHAPTER 3

HEALTH STATUS AND BIOCHEMICAL FINDINGS



1. INTRODUCTION

- 1.1. Nutritional and Health Status in Turkey
- **1.2.** Nutrition-Related Chronic Diseases

2. FINDINGS

- 2.1. Disease Status
- 2.2. Biochemical Findings
- 2.3. Biochemical Findings in Pregnant Women

3. CONCLUSIONS

- 3.1. Disease Status
- **3.2.** Laboratory Test Results
- 3.3. Laboratory Test Results in Pregnant Women
- **4. RECOMMENDATIONS**
- **5. REFERENCES**



1. INTRODUCTION

1.1. Nutritional and Health Status in Turkey

Nutritional and Health Problems in Turkey

Living by improving the quality of life has become an issue important as longevity. Nutrition and physical activity are essential to maintain a healthy lifestyle and minimize health problems that may occur in the future. Therefore, all individuals must place emphasis on their health and adopt healthy life sources (physical activity habit, healthy nutrition and prevention of tobacco use) throughout their lives in order to increase the quality of healthy life. It is critically important to optimize or eliminate nutritional problems that negatively affect the quality of life (iron deficiency anemia, protein-energy deficiency, iodine deficiency diseases, dental caries, rachitism and obesity etc.), to improve life style and environmental conditions in order to prevent diet-related chronic diseases (hypertension, cardiovascular diseases, diabetes, osteoporosis and certain types of cancer etc.), to ensure food security, and to raise awareness among the population on health and nutrition issues.

The economic development and healthy life of the population depends on the health of the individuals that make up population. This is based on balanced and adequate nutrition. Adequate and balanced nutrition is listed at the top of human needs, and it is also defined as 'healthy diet'. A population that fails to meet these needs may not increase its economic and social welfare. An individual and/or population suffering from food deprivation may not function and work efficiently and innovatively. As a result of the fact that healthy diet makes positive effects on mental development and work efficiency and reduces disease risk, excessive consumption was replaced by correct and balanced consumption awareness.

For all these reasons, it is very important for every country to conduct "Nutrition, Health and Food Consumption Survey" in order to develop national food and nutrition plans and policies for the population.

The following actions should be taken in order to determine the nutritional status of the individual and population and to monitor them regularly;

- a) Determination of nutritional status,
- b) Determining the causes,
- c) Finding solutions.

Situation in Our Country According to the Results of Nutrition and Health Surveys Conducted at National and Regional Level

Data related to nutritional and health problems specific to our country are presented below by being compiled out of certain surveys conducted at provincial, regional and country level. There are also differences in the data by the years when the studies were carried out, the method applied, the evaluation differences, and the standard and reference values used in anthropometric measurement data. Surveys conducted with the same methodology since Turkey Nutrition and Health Survey 2010 are also important in this respect. With obtained findings, data integrity may be achieved across the country, and regional, age and gender-based differences may be obtained, and comparisons may be made.

Nutritional and Health Problems

Chronic energy deficiency: A cut-off point of Body Mass Index (BMI) <18.5 kg/m² is accepted as criterion for adults for identifying chronic energy deficiency. Chronic energy deficiency is not considered as a main problem for adult women in Turkey (TNHS, 2008). According to data from TURSKTAT (2010) Health Survey, the prevalence of underweight among individuals aged 15 years and over was found as 3.5% for males, 5.9% for females, and 4.7% overall (males and females).

According to the unpublished data from TNHS 2010, in the evaluation of BMI, it was found that prevalence of underweight was 2.7% for females, 1.8% for males and 2.2% overall.

Iron deficiency anemia: Iron deficiency anemia is one of the important public health problems in our country. All age groups, particularly children aged 0-5 years, school-age children and adolescents, pregnant and lactating women, are important risk groups. In the hemoglobin level determination study conducted by Gazi University in 2011 on 6-17 months old infants and their mothers, it was found that hemoglobin level of 24.9% of mothers was below 12 g/dL. It was found that 48.3% of these mothers were diagnosed with anemia before the survey, 54.9% of them had iron deficiency anemia, and mothers who said they had anemia previously were more likely to have anemia during pregnancy (71.8%). 74.8% of mothers reported that they used iron medication (supplement) during pregnancy. Low level of ferritin was found in 43.7% of the mothers, and iron deficiency anemia was found in 6.9% of the mothers.

According to the unpublished data from TNHS 2010, when the serum iron levels of 10 624 blood samples surveyed across Turkey were evaluated, low levels of serum iron (<28 mg/dL) among females were most common in the age group of 31-50 years (14%), whereas low levels of serum iron (<45 mg/dL) among males were most common in the age group of 75 years and over (19.8%).

Vitamin D deficiency: Vitamin D deficiency was found at the rate of 44 - 100% in a study conducted on females (aged 14-44 years) in the summer season (Alagöl et al., 2000). Similar results were obtained in another study, and vitamin D supplementation was recommended (Güzel et al, 2001).

According to the unpublished data from TNHS 2010, it was determined that 3.1% of males and 12.7% of females across Turkey had severe vitamin D deficiency (<10 ng/ml).

Obesity in adults: In a review article/paper, it was reported that the prevalence of obesity among adults ranged from 11% to 22% among males, and 23% to 35% among females (Pekcan, 2012).

In a cross-sectional and population-based study (TURDEP I – Turkey Diabetes Epidemiology Study), the prevalence of obesity was found as 22.3% among individuals aged 20 years and over (males: 12.9%; females: 29.9%). The prevalence was found as 23.8% in urban areas and 19.6% in rural areas. The proportion of females with waist circumference >80 cm and above was 49.2%, and the proportion of males with waist circumference of >102 cm and above was 17.2% (Satman et al., 2002). In TURDEP II study, the prevalence of obesity among 26 499 individuals was found as 35.9% (males: 27.3%; females: 44.2%) (Satman, 2010).

İşeri and Arslan (2008) determined the prevalence of pre-obesity and obesity as 46% and 15.6% in males, and 33.6% and 16.6% in females, respectively. Bağrıaçık et al. (2009) screened 13 878 individuals aged 20 years and over (6 799 males and 7 079 females) in 6 regions (6 provinces) in TASO/TOAD (2000-2005) Study. Mean BMI was found as 27.52 kg/m² (males: 26.80 kg/m², females: 28.24 kg/m²), and mean waist circumference was found as 98.5 cm for males and 79.8 cm for females. 30.9% of the individuals were of normal body weight, 39.6% were overweight, and 29.5% were obese according to the WHO classification. The highest prevalence of obesity was found in the age group of 50-59 years (39.9%) and in Gaziantep province (41.6%).

Overweight individuals were found most common among males in the age group of 60–69 years and among females in the age group of 30–39 years (%37.2). The highest prevalence of obesity was determined in the age group of 50-59 years (27.9%) among males, and in the same age group (51.4%) among females. It was emphasized that the obesity is an important public health problem for Turkey.

Ergin et al. (2012) calculated the height and body weight of 3 790 females and 4 057 males aged 20 years and over, based of self-reports of respondents. The age-adjusted prevalence of overweight was found as 48.4% among females and 46.1% among males. Özgül et al. (2011) determined the prevalence of obesity among adult females who admitted to the Cancer Early Diagnosis and Training Centre (KETEM). BMI values of individuals admitted to the Centre were assessed among 74 492 females in the age group of 30-65 years in 2011. The prevalence of obesity was found as 35% and prevalence of overweight was found as 41%. The highest prevalence determined in the Aegean Region (42%), and the lowest prevalence was determined in the Eastern Anatolia (21%) and Southeastern Anatolia (28%) Regions, respectively.

According to the data from TURKSTAT (2010) Health Survey, the prevalence of pre-obesity and obesity among individuals aged years 15 and over was 37.3% and 13.2% in males, 28.4% and 21.0% in females, and 33.0% and 16.9% overall, respectively.

According to the data from TNHS 2010, the prevalence of obesity among adults was found as 41% in females, 20.5% in males, and 30.3% overall.

1.2. Nutrition-Related Chronic Diseases

Cardiovascular diseases: Cardiovascular diseases are the leading cause of all deaths in our country with 47.73%, and they also were the leading cause of burden of disease according to the survey conducted in 2016. According to the data from TURKSTAT study 2016, death from diseases of circulatory system ranked first, and this mortality was 36.4% for males, 43.93% for females, and 39.84% overall, respectively. The incidence of cerebrovascular diseases was 69.6 per 100 000 in males, 72.1 per 100 000 in females. Its prevalence was 3.19 per thousand (UHY-ME, 2004).

According to the data from TNHS (2010), 1 558 out of 12 926 respondents (12.1%) reported that they had a cardiovascular disease (females: 14.8%, males: 9.3%).

Hypertension: According to the Turkey Hypertension Prevalence Study, the prevalence of hypertension among adults was found to be 31.8% (males: 27.5%; females: 36.1%). The prevalence of hypertension increased with age. The prevalence of hypertension in rural areas (32.9%) was higher than in urban areas (31.1%). Four-year adjusted general incidence rate was determined as 21.3% (males: 23.0%; females: 19.2%; urban: 19.0%; rural: 25.5%) (Arıcı et al., 2008). According to the Turkey Diabetes Epidemiology Study (TURDEP), the prevalence of hypertension was 29% (Satman et al., 2004). According to 2011 Health Statistics Yearbook of the Ministry of Health, Republic of Turkey, distribution of percentage of diseases/health conditions diagnosed by a physician among individuals aged 15 years and over was given by gender and settlements. According to reported values, the prevalence of hypertension was 8.9% among males, 17.9% among females and 13.5% among all individuals in 2008, whereas it was 8.4% among males, 16.8% among females and 12.7% among all individuals in 2010. According to 2010 data, the prevalence of hypertension was higher in rural areas (males: 10.3%, females: 19.9% and overall: 15.3%) than in urban areas (males: 7.7%, females: 15.3% and overall: 11.5%) (MOH, 2012).

According to the data from TNHS 2010, the prevalence of hypertension was 17.4% across Turkey. It was found as 19.2% for females and 15.6% for males.

According to the National Burden of Disease Study 2016, DALY's related to elevated systolic blood pressure per 100 000 persons was found as 2 317 in males, 1 779 in females, and 2 043 overall.

Cancer: In 2016, the incidence of cancer was 246.8 per 100 000 in males, 173.6 per 100 000 in females, 210.2 per 100 000 overall. While cancers in Turkey are the second in causes of deaths in adults with a share of 19.71%, it again has great importance as the second cause of death with a share of 19.71% (M: 23.58% and F: 15.15%) according to TURKSTAT's Cause of Death Statistics (2016) (MoH, 2017).

According to the data from TNHS 2010, breast cancer in females (15.1%) and lung cancer in males (11.4%) were found to be the most common cancers. Colorectal cancer was the second most common cancer (7.3%) in both genders.

Diabetes: In a cross-sectional and population-based study (TURDEP-Turkey Diabetes Epidemiology Study), the prevalence of diabetes was found as 7.2% (males: 6.2%; females: 8%) among 24 788 subjects aged 20 years and over. It was determined that prevalence of diabetes showed regional variation between 4.3% and 9.2%. It was observed that its incidence has increased significantly over the years (Satman et al., 2002a; 2002b; 2004). In Turkey Adult Heart Health and Hypertension Survey and Risk Factors study (TEKHARF), the prevalence of diabetes was found as 8.4 (males: 8.1%; females: 8.9%) (Yumuk et al., 2005). According to TURDEP-II, it was observed that the prevalence of diabetes has reached to 13.7% in Turkish adult population (Satman, 2010). According to the data from TNHS 2010, diabetes was detected in 4.9% of individuals who had undergone diabetes survey based on questionnaire across Turkey. When the disease burden studies of 2002 and 2016 were compared in terms of disease burden studies, it was observed that Diabetes Mellitus rose to 5th rank in Disease Burden 2016 study, and showed an increase of 30% compared to 2002.

Physical activity level: In the study named "Eat Healthy, Protect Your Heart (EHPH)" conducted on 15 468 individuals over 30 years old in 7 provinces selected out of seven geographical regions (MoH, 2004), the physical activity habits of individuals were surveyed, and just 3.5% of individuals reported that they engaged in physical activity regularly (at least 3 days a week, for 30 minutes, moderate-intensity). According to National Household Survey (MoH, 2006) (conducted on 11 481 individuals aged 18 years and over in five regions), it was determined that 20.32% of individuals live inactive (lead a sedentary lifestyle), 15.99% of them had inadequate level of physical activity.

According to the TURKSTAT Health Survey 2016, 10.5% of males, 1.5% of females, and 5.9% overall, working in "Mostly Heavy Labor" or "Mostly Physically Demanding Work" reported that they had physical activity habits. These rate were 56.1%, 49.9%, respectively and 53.0% overall for "Mostly Walking" or "Physically Demanding Work". The proportions of those who "Mostly Sitting" or "Standing" were 33.5% for males, 48.6% for females and 41.1% overall.

2.FINDINGS

All tables present weighted percentages and unweighted numbers.

See "Chapter 2: Nutritional Habits and Status" for nutrition-related findings of the survey. See also Appendix 09 for Regional NUTS distributions.

Table 3. 1. Distribution of household size in Turkey, TNHS 2017

	x	Standard Error	95%	% CI	25 th percentile	50 th percentile	75 th percentile
Household size	4.03	0.023	3.98	4.07	3	4	5

The mean (\bar{x}) household size in Turkey is 4.03 (Table 3.1).

Table 3.2. Distribution of educational level, years of education, marital status, employment status and income status of individuals aged 15 years and over in Turkey, TNHS 2017

	Males			Females					Overall			
	N	%	Standard Error	95%CI	N	%	Standard Error	95%CI	N	%	Standard Error	95%CI
Education level												
Illiterate	156	2.1	0.2	1.7-2.6	1077	12.6	0.5	11.6-13.5	1233	7.4	0.3	6.8-7.9
Literate	164	2.1	0.2	1.8-2.6	367	4.4	0.3	3.9-5	531	3.3	0.2	3-3.7
Elementary school	1800	24.7	0.7	23.4-26.1	2470	29.9	0.7	28.6-31.4	4270	27.4	0.5	26.4-28.
Primary education	149	2.9	0.3	2.4-3.4	138	2.1	0.2	1.7-2.6	287	2.5	0.2	2.2-2.8
Secondary school	688	13.2	0.8	12-14.4	650	10.6	0.5	9.7-11.6	1338	11.9	0.4	11.2-12.
Secondary education	276	6.1	0.4	5.3-7.1	230	5.2	0.4	4.4-6.1	506	5.6	0.3	5.1-6.3
High school and equivalent	1369	26.2	0.8	24.7-27.8	1216	19.8	0.7	18.5-21.1	2585	23	0.5	22-24
Higher education	1237	22.6	0.8	21.1-24.1	1025	15.4	0.6	14.3-16.6	2262	19	0.5	18-20
Total	5839	100	0	100-100	7173	100	0	100-100	13012	100	0	100-100
Years of education	5838	9.86	0.077	9.71-10.01	7173	7.84	0.080	7.66-7.99	13011	8.8	0.057	8.73-8.9
Marital status												
Never married	1170	32.3	0.9	30.5-34.1	1002	23	0.8	21.6-24.6	2172	27.6	0.6	26.5-28.
Married	4314	64.8	0.9	63-66.5	4851	65.8	0.8	64.2-67.3	9176	65.3	0.6	64.1-66.
Widowed	166	1.3	0.1	1.1-1.6	1006	8.3	0.4	7.7-9	1172	4.8	0.2	4.5-5.2
Divorced	171	1.5	0.1	1.2-1.8	270	2.6	0.2	2.2-3	441	2	0.1	1.8-2.3
Lives separately	18	0.1	0	0.1-0.2	34	0.3	0.1	0.2-0.5	52	0.2	0	0.2-0.3
Total	5839	100	0	100-100	7173	100	0	100-100	13012	100	0	100-10
Current employment status												
Government employee	549	8.6	0.5	7.7-9.6	313	3.8	0.3	3.3-4.4	862	6.2	0.3	5.7-6.8
Non-government (private sector) employee	1456	26.2	0.8	24.8-27.8	600	9.3	0.5	8.4-10.3	2056	17.7	0.5	16.8-18
Self-employed	1004	16.2	0.6	15.1-17.4	165	1.9	0.2	1.6-2.3	1169	9	0.3	8.4-9.7
Student	452	14.6	0.8	13.2-16.2	503	13.7	0.7	12.4-15	955	14.1	0.5	13.2-15.
Homemaker (housewife)	6	0.1	0	0-0.2	4811	61.5	0.8	59.9-63	4817	30.9	0.5	29.9-31.
Retired	1396	16.4	0.5	15.4-17.5	439	4.6	0.3	4-5.2	1835	10.5	0.3	9.9-11.
Unemployed-able to work	233	5.1	0.4	4.3-6	156	2.9	0.3	2.4-3.5	389	4	0.3	3.5-4.5
Unemployed- unable to work	154	2	0.2	1.6-2.5	48	0.4	0.1	0.3-0.6	202	1.2	0.1	1-1.5
Worker	589	10.6	0.5	9.7-11.7	138	2	0.2	1.7-2.5	727	6.3	0.3	5.8-6.9
Total	5839	100	0	100-100	7173	100	0	100-100	13012	100	0	100-100
Income Status												
We can easily make it till the end of month with	1372	23.7	0.8	22.2-25.2	1408	20.4	0.6	19.2-21.7	2780	22	0.5	21.1-23
our income												
We can make it till the end of month with our	1564	29.4	0.8	27.8-31.1	1831	26.8	0.7	25.4-28.2	3395	28.1	0.6	27-29.
income without serious problems	4000		0.0	00 F 00 F	2672	26.5	0.0	054.004	10-0		0.5	<u> </u>
We barely make it till the end of the month with	1980	32	0.8	30.5-33.5	2678	36.6	0.8	35.1-38.1	4658	34.3	0.6	33.2-35.
our income We can't make it till the end of the month with	885	14	0.6	13-15.2	1188	15.2	0.5	14.2-16.3	2073	14.6	0.4	13.9-15.
our income	005	14	0.0	13 13.2	1100	13.2	0.5	14.2.10.3	2075	14.0	0.4	13.3-13.
Don't know	38	0.9	0.2	0.6-1.3	68	1	0.2	0.7-1.3	106	0.9	0.1	0.7-1.2
Total	5839	100	0	100-100	7173	100	0	100-100	13012	100	0	100-100

The percentage of illiterates among survey participants is 2.1% in males, whereas it was 12.6% in females. While 26.2% of males were high school or equivalent graduates, 29.9% of females were primary school graduates. Mean years of education is 9.86 years for males and 7.84 years for females.

In respect of marital status, 27.6% of interviewed individuals reported that they had never been married, 65.3% were currently married, 4.8% were widowed, 2% were divorced, and 0.2% were living separately from their spouses.

In total, 4% of survey participants reported that they were unemployed and able to work (M: 5.1%, F: 2.9%). In TNHS 2017 study, 32% of males and 36.6% of females said We barely make it till the end of the month with our income" (Table 3.2).

Table 3.3. Distribution of the types and ownership statuses of the residences among individuals aged 15
years and over in Turkey, TNHS 2017

House type	Ν	%	Standard Error	95%CI
Detached house	5156	38.2	0.6	37.1-39.3
Apartment	7441	58.2	0.6	57-59.3
Slum	293	2.3	0.2	2-2.7
Dormitory	66	0.9	0.1	0.7-1.2
Other	56	0.4	0.1	0.3-0.6
TOTAL	13012	100	0	100-100
House ownership status				
Own house	8266	62.2	0.6	61.1-63.3
Lives in a rented house	2946	23	0.5	22-24
Does not pay rent	1540	12.7	0.4	12-13.6
Lodging	127	0.9	0.1	0.8-1.1
Other	133	1.1	0.1	0.9-1.5
TOTAL	13012	100	0	100-100

While 58.2% of individuals aged 15 years and over live in an apartment, 62.2% live in their own house, and 2.3% of them reported that they live in a slum (Table 3.3).

2.1. Disease Status

able 3.4. Distribution of prevalence of having long-term (chronic) illness/disease in Turkey by gender and	I.
ge groups, TNHS 2017 (Based on self-report)	

	Males				Females			Overall		
Disease status	N	%	95%CI	N	%	95%CI	N	%	95%CI	
Age of 15 years and over										
No	3428	65.3	63.7-66.8	3240	51.5	49.9-53	6668	53.3	57.2-59.4	
Yes	2398	34.7	33.2-36.3	3921	48.5	47-50.1	6319	41.7	40.6-42.8	
TOTAL	5826	100	100-100	7161	100	100-100	12987	100	100-100	
Age group										
15-18	41	14.5	10.1-20.3	51	17.3	13-22.6	92	15.9	12.7-19.6	
19-30	156	17.8	14.6-21.4	316	24.8	21.7-28.1	472	21.2	19-23.6	
31-50	725	29.5	27.2-31.8	1207	44.9	42.4-47.4	1932	37.1	35.4-38.8	
51-64	717	56.6	53.2-60.1	1193	74.7	71.7-77.4	1910	65.7	63.4-67.9	
65-74	475	75.9	71.7-79.7	663	90	87-92.4	1138	83.5	80.9-85.8	
75 years and over	284	82.1	76.6-86.5	491	90.5	86.3-93.5	775	87.1	83.9-89.8	
Age of 19 years and	over									
19-64	1598	31.7	30-33.5	2716	45.3	43.6-47.1	4314	38.5	37.2-39.7	
≥65	759	78.1	74.8-81.1	1154	90.2	87.8-92.1	1913	84.9	82.9-86.7	
TOTAL	2357	36.6	34.9-38.2	3870	51.3	49.7-52.9	6227	44	42.8-45.1	

While 41.7% of individuals aged 15 and over reported that they have any long-term (chronic) disease, this rate is 34.7% for males and 48.5% for females. Considering the age groups, the percentage of those who reported that they have any long-term (chronic) disease is 75.9% in males aged 65-74 years, and 90.5% in females aged 75 years and over. In respect of Turkey's mean value, this rate is 78.1% for males aged 65 years and over and 90.2% for females aged 65 years and over.

The prevalence of having any long-term (chronic) disease among males and females aged 19 years and over is 44% (Table 3.4).

Table 3.5. Distribution of prevalence of having diagnosed cancer in Turkey by gender and age groups, TNHS
2017 (Based on self-report)

	<u> </u>								
		Males			Females			Overall	
Disease status	Ν	%	95%CI	Ν	%	95%CI	Ν	%	95%CI
Age of 15 years and over									
15-18	-	-	-	-	-	-	-	-	-
19-30	1	0.1	0-0.9	2	0.1	0-0.5	3	0.1	0-0.4
31-50	12	0.5	0.2-0.8	15	0.6	0.3-1	27	0.5	0.3-0.8
51-64	26	1.7	1.1-2.7	32	1.9	1.2-2.9	58	1.8	1.3-2.5
65-74	18	2.2	1.3-3.5	15	1.6	0.9-2.8	33	1.8	1.3-2.7
75 years and over	15	4.5	2.6-7.6	12	1.5	0.8-2.9	27	2.7	1.8-4.1
TOTAL	72	0.8	0.6-1.1	76	0.8	0.6-1	148	0.8	0.6-1
Age of 19 years and over									
19-64	39	0.6	0.4-0.9	49	0.7	0.5-1	88	0.7	0.5-0.9
≥65	33	3	2-4.3	27	1.5	1-2.4	60	2.2	1.6-2.9
TOTAL	72	0.9	0.7-1.1	76	0.8	0.6-1.1	148	0.9	0.7-1

The percentage of individuals aged 15 years and over who have diagnosed with cancer is 0.8% for both genders. Considering the age groups, this rate is 4.5% for males aged 75 years and over and 1.9% for females aged 51-64 years. In respect of Turkey's mean level, the prevalence of being diagnosed with any cancer in the group \geq 65 years is 3% for males and 1.5% for females (Table 3.5).

In TNHS 2010 study, 89 of surveyed individuals from all age groups reported that they had malignant disease (0.7%). The prevalence of malignant neoplasm was 1.0% among females and 0.4% among males. When evaluated by age groups, the prevalence of having malignant neoplasm increased with age, and it was most common in the age group of 75 and over (3.3%). According to Health Statistics Yearbook (2016) of Ministry of Health of Republic of Turkey, the incidence of cancer was 49.29 per 100 000 in 2016, and 70.32 per 100 000 in 2003.

In Turkey, cancers are the second in causes of deaths in adults with a rate of 19.71%. According to data obtained from TURKSTAT's Causes of Death Statistics (2016) cancers have critical importance as the second cause of death with a rate of 19.71% (males: 23.58% and females: 15.15%)

Table 3.6. Distribution of prevalence of having diagnosed diabetes mellitus in Turkey by gender and age group, TNHS 2017 (Based on self-report)

		Males			Females			Overall	
Disease status	N	%	95%CI	N	%	95%Cl	N	%	95%CI
Age 15 yrs and over									
15-18	1	1	0.1-6.5	-	-	-	1	0.5	0.1-3.3
19-30	5	0.5	0.2-1.3	17	1.2	0.7-2.1	22	0.9	0.5-1.4
31-50	100	4.2	3.3-5.3	136	5.5	4.5-6.8	236	4.8	4.1-5.7
51-64	235	19.6	16.7-22.8	362	21.1	18.8-23.7	597	20.4	18.5-22.4
65-74	166	26.1	22.4-30.3	229	31.4	27.3-37.9	395	29	26.1-32
75 years and over	71	18.9	14.6-24.1	138	24.7	20.2-29.9	209	22.4	19.1-26
TOTAL	578	7.6	6.8-8.5	882	9.6	8.9-10.4	1460	8.6	8.1-9.2
Age 19 yrs and over									
19-64	340	6.4	5.6-7.3	515	7.7	6.9-8.5	855	7	6.5-7.7
≥65	237	23.6	20.7-26.8	367	28.7	25.5-32	604	26.4	24.2-28.8
TOTAL	577	8.2	7.4-9.1	882	10.5	9.6-11.3	1459	9.3	8.7-10

8.6% of individuals aged 15 years and over reported that they have Diabetes Mellitus (DM; diabetes) diagnosed by a physician. The prevalence of DM is 7.6% for males and 9.6% for females.

This prevalence among individuals aged 19 years and over is 9.3%; 8.2% for males and 10.5% for females. In the distribution by the age groups, the prevalence of DM in the age group of 65-74 years is 26.1% among males and 31.4% among females. The percentage of individuals in the age group of 65 years and over who have DM was found as 23.6% in males and 28.7% in females (Table 3.6).

The prevalence of diabetes mellitus (those who diagnosed with DM or whose HbA1c level is 6.5 and above or whose blood glucose level is 126 and above) is 12.5% among individuals aged 15 years and over. The prevalence of DM among individuals aged 20 years and over is 13.5% (Males: 13.1%, Females: 14%).

n Turkey, TNHS 201	(Basea		.porty		E a constant			0	
Disease status		Males			Females	5		Overal	
Disease status	Ν	%	95%CI	Ν	%	95%CI	Ν	%	95%CI
Age 15 yrs and over									
15-18	1	0.4	0.1-2.7	6	2.3	1-5.5	7	1.4	0.6-3
19-30	5	0.4	0.2-0.9	50	3.1	2.2-4.4	55	1.7	1.2-2.4
31-50	20	0.7	0.5-1.2	289	10.3	9-11.8	309	5.5	4.8-6.2
51-64	31	1.9	1.2-3	265	16.4	14.3-18.7	296	9.2	8-10.5
65-74	22	3.2	1.9-5.1	102	14.4	11.1-18.5	124	9.2	7.3-11.6
75 years and over	9	2.4	1.2-4.9	48	10.1	6-16.5	57	7	4.4-11
TOTAL	88	1.0	0.8-1.3	760	9.2	8.5-10.1	848	5.2	4.7-5.6
Age 19 yrs and over									
19-64	56	0.9	0.6-1.2	604	9.4	8.6-10.4	660	5.1	4.7-5.6
≥65	31	2.9	1.9-4.3	150	12.6	9.9-16	181	8.4	6.7-10.4
TOTAL	87	1.1	0.9-1.4	754	9.8	9-10.8	841	5.5	5-6

Table 3.7. Distribution of prevalence of having other diagnosed endocrine diseases by gender and age groups in Turkey TNHS 2017 (Based on self-report)

The prevalence of having endocrine disease based on self-report among individuals aged 15 years and over is 1% for males, 9.2% for females, and 5.6% overall. The prevalence of having endocrine disease is 3.2% among males in age group of 65-74 years and 1.4% among females in the age group of 51-64 years.

Considering groups aged 19 years and over, the percentage of individuals in the age group 65 years and over who have endocrine disease 2.9% in males and 12.6% in females (Table 3.7).

Т	Table 3.8. Distribution of prevalence of having diagnosed neuropsychiatric disorder in Turkey by gender and								
а	age groups, TNHS 2017 (Based on self-report)								
		Overall							

Discourse status	Males				Femal	es	Overall			
Disease status	Ν	%	95%CI	N	%	95%CI	Ν	%	95%CI	
Age 15 yrs and over										
15-18	7	1.9	0.8-4.2	11	3.2	1.7-5.8	18	2.5	1.6-4.1	
19-30	37	5.3	3.5-7.9	69	5.6	4-7.8	106	5.4	4.2-7.1	
31-50	94	4.1	3.2-5.2	249	10.1	8.7-11.7	343	7	6.2-8	
51-64	57	4.2	3.1-5.7	171	11	9.1-13.4	228	7.6	6.5-9	
65-74	20	4.1	2.4-7.1	80	10.4	7.8-13.7	100	7.5	5.8-9.6	
75 years and over	27	9.1	6-13.8	83	16.3	12.4-21.2	110	13.4	10.7-16.8	
TOTAL	242	4.4	3.7-5.2	663	8.9	8.1-9.8	905	6.7	6.1-7.3	
Age 19 yrs and over										
19-64	188	4.5	3.7-5.4	489	8.9	7.9-10.0	677	6.7	6-7.4	
≥65	47	5.9	4.2-8.2	163	12.8	10.5-15.5	210	9.8	8.2-11.6	
TOTAL	235	4.6	3.9-5.5	652	9.4	8.5-10.4	887	7	6.4-7.7	

The prevalence of having neuropsychiatric disorder among individuals aged 15 years and over is 4.4% in males and 8.9% in females. Considering the age groups, the percentage of individuals in the age group of 75 years and over who have neuropsychiatric disease was found as 9.1% in males and 16.3% in females.

Considering groups aged 19 years and over, the percentage of individuals in the age group 65 years and over who reported having neuropsychiatric disorder is 5.9% in males and 12.8% in females (Table 3.8).

	Males				Femal	les	Overall			
Disease status	Ν	%	95%CI	Ν	%	95%CI	Ν	%	95%CI	
Age 15 yrs and over										
15-18	6	1.1	0.5-2.5	6	2.8	1.1-6.7	12	1.9	1-3.8	
19-30	16	2.1	1-4	21	1.5	0.9-2.5	37	1.8	1.2-2.8	
31-50	62	3.1	2.2-4.3	88	2.8	2.2-3.6	150	3	2.4-3.6	
51-64	85	6.3	4.8-8.3	156	9.2	7.6-11.1	241	7.8	6.6-9.1	
65-74	83	12.3	9.8-15.5	100	12.7	10.2-15.9	183	12.6	10.7-14.7	
75 years and over	69	20.1	15.5-25.7	116	20.6	16.6-25.2	185	20.4	17.3-23.9	
TOTAL	321	4.4	3.8-5.1	487	5.3	4.7-5.9	808	4.8	4.4-5.3	
Age 19 yrs and over										
19-64	163	3.5	2.8-4.3	265	3.9	3.3-4.5	428	3.7	3.2-4.2	
≥65	152	15.1	12.7-17.8	216	16	13.7-18.5	368	15.6	13.9-17.4	
TOTAL	315	4.7	4.0-5.5	481	5.5	4.9-6.1	796	5.1	4.6-5.6	

 Table 3.9. Distribution of prevalence of having diagnosed sense organ disorders in Turkey by gender and age groups, TNHS 2017 (Based on self-report)

The prevalence of having disorders of sense organs among individuals aged 15 years and over is 4.4% for males, 5.3% for females, and 4.8% overall. Considering the age groups, the percentage of individuals in the age group 75 years and over who reported having disorders of sense organs is 20.1% in males and 20.6% in females.

Considering the groups aged 19 years and over, the percentage of individuals in the age group 65 years and over who have disorders of sense organs is 15.1% in males and 16% in females (Table 3.9).

Table 3.10. Distribution of prevalence of having diagnosed cardiovascular diseases in Turkey by gender and
age groups, TNHS 2017 (Based on self-report)

Discourse status		Males			Females			Overall	
Disease status	Ν	%	95%CI	N	%	95%CI	Ν	%	95%CI
Age 15 yrs and over									
15-18	5	1.5	0.6-3.9	6	1.5	0.6-3.4	11	1.5	0.8-2.8
19-30	15	2.2	1.2-4.1	37	2.6	1.8-3.8	52	2.4	1.7-3.4
31-50	169	6.9	5.6-8.3	235	9.2	7.2-11.7	404	8	6.8-9.4
51-64	361	27.8	24.8-30.9	648	40.9	37.9-44.0	1009	34.3	32.2-36.6
65-74	292	47.2	42.6-51.9	456	63.2	58.7-67.5	748	55.8	52.5-59.1
75 years and over	173	50.2	43.9-56.4	370	68.5	62.5-74.0	543	61.2	56.7-65.4
TOTAL	1015	12.9	12-14	1752	19.5	18.3-20.8	2767	16.2	15.4-17
Age 19 yrs and over									
19-64	545	10	8.9-11.1	920	14.3	13-15.7	1465	12.1	11.3-13
≥65	465	48.2	44.5-52	826	65.4	61.8-68.8	1291	57.9	55.2-60.5
TOPLAM	1010	14	12.9-15.1	1746	21	19.8-22.4	2756	17.5	16.7-18.4

The prevalence of having cardiovascular diseases among individuals aged 15 years and over is 12.9% for males and 19.5% for females. Considering the age groups, this rate in the age group of 75 years is 50.2% for males and 68.5% for females.

Considering the groups aged 19 years and over, it was observed that the prevalence of having cardiovascular diseases in the age group of 65 years and over is 48.2% among males and 65.4% among females (Table 3.10).

	• •	-		• •							
	Males				Females			Overall			
Disease status	N	%	95%CI	N	%	95%CI	N	%	95%CI		
Age 15 yrs and over											
15-18	8	3.8	1.5-9.2	9	2.8	1.5-5.4	17	3.3	1.8-5.9		
19-30	29	4	2.2-6.9	48	3.4	2.4-4.7	77	3.7	2.6-5.2		
31-50	95	3.2	2.5-4.1	169	6.4	5.4-7.6	264	4.8	4.2-5.5		
51-64	92	6.8	5.4-8.5	165	10.3	8.6-12.3	257	8.5	7.4-9.8		
65-74	62	9.6	7.2-12.6	105	14.9	11.8-18.6	167	12.4	10.4-14.8		
75 years and over	40	7.6	6.8-13.5	81	16.4	11.6-22.6	121	13.7	10.4-17.7		
TOTAL	326	4.7	4-5.6	577	7.2	6.5-8	903	6	5.4-6.5		
Age 19 yrs and over											
19-64	216	4.2	3.4-5.2	382	6.4	5.6-7.2	598	5.3	4.7-5.9		
≥65	102	9.6	7.7-11.9	186	15.5	12.7-18.8	288	12.9	11.1-15		
TOTAL	318	4.8	4-5.7	568	7.6	6.8-8.4	886	6.2	5.6-6.8		

Table3.11. Distribution of prevalence of having diagnosed respiratory system diseases in Turkey bygender and age groups, TNHS 2017 (Based on self-report)

The prevalence of having diseases of the respiratory system among individuals aged 15 years and over is 4.7% for males and 7.2% for females. Considering the age groups, the age group in which diseases of the respiratory system is most common is the age group of 65-74 years. The prevalence of diseases of the respiratory system in this age group is 9.6% among males. For females, it was reported that diseases of the respiratory system was prevalent in the age group of 65-74 years with a rate of 16.4%.

Considering the groups aged 19 years and over, the prevalence of diseases of the respiratory system in the age group of 65 years and over is 9.6% among males and 15.5% among females (Table 3.11).

Table 3.12. Distribution of prevalence of having diagnosed digestive system diseases by gender and age	
groups in Turkey, TNHS 2017 (Based on self-report)	

	Males				Females	;	Overall		
Disease status	N	%	95%CI	N	%	95%CI	N	%	95%CI
Age 15 yrs and over									
15-18	3	0.7	0.2-2.8	5	1.5	0.6-3.8	8	1.1	0.5-2.4
19-30	18	1.6	1-2.7	46	4.5	3.1-6.7	64	3	2.2-4.2
31-50	133	5.7	4.6-6.9	182	6.3	5.3-7.4	315	6	5.2-6.8
51-64	66	5	3.8-6.6	187	10.6	9-12.5	253	7.8	6.8-9
65-74	50	8.2	5.9-11.3	100	11.7	9.2-14.7	150	11.1	8.3-12.2
75 years and over	43	13.6	9.8-18.5	75	15.2	10.8-20.8	118	14.5	11.4-18.3
TOTAL	313	4.5	3.9-5.2	595	7.1	6.4-7.9	908	5.8	5.3-6.3
Age 19 yrs and over									
19-64	217	4.3	3.6-5	415	6.7	5.9-7.6	632	5.5	5-6
≥65	93	10.1	8-12.7	175	13.1	10.7-15.9	268	11.8	10.1-13.7
TOTAL	310	4.9	4.2-5.6	590	7.6	6.8-8.4	900	6.2	5.7-6.8

The prevalence of having diseases of the digestive system among individuals aged 15 years and over is 4.5% for males and 7.1% for females. Considering the age groups, this rate in the age group of 75 years is 13.6% for males and 15.2% for females.

Considering the groups aged 19 years and over, the prevalence of having diseases of the digestive system in the age group of 65 years and over was found as 10.1% for males and 13.1% for females (Table 3.12).

Turkey by gender and age groups, TNHS 2017 (Based on self-report)											
		Males			Females			Overall			
Disease status	Ν	%	95%CI	Ν	%	95%CI	Ν	%	95%CI		
Age 15 yrs and over											
15-18	2	0.7	0.2-3.1	2	0.7	0.2-2.8	4	0.7	0.2-1.9		
19-30	7	0.9	0.4-2	20	1.4	0.9-2.3	27	1.2	0.7-1.8		
31-50	40	1.7	1.2-2.4	55	1.8	1.3-2.5	95	1.7	1.4-2.2		
51-64	87	6.3	4.8-8.3	52	2.9	2.1-4.1	139	4.6	3.7-5.7		
65-74	96	15.6	12.5-19.4	42	5.9	4.2-8.3	138	10.4	8.6-12.5		
75 years and over	68	17.3	13.4-22.1	44	7.9	5.2-11.8	112	11.7	9.3-14.5		
TOTAL	300	3.6	3.1-4.2	215	2.4	2-2.9	515	3	2.7-3.4		
Age 19 yrs and over											
19-64	134	2.4	2-3	127	1.9	1.6-2.4	261	2.2	1.9-2.6		
≥65	164	16.2	13.7-19.1	86	6.7	5.1-8.7	250	10.9	9.4-12.6		
TOTAL	298	3.9	3.4-4.5	213	2.6	2.2-3.1	511	3.2	2.9-3.6		

Table 3. 13. Distribution of prevalence of having genitourinary system diseases diagnosed system diseases in Turkey by gender and age groups, TNHS 2017 (Based on self-report)

The prevalence of having diseases of genitourinary system among individuals aged 15 years and over is 3.6% in males and 2.4% in females. Considering the age groups, the highest prevalence of diseases of genitourinary system in the age group of 75 years and over is 17.3% for males and 7.9% for females.

Considering the groups aged 19 years and over, this rate in the age group of 65 years and over is 16.2% for males and 6.7% for females (Table 3.13).

Table 3. 14. Distribution of prevalence of having diagnosed skin diseases in Turkey by gender and age groups,
TNHS 2017 (Based on self-report)

	Males				Females			Overall		
Disease status	N	%	95%CI	N	%	95%CI	N	%	95%CI	
Age 15 yrs and over										
15-18	3	0.8	0.2-2.5	5	1.9	0.8-4.8	8	1.4	0.6-2.8	
19-30	13	2.5	1.1-5.8	16	1.9	0.9-3.9	29	2.2	1.2-3.9	
31-50	39	1.4	1-2	57	2.1	1.5-2.8	96	1.8	1.4-2.2	
51-64	26	1.6	1-2.4	30	1.5	1-2.3	56	1.5	1.1-2.1	
65-74	11	1.2	0.6-2.4	12	2	1.1-3.6	23	1.6	1-2.5	
75 years and over	4	1.5	0.5-4.6	15	2.6	1.4-4.7	19	2.1	1.2-3.6	
TOTAL	96	1.7	1.2-2.4	135	1.9	1.5-2.5	231	1.8	1.5-2.2	
Age 19 yrs and over										
19-64	78	1.8	1.2-2.7	103	1.9	1.4-2.5	181	1.8	1.4-2.4	
≥65	15	1.3	0.7-2.4	27	2.2	1.5-3.4	42	1.8	1.3-2.6	
TOTAL	93	1.8	1.2-2.5	130	1.9	1.5-2.5	223	1.8	1.5-2.3	

The prevalence of having skin diseases among individuals aged 15 years and over is 1.7% for males and 1.9% for females. Considering the age groups, this prevalence is 2.5% among males aged 19-30 years, and 2.6% among females aged 75 years and over.

Considering the groups aged of 19 years and over, this rate in the age group of 65 years and over is 1.3% for males and 2.2% for females (Table 3.14).

	• •	· · ·		· ·					
		Males			Female			Overal	
Disease status	Ν	%	95%CI	Ν	%	95%CI	N	%	95%CI
Age 15 yrs and over									
15-18	8	3.5	1.3-8.8	6	2.2	0.9-5.3	14	2.9	1.5-5.6
19-30	22	2.1	1.3-3.4	44	3.1	2.1-4.5	66	2.6	1.9-3.5
31-50	164	6.8	5.7-8.1	309	10.9	9.6-12.3	473	8.8	8-9.8
51-64	129	9.3	7.6-11.4	406	22.4	20.1-24.9	535	15.9	14.4-17.5
65-74	102	14.3	11.6-17.5	263	34.7	30.5-39.1	365	25.3	22.6-28.1
75 years and over	60	18	13.7-23.4	190	32.8	27.8-38.3	250	26.9	23.4-30.7
TOTAL	485	6.6	5.9-7.4	1218	13.1	12.3-14	1703	9.9	9.3-10.5
Age 19 yrs and over									
19-64	315	5.9	4.2-6.7	459	13.1	10.2-12	1074	8.4	7.9-9.1
≥65	162	15.6	13.2-18.4	453	33.9	30.7-37.3	615	25.9	23.8-28.2
TOTAL	477	6.9	6.2-7.7	1212	14.1	13.2-15.1	1689	10.5	9.9-11.1

Table 3.15. Distribution of prevalence of having diagnosed musculoskeletal system diseases in Turkey by gender and age groups, TNHS 2017 (Based on self-report)

The prevalence of having diseases of musculoskeletal system among individuals aged 15 and over is 6.6% for males and 13.1% for females. Considering the age groups, 18% of males in the age group of 75 years and over, and 34.7% of females in the age group of 65-74 years reported that they have any disease of musculoskeletal system.

Considering the groups aged 19 years and over, 15.6% of males and 33.9% of females in the age group of 65 years and over have been diagnosed with any musculoskeletal system disease (Table 3.15).

Table 3.16. Distribution of prevalence of having diagnosed congenital/chromosomal anomalies in Turkey by
gender and age groups, TNHS 2017

	Males			Females			Overall		
Disease status	Ν	%	95%CI	N	%	95%CI	Ν	%	95%CI
Age 15 yrs and over									
15-18	-	-	-	2	0.4	0.1-1.8	2	0.2	0.1-0.9
19-30	6	0.5	0.2-1.3	9	0.6	0.3-1.3	15	0.6	0.3-1
31-50	9	0.3	0.1-0.5	10	0.3	0.1-0.6	19	0.3	0.2-0.5
51-64	-	-	-	1	-	0-0.2	1	0	0-0.1
65-74	-	-	-	-	-	-	-	-	-
75 years and over	1	0.2	0-1.5	-	-	-	1	0.1	0-0.6
TOTAL	16	0.3	1.1-0.5	22	0.3	0.2-0.5	38	0.3	0.2-0.4
Age 19 yrs and over									
19-64	15	0.3	0.2-0.5	20	0.3	0.2-0.6	35	0.3	0.2-0.5
≥65	1	0.1	0-0.5	-	-	-	1	-	0-0.2
TOTAL	16	0.3	0.2-0.5	20	0.3	0.2-0.5	36	0.3	0.2-0.4

The percentage of individuals aged 15 years and over who reported that they have congenital/chromosomal anomalies is 0.3% for males and 0.3% for females. In the age group of 19-30 years, it is 0.5% for males and 0.6% for females. Considering Turkey's mean value, the prevalence of having congenital/chromosomal anomalies is 0.3% for males and 0.3% for females aged 19 years and over and 19-64 years (Table 3.16).

Table 3.17. Distribution of prevalence of having diagnosed oral and dental health problems in Turkey by gender and age groups, TNHS 2017

		Males			Females	5		Overall	
Disease status	Ν	%	95%CI	Ν	%	95%CI	Ν	%	95%CI
Age 15 yrs and over									
No	1619	32.3	30.7-34	1695	26.3	24.9-27.7	3314	29.3	28.2-30.4
Yes	4207	67.7	66-69.3	5466	73.7	72.3-75.1	9673	70.7	69.6-71.8
TOTAL	5826	100	100-100	7161	100	100-100	12987	100	100-100
Age group									
15-18	109	39.4	32.7-46.6	131	49.2	42.5-55.9	240	44.3	39.4-49.2
19-30	504	56.3	52.1-60.4	802	60.7	57.1-64.1	1306	58.4	55.7-61.1
31-50	1777	72.2	69.9-74.4	2144	79.1	77.3-80.9	3921	75.6	74.2-77
51-64	1003	79.2	76.1-82	1295	83.6	81.3-85.7	2298	81.4	79.5-83.2
65-74	531	84.3	80.6-87.4	625	85.6	82.2-88.5	1156	85	82.6-87.2
75 years and over	283	79.7	74-84.4	469	84.7	79.7-88.7	752	82.7	79-85.9
Age 19 yrs and over									
19-64	3284	68.7	66.9-70.5	4241	74.4	72.9-75.9	7525	71.5	70.3-72.7
≥65	814	82.7	79.6-85.4	1094	85.3	82.5-87.7	1908	84.1	82.1-86
TOTAL	4098	70.2	68.5-71.8	5335	75.8	74.5-77.2	9433	73	71.9-74.1

The prevalence of having oral and dental health problems among individuals aged 15 years and over is 67.7% for males and 73.7% for females. Considering the age groups, this prevalence increases to 84.3% in males aged 65 - 74 years, and is observed as 85.6% in females aged 65-74 years.

Considering the groups aged 19 years and over, this rate in the age group of 65 years and over is 82.7% for males and 85.3% for females (Table 3.17).

Table 3.18. Distribution of rates of attendance to healthcare facility, reasons for attendance and vaccination
against hepatitis in Turkey by gender, TNHS 2017

		Male	s		Female	25		Overa	II
Attendance to a healthcare facility in last 3 months	N	%	95%CI	N	%	95%CI	N	%	95%CI
No	2864	50.8	49.1-52.5	2704	38.9	37.3-40.5	5568	44.8	43.7-46.0
Yes	2962	49.2	47.5-50.9	4457	61.1	59.5-62.7	7419	55.2	54-56.3
TOTAL	5826	100	100-100	7161	100	100-100	12987	100	100-100
If yes									
Primary Care Physician	836	26.9	24.8-29.1	1255	26.7	25.1-28.5	2091	26.8	25.5-28.2
Hospital (state, university, private)	1940	66.8	64.5-69	2944	66.8	64.9-68.6	4884	66.8	65.4-68.2
Oral and Dental Health Center	178	6.1	5.1-7.2	235	6	5.1-7	413	6	5.4-6.8
Public Health Center	8	0.2	0.1-0.4	23	0.4	0.3-0.7	31	0.3	0.2-0.5
Reason for visit to the healthcare facility									
Illness	3425	59.7	58-61.4	4284	60.8	59.2-62.3	7709	60.2	59.1-61.4
Control	699	12	10.9-13.3	1099	15.8	14.5-17.1	1798	13.9	13-14.8
Getting a prescription	805	11.2	10.3-12.2	982	11.4	10.5-12.3	1787	11.3	10.6-12.0
Emergency	442	8	7.1-9.1	395	6.1	5.3-6.9	837	7	6.4-7.7
Other	455	9	8.1-10.1	401	6	5.3-6.8	856	7.5	6.9-8.2
Vaccination against hepatitis									
Yes	972	18.7	17.3-20.2	1028	16	14.8-17.3	2000	17.4	16.4-18.3
No	1974	31.3	29.8-32.8	2528	34.4	32.9-35.8	4502	32.8	31.8-33.9
Don't know	2880	50	48.3-51.7	3605	49.6	48.1-51.2	6485	49.8	48.7-51
Not vaccinated	4854	81.3	79.8-82.7	6133	84	82.7-85.2	10987	82.6	81.7-83.6
If yes, dose of vaccine;									
1 st	78	1.4	1.1-1.9	72	1.1	0.8-1.6	150	1.3	1-1.6
2 nd	81	1.8	1.3-2.6	130	1.8	1.5-2.3	211	1.8	1.5-2.3
3 rd	211	3.6	3-4.4	303	4.7	4.1-5.4	514	4.2	3.7-4.7
Don't know	602	11.8	10.6-13.1	523	8.4	7.5-9.4	1125	10.1	9.3-10.9

Table 3.18 shows the distribution of rates of attendance (admission) to the hospital, reason for attendance (admission) and vaccination against hepatitis among individuals aged 15 years and over. As seen in the table, the prevalence of vaccination against hepatitis among individuals aged 15 years and over was 18.7% for males and 16% for females. Distribution of vaccination against hepatitis by dose is as below:

1st dose is 1.4% for males, 1.1% for females,

2nd dose is 1.8% for males and females,

3rd dose is 3.6% for males and 4.7% for females.

Considering the prevalence of attendance to any healthcare facility in last 3 months, most common attendance for any reason were made to the hospital (state, university and private) (males: 66.8%, females: 66.8%). The most common reason for attendance to any healthcare facility was illness (males: 59.7%, females: 60.8%), followed by the attendance for control reasons (males: 12%, females: 13.9%).

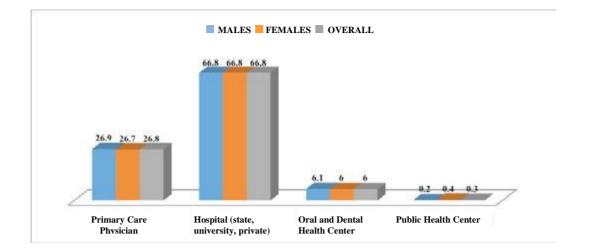


Figure 3. 1. Percentage distribution of healthcare institutions has been attended in the last 3 months in Turkey by gender (%)

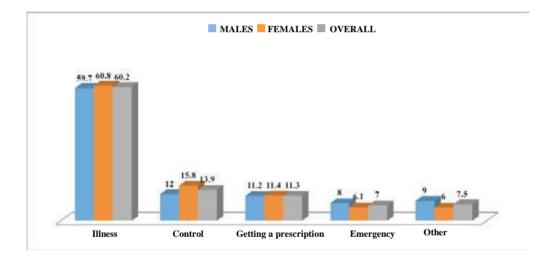


Figure 3.2. Reasons for attendance to a healthcare facility in the last 3 months in Turkey (%)

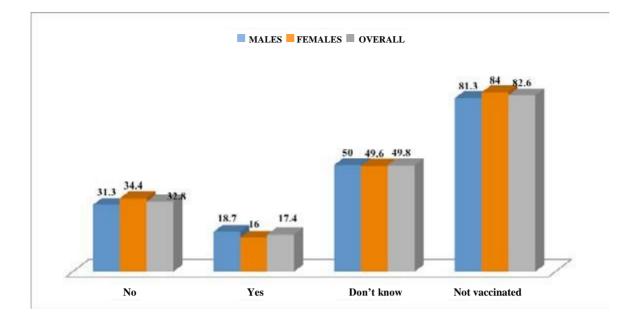


Figure 3.3. Hepatitis vaccination in Turkey by gender (%)

2.1.1. Disability Status

Table 3.19. Distribution of prevalence of physical or mental disability (%), type of disability in Turkey by gender and having a report, TNHS 2017

		Males	5		Female	es		Overa	II
Physical and mental disability	N	%	95%CI	Ν	%	95%CI	Ν	%	95%CI
No	5541	95.8	95.1-96.4	6950	97.2	96.6-97.7	12491	96.5	96.1-96.9
Yes	285	4.2	3.6-4.9	212	2.8	2.3-3.4	497	3.5	3.1-3.9
TOTAL	5826	100	100-100	7162	100	100-100	12988	100	100-100
Type and cause of disability									
Visual impairment									
No	5766	99.1	98.7-99.3	7094	99	98.6-99.3	12860	99.1	98.8-99.3
Yes	60	0.9	0.7-1.3	68	1	0.7-1.4	128	0.9	0.7-1.2
TOTAL	5826	100	100-100	7162	100	100-100	12988	100	100-100
Hearing impairment									
No	5748	99	98.6-99.2	7100	99.3	99-99.5	12848	99.1	98.9-99.3
Yes	78	1	0.8-1.4	62	0.7	0.5-1	140	0.9	0.7-1.1
TOTAL	5826	100	100-100	7162	100	100-100	12988	100	100-100
Language and speech impairment									
No	5806	99.6	99.2-99.8	7153	99.9	98.8-100	12959	99.7	99.6-99.8
Yes	20	0.4	0.2-0.8	9	0.1	0-0.2	29	0.3	0.2-0.4
TOTAL	5826	100	100-100	7162	100	100-100	12988	100	100-100
Mental impairment									
No	5799	99.4	99.1-99.6	7142	99.7	99.4-99.8	12941	99.6	99.4-99.7
Yes	27	0.6	0.4-0.9	20	0.3	0.2-0.6	47	0.4	0.3-0.6
TOTAL	5826	100	100-100	7162	100	100-100	12988	100	100-100
Orthopedic impairment									
No	5705	98.3	97.9-98.7	7086	99	98.7-99.3	12791	98.7	98.4-98.9
Yes	121	1.7	1.3-2.1	76	1	0.7-1.3	197	1.3	1.1-1.6
TOTAL	5826	100	100-100	7162	100	100-100	12988	100	100-100
Psychological /emotional									
No	5818	99.8	99.5-99.9	7159	99.9	99.6-100	12977	99.9	99.7-99.9
Yes	8	0.2	0.1-0.5	3	0.1	0-0.4	11	0.1	0.1-0.3
TOTAL	5826	100	100-100	7162	100	100-100	12988	100	100-100
Long-term condition (chronic illness)									
No	5810	99.8	99.6-99.9	7155	99.9	99.8-100	12965	99.9	99.8-99.9
Yes	16	0.2	0.1-0.4	7	0.1	0-0.2	23	0.1	0.1-0.2
TOTAL	5826	100	100-100	7162	100	100-100	12988	100	100-100
Unclassified									
No	5816	99.9	99.7-99.9	7162	100	100-100	12978	99.9	99.8-100
Yes	10	0.1	0.1-0.3	-	-	-	10	0.1	0-0.2
TOTAL	5826	100	100-100	7162	100	100-100	12988	100	100-100

The distribution of the prevalence (%) of physical or mental disability and types of disability among individuals aged 15 years and over by gender is shown in Table 3.19 and Figure 3.4. As it seen in the table, the prevalence of having physical or mental disability among survey participants aged 15 years and over is 4.2% for males and 2.8% for females.

The percentage of those whose type of disability is visual impairment is 0.9% for males and 1% for females. The percentage of those whose type of disability is hearing impairment is 1% for males and 0.7% for females. The percentage of those whose type of disability is language and speech impairment is 0.4% for males and 0.1% for females. The prevalence of having mental impairment is 0.6% for males and 0.3% for females. The prevalence of having orthopedic impairment is 1.7% for males and 1% for females. The percentage of those who have psychological and emotional impairment is 0.2% for males and 0.1% for females. The prevalence of having chronic disease is 0.2% for males and 0.1% for females.

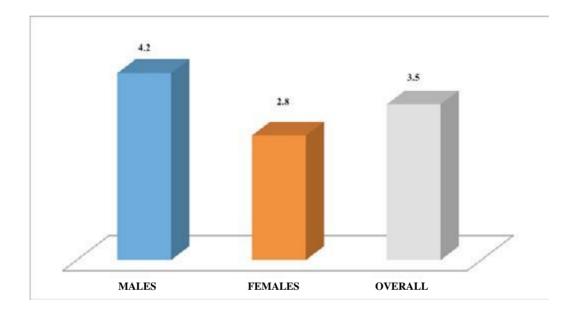


Figure 3.4. Prevalence of having physical or mental disability among individuals aged 15 years and over in Turkey by gender (%)

Table 3.20. Distribution of prevalence of physical or mental disability by type of disability and congenital or
acquired condition in Turkey by gender, TNHS 2017

		Male	es		Femal	es		Overa	ll
Physical and mental disability	Ν	%	95%CI	Ν	%	95%CI	Ν	%	95%CI
Type and cause of disability									
Visual impairment									
Congenital	10	26.5	13.2-46.2	11	14.5	6.8-28.2	21	20.3	11.9-32.4
Acquired	45	73.5	53.8-86.8	53	85.5	71.8-93.2	98	79.7	67.6-88.1
TOTAL	55	100	100-100	64	100	100-100	119	100	100-100
Hearing impairment									
Congenital	10	26.6	13.7-45.1	6	13.2	5.3-29.2	16	21.4	12.3-34.7
Acquired	68	73.4	54.9-86.3	49	86.8	70.8-94.7	117	78.6	65.3-87.7
TOTAL	55	100	100-100	64	100	100-100	119	100	100-100
Language and speech impair	ment								
Congenital	9	72.6	45.6-89.4	3	17.4	4.5-48.6	12	61.3	36.9-81.1
Acquired	8	27.4	10.6-54.4	5	82.6	51.4-95.5	13	38.7	18.9-63.1
TOTAL	55	100	100-100	64	100	100-100	119	100	100-100
Mental impairment									
Congenital	10	50.1	27.7-72.5	9	50.7	23.7-77.3	19	50.3	32.3-68.3
Acquired	12	49.9	27.5-72.3	7	49.3	22.7-76.3	19	49.7	31.7-67.7
TOTAL	55	100	100-100	64	100	100-100	119	100	100-100
Orthopedic impairment									
Congenital	18	22.9	13.3-36.5	11	20.6	10.7-36.2	29	22	14.5-31.9
Acquired	92	77.1	63.5-86.7	59	79.4	63.8-89.3	151	78	68.1-85.5
TOTAL	55	100	100-100	64	100	100-100	119	100	100-100
Psychological/ emotional									
Congenital	2	57.9	15.4-91.2	-	-	-	2	51.3	13.6-87.6
Acquired	3	42.1	8.8-84.6	2	100	100-100	5	48.7	12.4-86.4
TOTAL	55	100	100-100	64	100	100-100	119	100	100-100
Long-term condition (chronic	illness)								
Congenital	1	6.6	0.9-35.6	-	-	-	1	5	0.7-28.5
Acquired	14	93.4	64.4-99.1	5	100	100-100	19	95	71.5-99.3
TOTAL	55	100	100-100	64	100	100-100	119	100	100-100
Unclassified									
Congenital	2	27.2	5-72.3	-	-	-	2	27.2	5-72.3
Acquired	6	72.8	27.7-95	-	-	-	6	72.8	27.7-95
TOTAL	55	100	100-100	64	100	100-100	119	100	100-100

Table 3.20 shows the percentage of types of disability and congenital or acquired condition of the physical or mental disability among individuals aged 15 years and over by gender. Considering the physical or mental disability conditions, 26.5% of males and 14.5% of females have congenital visual impairment. 26.6% of males and 13.2% of females have congenital hearing impairment. 72.6% of males and 17.4% of females have congenital language and speech impairment. 50.1% of males and 50.7% of females have congenital mental impairment. 22.9% of males and 20.6% of females have congenital orthopedic impairment 57.9% of males have congenital physiological/emotional impairment. 6.6% of males have congenital long-term (chronic illness) disability.

2.1.2. Tobacco use

Table 3.21. Use of tobacco and tobacco products by gender in Turkey, TNHS 2017

		Males			Females			Overa	
Use of tobacco and tobacco products	Ν	%	95%CI	Ν	%	95%CI	N	%	95%CI
No, I have never smoked	1604	30.9	29.3-32.6	4851	68.4	66.9-69.8	6455	49.7	48.6-50.9
No, I quit smoking	1557	21.9	20.6-23.2	901	12.2	11.1-13.5	2458	17.1	16.2-18
Yes	2664	47.2	45.5-48.9	1409	19.4	18.2-20.6	4073	33.2	32.1-34.3
TOTAL	5825	100	100-100	7161	100	100-100	12986	100	100-100
Manufactured cigarette									
No	151	6	4.8-7.5	50	4.4	2.8-6.9	201	5.5	4.5-6.8
Yes	2513	94	92.5-95.2	1359	95.6	93.1-97.2	3872	94.5	93.2-95.5
TOTAL	2664	100	100-100	1409	100	100-100	4073	100	100-100
Hand-rolled cigarettes									
No	2390	89.8	88.1-91.3	1307	92.2	89.8-94	3697	90.5	89.1-91.7
Yes	274	10.2	8.7-11.9	102	7.8	6-10.2	376	9.5	8.3-10.9
TOTAL	2664	100	100-100	1409	100	100-100	4073	100	100-100
Hookah									
No	2519	93.1	91.6-94.3	1383	96.8	94.3-98.2	3902	94.2	93-95.2
Yes	145	6.9	5.7-8.4	26	3.2	1.8-5.7	171	5.8	4.8-7
TOTAL	2664	100	100-100	1409	100	100-100	4073	100	100-100
Tobacco pipe									
No	2644	99	98.1-99.5	1401	99.2	97.9-99.7	4045	99.1	98.4-99.4
Yes	20	1	0.5-1.9	8	0.8	0.3-2.1	28	0.9	0.6-1.6
TOTAL	2664	100	100-100	1409	100	100-100	4073	100	100-100
Cigar	2620	09.4	07 E 00	1401	00.2	07 0 00 7	4020	09.6	07.0.00 /
No Yes	2629 35	98.4 1.6	97.5-99 1-2.5	1401 8	99.2 0.8	97.9-99.7	4030 43	98.6 1.4	97.9-99.1 0.9-2.1
TOTAL	2664	1.0 100	1-2.5 100-100	。 1409	100	0.3-2.1 100-100	43 4073	1.4 100	100-100
Frequency of use of tobacco	2004	100	100-100	1409	100	100-100	4075	100	100-100
and tobacco products									
MANUFACTURED CIGARETTE									
Every day	2260	89.4	87.7-91	1078	79	76.2-81.5	3338	86.3	84.8-87.7
Occasionally/rarely	253	10.6	9-12.3	281	21	18.5-23.8	534	13.7	12.3-15.2
TOTAL	2513	100	100-100	1359	100	100-100	3872	100	100-100
HAND-ROLLED CIGARETTES									
Every day	192	71.7	64.1-78.3	67	61.4	46.9-74.1	259	69.2	62.4-75.3
Occasionally/rarely	82	28.3	21.7-35.9	35	38.6	25.9-53.1	117	30.8	24.7-37.6
TOTAL	274	100	100-100	102	100	100-100	376	100	100-100
НООКАН									
Every day	7	4.6	1.8-11.2	2	8.1	1.5-33.1	9	5.1	2.3-11.1
Occasionally/rarely	138	95.4	88.8-98.2	24	91.9	66.9-98.5	162	94.9	88.9-97.7
TOTAL	145	100	100-100	26	100	100-100	171	100	100-100
TOBACCO PIPE				4	25.2	2 4 70		6.2	0 0 0 0 0
Every day	-	-	-	1	25.2	3.4-76	1	6.3	0.9-33.8
Occasionally/rarely	20	100	100-100	7	74.8	24-96.6	27	93.7	66.2-99.1
TOTAL	20	100	100-100	8	100	100-100	28	100	100-100
CIGAR Every day	2	6	1 8-10 2	1	2 ⊑ 2	3.4-76	4	9.3	3.1-24.9
Occasionally/rarely	3 32	6 94	1.8-18.2 81.8-98.2	1 7	25.2 74.8	24-96.6	4 39	9.3 90.7	3.1-24.9 75.1-96.9
TOTAL	32 35	94 100	100-100	8	74.8 100	24-96.6 100-100	39 43	90.7 100	100-100
IUIAL	- 35	100	100-100	0	100	100-100	43	100	100-100

Table 3.21 and Figure 3.5 show the use of tobacco and tobacco products among individuals aged 15 years and over by gender. As it seen in the table, in consideration of use of tobacco and tobacco products, the percentage of currently smokers who smoke any tobacco product is 33.2% overall, 47.2% for males and 9.4% for females. Among used tobacco products, the prevalence of use manufactured cigarettes is 94% for males and 95.6% for females, whereas 10.2% of males and 7.8% of females reported that they smoke hand-rolling cigarette. Among tobacco smokers group (4 073 respondents), 6.9% of males and 3.2% of females percentage use hookah, 1% of males and 0.8% of females use tobacco pipe, 1.6% of males and 0.8% of females use cigar.

In TNHS 2017 study, in terms of the frequency of use tobacco and tobacco products, the percentage of daily cigarette smokers is 89.4% in males and 79% in females. The percentage of smokers who use hookah occasionally/rarely is 95.4% in males and 91.9% in females. The percentage of smokers who use tobacco pipe occasionally/rarely is 100% in males and 74.8% in females. The percentage of smokers who smoke cigar occasionally/rarely was reported as 94% in males and 74.8% in females. According to the data from TURKSTAT Turkey Health Survey 2016, the percentage of occasional tobacco users was 4.0% for males, 4.1% for females, and 4.1% overall. According to the data obtained from the same survey, the percentage of non-smokers was found as 36.6% for males, 75.9% for females, and 56.5% overall.

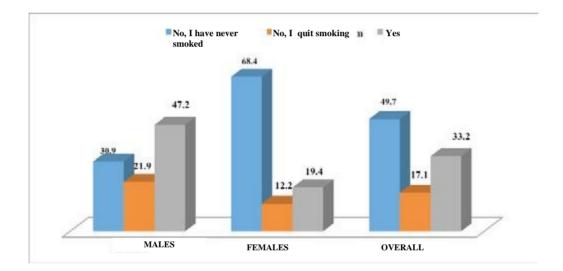


Figure 3.5. Percentage distribution of use of tobacco and tobacco products among individuals aged 15 years and over in Turkey by gender (%)

inside their areas (in noine		acej m	I UIKEY DY SC	inder, m						
		Males			Females			Overall		
Smoking cigarette/cigar/ tobacco pipe in home and at workplace	Ν	%	95%CI	Ν	%	95%CI	Ν	%	95%CI	
Yes	2515	47.9	46.1-49.6	2838	44.7	43.1-46.3	5353	46.3	45.1-47.4	
No	3310	52.1	50.4-53.9	4323	55.3	53.7-56.9	7633	53.7	52.6-54.9	
TOTAL	5825	100	100-100	7161	100	100-100	12986	100	100-100	

Table 3.22. Percentage distribution of respondents who say that smoking cigarette/cigar/tobacco pipe occurs inside their areas (in home, workplace) in Turkey by gender, TNHS 2017

The prevalence of smoking cigarette/cigar/tobacco pipe inside home and in the workplace is 47.9% for males and 44.7% for females (Table 3.22).

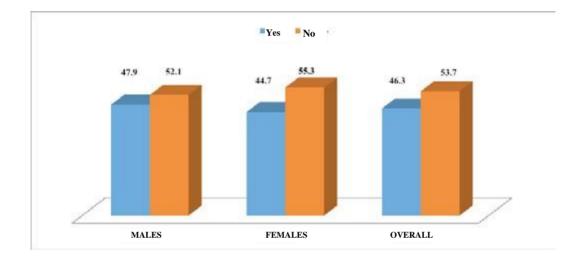


Figure 3.6. Percentage of individuals aged 15 years and over who say that smoking cigarette/cigar/tobacco pipe occurs inside their areas (home, workplace) in Turkey by gender, %

2.1.3. Physical Activity

For the analysis of physical activity data, existing World Health Organization guidelines were followed in the study. World Health Organization recommends that adults should do at least one of the following throughout a week, including work-, transportation- and leisure time-related activities.

- ✓ 150 minutes of moderate-intensity physical activity, or
- ✓ 75 minutes of vigorous-intensity aerobic activity, or
- ✓ An equivalent combination of moderate- and vigorous-intensity physical activity achieving at least 600 MET-minutes.

Table 3.23. Distribution of status of meeting the World Health Organization's recommendations on physicalactivity for health in Turkey, TNHS 2017

		Males	;		Female	S		Total	
Physical activity	Ν	%	95%CI	N	%	95%CI	N	%	95%CI
Age group									
15-17									
Criteria Not Met	23	16.6	10.1-26.1	63	42.3	33.8-51.4	86	28.2	22.5-34.6
Criteria Are Met	132	83.4	73.9-89.9	85	57.7	48.6-66.2	217	71.8	65.4-77.5
TOTAL	155	100	100-100	148	100	100-100	303	100	100-100
18-29									
Criteria Not Met	197	21.5	18.4-25	598	45.1	41.6-48.6	795	33.2	30.8-35.8
Criteria Are Met	715	78.5	75-81.6	645	54.9	51.4-58.4	1360	66.8	64.2-69.2
TOTAL	912	100	100-100	1243	100	100-100	2155	100	100-100
30-44									
Criteria Not Met	537	26.1	23.8-28.5	980	43.8	41.3-46.4	1517	34.9	33.1-36.7
Criteria Are Met	1409	73.9	71.5-76.2	1255	56.2	53.6-58.7	2664	65.1	63.3-66.9
TOTAL	1946	100	100-100	2235	100	100-100	4181	100	100-100
45-59									
Criteria Not Met	380	27.1	24.4-30	752	43.2	40-46.5	1132	35.1	33-37.3
Criteria Are Met	1015	72.9	70-75.6	960	56.8	53.5-60	1975	64.9	62.7-67
TOTAL	1395	100	100-100	1712	100	100-100	3107	100	100-100
60-69									
Criteria Not Met	230	29.7	25.8-34.1	546	55.6	51.6-59.6	776	43.2	40.3-46.2
Criteria Are Met	564	70.3	65.9-74.2	423	44.4	40.4-48.4	987	56.8	53.8-59.7
TOTAL	794	100	100-100	969	100	100-100	1763	100	100-100
70 years and over									
Criteria Not Met	294	47.1	42.4-51.8	654	77.3	73.2-80.9	948	64.5	61.3-67.7
Criteria Are Met	329	52.9	48.2-57.6	201	22.7	19.1-26.8	530	35.5	32.3-38.7
TOTAL	623	100	100-100	855	100	100-100	1478	100	100-100
≥15									
Criteria Not Met	1661	26.1	24.7-27.6	3593	47.8	46.2-49.4	5254	37	35.9-38.1
Criteria Are Met	4164	73.9	72.4-75.3	3569	52.2	50.6-53.8	7733	63	61.9-64.1
TOTAL	5825	100	100-100	7162	100	100-100	12987	100	100-100
≥19		a = 4		o /= ·				0 - 0	
Criteria Not Met	1622	27.1	25.6-28.6	3471	48	46.4-49.6	5093	37.6	36.5-38.7
Criteria Are Met	3950	72.9	71.4-74.4	3418	52	50.4-53.6	7368	62.4	61.3-63.5
TOTAL	5572	100	100-100	6889	100	100-100	12461	100	100-100

Table 3.23 and Figure 3.7 present the distribution status of meeting WHO's recommendations on physical activity for health. As can be seen in the table, the distribution of percentage of individuals not meeting the WHO's recommendations on physical activity for health among the population of Turkey is 37% in the group aged 15 years and over and 37.6% in the group aged 19 years and over. When these rates were evaluated in terms of gender, it was found that while 26.1% of males aged 15 years and over do not meet the criteria, this rate is 47.8% for females. In the group aged 19 years and over, these rates are 27.1% for males and 48% for females, respectively. The percentage of individuals meeting the WHO recommendations on physical activity for health decreases as the age group increases (age group of 15-17 years: 71.8%, age group of 18-29 years: 66.8%, age group of 30-44 years: 65.1%, age group of 45-59 years: 64.9%, age group of 60-65 years: 56.8%, and age group of 70 years and over: 35.5%).

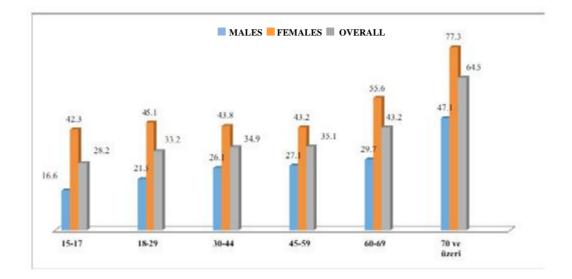


Figure 3.7. Distribution of percentage of respondents not meeting the World Health Organization's recommendations on physical activity for health in Turkey by age groups

 Table 3.24. Distribution of physical activity levels according to the recommendations of the Global Physical

 Activity Questionnaire (GPAQ), TNHS 2017

		Male	S		Femal	es		Overa	ll
GPAQ Assessment	N	%	95%CI	N	%	95%CI	N	%	95%CI
Age group									
15-17									
Low	34	22.9	15.4-32.6	70	48.8	39.9-57.8	104	34.5	28.5-41.2
Moderate	52	34.9	26.5-44.3	63	39.5	31.3-48.5	115	37	30.9-43.5
High	69	42.3	33.4-51.6	15	11.7	6.8-19.3	84	28.5	22.9-34.8
TOTAL	155	100	100-100	148	100	100-100	303	100	100-100
18-29									
Low	259	27.7	24.3-31.4	672	51	47.4-54.5	931	39.3	36.7-41.9
Moderate	279	30.5	26.9-34.4	414	35.4	32.1-38.9	693	33	30.5-35.6
High	374	41.8	37.7-45.9	157	13.6	11.1-16.6	531	27.8	25.2-30.4
TOTAL	912	100	100-100	1243	100	100-100	2155	100	100-100
30-44		200				100 100		200	100 100
Low	650	31.9	29.5-34.5	1113	49.4	46.9-52	1763	40.6	38.8-42.4
Moderate	542	28.2	25.7-30.7	791	35	32.6-37.4	1333	31.5	29.8-33.3
High	754	39.9	37.2-42.7	331	15.6	13.7-17.6	1085	27.9	26.1-29.7
TOTAL	1946	100	100-100	2235	100	100-100	4181	100	100-100
45-59									
Low	442	32	29-35.1	852	47.8	44.5-51.2	1294	39.9	37.7-42.1
Moderate	477	36	32.8-39.2	564	35.1	31.6-38.8	1041	35.5	33.2-38
High	476	32	29.1-35.2	296	17.1	15-19.4	772	24.6	22.7-26.6
TOTAL	1395	100	100-100	1712	100	100-100	3107	100	100-100
60-69									
Low	265	34.9	30.7-39.3	596	61.5	57.5-65.3	861	48.7	45.8-51.7
Moderate	346	43.2	39-47.6	281	30.1	26.4-34	627	36.4	33.6-39.3
High	183	21.9	18.7-25.4	92	8.4	6.7-10.6	275	14.9	13.1-16.9
TOTAL	794	100	100-100	969	100	100-100	1763	100	100-100
70 years and over									
Low	320	50.9	46.2-55.6	680	79.9	75.9-83.4	1000	67.7	64.5-70.7
Moderate	234	38.4	33.9-43.1	145	16.8	13.5-20.7	379	25.9	23.1-29.0
High	69	10.7	8.2-13.9	30	3.3	2.1-5	99	6.4	5.1-8.1
TOTAL	623	100	100-100	855	100	100-100	1478	100	100-100
≥15									
Low	1970	31.7	30.2-33.3	3983	53.1	51.5-54.7	5953	42.4	41.3-43.6
Moderate	1930	32.8	31.3-34.5	2258	33.4	31.9-34.9	4188	33.1	32-34.2
High	1925	35.5	33.8-37.2	921	13.5	12.5-14.7	2846	24.4	23.4-25.5
TOTAL	5825	100	100-100	7162	100	100-100	12987	100	100-100
≥19				-					
Low	1911	32.5	30.9-34.1	3849	53.3	51.7-54.9	5760	43	41.8-44.1
Moderate	1840	32.4	30.8-34.1	2139	32.7	31.2-34.3	3979	32.6	31.5-33.7
High	1821	35.1	33.4-36.8	901	14	12.9-15.2	2722	24.5	23.4-25.6
TOTAL	5572	100	100-100	6889	100	100-100	12461	100	100-100

The distribution of physical activity levels according to the recommendations of the Global Physical Activity Questionnaire (GPAQ) is presented in Table 3.24 and Figure 3.8. As it seen in Table 3.24, the distribution of physical activity levels according to the recommendations of the Global Physical Activity Questionnaire (GPAQ) is as below: in the age group of 15-17 years, the percentage of individuals with high level of physical activity is 42.3% for males and 11.7% for females; in the age group of 18-29 years, the percentage of individuals with high level of physical activity is 41.8% for males and 13.6% for females; in the age group of 30-44 years, the percentage of individuals with high level of physical activity is 39.9% for males 15.6% for females; in the age group of 45-59 years, the percentage of individuals with high level of physical activity is 21.9% for males and 8.4% for females; in the age group of 70 years and over, the percentage of individuals with high level of physical activity is 10.7% for males and the 3.3% for females.

In the group aged 15 years and over, the percentage of individuals with high level of physical activity is 35.5% for males, 13.5% for females and 24.4% overall.

In the group aged 19 years and over, the percentage of individuals with high level of physical activity is 35.1% for males, 14% for females and 24.5% overall. Among the population aged 15 years and over, 42.4% of the population in engaged in low level of physical activity, 33.1% is engaged in moderate level of physical activity, and 24.4% is engaged in high level of physical activity. These rates are 43%, 32.6% and 24.5%, respectively for the group aged 19 years and over.

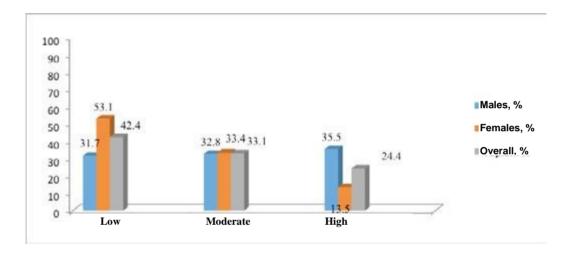


Figure 3.8. Distribution of physical activity levels by the recommendations of the Global Physical Activity Questionnaire (GPAQ) in the groups aged 15 years and over in Turkey, TNHS 2017

		Male	25		Female	es	Overall			
Age group	Ν	x	95%CI	Ν	x	95%CI	Ν	x	95%CI	
15-17	150	126.6	107.8-145.3	138	77.2	61.4-93	288	104.4	91.8-117	
18-29	860	207.4	189.3-225.5	1114	86.6	77.3-95.9	1974	148.6	137.8-159.4	
30-44	1766	231.5	216.5-246.5	1995	101.6	94.2-109	3761	167.9	159-177	
45-59	1273	197.7	182.1-213.3	1517	108.0	98.6-117.4	2790	153.4	144-162.9	
60-69	718	148.6	129-168.2	773	77.9	69.5-86.3	1491	113.9	103-124.9	
≥70	490	89.1	75.3-103	464	52.1	44.5-59.8	954	71.5	63.2-79.9	

Table 3.25. Daily average total physical activity status in Turkey (minutes), TNHS 2017

Table 3.25 shows the distribution of mean time (minutes) spent on total physical activity on average per day by gender and age groups. As it seen in the table, the mean time (minutes) spent on total physical activity on average per day is 126.6 minutes for males and 77.2 minutes for females in the age group 15-17 years; 207.4 minutes for males and 86.6 minutes for females in the age group of 18-29 years; 231.5 minutes for males and 101.6 minutes for females in the age group of 45-59 years; 148.6 minutes for males and 77.9 minutes for females in the age group 60-69 years; and 89.1 minutes for males and 52.1 minutes for females in the age group of \geq 70 years.

Table 3.26. Distribution of mean, median, 25th and 75th interquartile range of time (minutes) of daily physical activity in Turkey by gender, TNHS 2017

		Males			Female	S		Overa	II
Age group	Мес	dian	IQR (25-75)	Me	an	IQR* (25-75)	Med	lian	IQR (25-75)
15-17	100	0.7	55-165	4	5	20-100	80	C	30-140
18-29	12	20	60-300	4	5	20-100	7:	5	30-180
30-44	12	20	45-370	6	0	30-120	7:	5	30-230
45-59	9	0	40-300	6	0	30-131.9	70	כ	30-180
60-69	6	0	30-165	4	0	20-90	60	כ	30-120
≥70	4	5	25-92.9	3	0	18.6-60	30	כ	20-75
≥15	10)5	40-270	4	5	25-115	6	כ	30-180
≥19	10)5	40-300	46	.8	30-120	6	כ	30-180
		Males			Females			Overall	
	Ν	x	95%CI	Ν	x	95%CI	Ν	x	95%CI
≥15	5257	197.0	188.9-205.1	6001	93.1	88.9-97.3	11258	146.4	141.7-151.3
≥19	5015	202.0	193.4-210.7	5746	95.3	90.8-99.8	10761	150.2	145.0-155.3

* Interquartile range.

Table 3.26 presents the distribution the median, 25^{th} and 75^{th} quartiles of daily total physical activity by gender. As seen in the table, the median time spent on total physical activity by the population aged ≥ 15 years was found as 60 minutes. This figure is on average 105 minutes for males (Interquartile range 40^{th} - 270^{th}) and on average 45.0 minutes for females (Interquartile range 25^{th} -115th).

Median time (minutes) spent on physical activity on average per day was 60 minutes for the population in the age group \geq 19 years. This figure was on average 105 minutes (Interquartile range 40th -300th) for males and 46.8 minutes (Interquartile range 30th -120th) for females.

TNHS 2017									
AGE GROUP	Males			Females			Overall		
	Ν	x	95%CI	Ν	x	95%CI	Ν	x	95%CI
15-17	36	114.7	72.0-157.4	26	75.3	38-112.6	62	98.8	69.2-128.6
18-29	352	266.6	236.4-296.9	215	140.4	110.9-169.9	567	227.5	204.5-250.5
30-44	911	282.4	263.1-301.7	579	166.2	150.2-182.2	1490	242.8	228.4-257.3
45-59	556	284.0	257.8-310.1	440	163.1	143.1-183.0	996	234.5	215.3-253.7
60-69	201	261.3	219.0-303.5	141	140.3	118.4-162.2	342	213.8	185.2-242.5
≥70	68	136.2	105.9-166.6	56	91.5	51.3-131.6	124	116.3	90.3-142.2

 Table 3.27. Distribution of daily work-related physical activity (minutes) in Turkey by age groups and gender,

 TNHS 2017

Table 3.27 shows the distribution of time (minutes) spent on work-related physical activity per day by age groups and gender. Mean time (minutes) spent on work-related physical activity on average per day is 114.7 minutes for males and 75.3 minutes for females in the age group of 15-17 years; 266.6 minutes for males and 140.4 minutes for females in the age group of of 18-29 years; 282.4 for males and 166.2 minutes for females in the age group of 30-44 years; 284 minutes for males and 163.1 minutes for females in the age group of 45-59 years; 261.3 minutes for males and 140.3 minutes for females in the age group of 60-69 years; 136.2 minutes for males and 91.5 minutes for females in the age group of \geq 70 years.

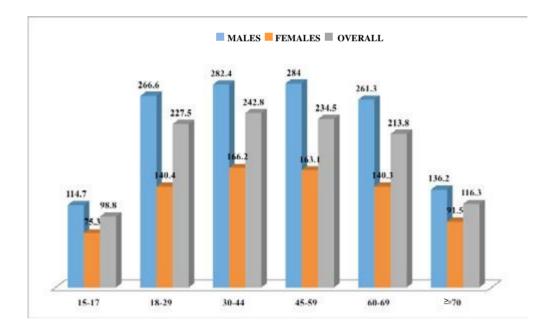


Figure 3.9. Distribution of time (minutes) spent on work-related physical activity per day in Turkey by age groups and gender

AGE GROUP	Males			Females			Overall		
	Ν	x	95%CI	Ν	x	95%CI	Ν	x	95%CI
≥15	2124	269.1	255.9-282.4	1457	152.3	141.6-163.1	3581	227.4	217.7-237.1
≥19	2065	275.7	262.1-289.3	1418	156.6	145.5-167.7	3483	233.3	223.3-243.3

Table 3.28 shows the distribution of time (minutes) spent on work-related physical activity per day among individuals aged 15 and 19 years and over. The mean time (minutes) spent on work-related activity on average per day in the age group of \geq 15 years is 269.1 minutes for males and 152.3 minutes for females. The mean time (minutes) spent on work-related activity on average per day in the group aged \geq 19 years is 275.7 minutes for males and 156.6 minutes for females.

Table 3.29. Distribution of mean daily transport-related physical activity (minutes) in Turkey by age groupsand gender, TNHS 2017

AGE GROUP	Males			Females			Overall		
	Ν	x	95%CI	Ν	x	95%CI	Ν	x	95%CI
15-17	141	42.8	37.1-48.6	130	36.3	29.7-42.9	271	39.9	35.6-44.2
18-29	782	49.7	44.9-54.6	1077	41.6	36.5-46.8	1859	45.7	44.2-49.2
30-44	1529	50.4	47.1-53.6	1867	38.4	39.3-40.4	3396	44.3	42.4-46.2
45-59	1154	51.2	47.9-54.6	1445	37.6	35.8-39.4	2599	44.3	42.4-46.1
60-69	674	54.2	49.1-59.1	729	39.5	36.2-42.9	1403	46.9	43.9-49.9
≥70	474	46.9	38.2-55.7	446	39.6	29.5-35.8	920	40.1	35.2-45

The mean time (minutes) spent on transport-related physical activity on average per day is 42.8 minutes for males and 36.3 minutes for females in the age group of 15-17 years; 49.7 minutes for males and 41.6 minutes for females in the age group of 18-29 years; 50.4 minutes for males and 38.4 minutes for females in the age group of 30-44 years; 51.2 minutes for males and 37.6 minutes for males in the age group of 45-59 years; 54.2 minutes and 39.5 minutes for males in the age group of 60-69 years; 46.9 minutes for males and 39.6 minutes for males in the age group of \geq 70 years (Table 3.29).

Table 3.30.	Distribution of	mean daily transport-re	elated physical act	tivity (minutes)	in Turkey by gender,
TNHS 2017					

AGE GROUP	Males			Females			Overall		
	Ν	x	95%CI	Ν	x	95%CI	Ν	x	95%CI
≥15	4754	50.1	48.1-52.1	5694	38.9	37.2-40.6	10448	44.5	43.2-45.8
≥19	4526	50.5	48.4-52.6	4551	39.1	37.3-40.9	9977	44.8	43.4-46.2

Mean time (minutes) spent on transport-related physical activity on average per day in the group aged \geq 15 years is 44.5 minutes; 50.1 minutes for males and 38.9 minutes for females. Mean time (minutes) spent on transport-related physical activity on average per day in the group aged \geq 19 years is 44.85 minutes; 50.5 minutes for males and 39.1 minutes for females. This mean figure is the highest in the age group of 60-69 years (Table 3.30).

Table 3.31. Distribution of mean daily recreation and leisure-time - related physical activity (minutes) in Turkey
by age groups and gender, TNHS 2017

AGE GROUP	Males			Females			Overall		
	Ν	x	95%CI	Ν	x	95%CI	Ν	x	95%CI
15-17	102	88.1	75.8-100.4	52	65.6	51-80.1	154	80.3	70.7-89.9
18-29	434	100.5	91.1-109.9	273	69.9	60.7-79.1	707	90.4	83.3-97.5
30-44	652	102.2	93.3-111.2	482	72.8	63.9-81.6	1134	90.7	84.2-97.3
45-59	393	94.1	83.6-104.6	367	86.3	71.9-100.6	760	90.6	82.1-99.2
60-69	210	106.6	88.6-124.6	174	65.2	54.9-75.5	384	87.5	76.4-98.6
≥70	118	95.2	72.6-117.7	65	61.9	49.6-74.1	183	84	68.2-99.9

Table 3.31 shows the distribution of time (minutes) spent on recreation and leisure time-related physical activity overage per day. As it seen in the table, the mean time (minutes) spent on recreation and leisure time-related physical activity on average per day is 88.1 minutes for males and 65.6 minutes for females in the age group of 15-17 years; 100.5 minutes for males and 69.9 minutes for females in the age group of 18-29 years; 102.2 minutes for males and 72.8 minutes for females in the age group of 30-44 years; 94.1 minutes for males and 86.3 minutes for females in the age group of 45-59 years; 106.6 minutes and 65.2 minutes for males in the age group of 60-69 years; 95.2 minutes for males and 61.9 minutes for females in the age group \geq 70 years (Table 3.29).

Table 3.32. Distribution of mean daily recreation and leisure time - related physical activity (minutes) in	
Turkey by gender, TNHS 2017	

AGE GROUP	Males			Females			Overall		
	Ν	x	95%CI	Ν	x	95%CI	Ν	x	95%CI
≥15	1909	98.9	94-103.9	1413	73.4	68.3-78.6	3322	89.3	85.6-92.9
≥19	1747	99.6	94.1-105.1	1326	74.3	68.8-79.8	3073	89.9	85.9-93.9

In the distribution of mean daily recreation and leisure time-related physical activity by age groups and gender, individuals aged 15 years and over engage in any recreation and leisure-time - related physical activity for 89.3 minutes per day. This figure is on average 98.9 minutes for males and 73.4 minutes for females. It was determined that individuals in the group aged 19 years and over engage in any recreation and leisure time-related physical activity for 89.9 minutes per day overall, males engage in recreation and leisure time - related physical activity for 89.9 minutes for 74.3 minutes on average (Table 3.32).

Table 3.33. Distribution of mean time (minutes) spent sitting or laying down per day in Turkey by age groups
and gender, TNHS 2017

AGE GROUP	Males			Females			Overall		
	Ν	x	95%CI	Ν	x	95%CI	Ν	x	95%CI
15-17	155	486.9	443.7-529.9	148	504.5	467.4-541.5	303	494.8	465.9-523.6
18-29	911	378.1	362.2-393.9	1243	391.6	375.7-407.3	2154	384.7	373.5-395.9
30-44	1946	353.8	342.1-365.3	2235	309.7	300.3-319.1	4181	331.9	324.5-339.4
45-59	1393	370.0	357.4-382.5	1712	331.0	319.7-342.2	3105	350.5	342.0-359.1
60-69	794	412.9	394.9-430.7	969	409.2	390.6-427.8	1763	410.9	398.0-423.8
≥70	623	493.0	471.3-514.7	851	562.9	538.8-587.1	1474	533.3	516.3-550.2

Table 3.33 presents the time spent sitting or laying down on average per day is 486.9 minutes for males and 504.5 minutes for females in the age group of 15-17 years; 378.1 minutes for males and 391.6 minutes for females in the age group of 18-29 years; 353.8 minutes for males and 309.7 minutes for females in the age group of 30-44 years; 370 minutes for males and 331 minutes for females in the age group of 45-59 years; 412.9 minutes for males and 409.2 minutes for females in the age group of 60-69 years; 493 minutes for males and 562.9 minutes for females in the age group of 70 years and over.

AGE GROUP	Males				Femal	es	Overall			
	Ν	īx	95%CI	Ν	īx	95%CI	Ν	īx	95%CI	
≥15	5822	384.5	377.3-391.6	7158	374.1	367.3-381.0	12980	379.3	374.3-384.2	
≥19	5569	376.7	369.6-383.7	6885	363.7	356.8-370.6	12454	370.2	365.2-375.1	

Table 3.34. Distribution of time (minutes) spent sitting or laying down per day in Turkey by gender, TNHS2017

As it seen in the Table 3.34, males in the group aged 15 years and over group spend sitting or lying down on average 384.5 minutes per day and females spend on average 374.1 minutes per day. These figures are 376.7 minutes for males and 363.7 minutes for females in the group aged 19 years and over.

Table 3.35. Distribution of engaging in physical activity at any work in Turkey by gender and age groups (%),	
TNHS 2017	

		Males			Female	S		Overal	
Physical activity	Ν	%	95%CI	N	%	95%CI	N	%	95%CI
Age group									
15-17									
Not engaging	120	76.3	67.5-83.3	122	80.2	71.5-86.7	242	78	72-83.1
Engaging	36	23.7	16.7-32.5	26	19.8	13.3-28.5	62	22	16.9-28
TOTAL	156	100	100-100	148	100	100-100	304	100	100-100
18-29									
Not engaging	561	60.8	56.6-64.8	1031	82.2	79.1-84.8	1592	71.4	68.7-74
Engaging	352	39.2	35.2-43.4	215	17.8	15.2-20.9	567	28.6	26-31.3
TOTAL	913	100	100-100	1246	100	100-100	2159	100	100-100
30-44									
Not engaging	1039	51.2	48.4-53.9	1661	74.3	72-76.5	2700	62.6	60.7-64.5
Engaging	911	48.8	46.1-51.6	579	25.7	23.5-28	1490	37.4	35.5-39.3
TOTAL	1950	100	100-100	2240	100	100-100	4190	100	100-100
45-59									
Not engaging	845	60.5	57.2-63.7	1275	72.2	68.5-75.7	2120	66.3	63.9-68.7
Engaging	556	39.5	36.3-42.8	440	27.8	24.3-31.5	996	33.7	31.3-36.1
TOTAL	1401	100	100-100	1715	100	100-100	3116	100	100-100
60-69									
Not engaging	598	76.2	72.7-79.5	829	85.8	82.7-88.4	1427	81.2	78.9-83.3
Engaging	201	23.8	20.5-27.3	141	14.2	11.6-17.3	342	18.8	16.7-21.1
TOTAL	799	100	100-100	970	100	100-100	1769	100	100-100
70 years and over									
Not engaging	556	88.4	85.1-91.1	802	93.2	89.8-95.5	1358	91.2	88.9-93
Engaging	68	11.6	8.9-14.9	56	6.8	4.5-10.2	124	8.8	7-11.1
TOTAL	624	100	100-100	858	100	100-100	1482	100	100-100

As it seen in the Table 3.35, the percentage of individuals not engaging in physical activity at any work is 76.3% for males and 80.2% for females in the age group of 15-17 years. These figures for other age groups are as follows respectively: 60.8% for males and 82.2% for females in the age group of 18-29 years; 51.2% for males and 74.3% for females in the age group of 30-44 years; 60.5% for males and 72.2% for females in the age group of 45-59 years; 76.2% for males and 85.8% for females in the age group of 60-69 years; 88.4% for males and 93.2% for females in the age group of 70 years and over.

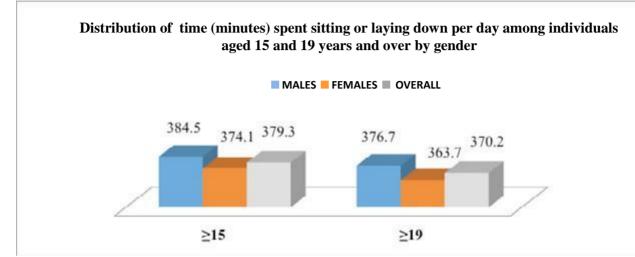


Figure 3.10. Distribution of time (minutes) spent sitting or laying down per day by age groups and gender

		Males			Female	es	Overall			
Physical activity	N	%	95%CI	N	%	95%CI	N	%	95%CI	
Age group										
15-17										
Not engaging	15	11.2	6.1-19.5	18	11.2	6.5-18.5	33	11.2	7.5-16.4	
Engaging	141	88.8	80.5-93.9	130	88.8	81.5-93.5	271	88.8	83.6-92.5	
TOTAL	156	100	100-100	148	100	100-100	304	100	100-100	
18-29										
Not engaging	131	13.5	11.1-16.3	169	12.1	10.1-14.4	300	12.8	11.2-14.6	
Engaging	782	86.5	83.7-88.9	1077	87.9	85.6-89.9	1859	87.2	85.4-88.8	
TOTAL	913	100	100-100	1246	100	100-100	2159	100	100-100	
30-44										
Not engaging	421	20.3	18.3-22.5	373	16.5	14.7-18.4	794	18.4	17-19.9	
Engaging	1529	79.7	77.5-81.7	1867	83.5	81.6-85.3	3396	81.6	80.1-83	
TOTAL	1950	100	100-100	2240	100	100-100	4190	100	100-100	
45-59										
Not engaging	247	19.2	16.7-22	270	14.2	12.3-16.2	517	16.7	15.1-18.4	
Engaging	1154	80.8	78-83.3	1445	85.8	83.8-87.7	2599	83.3	81.6-84.9	
TOTAL	1401	100	100-100	1715	100	100-100	3116	100	100-100	
60-69										
Not engaging	125	16.3	13.2-20	241	24.2	21-27.7	366	20.4	18.1-22.9	
Engaging	674	83.7	80-86.8	729	75.8	72.3-79	1403	79.6	77.1-81.9	
TOTAL	799	100	100-100	970	100	100-100	1769	100	100-100	
70 years and over										
Not engaging	150	25.3	21.3-29.7	412	50.2	45.5-54.9	562	39.7	36.4-43.1	
Engaging	474	74.7	70.3-78.7	446	49.8	45.1-54.5	920	60.3	56.9-63.6	
TOTAL	624	100	100-100	858	100	100-100	1482	100	100-100	

Table 3.36. Distribution of engagement in transport-related	physical activity in Turl	key by gender and age
groups (%), TNHS 2017		

Table 3.36 presents the distribution (%) of participants who are classified as not engaging in transport-related physical activity by age group and gender. Percentages of individuals not engaging in transport-related physical activity are as follows: 11.2% for males and 11.2% for females in the age group of 15-17 years; 13.5% for males and 12.1% for females in the age group of 18-29 years, 20.3% for males and 16.5% for females in the age group of 30-44 years; 19.2% for males and 14.2% for females in the age group of 45-59 years; 16.3% for males and 24.2% for females in the age group of 60-69 years; 25% for males and 50.2% for females in the age group of 70 years and over.

Table 3.37. Distribution of engagement in daily transport-related physical activity in Turkey by gender and
age groups (%), TNHS 2017

			Males			Female	S	Overall			
	Age group	Ν	%	95%CI	N	%	95%CI	N	%	95%CI	
≥15											
	Not engaging	1089	17.7	16.5-19	1483	18	17-19.2	2572	17.9	17-18.7	
	Engaging	4754	82.3	81-83.5	5694	82	80.8-83	10448	82.1	81.3-83	
	TOTAL	5843	100	100-100	7177	100	100-100	13020	100	100-100	
≥19											
	Not engaging	1063	18.3	17.1-19.6	1452	18.8	17.6-19.9	2515	18.5	17.7-19.4	
	Engaging	4526	81.7	80.4-82.9	5451	81.2	80.1-82.4	9977	81.5	80.6-82.3	
	TOTAL	5589	100	100-100	6903	100	100-100	12492	100	100-100	

As it seen in the Table 3.37, the percentages of individuals not engaging in daily transport-related physical activity are as follows: 17.7% for males and 18% for females in the group aged \geq 15 years; 18.3% for males and 18.8% for females in the group aged \geq 19 years.

Table 3.38. Distribution of engagement in recreation and leisure-related physical activity in Turkey by age groups and gender (%), TNHS 2017

		Male	s		Female	s		Overa	I
Physical activity	Ν	%	95%CI	N	%	95%CI	N	%	95%CI
Age group									
15-17									
Not engaging	54	39.1	30-48.9	96	60.4	51.1-69.1	150	48.6	42.1-55.2
Engaging	102	60.9	51.1-70	52	39.6	30.9-48.9	154	51.4	44.8-57.9
TOTAL	156	100	100-100	148	100	100-100	304	100	100-100
18-29									
Not engaging	479	51.3	47.2-55.4	973	75.8	72.5-78.8	1452	63.5	60.8-66.1
Engaging	434	48.7	44.6-52.8	273	24.2	21.2-27.5	707	36.5	33.9-39.2
TOTAL	913	100	100-100	1246	100	100-100	2159	100	100-100
30-44									
Not engaging	1298	67.6	65-70.1	17.58	78.8	76.6-80.8	3056	73.2	71.5-74.8
Engaging	652	32.4	29.9 - 35	482	21.2	19.2-23.4	1134	26.8	25.2-28.5
TOTAL	1950	100	100-100	2240	100	100-100	4190	100	100-100
45-59									
Not engaging	1008	72	68.8-75	1348	77.6	74.8-80.2	2356	74.8	72.7-76.8
Engaging	393	28	25-31.2	367	22.4	19.8-25.2	760	25.2	23.2-27.3
TOTAL	1401	100	100-100	1715	100	100-100	3116	100	100-100
60-69									
Not engaging	589	76.2	72.5-79.5	796	81.2	78-84.1	1385	78.8	76.4-81
Engaging	210	23.8	20.5-27.5	174	18.8	15.9-22	384	21.2	19-23.6
TOTAL	799	100	100-100	970	100	100-100	1769	100	100-100
70 years and over									
Not engaging	506	80.3	76.2-83.9	793	92.8	90.5-94.6	1299	87.6	85.3-89.5
Engaging	118	19.7	16.1-23.8	65	7.2	5.4-9.5	183	12.4	10.5-14.7
TOTAL	624	100	100-100	858	100	100-100	1482	100	100-100

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As it seen in the Table 3.38, the percentages of individuals not engaging in daily recreation and leisure timerelated physical activity are as follows: 39.1% for males and 60.4% for females in the age group of 15-17 years; 51.3% for males and 75.8% for females in the age group of 18-29 years; 67.6% for males and 78.8% for females in the age group of 30-44 years; 72% for males and 77.6% for females in the age group of 45-59 years; 76.2% for males and 81.2% for females in the age group of 60-69 years; 80.3% for males and 92.8% for females in the age group of 70 years and over.

	Males				Females			Overall		
Age group	Ν	%	95%CI	Ν	%	95%CI	Ν	%	95%CI	
Age 15 years and over										
Not engaging	3934	64.2	62.5-65.9	5764	78.3	77-79.6	9698	71.3	70.2-72.4	
Engaging	1909	35.8	34.1-37.5	1413	21.7	20.4-23	3322	28.7	27.6-29.8	
TOTAL	5843	100	100-100	7177	100	100-100	13020	100	100-100	
Age 19 years and over										
Not engaging	3842	66.6	64.9-68.3	5577	79.3	78-80.6	9419	73	71.9-74.1	
Engaging	1747	33.4	31.7-35.1	1326	20.7	19.4-22	3073	27	25.9-28.1	
TOTAL	5589	100	100-100	6903	100	100-100	12492	100	100-100	

Table 3.39. Distribution of engagement in daily recreation and leisure time-related physical activity in Turkey(%), TNHS 2017

As it seen in the Table 3.39, the percentage of individuals not engaging in daily recreation and leisure timerelated physical activity is 64.2% for males and 78.3% for females in the group aged 15 years and over; 66.6% for males and 79.3% for females in the group aged 19 years and over.

	Males				Females		Overall			
Age group	Ν	%	95%CI	N	%	95%CI	Ν	%	95%CI	
Age 15 years and over										
Not engaging	3719	61.6	59.9-63.3	5720	78.8	77.4-80.2	9439	70.3	69.1-71.4	
Engaging	2124	38.4	36.7-40.1	1457	21.2	19.8-22.6	3581	29.7	28.6-30.9	
TOTAL	5843	100	100-100	7177	100	100-100	13020	100	100-100	
Age 19 years and over										
Not engaging	3524	60.3	58.5-62	5485	78.3	76.8-79.7	9009	69.3	68.2-70.5	
Engaging	2065	39.7	38-41.5	1418	21.7	20.3-23.2	3483	30.7	29.5-31.8	
TOTAL	5589	100	100-100	6903	100	100-100	12492	100	100-100	

Table 3.40 presents the distribution of percentages of participants who are classified as not engaging in daily work-related physical activity by age groups and gender. The percentages of participants not engaging in work-related physical activity per day is 61.6% for males and 78.8% for females in the group aged 15 years and over, 60.3% for males and 78.3% for females in the group aged 19 years and over.

2.2. Biochemical Findings

			Gluce	ose valu	es, (mg/	dL)								
Basic	N	N	N	N	x	95% CI	< 1	70	70-99		100-125 Impaired fasting glucose		≥126 Overt diabetes	
characteristics				Ν	%	N	%	N	%	N	%			
Males														
15-18	183	86.8	85.4-88.2	4	2.5	169	93.7	10	3.8	-	-			
19-30	592	87.8	86.7-88.9	21	3.7	513	87.5	50	7.9	8	0.9			
31-50	1774	94.7	93.3-96	24	1.6	1379	76.5	295	17.6	76	4.3			
51-64	952	111.6	107.2-116.1	15	2.1	525	54	263	27.3	149	16.6			
65 years and over	734	112.1	108.5-115.7	9	1	387	52.4	186	25.3	152	21.3			
TOTAL	4235	97.4	96.2-98.5	73	2.2	2973	73.6	804	16.8	385	7.2			
Females														
15-18	206	85.9	84.6-87.2	7	3.4	185	90.1	14	6.5	-	-			
19-30	880	86.3	84.8-87.9	32	3.9	800	90.6	44	5.1	4	0.4			
31-50	2113	91.9	90.9-93	30	1.6	1746	81.4	280	14.4	57	2.6			
51-64	1263	105.7	103.5-107.9	7	0.4	734	58.5	351	28.6	171	12.4			
65 years and over	982	108.8	105.5-112.1	16	1.5	528	54.4	267	27.1	171	17			
TOTAL	5444	94.9	94.1-95.8	92	2	2993	76.5	956	15.9	403	5.6			
Age of 15 years and over	9679	96.1	95.4-96.8	165	2.1	6966	75.2	1760	16.3	788	6.3			
Age of 19 years and over	9290	96.9	96.2-97.7	154	2.0	6612	73.7	1736	17.3	788	6.9			

Table 3.41. Distribution of FBG values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

The mean blood glucose examined in the blood samples of 9 679 individuals aged 15 years and over in the survey was found as 96.1 mg/dL for the group aged 15 years and over, and 96.9 mg/dL for the group aged 19 years and over. When evaluated by basic characteristics of survey participants, the prevalence of blood glucose level (70-99 mg/dL) among males in the age group of 19-30 years was found as 87.5% and the prevalence of mean blood glucose level (70-99 mg/dL) among females in the age group of 19-30 years was found as 90.6%. Considering Turkey's mean level, the highest prevalence of blood glucose level (70-99 mg/dL) was found as 75.2% in the group aged 15 years and over, and 73.7% in the group aged 19 years and over.

The prevalence of elevated FPG was determined as 6.3% in individuals aged 15 years and 6.9% in individuals aged 19 years and over. The prevalence of level between 101 and 126 mg/dL, defined as impaired fasting glucose (IFG), was 16.3% in the group aged 15 years and over, and 17.3% in the group aged of 19 years and over. This figure was 15.9% in the total of females and 16.8% in the total of males (Table 3.41).

			Urea, mg	/dL					
Basic	NI			< 1	6.6	16.6-	-48.5	≥ 4	8.6
characteristics	Ν	x	95% CI	N	%	N	%	N	%
Males									
15-18	181	24.1	22.9-25.3	13	9.1	167	90.4	1	0.6
19-30	597	26.4	25.8-27.1	24	4.2	570	95.4	3	0.4
31-50	1758	28.4	27.9-28.9	36	2.7	1700	96	22	1.4
51-64	949	31.6	30.9-32.2	11	1.5	906	94.6	32	3.9
65 years and over	733	36.9	35.8-38.2	6	1.2	623	85.4	104	13.4
TOTAL	4218	29	28.7-29.4	90	3.2	3966	94.1	162	2.8
Females									
15-18	206	19.7	18.8-20.6	57	30.1	149	69.9	-	-
19-30	869	22.4	21.6-23.1	130	15.2	736	84.4	3	0.4
31-50	2102	23.1	22.8-23.4	216	9.9	1880	89.9	6	0.2
51-64	1253	28.6	27.9-29.3	25	2.1	1195	94.9	33	3.0
65 years and over	970	35.9	34.6-37.1	5	0.3	834	86	131	13.7
TOTAL	5400	25.3	24.9-28.7	433	10.1	4794	87.5	173	2.5
Age 15 years and over	9618	27.1	26.9-27.3	523	6.7	8760	90.7	335	2.6
Age 19 years and over	9231	27.6	27.3-27.8	453	5.6	8444	91.6	334	2.8

Table 3.42. Distribution of urea values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

The mean urea level among individuals aged 15 and over (9 618 participants) was 29 mg/dL for males and 25.3 mg/dL for females. When urea values were examined by basic characteristics of the group aged 15 years and over, the prevalence of urea level (16.6-48.5 mg/dL) was 95.4% for males in the age group of 19-30 years, whereas the prevalence of urea level (16.6-48.5 mg/dL) among females was 94.9% in the age group of 51-64 years. Considering Turkey's mean level, the highest prevalence of urea level (16.6-48.5 mg/dL) was 90.7% in the group aged 15 years and over and 91.6% in the group aged 19 years and over. The highest urea levels for males and females was in age group of 65 years and over (males: 13.4%, females: 13.7%). The percentage of those whose urea levels was found above the determined reference level was 2.6% in the group aged 15 years and over, and 2.8% in the group aged 19 years and over (Table 3. 42).

			C	reatinine, r	ng/dL				
Males	N	x		<().7	0.7	-1.2	≥1	L .3
wates	N	X	95% CI	N	%	N	%	N	%
15-18	214	0.8	0.7-0.9	34	16.9	179	82.6	1	0.5
19-30	778	0.9	0.8-0.9	23	2.7	751	96.8	4	0.4
31-50	2185	0.9	0.9-0.9	70	3.4	2092	95.5	23	1.0
51-64	1157	0.9	0.9-0.9	35	3.1	1092	94.3	30	2.6
65 years and over	904	0.9	0.9-1	27	3.3	785	86.3	92	10.5
TOTAL	5238	0.9	0.9-0.9	189	4.2	4899	93.7	150	2.1
Females	N	x	95% CI	<0.5		0.5	-0.9	≥	:1
Females	N N	^	3370 CI	N	%	N	%	N	%
15-18	249	0.6	0.6-0.6	4	1.5	245	98.5	-	-
19-30	1046	0.6	0.6-0.6	25	2.0	1015	97.5	6	0.5
31-50	2458	0.7	0.7-0.7	48	2.3	2374	96.3	36	1.4
51-64	1450	0.7	0.7-0.7	21	1.6	1353	94	76	4.4
65 years and over	1165	0.8	0.8-0.8	11	1.1	953	82.3	201	16.6
TOTAL	6368	0.7	0.7-0.7	109	1.9	5940	94.6	319	3.5
Age 15 years and over	11606	0.8	0.8-0.8	298	3.1	10839	94.1	469	2.8
Age 19 years and over	11143	0.8	0.8-0.8	260	2.5	10415	94.4	468	3

Table 3.43. Distribution of creatinine values among individuals aged 15 years and over in Turkey by basiccharacteristics, TNHS 2017

The mean creatinine levels among individuals aged 15 years and over (11 606 participants) by basic characteristics were found as 0.9 mg/dL for males and 0.7 mg/dL for females. The prevalence of creatinine level (0.7-1.2 mg/dL) among males was 96.8% in the age group of 19-30 years, and prevalence of creatinine level (0.5-0.9 mg/dL) among females was 98.5% in the age group of 15-18 years. Considering Turkey's mean level, the highest prevalence of creatinine level (0.7-1.2 mg/dL for males, 0.5-0.9 mg/dL for females) was 94.1% in the group aged 15 years and over, and 94.4% in the group aged 19 years and over. The percentage of those whose creatinine level was found above the determined reference level was 2.8% in the group aged 15 years and over, (Table 3. 43).

			AST, U/	'L			
Males				0-4	10	2	41
Wales	N	x	95% CI	N	%	N	%
15-18	219	20.6	19.7-21.5	217	99.5	2	0.5
19-30	782	22.3	21.6-22.9	755	97.4	27	2.6
31-50	2191	23	22.5-23.5	2102	96.1	89	3.9
51-64	1156	21.5	20.9-22.1	1126	97.4	30	2.6
65 years and over	904	20.9	20.4-21.5	885	97.8	19	2.2
TOTAL	5252	22.2	21.9-22.5	5085	97.1	167	2.9
Females	N	x	95% CI	0-3	32	≥	33
Ternales		^	5578 61	N	%	N	%
15-18	245	17.4	16.7-18.1	241	98.6	4	1.4
19-30	1052	18.4	17.8-18.9	1023	97.0	29	3.0
31-50	2456	18.3	18-18.6	2393	97.7	63	2.3
51-64	1447	21.5	20.9-22.1	1364	93.1	83	6.9
65 years and over	1170	20.8	19.9-21.8	1110	94.2	60	5.8
TOTAL	6370	19.2	18.9-19.4	6131	96.4	239	3.6
Age 15 years and over	11622	20.7	20.5-20.9	11216	96.7	406	3.3
Age 19 years and over	11158	20.8	20.6-21	10758	96.5	400	3.5

Table 3.44. Distribution of AST values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

The mean level of AST of 11 622 survey participants aged 15 years and over was found as 22.2 U/L for males and 19.2 U/L for females. The distribution of AST values by basic characteristics of these participants was as follows: the prevalence of AST level (0-40 U/L) among males was 99.5% in the age group of 15-18 years, the prevalence of AST level (0-32 U/L) among females was 98.6% in the age group of 15-18 years. Considering Turkey's mean level, the highest prevalence of AST level (0-40 U/L for males, 0-32 U/L for females) was 96.7% in the group aged 15 years and over, and 96.5% in the group aged 19 years and over. The percentage of those whose AST level was found above determined reference level was 3.3% in the group aged 15 years and over, and 3.5% in the group aged 19 years and over (Table 3. 44).

			ALT, U/	Ĺ			
	NI	x		0-4	\$1	≥	42
Males	Ν	X	95% CI	N	%	N	%
15-18	219	17.6	16.2-19	214	98.0	5	2.0
19-30	783	26.3	24.7-27.8	686	88.8	97	11.2
31-50	2196	29.4	28.4-30.3	1823	83.9	373	16.1
51-64	1157	24.3	23.4-25.3	1065	92.1	92	7.9
65 years and over	903	19.1	18.2-19.9	871	96.3	32	3.7
TOTAL	5258	25.7	25.1-26.3	4659	89.0	599	11
Females	N	x	95% CI	0-3	33	≥	34
remaies	IN	X	95% CI	N	%	N	%
15-18	247	13.5	12.6-14.5	242	98.2	5	1.8
19-30	1051	16.1	15.3-16.9	1004	95.8	47	4.2
31-50	2462	17.5	17.1-17.9	2329	94.8	133	5.2
51-64	1450	22.2	21.3-22.9	1303	88	147	12
65 years and over	1167	18.1	16.6-19.6	1101	94.4	66	5.6
TOTAL	6377	17.8	17.4-18.2	5979	94	398	6
Age 15 years and over	11635	21.7	21.4-22.1	10638	91.5	997	8.5
Age 19 years and over	11169	22.3	21.9-22.7	10182	90.9	987	9.1

Table 3.45. Distribution of ALT values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

As of result of the analyses performed on 11 635 blood samples in Turkey, the mean levels of ALT were found as 25.7 U/L for males and 17.8 U/L for females. The distribution of ALT values among individuals aged 15 years and over by basic characteristics was as follows: the prevalence of ALT level (0-41 U/L) among males was 98% in the age group of 15-18 years, and the prevalence of ALT level (0-33 U/L) among females was 98.2% in the age group of 15-18 years. Considering Turkey's mean level, the highest prevalence of ALT level (Male: 0-41 U/L, Female: 0-33 U/L) was 91.5% in the group aged 15 years and over, and 90.9% in the group aged 19 years and over.

The percentage of those whose ALT level was found above determined reference level was 8.5% in the group aged 15 years and over, and 9.1% in the group aged 19 years and over (Table 3.45).

Table 3.46. Distribution of protein values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

				Protein, g	/dL				
Basic		-	050/ 01	≤5	5.9	6-7	7.9	≥	8
characteristics	Ν	x	95% CI	N	%	N	%	N	%
Males									
15-18	196	7.4	7.3-7.5	-	-	177	90.3	19	9.7
19-30	724	7.4	7.4-7.4	-	-	643	89.7	81	10.3
31-50	2011	7.2	7.2-7.3	6	0.3	1860	92	145	7.8
51-64	1046	7.1	7.1-7.2	3	0.2	989	95.2	54	4.7
65 years and over	834	7.1	7-7.1	12	1.1	792	94.7	30	4.2
TOTAL	4811	7.3	7.2-7.3	21	0.2	4461	92.1	329	7.7
Females									
15-18	217	7.4	7.4-7.5	-	-	183	85.1	34	14.9
19-30	940	7.3	7.3-7.4	2	0.1	852	91.1	86	8.8
31-50	2242	7.2	7.2-7.2	2	0.0	2113	94.6	127	5.4
51-64	1327	7.2	7.2-7.2	7	0.6	1236	92.5	84	6.9
65 years and over	1071	7.1	7.1-7.2	12	1.3	1001	93.2	58	5.5
TOTAL	5797	7.2	7.2-7.3	23	0.3	5385	92.4	389	7.2
Age 15 years and over	10608	7.2	7.2-7.3	44	0.3	9846	92.3	718	7.5
Age 19 years and over	10195	7.2	7.2-7.2	44	0.3	9486	92.7	665	7.0

The mean levels of protein in examined 10 608 blood samples of individuals aged 15 years and over were found as 7.3 g/dL for males and 7.2 g/dL for females. The distribution of protein values by basic characteristics was as follows: the prevalence of protein level (6-7.9 g/dL) among males was 95.2% in the age group of 51-64 years, and the prevalence of protein level (6-7.9 g/dL) among females was 94.62% in the age group of 31-50 years. Considering Turkey's mean level, the highest prevalence of protein level (6-7.9 g/dL) was 92.3% in the group aged 15 years and over, and 92.7% in the group aged 19 years and over. The percentage of those whose protein level was found above determined reference level was 7.5% in the group aged 15 years and over, and 7% in the group aged 19 years and over (Table 3.46).

				Albumin, g	g/dL				
Basic	N	x		≤3	8.1	3.2	-5.5	≥!	5.6
characteristics	IN	X	95% CI	N	%	N	%	N	%
Males									
15-18	208	4.7	4.6-4.7	-	-	208	100.0	-	-
19-30	752	4.7	4.6-4.7	1	0.5	746	98.9	5	0.6
31-50	2125	4.5	4.5-4.5	2	0.0	2121	99.9	2	0.1
51-64	1121	4.3	4.3-4.4	3	0.1	1118	99.9	-	-
65 years and over	884	4.2	4.2-4.2	3	0.3	880	99.6	1	0.1
TOTAL	5090	4.5	4.5-4.5	9	0.2	5073	99.6	8	0.2
Females									
15-18	238	4.6	4.6-4.7	-	-	236	99.2	2	0.8
19-30	1022	4.5	4.4-4.5	1	0.1	1020	99.9	1	0.0
31-50	2375	4.3	4.3-4.3	3	0.2	2372	99.8	-	-
51-64	1390	4.3	4.3-4.3	3	0.1	1387	99.9	-	-
65 years and over	1117	4.2	4.2-4.2	6	0.4	1111	99.6	-	-
TOTAL	6142	4.4	4.4-4.4	13	0.1	6126	99.8	3	0.1
Age 15 years and over	11232	4.4	4.4-4.4	22	0.2	11199	99.7	11	0.1
Age 19 years and over	10786	4.4	4.4-4.4	22	0.2	10755	99.7	9	0.1

 Table 3.47. Distribution of albumin values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

The mean albumin in examined 11 232 blood samples of individuals aged 15 years and over was 4.5 g/dL for males and 4.4 g/dL females. Albumin values by basic characteristics were found as follows: the prevalence of albumin level (3.2-5.5 g/dL) among males was 100% in the age group of 15-18 years, and the prevalence of albumin level (3.2-5.5 g/dL) among females was 99.9% in the age groups of 19-30 and 51-64 years. Considering Turkey's mean level, the highest prevalence of albumin level (3.2-5.5 g/dL) was found as 99.7% in the group aged 15 years and over.

The percentage of those whose albumin level was found above the determined reference level was 0.1% in the group aged 15 years and over, and 0.1% in the group aged 19 years and over (Table 3.47).

				ALP, U/L					
Basic	N	x	95% CI		39 ow	-	-130 rmal	≥1 Hi	-
characteristics				N	%	N	%	N	%
Males									
15-17	62	144.2	120.8-167.6	-	-	62	100	-	-
18-30	328	83.5	78.9-88.1	-	-	306	93.4	22	6.6
31-50	890	75.9	74.0-77.9	-	-	873	97.7	17	2.3
51-64	471	75.2	71.8-78.6	-	-	454	96.5	17	3.5
65 years and over	374	73.8	70.1-77.4	-	-	361	96.2	13	3.8
TOTAL	2125	81.4	79.2-83.6	-	-	2056	96.3	69	3.7

Table 3.48. Distribution of ALP values among males aged 15 years and over in Turkey by basic characteristics,
TNHS 2017

Table 3.49. Distribution of ALP values among females aged 15 years and over in Turkey by basic characteristics, TNHS 2017

				ALP, U/	L				
Basic	N	x	95% CI		34 ow		35-105 Normal		LO6 igh
characteristics				Ν	N %		%	N	%
Females									
15-18	57	99.4	90.2-108.7	-	-	56	99.0	1	1.0
19-30	487	66.9	64.1-69.7	21	4.5	443	91.1	23	4.4
31-50	1031	67.1	65.2-69.0	36	3.3	943	91.8	52	4.9
51-64	580	80.9	78.4-83.5	19	2.1	461	80.9	100	16.9
65 years and over	481	82.7	77.9-87.4	14	2.6	390	79.9	77	17.5
TOTAL	2636	73.0	71.6-74.4	90	3.2	2293	88.5	253	8.3

The mean ALP among individuals aged 15 years and over was 81.4 U/L for males and 73.0 U/L for females. ALP values by basic characteristics were found as follows: the prevalence of normal ALP level among males was 100% in the age group of 15-18 years and the prevalence of normal ALP level among females was 99% in the age group of 15-18 years.

The percentage of individuals in the group aged 15 years and over whose ALP level was found above the determined reference level was 8.3% for females and 3.7% for males (Table 3. 49).

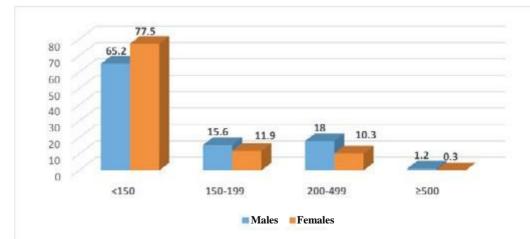
Table 3.50. Distribution of total cholesterol values among individuals aged 15 years and over in Turkey by
basic characteristics, TNHS 2017

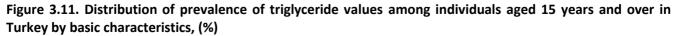
			Total C	holesterol,	mg/dL				
Basic	NI	x	95% CI	≤1	29	1	30-199	≥2	:00
characteristics	Ν	X	95% CI	N	%	N	%	N	%
Males									
15-18	179	141.1	135.9-146.1	74	42.8	104	56.8	1	0.4
19-30	595	165.2	161.7-168.7	94	14.9	401	71.1	100	14.1
31-50	1755	191.7	189.4-193.8	60	4.2	992	56.5	703	39.3
51-64	946	198.7	195.2-202.1	41	4.4	456	47.9	449	47.8
65 years and over	723	191.9	188.3-195.4	45	6.7	391	51.2	287	42.2
TOTAL	4198	182.5	180.9-184.2	314	10.2	2344	57.9	1540	32.0
Females									
15-18	202	153.2	149.0-157.4	40	19.1	151	75.5	11	5.4
19-30	870	163.3	160.4-166.2	109	11.7	648	75.7	113	12.6
31-50	2097	186.7	184.7-188.6	74	3.0	1327	63.9	696	33.2
51-64	1248	215.8	212.7-218.8	11	1.0	453	36.6	784	62.4
65 years and over	967	210.8	207.1-214.5	20	2.2	377	40.4	570	57.4
TOTAL	5384	187.1	185.6-188.6	254	5.8	2956	59.5	2174	34.8
Age 15 years and over	9582	184.9	183.8-186.0	568	7.9	5300	58.7	3714	33.4
Age 19 years and over	9201	188.1	187.0-189.3	454	5.9	5045	58.0	3702	36.0

As of result of the analysis performed on 9 582 blood samples in total, the mean levels of total cholesterol among individuals aged 15 years and over were found as 182.5 mg/dL for males and 187.1 mg/dL for females. The prevalence of total cholesterol level (130-199 mg/dL) among males was 71.1% in the age group of 19-30 years, and the prevalence of total cholesterol level (130-199 mg/dL) among females was 75.7% in the age group of 19-30 years. Considering Turkey's mean level, the highest prevalence of total cholesterol level (130-199 mg/dL) was found as 58.7% in the group aged 15 years and over, and 58% in the group aged 19 years and over. The percentage of study population who had total cholesterol level above the reference level 200 mg/dL was 33.4% in the group aged 15 years and over, and 36% in the group aged 19 years and over. In Turkey, 32% of males and 34.8% of females had cholesterol level above 200 mg/dL, i.e. they had hypercholesterolemia (Table 3.50).

				Triglyc	eride, mg	g/dL					
Basic characteristics	N	x	95% CI	<150 95% CI Normal		150-199 Borderline high)-499 gh	≥500 and above Very high	
				N	%	N	%	N	%	N	%
Males											
15-18	183	89.1	80.5-97.6	172	92.7	7	3.2	4	4.1	-	-
19-30	599	123.6	116.8-130.4	447	74.0	77	14.0	72	11.8	3	0.2
31-50	1778	165.2	158.1-172.3	1022	57.1	324	17.9	402	23.1	30	1.9
51-64	957	160.7	152.9-168.5	541	57.6	175	17.2	227	23.6	14	1.6
65 years and over	731	141.1	134.3-147.8	500	67.6	121	17.3	104	14.3	6	0.8
TOTAL	4248	145.8	141.9-149.6	2682	65.2	704	15.6	809	18.0	53	1.2
Females											
15-18	206	83.2	77.6-88.7	197	95.1	7	4.3	2	0.7	-	-
19-30	879	86.4	82.4-90.3	799	90.5	49	6.2	30	3.3	1	0.0
31-50	2118	117.1	113.3-120.9	1674	79.2	243	10.9	196	9.6	5	0.3
51-64	1259	154.6	148.2-161.0	753	61.4	242	17.8	252	20.0	12	0.8
65 years and over	981	145.5	139.9-151.1	597	61.3	206	21.5	173	16.7	5	0.5
TOTAL	5443	117.9	115.6-120.4	4020	77.5	747	11.9	653	10.3	23	0.3
Age 15 years and over	9691	131.4	129.1-133.7	6702	71.5	1451	13.7	1462	14.0	76	0.7
Age 19 years and over	9302	135.4	133.0-137.8	6333	69.6	1437	14.6	1456	15.1	76	0.8

Table 3.51. Distribution of triglyceride values among individuals aged 15 years and over in Turkey by basic
characteristics, TNHS 2017





The mean triglyceride level among individuals aged 15 years and over (9 691 participants) was found as 131.4 mg/dL, and it was 135.4 mg/dL for the group aged 19 years and over. This mean triglyceride level was 117.9 mg/dL for females and 145.8 mg/dL for males. The prevalence of triglyceride level (<150 mg/dL) among males was found as 92.7% in the age group of 15-18 years, and the prevalence of triglyceride level (<150 mg/dL) among females was 95.1% in the age group of 15-18 years. Considering Turkey's mean level, the highest prevalence of triglyceride level (<150 mg/dL) was found as 71.5% in the group aged 15 years and over, and 69.6% in the group aged 19 years and over (Table 3.51).

	-			HDL, mg/dL					
Males		-		≤2 Lo			-40 line low	≥∠ Nor	l1 mal
	N	x	95% CI	N	%	N	%	N	%
15-18	181	45.3	43.9-46.9	4	1.8	58	30.6	119	67.6
19-30	598	43.7	42.4-44.9	26	5.8	227	37.4	345	56.7
31-50	1772	42.5	41.9-43.0	95	5.4	700	39.9	977	54.7
51-64	952	44.7	43.9-45.5	47	4.5	303	33.0	602	62.5
65 years and over	730	45.4	44.4-46.2	34	4.8	205	31.8	491	63.5
TOTAL	4233	43.7	43.2-44.1	206	5.0	1493	36.4	2534	58.6
Females	N	x	95% CI	≤2 Lo			-50 line low	≥51 Normal	
				N	%	N	%	N	%
15-18	205	53.4	51.7-55.1	1	0.5	93	43.7	111	55.7
19-30	878	52.8	51.8-53.8	6	0.9	393	48.2	479	50.9
31-50	2109	51.7	51.0-52.5	29	1.4	1012	49.9	1068	48.7
51-64	1257	53.0	52.1-53.9	17	1.4	548	44.7	692	53.9
65 years and over	979	53.8	52.7-54.9	10	1.8	409	41.8	560	56.4
TOTAL	5428	52.6	52.2-53.1	63	1.3	2455	47.0	2910	51.7
Age 15 years and over	9661	48.3	47.9-48.6	269	3.1	3948	41.9	5444	55.0
Age 19 years and over	9275	48.2	47.8-48.5	264	3.2	3797	42.3	5214	54.5

Table 3.52. Distribution of of HDL cholesterol values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

The mean level of HDL cholesterol among survey participants aged 15 years and over by basic characteristics was found as 48.3 mg/dL, and it was 48.2 mg/dL for the group aged 19 years and over. The prevalence of HDL cholesterol level (\geq 41 mg/dL) among males was 67.6% in the age group of 15-18 years, and the prevalence of cholesterol value (\geq 51 mg/dL) among females was 55.7% in the age group of 15-18 years. Considering Turkey's mean level, the highest prevalence of (normal) cholesterol level was found as 55% in the group aged 15 years and over, and 54.5% in the group aged 19 years and over (Table 3.52).

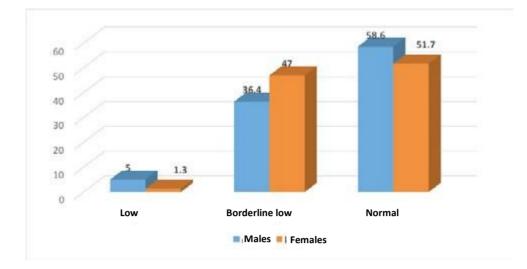


Figure 3.12. Distribution of prevalence of HDL cholesterol values among individuals aged 15 years and over in Turkey by basic characteristics, (%)

Table 3.53. Distribution of of LDL cholesterol values among inc	dividuals aged 15 years and over in Turkey by
basic characteristics, TNHS 2017	

	LDL, mg/dL												
Basic	N	x	95% CI	<1 Opti			-129 mal		-159 line high	160- Hi	-189 gh		.90 high
characteristics				N	%	N	%	N	%	N	%	N	%
Males													
15-18	180	77.6	73.7-81.4	153	81.3	25	17.8	2	0.9	-	-	-	-
19-30	586	97.7	94.7-100.7	318	52.8	184	34.5	70	10.7	11	1.7	3	0.4
31-50	1724	118.7	116.8-120.6	500	30.0	594	33.9	420	24.9	161	8.8	49	2.4
51-64	933	123.6	120.6-126.7	247	26.4	306	32.8	245	26.7	94	8.7	41	5.4
65 years and over	716	119.4	116.3-122.4	215	29.1	249	32.7	174	27.5	57	8.4	21	2.3
TOTAL	4139	111.2	109.8-112.6	1433	39.0	1358	32.4	911	20.1	323	6.3	114	2.3
Females													
15-18	204	83.4	79.7-87.1	157	78.2	37	16.1	9	5.3	-	-	1	0.4
19-30	874	94.2	91.7-96.8	560	64.9	215	24.2	84	8.6	10	1.1	5	1.2
31-50	2094	112.8	111.2-114.4	763	34.7	800	40.1	386	18.1	105	5.1	40	1.9
51-64	1242	132.7	130.1-135.3	226	18.8	397	31.1	341	26.8	184	16.4	94	6.9
65 years and over	972	128.3	125.5-131.1	199	19.4	310	33.6	293	30.6	118	12.0	52	4.4
TOTAL	5386	111.8	110.6-113.1	1905	40.3	1759	32.0	1113	18.1	417	6.8	192	2.9
Age 15 years and over	9525	111.5	110.6-112.4	3338	39.6	3117	32.2	2024	19.0	740	6.5	306	2.6
Age 19 years and over	9141	114.2	113.3-115.2	3028	36.1	3055	33.6	2013	20.4	740	7.1	305	2.8

According to result of the analysis of blood samples of 9 525 individuals aged 15 years and over, the prevalence of LDL level (<100 mg/dL) among males was 81.3% in the age group of 15-18 years, and the prevalence of LDL level (<100 mg/dL) among females was 78.2% in the age group of 15-18 years. Considering Turkey's mean level, the highest prevalence of LDL level (<100 mg/dL) was found as 39.6% in the group aged 15 years and over, and 36.1% in the group aged 19 years and over. The prevalence of LDL level being above the determined reference level was 2.6% in the group aged 15 years and over, and 2.8% in the group aged 19 years and over (Table 3.53).

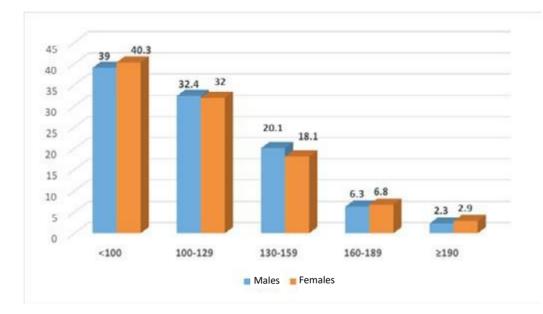


Figure 3.13. Distribution of prevalence of LDL cholesterol values among individuals aged 15 years and over in Turkey by basic characteristics, (%)

			GGT, l	J/L			
Males	N	x	95% CI	0-	-60	2	261
wates	IN	X	95% CI	N	%	N	%
15-18	205	16.4	15.3-17.5	205	100.0	-	-
19-30	758	23.6	22.1-25.1	731	97.2	27	2.8
31-50	2115	31.9	30.7-33.1	1933	91.6	182	8.4
51-64	1129	33.2	30.7-35.7	1051	92.7	78	7.3
65 years and over	885	27.8	26.1-29.6	833	94.9	52	5.1
TOTAL	5092	28.4	27.6-29.2	4753	94.2	339	5.8
Females	N	x	95% CI	0-	-40	2	≥41
remaies	IN	X	95% CI	N	%	N	%
15-18	239	13.0	10.9-15.0	237	99.0	2	1.0
19-30	1011	13.9	13.3-14.6	993	98.4	18	1.6
31-50	2373	17.8	17.0-18.5	2280	96.2	93	3.8
51-64	1413	26.0	23.2-28.8	1249	88.0	164	12.0
65 years and over	1131	26.3	23.5-29.1	1011	89.2	120	10.8

18.3-19.8

23.2-24.3

23.9-25.1

TOTAL

over

over

Age 15 years and

Age 19 years and

6167

11259

10815

19.1

23.8

24.6

Table 3.54. Distribution of GGT values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

The mean levels of GGT among individuals aged 15 years and over by basic characteristics were 23.8 mg/dL for the group aged 15 years and over, and 24.6 mg/dL for the group aged 19 years and over. This mean level for females was 19.1 mg/dL. The prevalence of GGT level (0-60 mg/dL) among males was found as 100% in the age group of 15-18 years, and the prevalence of GGT level (0-40 mg/dL) among females was found as 99% in the age group of 15-18 years. Considering Turkey's mean level, the highest prevalence of GGT level (Male: 0-60 mg/dL; Female: 0-40 mg/dL) was found as 94.4% in the group aged 15 years and over, and 93.9% in the group aged 19 years and over. The prevalence of GGT level being above the determined reference level was 5.6% in the group aged 15 years and over, and 6.8% in the group aged 19 years and over (Table 3.54).

5770

10523

10081

94.5

94.4

93.9

397

736

734

5.5

5.6

6.1

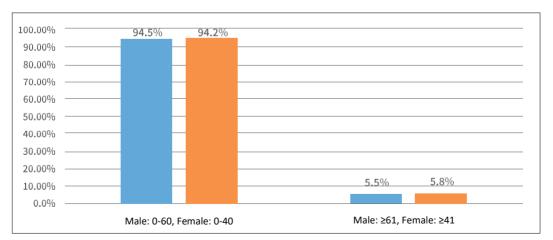


Figure 3.14. Distribution of prevalence of GGT values among individuals aged 15 years and over in Turkey by basic characteristics

			Ca	alcium, mg/	dL				
Basic	NI	x	95% CI	≤8	.4	8.5-1	L0.5	≥1	0.6
characteristics	Ν	X	95% CI	N	%	N	%	N	%
Males									
15-18	211	9.8	9.7-9.9	1	0.3	203	96.2	7	3.4
19-30	768	9.7	9.6-9.7	1	0.1	750	97.3	17	2.6
31-50	2169	9.5	9.4-9.5	14	0.6	2132	98.4	23	1.0
51-64	1146	9.4	9.3-9.4	14	1.8	1127	97.9	5	0.3
65 years and over	895	9.3	9.3-9.4	17	2.1	870	97.3	8	0.6
TOTAL	5189	9.5	9.5-9.5	47	0.8	5082	97.8	60	1.4
Females									
15-18	246	9.6	9.6-9.7	1	0.7	241	97.9	4	1.5
19-30	1033	9.4	9.3-9.4	16	1.0	1014	98.8	3	0.2
31-50	2426	9.2	9.2-9.3	61	3.9	2352	95.6	13	0.5
51-64	1426	9.4	9.4-9.5	14	0.8	1396	97.6	16	1.6
65 years and over	1152	9.3	9.3-9.4	29	3.0	1108	95.6	15	1.5
TOTAL	6283	9.4	9.3-9.4	121	2.2	6111	96.9	51	0.9
Age 15 years and over	11472	9.5	9.4-9.5	168	1.5	11193	97.3	111	1.1
Age 19 years and over	11015	9.4	9.4-9.4	166	1.6	10749	97.4	100	1.0

Table 3.55. Distribution of calcium values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

As a result of the evaluation of blood samples of 11 472 individuals aged 15 years and over, the mean calcium levels were found as 9.5 mg/dL for males, and 9.4 mg/dL for females. Calcium values of individuals by basic characteristics were found as follows: the prevalence of calcium level (8.5-10.5 mg/dL) among males was 98.4% in the age group of 31-50 years, and the prevalence of calcium level (8.5-10.5 mg/dL) among females was 98.4% (8.5-10.5 mg/dL) in the age group of 19-30 years. Considering Turkey's mean level, the highest prevalence of calcium level (8.5-10.5 mg/dL) was found as 97.3% in the group aged 15 years and over, and 97.4% in the group aged 19 years and over. The prevalence of having calcium level below the determined reference level was 1.5% in the group aged 15 years and over, and 1.6% in the group aged 19 years and over (Table 3.55).

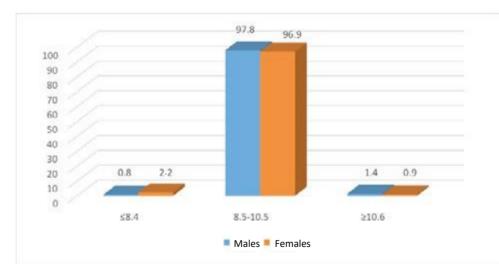


Figure 3.15. Distribution of prevalence of calcium values among individuals aged 15 years and over in Turkey by basic characteristics, (%)

			Pho	sphorus, m	g/dL				
Basic	N	x		≤2	.4	2.5-	4.5	≥4	l.6
characteristics	IN	X	95% CI	N	%	N	%	N	%
Males									
15-18	192	3.9	3.8-4.1	4	1.9	153	80.7	35	17.4
19-30	700	3.7	6.6-3.7	33	5.7	587	83.9	80	10.4
31-50	1933	3.4	3.3-3.4	211	10.9	1635	84.5	87	4.6
51-64	1016	3.3	3.2-3.3	156	15.5	824	79.8	36	4.7
65 years and over	821	3.3	3.2-3.3	107	14.2	683	80.4	31	5.5
TOTAL	4662	3.5	3.4-3.5	511	10.0	3882	82.8	269	7.2
Females									
15-18	224	3.9	3.8-3.9	3	2.3	204	87.6	17	10.0
19-30	907	3.7	3.7-3.8	25	2.3	824	90.4	58	7.4
31-50	2163	3.5	3.5-3.6	136	6.3	1922	88.5	105	5.2
51-64	1276	3.7	3.7-3.7	34	2.5	1157	91.8	85	5.6
65 years and over	1062	3.6	3.6-3.7	42	3.6	971	90.6	49	5.8
TOTAL	5632	3.6	3.6-3.7	240	4.0	5078	89.7	314	6.3
Age 15 years and over	10294	3.6	3.5-3.6	751	7.0	8960	86.3	583	6.7
Age 19 years and over	9878	3.5	3.5-3.5	744	7.4	8603	86.4	531	6.1

 Table 3.56. Distribution of phosphorus values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

As a result of the evaluation of blood samples of 10 294 participants, the mean phosphorus levels among individuals aged 15 years and over were found as 3.5 mg/dL for males and 3.6 mg/dL for females. The distribution of phosphorus values among individuals aged 15 years and over by basic characteristics was as follows: the prevalence of phosphorus level (2.5-4.5 mg/dL) among males was 84.5% in the age group of 31-50 years, and the prevalence of phosphorus level (2.5-4.5 mg/dL) among females was 91.8% in the age group of 51-64 years. Considering Turkey's mean level, the highest prevalence of phosphorus level (2.5-4.5 mg/dL) was found as 86.3% in the group aged 15 years and over, and 86.4% in the group aged 19 years and over.

7% of the study population in the group aged 15 years and over and 7.4% of the study population in the group aged 19 years and over had phosphorus levels below the reference level (Table 3.56).

	Magnesium, mg/dL										
Basic	N	x	95% CI	≤1	5	1.6-	2.6	≥2	2.7		
characteristics	IN	X	95% CI	N	%	N	%	N	%		
Males											
15-18	204	2.0	1.9-2.1	-	-	202	99.5	2	0.5		
19-30	738	2.0	2.0-2.1	7	1.2	724	97.9	7	0.8		
31-50	2067	2.0	2.0-2.0	19	1.0	2030	98.2	18	0.9		
51-64	1103	2.0	2.0-2.0	18	1.8	1073	97.5	12	0.7		
65 years and over	847	1.9	1.9-2.0	25	2.9	814	95.7	8	1.3		
TOTAL	4959	2.0	2.0-2.0	69	1.3	4843	97.8	47	0.8		
Females											
15-18	242	2.0	1.9-2.0	-	-	240	99.5	2	0.5		
19-30	996	2.0	1.9-2.0	7	0.6	980	98.3	9	1.1		
31-50	2337	1.9	1.9-1.9	22	1.0	2300	98.5	15	0.6		
51-64	1367	1.9	1.9-2.0	43	2.6	1312	96.5	12	0.8		
65 years and over	1091	1.9	1.9-1.9	52	5.0	1028	93.8	11	1.2		
TOTAL	6033	1.9	1.9-1.9	124	1.6	5860	97.6	49	0.8		
Age 15 years and over	10992	2.0	2.0-2.0	193	1.5	10703	97.7	96	0.8		
Age 19 years and over	10546	2.0	2.0-2.0	193	1.6	10261	97.6	92	0.9		

Table 3.57. Distribution of magnesium values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

As a result of the evaluation of blood samples of 10 992 individuals, the mean magnesium level were found as 2 mg/dL for males and 1.9 mg/dL for females. The distribution of magnesium values among individuals aged 15 and over by basic characteristics was as follows: the prevalence of magnesium level (1.6-2.6 mg/dL) among males was 99.5% in the age group of 15-18 years, and the prevalence of magnesium level (1.6-2.6 mg/dL) among females was 99.5% in the age group of 15-18 years. Considering Turkey's mean level, the highest prevalence of magnesium level (1.6-2.6 mg/dL) was 97.7% in the group aged 15 years and over, and 97.6% in the group aged 19 years and over. In terms of prevalence of having magnesium level below reference levels, the percentage of study population whose magnesium level was below the reference level was 1.5% in the group aged 15 years and over, and 1.6% in the group aged 19 years and over (Table 3.57).

			CRP, mg/dL				
Basic	N	x	95% CI	0	-5	≥	6
characteristics		^	5576 61	N	%	Ν	%
Males							
15-18	149	0.9	0.6-1.2	146	98.2	3	1.8
19-30	570	1.5	1.1-1.8	538	93.7	32	6.3
31-50	1631	1.5	1.0-2.0	1560	96.1	71	3.9
51-64	831	1.5	1.3-1.7	779	94.6	52	5.4
65 years and over	649	2.2	1.8-2.5	580	90.0	69	10.0
TOTAL	3830	1.5	1.3-1.7	3603	94.8	227	5.2
Females							
15-18	169	1.0	0.6-1.3	163	96.8	6	3.2
19-30	803	1.1	1.0-1.3	756	94.6	47	5.4
31-50	1791	1.4	1.2-1.5	1686	94.5	105	5.5
51-64	1056	2.0	1.7-2.3	951	91.1	105	8.9
65 years and over	876	2.6	2.1-3.0	771	88.2	105	11.8
TOTAL	4695	1.5	1.4-1.6	4327	93.3	368	6.7
Age 15 years and over	8525	1.5	1.4-1.6	7930	94.0	595	6.0
Age 19 years and over	8207	1.6	1.4-1.7	7621	93.7	586	6.3

 Table 3.58. Distribution of CRP values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

CRP values among individuals aged 15 years and over by basic characteristics were found as follows: the prevalence of CRP level (0-5 mg/dL) among males was 98.2% in the age group of 15-18 years, and the prevalence of CRP level (0-5 mg/dL) among females was 96.8% in the age group of 15-18 years. Considering Turkey's mean level, the highest prevalence of CRP level (0-5 mg/dL) was 94% in the group aged 15 years and over, and 93.7% in the group aged 19 years and over. 6% of the study population in the group aged 15 years and over and 6.3% of the study population in the group aged 19 years and over had CRP levels above the reference level (Table 3.58).

			I	ron, mcg/d	L				
Basic	N	x	95% CI	≤4	19	50 -1	175	≥1	76
characteristics	IN	X	95% CI	Ν	%	N	%	N	%
Males									
15-18	175	106.1	98.2-114.0	10	7.7	149	83.0	16	9.2
19-30	563	106.6	102.7-110.5	29	6.0	500	88.5	34	5.5
31-50	1680	100.5	98.5-102.5	102	5.7	1521	91.3	57	3.1
51-64	901	96.6	93.5-99.8	65	8.3	813	88.3	23	3.3
65 years and over	689	87.6	84.8-90.5	79	10.8	600	88.2	10	1.1
TOTAL	4008	100.4	98.9-102.0	285	6.9	3583	89.1	140	4.0
Females									
15-18	189	74.0	68.2-79.9	48	28.7	137	69.3	4	2.0
19-30	833	75.2	70.7-79.7	243	29.7	576	68.1	14	2.2
31-50	1980	71.7	69.7-73.7	617	31.6	1341	67.4	22	1.0
51-64	1173	76.0	74.0-78.1	186	15.9	984	83.8	3	0.3
65 years and over	925	76.3	73.7-78.8	167	17.1	756	82.7	2	0.2
TOTAL	5100	74.1	72.6-75.5	1261	26.1	3794	72.7	45	1.2
Age 15 years and over	9108	86.9	85.8-88.0	1546	16.8	7377	80.7	185	2.5
Age 19 years and over	8744	86.6	85.5-87.7	1488	16.7	7091	81.0	165	2.3

Table 3.59. Distribution of serum iron values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

As a result of the analysis of blood samples of 9 108 participants aged 15 years and over, the mean serum iron was found as 100.4 mcg/dL for males and 74.1 mcg/dL for females. The distribution of serum iron values by basic characteristics of participants was as follows: the prevalence of serum iron level (50-175 mcg/dL) among males was 91.3% in the age group of 31-50 years, and the prevalence of serum iron level (50-175 mcg/dL) among females was 83.8% in the age group of 51-64 years. Considering Turkey's mean level, the highest prevalence of serum iron level (50-175 mcg/dL) was found as 80.7% in the group aged 15 years and over, and 81% in the group aged 19 years and over. While the prevalence of having serum iron level lower than reference values is just 6.9% for males, this rate is 26.1% for females (Table 3.59).

	Iron Binding Capacity, mcg/dL										
Basic	NI	x	95% CI	≤2	49	250-	410	>410			
characteristics	Ν	X	95% CI	Ν	%	N	%	N	%		
Males											
15-18	192	300.7	289.2-312.2	50	31.9	123	60.4	19	7.7		
19-30	705	279.6	272.8-286.4	246	36.2	422	59.6	37	4.1		
31-50	1976	278.0	273.9-282.1	658	36.3	1245	60.5	73	3.3		
51-64	1041	278.5	272.8-287.3	354	37.6	632	57.9	55	4.5		
65 years and over	818	283.2	276.9-289.5	270	34.6	495	59.6	53	5.8		
TOTAL	4732	280.7	277.9-283.5	1578	36.0	2917	59.7	237	4.3		
Females											
15-18	220	348.8	335.6-362.0	33	15.3	137	62.3	50	22.5		
19-30	939	325.9	319.1-332.8	157	18.1	650	67.5	132	14.4		
31-50	2184	332.19	328.1-336.3	337	16.3	1464	67.0	383	16.6		
51-64	1298	315.7	311.0-320.4	217	18.0	968	73.5	113	8.5		
65 years and over	1059	303.4	296.4-310.3	230	25.5	738	67.0	91	7.4		
TOTAL	5700	325.4	322.6-328.2	974	18.1	3957	68.0	769	13.9		
Age 15 yrs and over	10432	303.2	301.0-305.2	2552	27.1	6874	63.8	1006	9.1		
Age 19 yrs and over	10020	301.2	299.1-303.3	2469	27.4	6614	64.0	937	8.6		

Table 3.60. Distribution of iron binding capacity values among individuals aged 15 years and over in Turkeyby basic characteristics, TNHS 2017

In the TNHS 2017 survey, the mean level of serum total iron binding capacity (TIBC) of 10 432 blood samples examined across Turkey was found as 303.2 μ g/dL. While this value was 280.7 μ g/dL for males, it was observed as 325.3 μ g/dL in females. Iron binding capacity values in individuals aged 15 years and over by the basic characteristics were found as follows: the prevalence of serum total iron binding capacity level (250-410 μ g/dL) among males was 60.5% in the age group of 31-50 years, and the prevalence of serum total iron binding capacity level (250-410 μ g/dL) among females was 73.5% in the age group of 51-64 years. Considering Turkey's mean level, the highest prevalence of iron binding capacity level (250-410 μ g/dL) was found as 63.8% in the group aged 15 years and over, and 64% in the group aged 19 years and over. 27.1% of the study population in the group aged 15 years and over and 27.4% of the study population in the group aged 19 years and over had iron binding capacity levels below the reference level (Table 3.60).

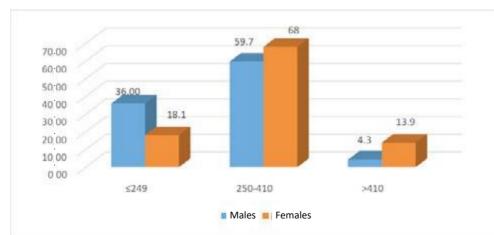


Figure 3.16. Distribution of prevalence of iron binding capacity values among individuals aged 15 years and over in Turkey by basic characteristics, (%)

	TSH, mIU/L										
Basic	N	x	95% CI	≤0.	26	0.27	-4.2	≥4	1.3		
characteristics	IN	X	95% CI	N	%	N	%	N	%		
Males											
15-18	216	2.2	1.9-2.5	-	-	207	94.9	9	5.1		
19-30	776	2.7	2.1-3.2	4	0.4	720	93.7	52	5.9		
31-50	2186	2.1	1.9-2.2	11	0.4	2067	94.9	108	4.6		
51-64	1145	2.0	1.7-2.2	18	5.1	1066	93.6	61	5.0		
65 years and over	885	2.1	1.8-2.3	23	2.3	807	91.0	55	6.7		
TOTAL	5208	2.2	2.0-2.4	56	0.8	4867	94.0	285	5.3		
Females											
15-18	244	2.0	1.8-2.3	2	0.4	230	95.2	12	4.4		
19-30	1045	2.5	2.3-2.7	5	0.2	952	91.1	88	8.7		
31-50	2455	2.7	2.5-2.9	35	1.7	2181	88.7	239	9.6		
51-64	1443	2.6	2.3-2.8	35	2.2	1240	87.3	168	10.5		
65 years and over	1152	2.5	2.2-2.8	63	5.0	965	84.8	124	10.2		
TOTAL	6339	2.5	2.4-2.6	140	1.8	5568	89.1	631	9.2		
Age 15 years and over	11547	2.4	2.3-2.5	196	1.3	10435	91.5	916	7.2		
Age 19 years and over	11087	2.4	2.3-2.5	194	1.4	9998	91.2	895	7.4		

Table 3.61. Distribution of TSH values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

In the TNHS 2017 survey, TSH values among 11 547 participants aged 15 years and over by basic characteristics were found as: the prevalence of TSH level (0.27-4.2 mIU/L) among males was 94.9% in the age groups of 15-18 and 31-50 years, and the prevalence of TSH level (0.27-4.2 mIU/L) among females was 95.2% in the age group of 15-18 years. Considering Turkey's mean level, the highest prevalence of TSH level (0.27-4.2 mIU/L) was found as 91.5% in the group aged 15 years and over, and 91.2% in the group aged 19 years and over. 1.3% of the study population in the group aged 15 years and over and 1.4% of the study population in the group aged 19 years and over and 1.4% of the study population in the group aged 19 years and over and 1.4% of the study population in the group aged 19 years and over and 1.4% of the study population in the group aged 19 years and over and 1.4% of the study population in the group aged 19 years and over and 1.4% of the study population in the group aged 19 years and over and 1.4% of the study population in the group aged 19 years and over and 1.4% of the study population in the group aged 15 years and over and 1.4% of the study population in the group aged 19 years and over and 1.4% of the study population in the group aged 19 years and over had TSH levels below the reference level (Table 3. 61).

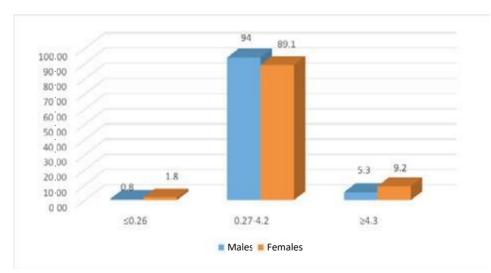


Figure 3.17. Distribution of prevalence of TSH values among individuals aged 15 years and over in Turkey by basic characteristics, %

				FT4, ng/dL					
Basic	N	x	95% CI	≤0.	97	0.98-	1.63	≥1.	.64
characteristics	IN	X	95% CI	N	%	N	%	N	%
				Erkek					
15-20	372	2.0	1.5-2.4	91	25.2	254	65.8	27	9.0
Females									
15-20	398	2.1	1.6-2.6	105	27.7	270	65.2	23	7.1
	N	x	95% CI	≤0.	.92	0.93	-1.7	≥:	1.8
	IN	*	95% CI	N	%	N	%	N	%
Males									
21-30	625	1.7	1.4-2.0	117	17.7	482	78.0	26	4.3
31-50	2192	1.9	1.7-2.2	460	22.3	1617	71.5	115	6.2
51-64	1151	1.7	1.5-2.0	248	25.8	844	69.1	59	5.1
65 years and over	892	1.9	1.6-2.1	184	23.9	655	70.2	53	5.9
TOTAL	4860	1.8	1.7-2.0	22.2	1009	72.3	3598	5.5	253
Females									
21-30	898	1.9	1.6-2.2	214	25.5	631	68.5	53	6.0
31-50	2463	1.7	1.5-1.8	700	31.7	1622	62.7	141	5.5
51-64	1435	1.7	1.6-2.0	290	22.3	1061	72.0	84	5.6
65 years and over	1157	1.9	1.6-2.2	227	18.9	851	74.4	79	6.6
TOTAL	5953	1.8	1.7-1.9	26.6	1431	67.6	4165	5.8	253
Age 15 years and over	11583	1.8	1.7-1.9	2636	24.7	8287	69.3	660	6.0
Age 19 years and over	11119	1.8	1.7-1.9	2517	24.5	7972	69.6	630	5.9

Table 3.62. Distribution of FT4 values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

FT4 values among individuals aged 15 years and over by basic characteristics were found as follows: the prevalence of FT4 level (0.93-1.7 ng/dL) among males was 78% in the age group of 21-30 years, and the prevalence of FT4 level (0.93-1.7 ng/dL) among females was 74.4% in the age group of 65 years and over. Considering Turkey's mean level, the highest prevalence of FT4 level (0.93-1.7 ng/dL) was found as 69.3% in the group aged 15 years and over, and 69.6% in the group aged 19 years and over. 24.7% of the study population in the group aged 15 years and over and 24.5% of the study population in the group aged 19 years and over had FT4 level below the reference level (Table 3.62).

			Fe	erritin, ng/ı	nL				
Males	N	x	95% CI	≤:	14	15	-200	≥2	01
iviales	IN	X	95% CI	Ν	%	N	%	N	%
15-18	213	44.6	40.0-49.2	15	7.9	198	92.1	-	-
19-30	773	85.4	79.2-91.7	29	3.8	703	91.0	41	5.3
31-50	2164	99.1	94.4-103.7	92	4.0	1887	88.0	185	8.0
51-64	1140	105.3	98.6-112.0	67	5.5	955	83.6	118	10.9
65 years and over	884	96.2	85.1-107.4	85	9.7	718	80.9	81	9.4
TOTAL	5174	92.2	89.2-95.2	288	5.1	4461	87.5	425	7.4
Females	N	x	95% CI	≤:	14	15	-150	≥1	51
remaies	IN	X	95% CI	N	%	N	%	N	%
15-18	241	21.1	18.9-23.3	104	44.4	137	55.6	-	-
19-30	1038	25.2	23.1-27.4	430	42.9	599	56.3	9	0.8
31-50	2436	26.6	24.7-28.5	1081	45.2	1333	54.0	22	0.8
51-64	1431	55.9	52.5-59.3	230	17.5	1134	77.8	67	4.7
65 years and over	1146	77.8	67.2-88.3	148	11.7	901	77.8	97	10.5
TOTAL	6292	37.6	35.7-39.4	1993	35.3	4104	62.1	195	2.7
Age 15 years and over	11466	64.8	62.9-66.7	2281	20.2	8565	74.8	620	5.0
Age 19 years and over	11012	67.7	66.6-69.7	2162	19.7	8230	74.9	620	5.5

Table 3.63. Distribution of ferritin values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

As a result of the evaluation of blood samples of 11 466 participants aged 15 years and over, the mean ferritin levels were found as 92.2 ng/mL for males and 37.6 ng/mL for females. The prevalence of ferritin level (15-200 ng/mL) among males was 92.1% in the age group of 15-18 years, and prevalence of ferritin level (15-150 ng/mL) among males was 77.8% in the age groups of 51-64 years and 65 years and over. Considering Turkey's mean level, the highest prevalence of ferritin level (15-200 ng/mL for males, 15-150 ng/mL for females) was found as 74.8% in the group aged 15 years and over, and 74.9% in the group aged 19 years and over. 20.2% of the study population in the group aged 15 years and over and 19.7% of the study population in the group aged 15 years and over and 19.7% of the study population in the group aged 15 years and over and 19.7% of the study population in the group aged 15 years and over and 19.7% of the study population in the group aged 15 years and over and 19.7% of the study population in the group aged 15 years and over and 19.7% of the study population in the group aged 15 years and over and 19.7% of the study population in the group aged 19 years and over had ferritin level below the reference level.

In 2017 survey, as seen in the figure, the prevalence of ferritin level being lower than the reference values was 35.3% for females, while this rate was just 5.1% for males. 20.2% of the study population in the group aged 15 years and over and 19.7% of the study population in the group aged 19 years and over had ferritin levels below the reference level (Table 3.63).

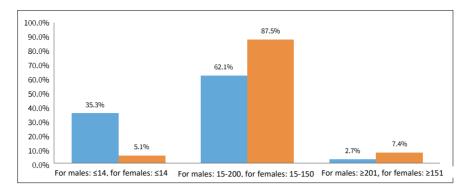


Figure 3.18. Distribution of ferritin values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

Table 3.64. Distribution of vitamin B₁₂ values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

Vitamin B ₁₂ , pg/mL												
Basic	N	x	95% CI		73 / low	74- Clin	-	149 Subcl	-222 inical		23 mal	
characteristics				N	%	N	%	N	%	N	%	
Males												
15-18	216	248.1	229.4-266.9	4	2.2	27	14.1	71	32.6	114	51.1	
19-30	777	260.8	252.0-269.5	7	1.1	77	9.4	223	27.5	470	61.9	
31-50	2186	278.6	272.6-284.6	5	0.2	187	9.5	553	25.5	1441	64.7	
51-64	1149	287.7	277.6-297.8	12	1.5	107	10.0	274	24.4	756	64.1	
65 years and over	888	316.7	301.1-332.4	2	0.2	74	9.3	226	26.2	586	64.3	
TOTAL	5216	277.2	272.9-281.5	30	0.8	472	9.9	1347	26.4	3367	62.8	
Females												
15-18	246	265.0	251.9-278.1	1	0.3	29	12.8	54	22.4	162	64.6	
19-30	1046	280.8	269.2-292.4	-	-	85	10.7	257	26.2	704	63.1	
31-50	2455	293.7	283.5-303.9	6	0.2	208	9.9	598	25.8	1643	64.1	
51-64	1434	334.3	319.8-348.7	2	0.1	93	7.6	307	22.7	1032	69.5	
65 years and over	1158	356.4	334.8-378.0	6	0.3	96	8.3	243	23.4	813	68.0	
TOTAL	6339	303.6	297.4-309.9	15	0.2	511	9.7	1459	24.8	4354	65.4	
Age 15 years and over	11555	290.4	286.6-294.2	45	0.5	983	9.8	2806	26.6	7721	64.1	
Age 19 years and over	11093	293.4	289.4-297.4	40	0.4	927	9.5	2681	25.4	7445	64.6	

As a result of the analysis of blood samples of 11 555 participants, the mean vitamin B_{12} was found as 277.2 pg/mL for males and 303.6 pg/mL for females. Vitamin B_{12} values in individuals aged 15 years and over by basic characteristics were found as follows: the prevalence of vitamin B_{12} level (\geq 223 ng/mL) among males was 64.7% in the age group of 31-50 years, and the prevalence of vitamin B_{12} level (\geq 223 ng/mL) among females was 69.5% in the age group of 51-64 years. Considering Turkey's mean level, the highest prevalence of vitamin B_{12} level (\geq 223 ng/mL) was found as 64.1% in the group aged 15 years and over, and 64.6% in the group aged 19 years and over. 0.5% of the study population in the group aged 15 years and over and 0.4% of the study population in the group aged 19 years and over and 0.4% of the study population in the group aged 19 years and over and 0.4% of the study population in the group aged 19 years and over had vitamin B_{12} levels below the reference level (Table 3.64).

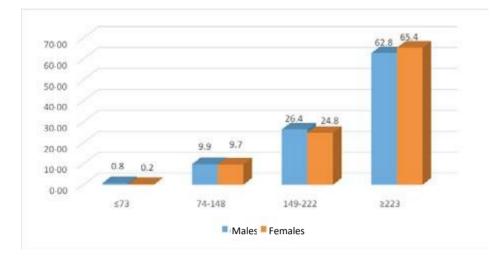


Figure 3.19. Distribution of vitamin B₁₂ values among individuals aged 15 years and over in Turkey by basic characteristics

Table 3.65. Distribution of folate	values among individuals age	ed 15 years and over in Turkey by basic
characteristics, TNHS 2017		

Folate, ng/mL												
Basic characteristics	N	x	95% CI		:3 iency	3-5 Insuffi	-	-	20 mal		20 gh	
characteristics				N	%	N	%	N	%	N	%	
Males												
15-18	194	6.5	6.0-7.0	11	5.2	85	47.3	96	46.8	2	0.7	
19-30	733	6.4	6.1-6.7	32	5.1	360	49.4	339	44.8	2	0.7	
31-50	2034	6.9	6.7-7.0	57	2.7	809	41.9	1158	54.9	10	0.4	
51-64	1064	8.0	7.7-8.3	23	2.4	319	29.9	714	66.4	8	0.9	
65 years and over	845	7.5	7.2-7.8	24	3.8	272	32.1	539	63.1	10	0.9	
TOTAL	4870	7.0	6.9-7.1	147	3.5	1845	41.1	2846	54.7	32	0.7	
Females												
15-18	221	6.8	6.3-7.2	9	5.1	99	44.6	111	49.5	2	0.9	
19-30	953	6.7	6.5-7.0	35	5.0	388	43.7	525	50.9	5	0.5	
31-50	2272	7.8	7.6-8.0	60	2.6	679	32.0	1513	64.7	20	0.8	
51-64	1338	8.6	8.4-8.9	12	0.8	295	21.8	1017	76.6	14	0.8	
65 years and over	1094	7.9	7.6-8.2	42	4.7	303	29.9	734	64.0	15	1.3	
TOTAL	5878	7.6	7.5-7.8	158	3.3	1764	33.5	3900	62.4	56	0.8	
Age 15 years and over	10748	7.3	7.2-7.4	305	3.4	3609	37.3	6746	58.5	88	0.7	
Age 19 years and over	10333	7.4	7.3-7.5	285	3.3	3425	36.6	6539	59.4	84	0.7	

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As a result of the analysis of 10 748 blood samples, the mean folate level was found as 7.3 ng/mL overall; 7 ng/mL for males and 7.6 ng/mL for females. Folate values in individuals aged 15 years and over by basic characteristics were found as follows: the prevalence of folate level (6-20 ng/mL) among males was 66.4% in the age group of 51-64 years, and the prevalence of folate level (6-20 ng/mL) among females was 76.6% in the age group of 51-64 years. Considering Turkey's mean level, the highest prevalence of folate level (6-20 ng/mL) was found as 58.5% in the group aged of 15 years and over and 59.4% in the group aged 19 years and over. 3.4% of the study population in the group aged 15 years and over and 3.3% of the study population in the group aged 15 years and over and 3.65).

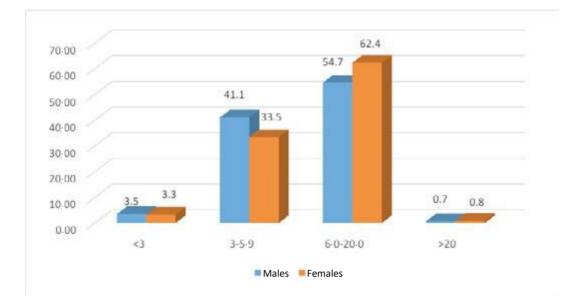


Figure 3.20. Distribution of prevalence of folate values among individuals aged 15 years and over in Turkey by basic characteristics, (%)

				н	bA1c, %						
Basic characteristics	N	x	95% CI		≤4.7	4.8	8-5.6	-	7-6.4 gh risk		≥6.5 diabetes
characteristics				N	%	N	%	N	%	N	%
Males											
15-18	205	5.3	5.2-5.3	17	7.5	156	76.5	31	15.6	1	0.4
19-30	737	5.2	5.2-5.3	68	9.5	596	81.2	63	7.9	10	1.4
31-50	2080	5.6	5.5-5.6	82	4.0	1369	67.2	517	23.1	112	5.7
51-64	1091	6.2	6.0-6.3	17	1.6	466	43.3	384	33.5	224	21.6
65 years and over	868	6.2	6.2-6.1	12	1.2	292	32.1	368	43.5	196	23.2
TOTAL	4981	5.6	5.6-5.7	196	4.9	2879	63.5	1363	22.7	543	8.9
Females											
15-18	238	5.1	5.1-5.2	25	11.6	200	82.0	13	6.4	-	-
19-30	1002	5.2	5.2-5.2	131	13.4	776	77.9	87	8.1	8	0.6
31-50	2369	5.4	5.4-5.5	139	5.5	1613	68.2	496	22.2	88	4.1
51-64	1375	6.1	6.0-6.2	22	1.5	509	37.2	579	43.4	265	18.0
65 years and over	1129	6.2	6.1-6.3	15	1.5	384	33.9	460	40.9	270	23.7
TOTAL	6080	5.6	5.5-5.6	332	6.6	3482	61.7	1635	23.7	631	7.9
Age 15 years and over	11061	5.6	5.6-5.6	528	5.8	6361	62.6	2998	23.2	1174	8.4
Age 19 years and over	10618	5.6	5.7-5.7	486	5.4	6005	61.1	2954	24.3	1173	9.1

 Table 3.66. Distribution of HbA1c values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

The mean HbA1c of examined 11 061 blood samples among individuals aged 15 and 19 years and over was found as 5.6%. HbA1c values by basic characteristics were found as follows: the prevalence of HbA1c level (4.8-5.6%) among males was 81.2% in the age group of 19-30 years. The prevalence of HbA1c level (4.8-5.6%) among females was 82% in the age group of 15-18 years. Considering Turkey's mean level, the highest prevalence of HbA1c level (4.8-5.6%) was 62.6% in the group aged 15 years and over, and 61.1% in the group aged 19 years and over. HbA1c level above 6.5% was found in 8.9% of males and 7.9% of females. This rate was consistent with FPG levels and was lower than rate in the Turkey Household Health Survey - Prevalence of Noncommunicable Disease Risk Factors 2017 (Table 3.66).

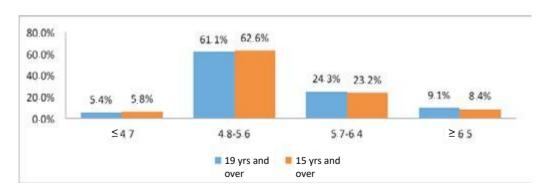


Figure 3.21. Distribution of HbA1c values among individuals aged 15 and 19 years and over in Turkey by basic characteristics

Hgb, g/dL												
Males	N	x	95% CI		7.9 leficiency	8-1 Mode defici	erate		12.9 eficiency	≥1 Nor	L3 mal	
				N	%	N	%	N	%	N	%	
15-18	207	15.1	14.9-15.3	1	0.5	-	-	7	2.8	199	96.7	
19-30	754	15.6	15.5-15.7	-	-	3	0.3	8	1.2	743	98.5	
31-50	2103	15.5	15.4-15.5	-	-	10	0.4	56	2.5	2037	97.5	
51-64	1112	14.9	14.9-15.1	1	0.1	12	0.9	70	6.2	1029	92.8	
65 years and over	860	14.2	14.1-14.3	1	0.1	36	3.9	134	14.9	689	81.1	
TOTAL	5036	15.3	15.2-15.3	3	0.1	61	0.8	275	4.1	4697	95.0	
Females	N	x	95% CI	≤7	7.9	8-1	0.9	11-:	11.9	≥1	l 2	
remaies	IN	x	95% CI	N	%	N	%	N	%	N	%	
15-18	237	13.1	12.9-13.2	-	-	12	4.3	24	10.9	201	84.9	
19-30	987	12.9	12.7-12.9	2	0.6	66	8.4	133	13.8	786	77.3	
31-50	2375	12.7	12.6-12.8	15	0.5	252	11.4	320	14.5	1788	73.5	
51-64	1400	13.2	13.1-13.3	3	0.3	56	4.0	133	9.2	1208	86.5	
65 years and over	1116	12.9	12.8-13.0	1	0.1	88	7.3	156	14.9	871	77.8	
TOTAL	6115	12.9	12.8-12.9	21	0.4	474	8.2	766	13.1	48.54	78.3	
Age of 15 years and over	11151	14.1	14.0-14.1	24	0.2	535	4.5	1041	8.6	9551	86.6	
Age of 15 years and over	10707	14.1	14.0-14.1	23	0.2	523	4.7	1010	8.8	9151	86.2	

 Table 3.67. Distribution of hemoglobin values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

The distribution of Hgb values among individuals aged 15 years and over by basic characteristics was as follows: the prevalence of Hgb level (\geq 13 g/dL) among males was found as 98.5% in the age group of 19-30 years, and the prevalence of Hgb level (\geq 12 g/dL) among females was 86.5% in the age group of 51-64 years. Considering the Turkey's mean level, the highest prevalence of Hgb level (\geq 13 g/dL for males, \geq 12 g/dL for females) was found as 86.6% in the group aged 15 years and over, and 86.2% in the group aged 19 years and over (Table 3.67).

HCT, % ≤40 41-52 ≥53 Males Ν x 95% CI % Ν Ν % Ν 217 45.1 44.8-45.7 20 8.4 196 91.4 0.3 15-18 1 19-30 770 46.4 46.1-46.7 2.7 95.4 1.9 22 728 20 31-50 2156 45.9 45.8-46.2 114 5.2 1981 92.4 51 2.4 51-64 1148 44.9 44.6-45.1 137 13.2 988 84.4 23 2.5 65 years and over 886 43.1 42.8-43.4 231 25.2 635 72.5 20 2.3 TOTAL 524 4538 5177 45.6 45.4-45.7 8.3 89.6 115 2.1 36-46 ≥47 Females 95% CI 15-18 249 39.9 39.5-40.3 17 5.8 229 93.5 3 0.7 19-30 1035 39.2 38.9-39.5 85.9 122 12.1 896 17 2.0 31-50 17.0 2014 81.3 1.7 2439 38.9 38.7-39.1 389 36 51-64 1437 40.3 40.1-40.6 119 1268 88.4 50 8.1 3.5 65 years and over 1151 39.8 39.5-40.0 158 13.4 950 82.8 43 3.8 TOTAL 6311 39.4 39.3-39.6 805 12.8 5357 84.9 149 2.3 Age 15 years and 11488 42.5 42.3-42.6 1329 10.6 9895 87.2 264 2.2 over Age 19 years and 11022 42.4 42.3-42.6 1292 10.9 9470 86.8 260 2.3

 Table 3.68. Distribution of hematocrit values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

The distribution of HCT values among individuals aged 15 years and over by basic characteristics was as follows: the prevalence of HCT level (41-52%) among males was found as 95.4% in the age group of 19-30 years and the prevalence of HCT level (36-46%) among females was 93.5% in the age group of 15-18 years. Considering Turkey's mean level, the highest prevalence of HCT level (41-52% for males, 36-46% for females) was found as 87.2% in the group aged 15 years and over, and 86.8% in the group aged 19 years and over (Table 3.68).

over

				MCV, fL					
Males	N	x	05% 01	≤80).6	80.7	-95.5	≥9	5.6
Iviales	N	X	95% CI	N	%	N	%	N	%
15-18	217	84.3	83.4-85.3	36	16.2	181	83.8	-	-
19-30	770	86.4	85.9-86.9	72	9.3	678	88.2	20	2.6
31-50	2158	86.9	86.6-87.3	188	8.1	1892	88.1	78	3.8
51-64	1148	87.4	86.9-87.8	108	9.9	964	84.1	76	6.1
65 years and over	886	88.3	87.8-88.9	93	9.9	681	78.0	112	12.1
TOTAL	5179	86.9	86.7-87.1	497	9.6	4396	86.0	286	4.4
Females	N	x		≤80).3	80.4	-95.9	≥!	96
remaies	N	X	95% CI	N	%	N	%	N	%
15-18	249	84.2	83.3-85.0	50	21.9	197	76.9	2	1.2
19-30	1034	84.4	83.8-84.9	206	20.1	816	78.7	12	1.2
31-50	2439	84.2	83.8-84.5	581	23.6	1808	74.7	50	1.7
51-64	1437	85.8	85.3-86.2	198	14.5	1202	83.1	37	2.5
65 years and over	1151	87.3	86.8-87.7	129	10.3	966	85.1	56	4.6
TOTAL	6310	84.9	84.7-85.1	1164	19.3	4989	78.7	157	2.0
Age 15 years and over	11489	85.9	85.7-86.0	1661	14.5	9385	82.3	443	3.2
Age 19 years and over	11023	86.0	85.9-86.2	1575	14.0	9007	82.5	441	3.5

Table 3.69. Distribution of MCV values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

According to results obtained from TNHS 2017 survey, the mean MCV level of 11 489 blood samples examined were found as 85.9 fL. The mean levels of MCV were observed as 86.69 fL for males and 85.0 fL for females. Considering MCV values in individuals aged 15 years and over by basic characteristics, the prevalence of MCV level (80.7-95.5 fL) among males was 88.2% in the age group of 19-30 years, and the prevalence of (80.4-95.9 fL) among females was 85.1% in the age group of 65 years and over. Considering Turkey's mean level, the highest prevalence of MCV level (80.7-95.5 fL for males, 80.4-95.9 fL for females) was found as 82.3% in the group aged 15 years and over (Table 3.69).

				MCH, pg/dL					
				≤2	27	28-	33	≥≘	34
	Ν	x	95% CI	N	%	N	%	N	%
Males									
15-18	217	28.4	27.9-28.8	56	26.1	157	71.3	4	2.6
19-30	769	29.2	29.1-29.4	95	12.9	662	85.5	12	1.6
31-50	2156	29.3	29.2-29.4	262	11.9	1868	86.9	26	1.2
51-64	1148	29.2	29.1-29.4	158	14.0	968	84.6	22	1.6
65 years and over	886	29.3	29.1-29.5	143	15.8	717	81.6	26	2.6
TOTAL	5176	29.2	29.1-29.3	714	14.1	4372	84.3	90	1.6
Females									
15-18	249	27.7	27.4-28.1	89	34.9	158	63.8	2	1.3
19-30	1032	27.7	27.5-27.9	375	37.7	653	62.1	4	0.2
31-50	2438	27.5	27.4-27.7	971	41.4	1452	58.1	15	0.5
51-64	1434	28.2	27.9-28.3	426	30.4	996	68.8	12	0.8
65 years and over	1151	28.5	28.3-28.7	303	26.2	836	72.4	12	1.1
TOTAL	6304	27.8	27.7-27.9	2164	36.1	4095	63.3	45	0.6
Age 15 years and over	11480	28.5	28.4-28.6	2878	25.1	8467	73.7	135	1.1
Age 19 years and over	11014	28.5	28.5-28.6	2733	24.6	8152	74.3	129	1.0

Table 3.70. Distribution of MCH values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

In the TNHS 2017 survey, the mean MCH level of 11 480 blood samples examined across Turkey was found as 28.5 pg. The mean levels of MCH were observed as 29.2 pg for males and 27.8 pg for females. MCH values in individuals aged 15 years and over by basic characteristics were as follows: the prevalence of MCH level (28-33 pg) among males was found as 86.9% in the age group of 31-50 years, and the prevalence of MCH level (28-33 pg) among females was found as 72.4% in the age group of 65 years and over. Considering Turkey's mean level, the highest prevalence of MCH level (28-33 pg) was found as 73.7% in the group aged 15 years and over, and 74.3% in the group aged 19 years and over (Table 3.70).

	MCHC, g/dL											
	N	x	95% CI	≤:	32	33-	36	≥	37			
	IN	X	95% CI	N	%	N	%	N	%			
Males												
15-18	215	33.5	33.3-33.7	38	17.8	172	79.8	5	2.5			
19-30	768	33.8	33.7-33.9	90	12.3	664	86.3	14	1.4			
31-50	2157	33.7	33.6-33.8	295	14.6	1830	83.5	32	1.9			
51-64	1146	33.4	33.3-33.5	239	20.6	893	78.1	14	1.3			
65 years and over	886	33.1	32.9-33.2	252	28.1	627	70.8	7	1.1			
TOTAL	5172	33.6	33.5-33.6	914	16.7	4186	81.6	72	1.6			
Females												
15-18	249	32.7	32.6-33.0	100	40.2	146	58.2	3	1.6			
19-30	1031	32.8	32.6-32.9	364	38.4	655	60.6	12	1.0			
31-50	2434	32.6	32.5-32.7	1026	43.1	1389	56.2	19	0.6			
51-64	1429	32.7	32.6-32.8	586	41.3	836	58.0	7	0.7			
65 years and over	1147	32.6	32.5-32.7	507	47.6	637	52.1	3	0.2			
TOTAL	6290	32.7	32.6-32.7	2583	42.0	3663	57.2	44	0.8			
Age 15 years and over	11462	33.1	33.1-33.2	3497	29.5	7849	69.3	116	1.2			
Age 19 years and over	10998	33.1	33.1-33.2	3359	29.5	7531	69.4	108	1.1			

Table 3.71. Distribution of MCHC values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

The mean MCHC level of examined 11 462 blood samples was found as 33.1 g/dL. The mean MCHC levels were found as 33.6 g/dL for males and 32.7 g/dL for females. MCHC values in individuals aged 15 years and over by basic characteristics were as follows: the prevalence of MCHC level (33-36 g/dL) among males was found as 86.3% in the age group of 19-30 years, and the prevalence of MCHC level (33-36 g/dL) for females was found as 60.6% in the age group of 19-30 years. Considering Turkey's mean level, the highest prevalence of MCHC level (33-36 g/dL) was found as 69.3% in the group aged 15 years and over, and 69.4% in the group aged 19 years and over (Table 3.71).

				RDW, %					
		-	05% 01	≤1(0.9	11-	15	≥1	5.1
	Ν	x	95% CI	N	%	N	%	N	%
Males									
15-18	216	15.6	14.1-17.1	1	0.7	172	81.9	43	17.4
19-30	769	14.5	13.8-15.1	4	0.5	659	86.0	106	13.5
31-50	2156	14.6	14.2-14.9	14	0.4	1822	85.6	320	14.0
51-64	1147	15.1	14.6-15.5	4	0.4	943	82.5	200	17.1
65 years and over	885	15.5	14.9-15.9	1	0.1	646	73.7	238	26.2
TOTAL	5173	14.8	14.5-15.8	24	0.4	4242	83.6	907	15.9
Females									
15-18	247	15.8	14.5-17.1	1	0.2	190	77.3	56	22.5
19-30	1032	15.6	14.9-16.3	8	1.4	759	73.3	265	25.3
31-50	2430	15.1	14.8-15.3	5	0.2	1711	70.1	714	29.7
51-64	1432	14.9	14.6-15.4	2	0.1	1121	79.3	309	20.6
65 years and over	1142	15.6	15.1-16.2	-	-	818	73.0	324	27.0
TOTAL	6283	15.3	15.1-15.5	16	0.5	4599	73.5	1668	26.0
Age 15 years and over	11456	15.1	14.8-15.2	40	0.4	8841	78.5	2575	21.0
Age 19 years and over	10993	15.0	14.8-15.2	38	0.4	8479	78.5	2476	21.1

Table 3.72. Distribution of RDW values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

The mean RDW level of 11 456 blood samples examined was found as 15.1%. The mean level of RDW for males was determined as 14.8% and 15.3% for females. RDW values in individuals aged 15 years and over by basic characteristics were as follows: the prevalence of RDW level (11-15%) among males was found as 86% in the age group of 19-30 years, and the prevalence of RDW level (11-15%) among females was found as 79.3%. in the age group of 51-64 years. Considering Turkey's mean level, the highest prevalence of RDW level (11-15%) was found as 78.5% in the group aged 15 years and over, and 78.5% in the group aged 19 years and over (Table 3.72).

	Vitamin D, ng/mL												
	N	x	95% CI	<1 Very		10- Lo			-29 quate		-79 mal		≥80 ligh
		^	5570 CI	N	%	N	%	N	%	N	%	N	%
Males													
15-18	207	23.5	22.0-24.9	6	2.9	69	35.7	77	37.1	55	24.3	-	-
19-30	752	20.4	19.7-21.2	63	7.5	318	43.4	259	35.2	110	13.7	2	0.2
31-50	2089	19.9	19.5-20.4	142	7.1	955	47.3	710	32.8	276	12.5	6	0.2
51-64	1102	21.2	20.5-21.9	67	6.8	440	41.4	416	37.3	176	14.1	3	0.3
65 years and over	847	21.4	20.5-22.3	75	8.6	353	42.2	270	31.5	147	17.4	2	0.2
TOTAL	4997	20.7	20.4-21.1	353	7.0	2135	43.8	1732	34.5	764	14.5	13	0.2
Females													
15-18	237	13.4	12.5-14.4	66	30.5	128	53.5	36	14.0	7	2.0	-	-
19-30	990	13.8	13.2-14.5	348	36.3	447	44.9	159	15.4	35	3.2	1	0.1
31-50	2346	15.9	15.3-16.5	648	27.3	1077	47.2	443	18.0	169	6.9	9	0.5
51-64	1378	17.3	16.5-18.1	315	23.3	636	47.4	271	19.1	148	9.9	8	0.4
65 years and over	1119	18.2	16.9-19.5	314	31.5	434	34.7	204	18.7	161	14.6	6	0.5
TOTAL	6070	15.8	15.4-16.2	1691	29.4	2722	45.6	1113	17.4	520	7.2	24	0.4
Age 15 years and over	11067	18.2	17.9-18.5	2044	18.2	4857	44.7	2845	25.9	1284	10.9	37	0.3
Age 19 years and over	10623	18.2	17.9-18.5	1972	18.3	4660	44.7	2732	25.9	1222	10.7	37	0.3

Table 3.73. Distribution of vitamin D values among individuals aged 15 years and over in Turkey by basic characteristics, TNHS 2017

The mean level of serum 25-OH Vitamin D of 11 067 blood samples examined was found as 18.2 ng/mL. Vitamin D values in individuals aged 15 years and over by basic characteristics were as follows: the prevalence of vitamin D level (10-19 ng/mL) among males was found as 47.3% in the age group of 31-50 years, and the prevalence of vitamin D level (10-19 ng/mL) among females was found as 53.5% in the age group of 15-18 years. Considering Turkey's mean level, the highest prevalence of vitamin D level (10-19 ng/mL) was found as 44.7% in the group aged 15 years and over, 44.7% in the group aged 19 years. The prevalence of the having vitamin D level below 10 ng/mL is 18.2% in the group aged 15 years and over, and 18.3% in the group aged 19 years and over (Table 3.73).

				PTH, pg/mL					
	Ν	x		≤1	L 4	15-	65	≥(56
	N	X	95% CI	N	%	N	%	N	%
Males									
15-18	184	42.1	38.5-45.8	2	1.0	158	86.8	24	12.3
19-30	668	38.4	35.9-40.9	19	3.3	602	89.7	47	7.0
31-50	1846	43.1	41.7-44.6	23	1.1	1612	87.9	211	11.0
51-64	975	46.7	44.5-48.8	12	1.5	811	83.8	152	14.7
65 years and over	764	57.4	54.2-60.5	4	0.7	556	72.5	204	26.8
TOTAL	4437	43.9	42.9-44.9	60	1.7	3739	86.0	638	12.3
Females									
15-18	217	44.4	40.2-48.6	4	1.9	191	86.2	22	11.9
19-30	915	48.3	46.2-50.3	8	1.10	712	81.0	195	18.0
31-50	2087	55.5	53.9-57.1	13	0.6	1507	72.3	567	27.1
51-64	1222	59.4	56.7-61.9	10	0.6	827	68.5	385	31.0
65 years and over	974	70.6	66.8-74.5	8	0.7	543	58.4	423	40.9
TOTAL	5415	55.4	54.2-56.5	43	0.8	3780	73.2	1593	26.0
Age 15 years and over	9852	49.7	48.9-50.5	103	1.2	7519	79.5	2230	19.2
Age 19 years and over	9451	50.3	49.4-51.1	97	1.2	7170	78.9	2184	19.9

Table 3.74. Distribution of parathyroid hormone values among individuals aged 15 years and over in Turkeyby basic characteristics, TNHS 2017

(When analyzed considering the reference ranges of PTH of each province, the prevalence of high level of PTH was found as 16%.)

The mean serum PTH level of examined 9 852 blood samples was found as 49.7 pg/ml. This level was observed as 43.9 pg/ml in males and 55.4 pg/ml in females. PTH values in individuals aged 15 years and over by basic characteristics were as follows: the prevalence of PTH level (15-65 pg/ml) among males was found as 89.7% in the age group of 19-30 years, and the prevalence of PTH level (15-65 pg/ml) among females was 86.2% in the age group of 15-18 years. Considering Turkey's mean level, the highest prevalence of PTH level (15-65 pg/ml) was found as 79.5% in the group aged 15 years and over, and 78.9% in the group aged 19 years and over. The prevalence of parathyroid hormone level being lower than the reference level was 1.2% in the group aged 15 years and over, and 0.2% in the group aged 15 years (Table 3.74).

2.3. Biochemical Findings in Pregnant Women

Table 3.75. Distribution of fasting blood glucose values among pregnant women aged 19 years and over inTurkey by basic characteristics, TNHS 2017

	FBG, mg/dL													
	NI	x	95% CI	<	70	70-	99	100	-125	≥1	26			
Age group	N	X	95% CI	N	%	N	%	N	%	N	%			
19-30	60	78.8	75.8-81.7	7	11.2	52	85.8	1	2.9	-	-			
≥31	57	84.8	79.7-89.9	5	6.4	49	86.1	1	1.3	2	6.2			
TOTAL	117	81.6	78.6-84.6	12	9	101	86	2	2.2	2	2.9			

FBG values in pregnant women aged 19 years and over by basic characteristics were found as follows: the prevalence of FPG level (70-99 mg/dL) in the age group of 19-30 years was 85.8%, and the prevalence of FPG level (70-99 mg/dL) in the age group of \geq 31 was 86.1% (Table 3.75).

Table 3.76. Distribution of creatinine values among pregnant women aged 19 years and over in Turkey by basic characteristics, TNHS 2017

	Creatinine, mg/dL													
0.000	N	x		<	0.5	0.5	-0.9	≥	1					
Age group	N	X	95% CI	N	%	N	%	N	%					
19-30	60	0.5	0.5-0.6	23	30.3	49	68.4	1	1.3					
≥31	57	0.5	0.5-0.6	16	24.1	56	75.9	-	-					
TOTAL	117	0.5	0.5-0.6	39	27.5	105	71.9	1	0.7					

Creatinine values in pregnant women aged 19 and over were found as follows: the prevalence of creatinine level (0.5-0.9 mg/dL) in the age group of 19-30 years was 68.4%, and the prevalence of creatinine level (0.5-0.9 mg/dL) in the age group \geq 31 years was 75.9% (Table 3.76).

Table 3.77. Distribution of TSH values among pregnant women aged 19 years and over in Turkey bybasiccharacteristics, TNHS 2017

	TSH, mIU/L													
A	N		95% CI	≤0.26			4.29	≥4	.3					
Age group	N	x	95% CI	N	%	N	%	N	%					
19-30	73	2.2	1.7-2.6	3	3.5	65	90.1	5	6.5					
≥31	72	2.4	1.6-3.3	2	1.2	64	88.6	6	10.2					
TOTAL	145	2.3	1.8-2.8	5	2.4	129	89.4	11	8.2					

TSH values in pregnant women aged 19 and over by basic characteristics were found as follows: the prevalence of TSH level (0.27-4.29 mIU/L) in the age group of 19-30 years was 90.1%, and the prevalence of TSH level (0.27-4.29 mIU/L) in the \geq 31 age group was 88.6%. The prevalence of TSH level being below the reference level in pregnant women is 2.4% (Table 3.77).

Table 3.78. Distribution of folate values among pregnant women aged 19 years and over in Turkey bybasiccharacteristics, TNHS 2017

	Folate, ng/mL														
•		-	05% 01	<	3	3-5	5.9	6-	20	>:	20				
Age group	N	x	95% CI	N	%	N	%	N	%	N	%				
19-30	67	13.4	11.6-15.2	2	1.9	9	10.6	47	72.5	9	15.1				
≥31	67	14.5	12.8-16.3	-	-	8	12.4	50	74.7	9	12.9				
TOTAL	134	13.9	12.6-15.2	2	1.0	17	11.4	97	73.5	18	14.1				

Folate values in pregnant women aged 19 years and over by basic characteristics were found as follows: the prevalence of folate level (6-20 ng/mL) in the age group of 19-30 years was 72.5%, and the prevalence of folate level (6-20 ng/mL) in the age group of \geq 31 years was 74.7% (Table 3.78). The prevalence of folate level being below the reference level in pregnant women is 1%.

Table 3.79. Distribution of HbA1c values among pregnant women aged 19 years and over in Turkey by basic	:
characteristics, TNHS 2017	

	HbA1c, %													
	N	x	95% CI	≤4	1.7	4.8-	5.6	5.7	-6.4	≥6	5.5			
Age group	N	X	95% CI	N	%	N	%	N	%	N	%			
19-30	72	5	4.9-5.1	18	26.4	52	71.6	2	2	-	-			
≥31	68	5.2	5-5.4	15	17.2	47	71.3	5	6.6	1	4.9			
TOTAL	140	5.1	5-5.2	33	22.2	99	71.5	7	4.1	1	2.2			

HbA1c values in pregnant women aged 19 years and over by basic characteristics were found as follows: the prevalence of HbA1c level (4.8-5.6%) in the age group of 19-30 years was 71.6%, and the prevalence of HbA1c level (4.8-5.6%) in the age group of \geq 31 years was 71.3% (Table 3.79).

The prevalence of HbA1c level being above the reference value in pregnant is 2.2%.

Table 3.80. Distribution of Hgb values among pregnant women aged 19 years and over in Turkey bybasiccharacteristics, TNHS 2017

	Hgb, mg/dL													
Vac grubu	N	x	95% CI	7-9.9		10 -1	LO.9	≥11						
Yaş grubu	IN	X	95% CI	N	%	N	%	N	%					
19-30	70	11.7	11.3-12	5	6.4	15	23	50	70.6					
≥31	67	12.1	11.8-12.4	2	1.4	7	13.4	58	85.1					
TOTAL	137	11.8	11.6-12.1	7	4.2	22	18.7	108	77.1					

Hgb values in pregnant women aged 19 years and over by basic characteristics were found as follows: the prevalence of Hgb level (\geq 11 mg/dL) in the age group of 19-30 years was 70.6%, and the prevalence of Hgb level (\geq 11 mg/dL) in the age group of \geq 31 years was 85.1%. 29.4% of pregnant women in the age group 19-30 years and 14.8% in the age group of 31 years and over had Hgb levels below 11 mg/dL (Table 3.80). The prevalence of Hgb level being below the reference level (11 mg/dL) in pregnant women is 22.9%.

Table 3.81. Distribution of ferritin valu	es among pregnant	women aged 19	years and over in	Turkey by
basic characteristics, TNHS 2017				

	Ferritin, ng/mL													
	NI	x		≤	14	15-	≥151							
Age group	N	x	95% CI	N	%	N	%	N	%					
19-30	74	22	15.7-28.3	37	50.9	36	47.5	1	1.6					
≥31	71	22.6	15.9-29.3	38	48.2	32	50.4	1	1.4					
TOTAL	145 22.3 17.7-26.9 75 49.7 68 48.8 2 1.5													

Ferritin values in pregnant women aged 19 years and over by basic characteristics were found as follows: the prevalence of ferritin level (\leq 14 ng/dL) in the age group of 19-30 years was 50.9%, and the prevalence of ferritin level (15-150 ng/dL) in the age group of \geq 31 years was 50.4% (Table 3.81).

The prevalence of ferritin level being below the reference level in pregnant women is 49.7%.

Table 3.82. Distribution of vitamin B_{12} values among pregnant women aged 19 years and over in Turkey, TNHS 2017

	Vitamin B ₁₂ pg/mL														
Ago group	N	x	95% CI	≤:	73	74 -:	148	149	-222	≥2	23				
Age group	IN	~	95% CI	N	%	N	%	N	%	N	%				
19-30	70	230.6	198.6-262.5	1	2.6	15	20.3	26	36.9	28	40.2				
≥31	72	223	200.4-245.7	2	5.5	13	14	26	32.1	31	48.5				
TOTAL	142	227	206.9-247.1	3	4	28	17.3	52	34.6	59	44.1				

Vitamin B_{12} values in pregnant women aged 19 years and over by basic characteristics were found as follows: the prevalence of vitamin B_{12} level (\geq 223 pg/mL) in the age group of 19-30 years was 40.2%, and the prevalence of vitamin B_{12} level (\geq 223 pg/mL) in pregnant women in the age group of \geq 31 years was 48.5% (Table 3.82). The prevalence of vitamin B_{12} level being below the reference level in pregnant women is 4%.

Table 3.83. Distribution of 25-OH Vitamin D values among pregnant women aged 19 years and over in Turkey, TNHS 2017

	25-OH Vitamin D, ng/mL														
Age group	N	x	95% CI		10 / low	10- Lo	-	-	-29 quate	30- Nor	-79 mal				
				N	%	N	%	N	%	N	%				
19-30	69	14.5	11.9-17.1	22	32.2	31	43.5	12	17.5	4	6.9				
≥31	68	15.5	13.6-17.4	15	14.6	35	51.9	17	31.2	1	2.3				
TOTAL	137	14.9	13.3-16.6 37 24.3 66 47.2 29 23.6 5							4.9					

25-OHD values in pregnant women aged 19 years and over by basic characteristics were found as follows: the prevalence of 25-OHD level (10-19 ng/mL) in the age group of 19-30 years was 43.5%, and the prevalence of 25-OHD level (10-19 ng/mL) in the age group of \geq 31 years was 51.9% (Table 3.83).

3. CONCLUSIONS

- In the survey carried out across Turkey, out of 22 414 respondents (10 984 males, 11 430 females) 53% of males and 62.7% of females completed the questionnaire. The rate of refusal to participate in interview is 26.5% in males, 22.4% in females and 24.4% overall.
- 2. In Turkey, while 24.7% of males are primary school graduates, 2.9% are secondary school graduates, 26.2% are high school or equivalent graduates, 22.6% are university graduates, 2.2% are illiterate. For females, these rates are follows: 12.6% are illiterate, 29.9% are primary school graduates, 2.1% are secondary school graduates, 19.8% are high school and equivalent graduates, 15.4% are college graduates. According to TNHS 2010 survey, 15.1% of males and 34.7% of females across Turkey had no education/had not completed primary school. While 38.7% of males had primary education, 17.4% had secondary education and 28.8% had high school or higher education, whereas these rates were 38.5%, 10.8% and 15.9%, respectively for females.
- 3. In the TNHS 2017 survey, the average years of education is 9.86 years for males and 7.84 years for females. In the Turkey Household Health Survey - Prevalence of Noncommunicable Disease Risk Factors, STEPS study, this rate was reported as 9.9 years for males and 8.2 years for females.
- 4. 64.8% of males and 65.8% of females are married, 26.2% of males are employed in the private sector, and 61.5% of females were housewives. 32% of males and 36.6% of females said "We barely make it till the end of the month with our income". In Turkey, 58.2% of individuals aged 15 years and over live in an apartment and 38.2% live in their own house.

3.1. Disease Status

- 5. Among 12 986 respondents aged 15 years and over surveyed across Turkey, 34.7% of males and 48.5% of females reported that they have any disease. These rates in group aged 19 years and over are 36.6% for males and 51.3% for females. Considering the age groups, the highest percentage of those who reported that they have any disease is 75.9% in males aged 65-74 years, and 90.5% in females aged 75 years and over. In respect of Turkey's mean level, this rate is 78.1% for males and 90.2% for females aged ≥65 years. In the TNHS 2010 survey, out of 12 980 individuals 41.4% reported that they had any chronic disease. 37.9% of males and 44.8% of females responded 'Yes' to the question on chronic disease. Out of 8 638 individuals aged 19 years and over 4 537 (52.5%) reported having any chronic disease.
- 6. The prevalence of having diagnosed cancer is 0.9% for males and 0.8% for females. Considering the age groups, the prevalence of diagnosed cancer is 4.5% for males aged 75 years and over, and 1.9% for females aged 51 to 64 years. In respect of Turkey's mean figure, the prevalence of having any diagnosed cancer is 3% for males and 1.5% for females in the group aged ≥65 years. In the TNHS 2010 survey, 89 of surveyed individuals (0.7%) reported that they had a malignant disease. When evaluated according to age groups, it was found the prevalence of having malignant neoplasm increases with age and was most common in the age group of 75 years and over.
- 7. Diabetes based on self-report was determined in 8.6% of respondents surveyed across Turkey. In the 2010 survey, diabetes was determined in 4.9% of individuals. The prevalence of having diabetes mellitus is 7.6% for males and 9.6% for females. This prevalence in the group aged 19 years and over is 9.3%; 8.2% for males and 10.5% for females.
- 8. The prevalence of having endocrine disease among 12 986 respondents aged 15 years and over surveyed across Turkey is 1% for males and 9.2% for females. In the TNHS 2010 survey, when 12 829 individuals were interviewed for endocrine disorders, 115 (0.9%) individuals reported that they had other endocrine disorders and 413 (3.2%) individuals reported that they had goiter.
- 9. The prevalence of having neuropsychiatric disorder among individuals aged 15 years and over across Turkey is 4.4% in males and 8.9% in females.
- 10. The prevalence of having disorders of sense organs among 12 986 respondents aged 15 years and over surveyed across Turkey is 4.4% for males, 5.3% for females, and 4.8% overall. According to the TNHS 2010 survey, when calculated out of 12 922 individuals who responded the question on disease of the sensory system, 1 862 (14.4%) respondents reported having disease of the sensory system. The prevalence of disease of sensory system was found to be higher in females (15.7%) compared to males (13.1%).

- 11. The prevalence of having cardiovascular diseases among respondents aged 15 years and over surveyed across Turkey is 12.9% for males and 19.5% for females. Considering the age groups, this rate in the age group of 75 years and over is 50.2% for males and 68.5% for females. According to the TNHS 2010 survey, out of 12 926 surveyed individuals (14.8% of females, 9.3% of males) 1 558 (12.1%) reported that they had cardiovascular disease. It was reported that the prevalence of cardiovascular diseases increased with age and was highest in the age group of 75 years and over with 62.0%.
- 12. The prevalence of having diseases of the respiratory system among 12 986 respondents aged 15 years and over surveyed across Turkey is 4.7% for males and 7.2% for females. Considering the age groups, the age group in which diseases of the respiratory system is most common is the age group of 65-74 years. The prevalence of diseases of the respiratory system was prevalent in the age group of 65-74 years with a rate of 16.4%. Considering Turkey's mean level, the prevalence of diseases of the respiratory system of 45.5% among females. In the TNHS 2010 survey 637 (4.9%) out of 12 917 surveyed individuals reported that they had disease of the respiratory system. The prevalence of disease of the respiratory system was found as 4.6% for males and 5.3% for females.
- 13. The prevalence of having diseases of the digestive system among 12 986 individuals aged 15 years and over surveyed across Turkey is 4.5% for males and 7.1% for females. Considering the age groups, this prevalence in the age group of 75 years is 13.6% for males and 15.2% for females. Considering Turkey's mean rate, the prevalence of diseases of digestive system in the age group of 65 years and over was found as 10.1% for males and 13.1% for females. In the 2010 survey, when the chronic diseases of the individuals based on self-report were surveyed by basic characteristics, 7.9% of respondents reported that they had a disease of the digestive system. The prevalence of disease of the digestive system was found as 9.7% in females and 6.0% in males.
- 14. The prevalence of having diseases of genitourinary system among respondents aged 15 years and over surveyed across Turkey is 3.6% in males and 2.4% in females. Considering the age groups, the highest prevalence of genitourinary diseases in the age group of 75 years and over is 17.3% for males and 7.9% for females. Considering Turkey's mean rate, this prevalence in the age group of 65 years and over is 16.2% for males and 6.7% for females. In the TNHS 2010, 6.4% of respondents reported that they had a genitourinary disease.
- 15. In the TNHS 2017 survey, the prevalence of having skin diseases among individuals aged 15 years and over is 1.7% for males and 1.9% for females. Considering the age groups, this prevalence is 2.5% in males aged 19-30 years, and 2.6% in females aged 75 years and over. Considering Turkey's mean rate, this rate in the age group of ≥19 years and 19-64 years is 1.8% for males and 2.2% for females in the group aged ≥ 65 years.
- 16. Among individuals aged 15 years and over surveyed across Turkey, 6.6% of males and 13.1% of females reported that they have disease of musculoskeletal system. Considering Turkey's mean rate, 15.6% of males and 33.9% of females in the age group of ≥65 years have any diagnosed musculoskeletal system disease. In the TNHS 2010, 13.6% of respondents reported having any musculoskeletal system disease.
- 17. In the TNHS 2017, the prevalence of having congenital/chromosomal anomalies among 12 986 respondents aged 15 years and over was reported as 0.3% for males and 0.3% for females. In the TNHS 2010, congenital anomalies were found in 0.8% of respondents. 0.9% of males and 0.7% of females reported having a congenital anomaly.
- 18. The prevalence of having oral and dental health problems among 12 986 respondents aged 15 years and over is 67.7% for males and 73.7% for females. Considering the age groups, this prevalence increases to 84.3% in males aged 65 to 74 years, it is seen as 85.6% in females. Considering Turkey's mean figure, this rate at the age of ≥65 years is 82.7% for males and 85.3% for females. In TNHS 2010, 19.9% of respondents reported having any oral (oral and dental) health problem. 19.1% of males and 20.8% of females reported that they had any oral health condition.
- 19. The prevalence of vaccination against hepatitis among individuals aged 15 years and over across Turkey is 18.7% in males and 16% in females.
- 20. Considering the attendance to any healthcare facility in last 3 months, the prevalence of attendance to any hospital (state, university and private) is 66.8%. The prevalence of attendance to any healthcare facility due to illness is 59.7% for males and 60.8% for females.

- 21. The percentages (%) of physical or mental disability and types of disability among individuals aged 15 years and over across Turkey by gender are as follows: the prevalence of having physical or mental disability among 12 987 respondents aged 15 years and over is 4.2% in males and 2.8% in females.
- 22. Across Turkey, the 0.9% of males and 1% of females are visually impaired; 1% of males and 0.7% of females are hearing impaired; 0.4% of males and 01% of females are language and speech impaired. The prevalence of having mental impairment is 0.6% for males and 0.3% for females. The prevalence of having orthopedic impairment is 1.7% for males and 1% for females. The percentage of those who have psychological and emotional impairment is 0.2% for males and 0.1% for females. The prevalence of having chronic disease is 0.2% for males and 0.1% for females. Considering the physical or mental disability conditions, 26.5% of males and 14.5% of males have congenital visual impairment. 26.6% of males and 13.2% of females have congenital hearing impairment. 72.6% of males and 17.4% of females have congenital language and speech impairment. 50.1% of males and 50.7% of females have congenital mental impairment. 22.9% of males and 20.6% of females have congenital orthopedic impairment. 57.9% of males had congenital physiological/emotional condition. Females have acquired physiological/emotional impairment. 27.2% of males have congenital longterm (chronic illness) disability. According to TNHS 2010, it was determined that 98.8% of individuals aged 12 years and over had no disability, and 1.3% had mental and/or physical disabilities. When evaluated by gender, this rate was found to be 1.5% in males and 0.9% in females. When evaluated by age groups, the rate of mental and/or physical disabilities was 2.7% in the age group of 65-74 years, whereas it was 3.8% in the age group of 75 years and over.
- 23. In consideration of use of tobacco and tobacco products across Turkey, the percentage of smokers who smoke any tobacco product is 47.2% for males, 9.4% for females and 33.2% overall. Among used tobacco products, the prevalence of use manufactured cigarettes is 94% for males and 95.6% for females, whereas 10.2% of males and 7.8% of females reported that they use hand-rolling cigarette. Among tobacco smokers group (4 073 respondents), the percentage of smokers who use hookah is 6.9% in males and 3.2% in females, the percentage of smokers who use tobacco pipe is 1% in males and 0.8% in females, the percentage of smokers who user cigar is 1.6% in males 0.8% in females.
- 24. In the TNHS 2017 study, the percentage of daily cigarette smokers is 89.4% in males and 79% in females. The percentage of smokers who use hookah occasionally/rarely is 95.4% in males and 91.9% in females. The percentage of smokers who use tobacco pipe occasionally/rarely is 100% in males and 74.8% in females. The percentage of smokers who smoke cigar occasionally/rarely was reported as 94% in males and 74.8% in females. According to the data from TURKSTAT Turkey Health Survey 2016, the prevalence of tobacco use was found as 40.1% for males, 13.3% for females, and 26.5% overall.
- 25. In the TNHS 2017 study, the percentage distribution of individuals not meeting the World Health Organization recommendations on physical activity for health is as follows: among the population of Turkey is 37% in the group aged 15 years and over and 37.6% in the group aged 19 years and over. When these rates were evaluated in terms of gender, while 26.1% of males in the group aged 15 years and over do not meet the criteria, this rate is 47.8% in females. In the group aged 19 years and over, these rates are 27.1% in males and 48% in females, respectively. According to results obtained in Turkey Household Health Survey Prevalence of Noncommunicable Disease Risk Factors, STEPS 2017 study, 43.6% of the population in Turkey do not meet WHO's recommendations on physical activity for health, and the value calculated for females is 53.6%.
- 26. Considering the distribution of physical activity levels according to the recommendations of the Global Physical Activity Questionnaire (GPAQ): In the group aged 15 years and over, the percentages of individuals with high level of physical activity are 35.5% for males, 13.5% for females and 24.4% overall; in the group aged 19 years and over, the percentages of individuals with high level of physical activity are 35.1% for males, 14.1% for females and 24.5% overall.
- 27. The median time spent on total daily physical activity of the population aged ≥15 years across Turkey was found as 60 minutes. This figure is on average 105 minutes for males (Interquartile range 40th -270th) and 45.0 minutes for females (Interquartile range 25th -115th). Median time spent on physical activity per day on average is 60 minutes for the population in the group aged ≥19 years. This rate is on average 105 minutes (Interquartile range 40th -300th) for males and 46.8 minutes (Interquartile range 30th -120th) for females.
- 28. The time (minutes) spent on activity at work on average per day in the age group of ≥15 years is 269.1 minutes for males and 152.3 minutes for females. The mean time (minutes) spent on activity at work on average per day in the group aged ≥19 years is 275.7 minutes for males and 156.6 minutes for females.

- 29. The mean time spent on transport-related physical activity on average per day in the group aged ≥15 years is 44.5 minutes; 50.1 minutes for males and 38.9 minutes for females. This mean time in the group aged ≥19 years is 44.8 minutes; 50.5 minutes for males and 39.1 minutes for females.
- 30. In the distribution of mean daily recreation and leisure time-related physical activity by age groups and gender, the population aged ≥15 years engage in any recreation and leisure time-related activity for 89.3 minutes per day. This figure is on average 98.9 minutes for males and 73.4 minutes for females. It was determined that individuals in the group aged 19 years and over engage in any recreation and leisure time related physical activity for 89.9 minutes per day overall, whereas males engage in any recreation and leisure time related physical activity for 99.6 minutes on average per day and females engage in any recreation and leisure time related physical activity for 74.3 minutes on average per day.
- 31. Across Turkey, males in the group aged ≥15 years spend sitting or lying down on average 384.5 minutes per day, and female spend sitting or lying down per day on average 374.1 minutes. These figures are on average 376.7 minutes for males and 363.7 minutes for females in the group aged ≥19 years.
- 32. The percentages of individuals who do not engage in any work,- transport-, and recreation-related physical activity are 76.3% for males and 80.2% for females in the age group of 15-17 years. These rates for other age groups are respectively as follows: 60.8% for males and 82.2% for females in the age group of 18-29 years; 51.2% for males and 74.3% for females in the age group of 30-44 years; 60.5% for males and 72.2% for females in the age group of 45-59 years; 76.2% for males and 85.8% for females in the age group of 60-69 years; 88.4% for males and 93.2% for females in the age group of 70 years and over.
- 33. Across Turkey, the percentages of individuals who do not engage in work-related physical activity per day are 61.6% for males and 78.8% for females in the group aged ≥15 years; 60.3% for males and 78.3% for females in the group aged ≥19 years.
- 34. Across Turkey, the percentages of individuals who do not engage in transport-related physical activity per day are 17.7% for males and 18% for females in the group aged ≥15 years; 18.3% for males and 18.8% for females in the group aged ≥19 years. In distribution according to age groups, the percentages of individuals who do not engage in transport-related physical activity per day are as follows: 11.2% for males and 11.2% for females in the age group of 15-17 years; 13.5% for males and 12.1% for females in the age group of 18-29 years, 20.3% of males and 16.5% for females in the age group of 30-44 years; 19.2% for males and 14.2% for females in the age group of 45-59 years; 16.3% of males and 24.2% for females in the age group of 60-69 years; 25% for males and 50.2% for females in the age group of 70 years and over.
- 35. The percentages of individuals who do not engage in recreation and leisure time-related physical activity per day are 64.2% for males and 78.3% for females in the group aged ≥15 years; 66.6% for males and 79.3% for females in the group aged 19 years and over. The percentages of individuals who do not engage in recreation and leisure time-related physical activity are as follows: 39.1% for males and 60.4% for females in the age group of 15-17 years; 51.3% of males and 75.8% for females in the age group of 18-29 years; 67.6% of males in and 78.8% of females in the age group of 30-44 years; 72% of males and 77.6% of females in the age group of 45-59 years; 76.2% for males and 81.2% for females in the age group of 60-69 years; 80.3% of males and 92.8% of females in the age group of 70 years and over.

3.2. Laboratory Test Results

- 1. In the TNHS 2017 survey, the mean blood glucose in the examined blood samples of 9 679 individuals aged 15 years and over was found as 96.1 mg/dL for the group aged 15 years and over, and 96.9 mg/dL for the group aged 19 years and over.
- 2. The prevalence of elevated FBG was determined as 6.3% in the group aged 15 years and over and 6.9% in the group aged 19 years and over. The prevalence of level between 101 to 126 mg/dL, defined as impaired fasting glucose (IFG), was 16.3% in the group aged 15 years and over, and 17.3% in the group aged of 19 years and over. This value was 15.9% in the total of females and 16.8% in the total of males. Considering the general distribution of the results of unpublished TNHS Health Survey 2010, the FBG of 10 611 individuals were analyzed in this study. While 3.6% of these individuals had FBG level ≥126 mg/dL (Diabetes Mellitus), 5.4% of them had FBG level 101-125 mg/dL (Impaired Fasting Glucose, IFG). While the prevalence of diabetes was 3.5% in females, it was 3.6% in males. The prevalence of IFG was 6.6% in females and 5.4% in males. As it seen, the TNHS 2017 survey results are considerably higher compared to unpublished TNHS 2010 survey results.

- 3. As a result of the analyses performed on 9 618 individuals whose blood samples were collected in the survey, the mean urea levels among individuals aged 15 and over were found as 29 mg/dL for males and 25.3 mg/dL for females The highest urea levels for males and females were in age group of 65 years and over (males: 13.4%, females: 13.7%). The percentage of individuals whose urea level was found above the determined reference level was 2.6% in the group aged 15 years and over, and 2.8% in the group aged 19 years and over.
- 4. The mean creatinine levels of 11 606 individuals aged 15 years and over surveyed by basic characteristics were found as 0.9 mg/dL for males and 0.7 mg/dL for females. Considering Turkey's mean level, the highest prevalence of creatinine level (0.7-1.2 mg/dL for males, 0.5-0.9 mg/dL for females) was found as 94.1% in the group aged 15 years and over, and 94.4% in the group aged 19 years and over. The percentage of those whose creatinine level was found above the determined reference level was 2.8% in the group aged 15 years and over, and 3% in the group aged 19 years and over. In the TNHS 2010 Survey, the mean level of serum creatinine of 10 661 blood samples examined across Turkey was found as 0.70 mg/dL. While this level was 0.80 mg/dL in males, it was found as 0.61mg/dL in females.
- 5. The mean AST of 11 622 individuals aged 15 years and over whose blood samples were collected and analyzed according to the criteria, was found as 22.2 U/L for males and 19.2 U/L for females. Considering Turkey's mean level, the highest prevalence of AST level (males: 0-40 U/L, females: 0-32 U/L) was 96.7% in the group aged 15 years and over, and 96.5% in the group aged 19 years and over. The percentage of individuals whose AST levels were found above the determined reference level was 3.3% in the group aged 15 years and over, and 9.5% in the group aged 19 years and over.
- 6. As of result of the analysis performed on 11 635 blood samples among individuals aged 15 years and over, the mean levels of ALT were found as 25.7 U/L for males and 17.8 U/L for females. Considering Turkey's mean level, the highest prevalence of ALT level (male: 0-41 U/L, female: 0-33 U/L) was found as 91.57% in the group aged 15 years and over, and 90.9% in the group aged 19 years and over. The percentage of individuals whose ALT levels were found above determined reference level was 8.5% in the group aged 15 years and over, and 9.1% in the group aged 19 years and over. In the unpublished TNHS 2010 Health Survey, the mean levels of serum ALT of 10 620 blood samples examined across Turkey was found as 17.6 U/L. The mean levels of serum ALT were obtained as 19.7 U/L for males and 15.6 U/L for females.
- 7. The mean protein levels of examined 10 608 blood samples among individuals aged 15 years and over were found as 7.3 g/dL for males and 7.2 g/dL for females. Considering Turkey's mean level, the highest prevalence of protein level (6-7.9 g/dL) was 92.3% in the group aged 15 years and over, and 92.7% in the group aged 19 years and over. In the TNHS 2010 Survey, the mean levels of serum total protein examined across Turkey was found as 69.6 g/dL. The mean level of serum total protein in males was found as 69.5 g/dL, 8.3% of individuals aged 75 and over had lower level of serum total protein. The percentage of individuals whose protein level was found above the determined reference level was 7.5% in the group aged 15 years and over.
- 8. The mean albumin in examined 11 232 blood samples among individuals aged 15 years and over was found as 4.5 g/dL for males and 4.4 g/dL females. Considering Turkey's mean level, the highest prevalence of albumin level (3.2-5.5 g/dL) was found as 99.7% in the group aged 15 years and over, and 99.7% in the group aged 19 years and over. The percentage of individuals whose albumin level was found above the determined reference level was 0.1% in the group aged 15 years and over, and 0.1% in the group aged 19 years and over. In the TNHS 2010 Survey, the mean level of serum albumin of blood samples examined across Turkey was found as 41.4 g/dL. Serum albumin levels were lower in females (41 g/dL) and individuals aged 75 and over (38.4 g/dL).
- 9. The mean ALP among individuals aged 15 years and over was 81.4 U/L for males and 73.0 U/L for females. According to the results of the TNHS 2010 Survey, the mean of serum ALP of 10 648 blood samples examined across Turkey was found as 86.6 U/L. While this figure was 92.6 U/L for males, it was observed as 80.7 U/L for females.
- 10. As of result of the analysis performed on a total of 9 582 blood samples across Turkey, the mean levels of total cholesterol among individuals aged 15 years and over were found as 182.5 mg/dL for males and 187.1 mg/dL for females. In Turkey, 32% of males and 34.8% of females had cholesterol level above 200 mg/dL, i.e. they had hypercholesterolemia. The results of the TNHS 2017 survey are considerably higher compared to results of the TNHS 2010 survey and Noncommunicable Risk Factors Survey 2017 conducted on this issue. According to results of TNHS 2010 survey, out of total of 10 656 individuals, 78.6% had cholesterol levels below 200 mg/dL and 21.4% had cholesterol levels above 200 mg/dL.

- 11. The mean triglyceride level of 9 691 individuals aged 15 years and over was found as 131.4 mg/dL for the group aged 15 years and over, and 135.4 mg/dL for the group aged 19 years and over. This mean triglyceride levels were 117.9 mg/dL for females and 145.8 mg/dL for males. Considering Turkey's mean level, the highest prevalence of triglyceride level (<150 mg/dL) was found as 71.5% in the group aged 15 years and over, and 69.6% in the group aged 19 years and over. The percentage of individuals with a triglyceride level of 200 mg/dL and above was 14.7% in the group aged 15 years and over and 15.9% in the group aged 19 years and over.
- 12. Considering the basic characteristics of 9 661 individuals, the mean level of HDL cholesterol was found as 48.3 mg/dL for the group aged 15 years and over and 48.2 mg/dL for the group aged 19 years and over. Considering Turkey's mean level, the highest prevalence of (normal) cholesterol value was found as 55% in the group aged 15 years and over, and 54.5% in the group aged 19 years and over. According to the results of the blood samples of 9 525 individuals examined in the TNHS 2017 survey, considering Turkey's mean level, the prevalence of HDL cholesterol level (<100 mg/dL) was found as 39.6% in the group aged 15 years and over and 36.1% in the group aged 19 years and over.
- 13. The mean GGT levels among individuals aged 15 years and over by basic characteristics were 23.8 mg/dL for the group aged 15 years and over, and 24.6 mg/dL for the group aged 19 years and over. This mean level for females was 19.1 mg/dL. Considering mean GGT levels across Turkey's, the highest prevalence of GGT level (Male: 0-60 mg/dL; Female: 0-40 mg/dL) was found as 94.4% in the group aged 15 years and over, and 93.9% in the group aged 19 years and over.

The prevalence of having LDL level above the determined reference level was 2.6% in the group aged 15 years and over, and 2.8% in the group aged 19 years and over.

- 14. As a result of the examination of blood samples of 11 472 individuals aged 15 years and over, the mean calcium levels were found as 9.5 mg/dL for males and 9.4 mg/dL for females. Considering Turkey's mean level, the highest prevalence of calcium level (8.5-10.5 mg/dL) was found as 97.3% in the group aged 15 years and over, and 97.4% in the group aged 19 years and over. According to the results of the Health Report of TNHS 2010 Survey, the mean level of serum calcium of 10 621 blood samples examined across Turkey was found as 9.6 mg/dL. While this level was 9.7 mg/dL in males, it was observed as 9.5 mg/dL in females. The prevalence of calcium level being below the determined reference level was 1.5% in the group aged 15 years and over, and 1.6% in the group aged 19 years and over.
- 15. As a result of the examination of blood samples of 10 294 individuals, the mean phosphorus levels among the individuals aged 15 years and over were found as 3.5 mg/dL for males and 3.6 mg/dL for females. Considering Turkey's mean level, the highest prevalence of phosphorus level (2.5-4.5 mg/dL) was found as 86.3% in the group aged 15 years and over, and 86.4% in the group aged 19 years and over. According to the results of the Health Report of TNHS Survey 2010, the mean level of serum phosphorus of 10 554 blood samples examined across Turkey were found as 3.7 mg/dL. The same mean level (3.7 mg/dL) was found for males and females. 7.0% of the study population in the group aged 15 years and over had phosphorus levels below the reference level.
- 16. As a result of the analysis of blood samples of 10 992 individuals, the mean magnesium levels were found as 2 mg/dL for males and 1.9 mg/dL for females. Considering Turkey's mean level, the highest prevalence of magnesium level (1.6-2.6 mg/dL) was 97.7% in the group aged 15 years and over, and 97.6% in the group aged 19 years and over. The percentage of study population whose magnesium levels was below the reference level was 1.5% in the group aged 15 years and over, and 1.6% in the group aged 19 years and over.
- 17. CRP values among individuals aged 15 years and over by basic characteristics were found as follows: the prevalence of CRP level (0-5 mg/dL) among males was 98.2% in the age group of 15-18 years, and the prevalence of of CRP level (0-5 mg/dL) among females was 96.8% in the age group of 15-18 years. Considering Turkey's mean level, the highest prevalence of CRP value (0-5 mg/dL) was found as 94.0% in the group aged 15 years and over, and 93.7% in the group aged 19 years and over.
- 18. As a result of the analysis of blood samples of 9 108 individuals aged 15 years and over, the mean serum iron was found as 100.4 mcg/dL for males and 74.1 mcg/dL for females. While the prevalence of serum iron levels being lower than reference level was just 6.9% for males, this rate was 26.1% for females. According to the results of TNHS 2010 survey, the mean level of serum iron of 10 624 blood samples examined across Turkey was found as 81.9 µg/dL. While this level was 92.8 µg/dL in males, it was observed as 71.1 µg/dL in females. While the prevalence of iron level being lower than the reference level was just 6.9% for males, this rate was 26.1% for females.
- 19. In the TNHS 2017 survey, the mean level of serum total iron binding capacity (TIBC) of 10 432 blood samples

examined across Turkey was found as 303.2 μ g/dL. While this value was 280.7 μ g/dL for males, it was observed as 325.3 μ g/dL in females. Considering Turkey's mean level, the highest prevalence of iron binding capacity level (250-410 μ g/dL) was found as 63.8% in the group aged 15 years and over, and 64% in the group aged 19 years and over. In the TNHS 2010 survey, the mean level of serum total iron binding capacity (TIBC) of 10 636 blood samples examined across Turkey was found as 283.10 μ g/dL. While this figure was 256.9 μ g/dL in females, it was observed as 308.9 μ g/dL in females. 27.1% of the study population in the group aged 15 years and over and 27.4% of the study population in the group aged 19 years and over had iron binding capacity levels below the reference level.

- 20. In the TNHS 2017 survey, considering Turkey's mean level, the highest prevalence of TSH level (0.27-4.2 mIU/L) was found as 91.5% in the group aged 15 years and over, and 91.2% in the group aged 19 years and over. According to the results of the TNHS 2010 survey, out of 10 565 individuals 93.8% had TSH level 0.34-4.25 μIU/mL, 2.3% had TSH level 4.25-10.00 μIU/mL, and 0.6% had TSH level above 10 μIU/mL.1.3% of the study population in the group aged 15 years and over and 1.4% of the study population in the group aged 19 years and over had TSH levels below the reference level.
- 21. In the TNHS 2017 survey, FT4 values among individuals aged 15 years and over by basic characteristics were found as follows: the prevalence of FT4 level (0.93-1.7 ng/dL) among males was 78% in the age group of 21-30 years, and the prevalence of FT4 level (0.93-1.7 ng/dL) among females was 74.4% in the age group of 65 years and over. Considering Turkey's mean level, the highest prevalence of FT4 level (0.93-1.7 ng/dL) was found as 69.3% in the group aged 15 years and over, and 69.6% in the group aged 19 years and over.
- 22. In the TNHS 2017 survey, as a result of the evaluation of examined blood samples of 11 466 of individuals aged 15 years and over, the mean ferritin levels were found as 92.2 ng/mL for males and 37.6 ng/mL for females.. Considering Turkey's mean level, the highest prevalence of ferritin level (15-200 ng/mL for males, 15-150 ng/mL for females) was found as 74.8% in the group aged 15 years and over, and 74.9% in the group aged 19 years and over. In the TNHS 2017 survey, the prevalence of low level of ferritin was 35.3% for females, while this rate was just 5.1% for males. 20.2% of the study population in the group aged 15 years and over and 19.7% of the study population in the group aged 19 years and over had ferritin levels below the reference level. According to the results of the Nutrition and Health Survey (TNHS) 2010, as a result of analysis of serum ferritin levels of 10 581 blood samples examined across Turkey, low serum level of ferritin (<11 ng/ml) among females was most prevalent in the age group of 31-50 years (47.5%).
- 23. As a result of the analysis of blood samples of 11 555 individuals examined across Turkey, the mean vitamin B_{12} was found as 277.2 pg/mL for males and 303.6 pg/mL for females. Considering Turkey's mean level, the highest prevalence of vitamin B_{12} level (\geq 223 ng/mL) was found as 64.1% in the group aged 15 years and over, and 64.6% in the group aged 19 years and over. In the TNHS 2010 survey, the mean level of serum vitamin B_{12} of 10 472 blood samples examined across Turkey was found as 196.2 pg/ml. While serum vitamin B_{12} levels were found to be the lowest in males (188.1 pg/ml), the lowest level was observed in the 19-30 age group (178.4 pg/ml). 0.5% of the study population in the group aged 15 years and over had vitamin B_{12} levels below the reference level. 0.52% of the study population in the group aged 19 years and over and 0.4% of the study population in the group aged 19 years and over had vitamin B_{12} levels below the reference level. 0.52% of the study population in the group aged 19 years and over and 0.4% of the study population in the group aged 19 years and over and 0.4% of the study population in the group aged 19 years and over and 0.4% of the study population in the group aged 19 years and over and 0.4% of the study population in the group aged 19 years and over and 0.4% of the study population in the group aged 19 years and over and 0.4% of the study population in the group aged 19 years and over and 0.4% of the study population in the group aged 19 years and over and 0.4% of the study population in the group aged 19 years and over and 0.4% of the study population in the group aged 19 years and over and 0.4% of the study population in the group aged 19 years and over and 0.4% of the study population in the group aged 19 years and over had vitamin B12 levels below the reference level.
- 24. As a result of the analysis of 19 748 blood samples examined across Turkey, the mean folate level was found as 7.3 ng/mL overall; 7 ng/mL for males and 7.6 ng/mL for females. Considering Turkey's mean level, the highest prevalence of folate level (6-20 ng/mL) was found as 58.5% in the group aged of 15 years and over and 59.4% in the group aged 19 years and over. 3.4% of the study population in the group aged 15 years and over and 3.3% of the study population in the group aged 19 years and over aged 19 years and over had folate levels below the reference level.
- 25. The mean HbA1c of 11 061 blood samples examined in the TNHS 2017 for individuals aged 15 and 19 years and over was found as 5.6%. Considering Turkey's mean level, the highest prevalence of HbA1c level (4.8-5.6%) was found as 62.6% in the group aged 15 years and over, and 61.1% in the group aged 19 years and over. HbA1c level above 6.5% was found in 8.9% of males and 7.9% of females. This rate was consistent with FPG levels and was lower than the level in the Turkey Household Health Survey Prevalence of Noncommunicable Disease Risk Factors 2017 survey.
- 26. In the TNHS 2017 survey, the distribution of Hgb values among individuals aged 15 years and over by basic characteristics was as follows: the highest prevalence of Hgb level (≥13 g/dL for males, ≥12 g/dL for females) was found as 86.6% in the group aged 15 years and over, and 86.2% in the group aged 19 years and over.

- 27. The distribution of HCT values among individuals aged 15 years and over by basic characteristics was as follows: the prevalence of HCT level (41-52%) among males was found as 95.4% in the age group of 19-30 years, and the prevalence of HCT level (36-46%) among females was 93.5% in the age group of 15-18 years. Considering Turkey's mean level, the highest prevalence of HCT level (41-52% for males, 36-46% for females) was found as 87.2% in the group aged 15 years and over, and 86.8% in the group aged 19 years and over. In the TNHS 2010 Survey, the mean HCT level of examined 10 938 blood samples was found as 41.4%. The mean HCT level was found as 44.1% for males and 38.7% for females.
- 28. According to results obtained in the TNHS 2017, the mean MCV level of 11 489 blood samples examined across Turkey were found as 85.9 fL. The mean levels of MCV were observed as 86.69 fL for males and 85.0 fL for females. Considering Turkey's mean level, the highest prevalence of MCV level (80.7-95.5 fL for males, 80.4-95.9 fL for females) was found as 82.3% in the group aged 15 years and over, and 82.5% in the group aged 19 years and over. According to the results obtained in the TNHS 2010 survey, the mean MCV level of 2 137 blood samples examined across Turkey was found as 85.5 fL . The mean MCV levels were observed as 86.6 fL for males and 84.9 fL for females.
- 29. In the TNHS 2017 survey, the mean MCH level of 11 480 blood samples examined across Turkey was found as 28.5 pg. The mean MCH levels were observed as 29.2 pg for males and 27.8 pg for females. In the TNHS 2010 Survey, the mean MCH level of 5 061 blood samples examined across Turkey was found as 28.6 pg. The mean MCH levels were observed as 29.0 pg for males and 28.1 pg for females.
- 30. The mean MCHC level of 11 462 blood samples examined across Turkey was found as 33.1 g/dL. The mean levels of MCHC were found as 33.6 g/dL for males and 32.7 g/dL for females. Considering Turkey's mean level, the highest prevalence of MCHC level (33-36 g/dL) was found as 69.3% in the group aged 15 years and over, and 69.4% in the group aged 19 years and over. In the TNHS 2010 Survey, the mean MCHC level of 5 032 blood samples examined across Turkey was found as 33.18 g/dL. The mean MCHC levels were found as 33.45 g/dL for males and 32.91 g/dL for females.
- 31. The mean RDW level of 11 456 blood samples examined across Turkey was found as 15.1%. The mean RDW levels for males was found as 14.8% and 15.3% for females. Considering Turkey's mean level, the highest prevalence of RDW level (11-15%) was found as 78.5% in the group aged 15 years and over, and 78.5% in the group aged 19 years and over. In the TNHS 2010 Survey, the mean RDW level of 4 939 blood samples examined across Turkey was found as 13.91%. The mean RDW level for males was determined as 13.71% and 14.11% for females.
- 32. The mean level of serum 25-OH Vitamin D of 11 067 blood samples examined across Turkey was found as 18.2 ng/mL. Considering Turkey's mean level, the highest prevalence of vitamin D (10-19 ng/mL) was found as 44.7% in the group aged 15 years and over, and 44.7% in the group aged 19 years. The prevalence of having vitamin D level below 10 ng/mL is 18.2% in the group aged 15 years and over, and 18.3% in the group aged 19 years and over. In TNHS Survey 2010, the mean level of serum 25-OH Vitamin D of 10 416 blood samples examined across Turkey was found as 26.79 ng/mL.
- 33. The mean level of serum PTH of 9 852 blood samples examined across Turkey was found as 49.7 pg/mL. This figure was observed as 43.9 pg/ml in males and 55.4 pg/ml in females. Considering Turkey's mean level, the highest prevalence of PTH level (15-65 pg/ml) was found as 79.5% in the group aged 15 years and over, and 78.9% in the group aged 19 years and over. In the TNHS 2010 Survey, the mean level of serum PTH of 6 754 blood samples examined across Turkey was found as 4.72 pg/ml. This figure was observed as 2.00 pg/ml in males and as 2.08 pg/ml in females. The prevalence of parathyroid hormone being lower than the reference level was 1.2% in the group aged 15 years and over, and 1.2% in the group aged 19 years and over.

3.3. Laboratory Test Results in Pregnant Women

- In Turkey, FBG values in pregnant women aged 19 years and over by basic characteristics were found as follows: the prevalence of FPG level (70-99 mg/dL) in the age group of 19-30 years was 85.8%, and the prevalence of FPG level (70-99 mg/dL) in the age group of ≥31 years was 86.1%.
- In Turkey, creatinine values in pregnant women aged 19 and over were found as follows: the prevalence of creatinine level (0.5-0.9 mg/dL) in the age group of 19-30 years was 68.4%, and the prevalence of creatinine level (0.5-0.9 mg/dL) in the age group ≥31 years was 75.9%.
- 3. TSH values in pregnant women aged 19 and over by basic characteristics were found as follows: the prevalence of TSH level (0.27-4.29 mIU/L) in the age group of 19-30 years was 90.1%, and the prevalence of TSH level (0.27-4.29 mIU/L) in the ≥31 age group was 88.6%.
- 4. In Turkey, folate values in pregnant women aged 19 years and over by basic characteristics were found as follows: the prevalence of folate level (6-20 ng/mL) in the age group of 19-30 years was 72.5%, and the prevalence of folate level (6-20 ng/mL) in the age group of ≥31 years was 74.7%.
- 5. In Turkey, HbA1c values in pregnant women aged 19 years and over by basic characteristics were found as follows: the prevalence of HbA1c level (4.8-5.6%) in the age group of 19-30 years was 71.6%, and the prevalence of HbA1c level (4.8-5.6%) in the age group of ≥31 years was 71.3%.
- 6. In Turkey, Hgb values in pregnant women aged 19 years and over by basic characteristics were found as follows: the prevalence of Hgb level (≥11%) in the age group of 19-30 years was 70.6%, and the prevalence of Hgb level (≥11%) in the age group of ≥31 years was 85.1%. 23.6% of pregnant women in the age group of 19-30 years and 14.8% in the age group of 31 yeas and over had Hgb level below 11 mg/dl.
- 7. In Turkey, ferritin values in pregnant women aged 19 years and over by basic characteristics were found as follows: the prevalence of ferritin level (≤14 ng/dL) in the age group of 19-30 years was 50.9%, and the prevalence of ferritin level (15-150 ng/dL) in the age group of ≥31 years was 50.4%.
- 8. In Turkey, Vitamin B_{12} values in pregnant women aged 19 years and over by basic characteristics were found as follows: the prevalence of vitamin B_{12} level (\geq 223 pg/mL) in the age group of 19-30 years was 40.2%, and the prevalence of vitamin B_{12} level (\geq 223 pg/mL) in pregnant women in the age group of \geq 31 years was 48.5%
- 9. In Turkey, 25-OHD values in pregnant women aged 19 years and over by basic characteristics were found as follows: the prevalence of 25-OHD level (10-19 ng/mL) in the age group of 19-30 years was 43.5%, and the prevalence of 25-OHD level (10-19 ng/mL) in the age group of ≥31 years was 51.9%.

4. RECOMMENDATIONS

As a result of the developments in the field of medicine, communicable diseases are replaced by chronic diseases, cancer and immune system diseases in Turkey as well as in the world. With the effect of medical developments, lifetime has prolonged, and accordingly, and the life expectancy and resource expectation that individuals wish to benefit from health services have also increased. The prolongation of life expectancy has enabled more individuals to focus on improving their individual health and lifestyles for a healthy life. Therefore, today, living by improving life quality has become as important as leading a long life. The main factors for aging healthily and minimizing age-related health risks with various methods are nutrition and physical activity.

As it known, inadequate and unbalanced nutrition leads to various diseases, and many diseases and health problems also make negative effects on nutrition. In order to reduce or eliminate such negative effects, first of all, the current situation and problems should be revealed with scientific evidence. Therefore, as in many countries, it is necessary to conduct a Nutrition, Health and Food Consumption Survey every five, at the latest, ten years in our country. Because reliable survey data is very critical for preparation of effective, beneficial and consistent food and nutrition plans and policies that are directed towards national nutrition problems. When studies conducted in this respect were complied, it was observed that several studies differ from each other by the year when study was conducted, the method applied, the evaluation differences, and the standard and reference values used in anthropometric measurement data, except Turkey Nutrition and Health Survey that was conducted with a similar method in 2010. Turkey Nutrition and Health Surveys 2010 and 2017 are also important in this respect. With obtained findings, data integrity was achieved across the country, and differences were obtained, and comparisons were made.

In order to create National Nutrition Plans and Policies that will ensure adequate and balanced nutrition of a population, nutrition and health data for that country must be available. It is very important for governments to determine and monitor nutrition status at regular intervals in terms of "improvement and promotion of the health of countrymen". Due to all these reasons, it is necessary to determine the nutritional status of the individual and the population and to monitor it regularly. Thus, one may define nutritional status, determine the reasons and find solutions. Data obtained in Turkey Nutrition and Health Survey 2017, which was conducted with the resources and manpower of the Ministry of Health, Republic of Turkey, is a very important data source both on nutritional and health status of the Turkish population, and as mentioned above, it is possible to re-configure it with the same method at regular intervals with the manpower in the field.

We recommend the findings of this survey, which is conducted across Turkey on a sample representing entire Turkey, to be used as a guidelines for researchers, clinicians and policy makers in order to improve the health and nutritional status of our population and to find solutions.

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CHAPTER 4



APPENDICES



APPENDIX 1. Certificate of Ethics Committee Approval

APPENDIX 2. Questionnaire

APPENDIX 3. TNHS 2017, 24-Hour Dietary Recall Form (1st Period)

APPENDIX 4. TNHS 2017, 24-Hour Dietary Recall Form (2nd Period)

APPENDIX 5. TNHS 2017, Individual Laboratory Form

APPENDIX 6. TNHS 2017, Executive Board

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APPENDIX 8. Comparison of Certain Food Groups, Intakes of Nutrients and Regional Analyses According to Data of TNHS 2010 and TNHS 2017

APPENDIX 9. Tables Contained Certain Health Conditions and Laboratory Test Results by NUTS Regions



Appendix 1. Certificate of Ethics Committee Approval

E-POSTA

DECISION FORM OF CLINICAL RESEARCH ETHICS COMMITTEE

TITLE OF THE	SURVEY	TURKEY NUTRITION AND HEALTH SURVEY
PROTOCOL CO IF ANY	ODE OF THE SURVEY,	
CS FTEE ATION	NAME OF THE ETHICS COMMITTEE	CLINICAL RESEARCH ETHICS COMMITTEE OF TAHIR BURAK WOMEN'S HEALTH TRAINING AND RESEARCH HOSPITAL, MINISTRY OF HEALTH, REPUBLIC OF TURKEY (2011-KAEK-19)
FULL ADDRESS TELEPHONE FAX		T.C.Sağlık Bakanlığı Zekai Tahir Kadın Sağlığı Eğitim ve Araştırma Hastanesi Talatpaşa Bulvarı Samanpazarı/ANKARA
E O E	TELEPHONE	0 312 306 56 85
S S	FAX	0 312 312 50 69

etik kurul@yahoo.com.tr

Document Name	Date	Version	La	nguage			
CENTERS PARTICIPATED IN THE SURVEY	SINGLE CENTER	MULTIPLE CENTERS	NATIONAL	INTERNATIONAL			
	Nonpharmacological clinical trial If other, specify: Cross- sectional Study						
	performed with in vitro medical diagnostic devices						
PHASE AND TYPE OF THE SURVEY	Medical device research						
		harmacological					
LEGAL REPRESENTATIVE OF SPONSOR	REPUBLIC C		Y OF TURKEY, MIN	IISTRY OF HEALTH,			
TÜBİTAK)							
PROJECT EXECUTER (For those who							
SPONSOR							
ADMINISTRATIVE SUPERVISOR, IF ANY							
PRINCIPAL RESEARCHER			,				
PRINCIPAL RESEARCHER CENTER OF THE COORDINATOR/		LTH AGENC	Y OF TURKEY, MIN	IISTRY OF HEALTH,			
SPECIALTY OF THE COORDINATOR/	Public Health						
COORDINATOR/ PRINCIPAL RESEARCHER	Assoc.Prot.	NAZAN YAR	DIM, MD				
	PRINCIPAL RESEARCHER SPECIALTY OF THE COORDINATOR/ PRINCIPAL RESEARCHER CENTER OF THE COORDINATOR/ PRINCIPAL RESEARCHER TITLE/NAME/SURNAME OF THE ADMINISTRATIVE SUPERVISOR, IF ANY SPONSOR TITLE/NAME/SURNAME OF THE PROJECT EXECUTER (For those who get support from resources such as TÜBİTAK) LEGAL REPRESENTATIVE OF SPONSOR PHASE AND TYPE OF THE SURVEY CENTERS PARTICIPATED IN THE SURVEY	PRINCIPAL RESEARCHERSPECIALTY OF THE COORDINATOR/ PRINCIPAL RESEARCHERPublic HealthCENTER OF THE COORDINATOR/ PRINCIPAL RESEARCHERPUBLIC HEA REPUBLIC OTITLE/NAME/SURNAME OF THE ANYANYSPONSORItalTITLE/NAME/SURNAME OF THE PROJECT EXECUTER (For those who get support from resources such as TÜBİTAK)PUBLIC HEA REPUBLIC OLEGAL REPRESENTATIVE OF SPONSORPUBLIC HEA REPUBLIC OPHASE 1PHASE 1PHASE 3PHASE 3PHASE 4Observational p studySURVEYPerformance rat performed with medical diagnos Nonpharmacolo trialCENTERS PARTICIPATED IN THE SURVEYSINGLE CENTERS PARTICIPATED IN THE SURVEY	PRINCIPAL RESEARCHER Public Health SPECIALTY OF THE COORDINATOR/ PRINCIPAL RESEARCHER Public Health CENTER OF THE COORDINATOR/ PRINCIPAL RESEARCHER PUBLIC HEALTH AGENC REPUBLIC OF TURKEY TITLE/NAME/SURNAME OF THE ADMINISTRATIVE SUPERVISOR, IF ANY PUBLIC HEALTH AGENC REPUBLIC OF TURKEY SPONSOR TITLE/NAME/SURNAME OF THE PROJECT EXECUTER (For those who get support from resources such as TÜBİTAK) PUBLIC HEALTH AGENC REPUBLIC OF TURKEY LEGAL REPRESENTATIVE OF SPONSOR PUBLIC HEALTH AGENC REPUBLIC OF TURKEY PHASE 1 PHASE 1 PHASE 3 PHASE 3 PHASE 4 Observational pharmacological study Medical device clinical research Performance rating studies performed with in vitro medical diagnostic devices Nonpharmacological clinical trial If other, specify: Cross- sectional Study CENTERS PARTICIPATED IN THE SURVEY SINGLE CENTER MULTIPLE CENTERS	PRINCIPAL RESEARCHER FIGURE 1 OF THE OF THE COORDINATOR/ PRINCIPAL RESEARCHER Public Health CENTER OF THE COORDINATOR/ PRINCIPAL RESEARCHER PUBLIC HEALTH AGENCY OF TURKEY, MIN REPUBLIC OF TURKEY TITLE/NAME/SURNAME OF THE ADMINISTRATIVE SUPERVISOR, IF ANY PUBLIC HEALTH AGENCY OF TURKEY, MIN REPUBLIC OF TURKEY TITLE/NAME/SURNAME OF THE PROJECT EXECUTER (For those who get support from resources such as TÜBİTAK) PUBLIC HEALTH AGENCY OF TURKEY, MIN REPUBLIC OF TURKEY LEGAL REPRESENTATIVE OF SPONSOR PUBLIC HEALTH AGENCY OF TURKEY, MIN REPUBLIC OF TURKEY PHASE 1			

	Document Name	Date	Version Number						
ENTS	SURVEY PROTOCOL			Turkish		English		Other	
OCUMEN	INFORMED CONSENT FORM			Turkish		English		Other	
DOC	CASE REPORT FORM			Turkish		English		Other	
	SURVEY BROCHURE			Turkish		English		Other	

Title/Name/Surname

of the Chairman of Ethics Committee: **Assoc. Prof. Sema ZERGEROĞLU, MD** Signature: (Signature)

Note: The Chairman of the Ethics Committee shall sign each page which does not contain his/her signature

DECISION FORM OF CLINICAL RESEARCH ETHICS COMMITTEE

TITLE OF THE SURVEY	TURKEY NUTRITION AND HEALTH SURVEY
PROTOCOL CODE OF THE SURVEY, IF ANY	

	Document Title		Explanation					
_	INSURANCE							
S	SURVEY BUDGET	\square						
'NU'. NTS	BIOLOGIC MATERIAL TRANSFER FORM							
VALUA	NOTICE							
ШN	ANNUAL STATEMENT							
OTHER DOC	FINAL REPORT							
Ю	SAFETY NOTICES							
	OTHER							
7	Decision No: 30/2017	Date: 14.02.2017						
DECISION INFORMATION	The documents related to the application file with the abovementioned information were examined and found appropriate considering the reason, purposes, approaches and methods of the research/study, and it was decided by absolute majority of all the ethics committee members attending the meeting that there is no ethical or scientific inconvenience for the research/study to be carried out at the centers specified in the application file, For research/studies within the scope of the Regulation on Clinical Trials of Pharmaceuticals and Biological Products, permission must be obtained from the Turkish Medicines and Medical Devices Agency							

CLINICAL RESEARCH ETHICS COMMITTEE							
WORKING PRINCIPLES OF ETHICS	Regulation on Clinical Trials of Pharmaceutical and Biologic Products, Latest Version of						
COMMITTEE	GuideROW ON Good Clinical Practices						
TITLE/NAME/SURNAME	Assoc. Prof. Sema ZERGEROĞLU, MD						
OF THE CHAIRMAN:							

Title/Name/Surname	Area of Expertise	Institution	Ger	nder		iation survey	Partic	ipation	Signature
Atty.Murat CANGÜL	Law	Self-Employed Lawyer	M⊠	F□	Υ□	N 🖂	Υ□	N 🛛	
Assoc.Prof. Eyüp HORASANLI, MD	Anesthesiology	Keçiören Training & Research Hospital	M⊠	F□	Υ□	N⊠	Υ□	N⊠	(Signature)
Assoc.Prof. Fırat HARDALAÇ , MD	Biomedical	Electric-Electronic Dept. of Engineering Faculty, Gazi Uni	M⊠	F□	Y 🗆	N⊠	Y 🗆	N 🛛	(Signature)
Engr.Msc. Fatih DULKAN	Metallurgy Engr.	Ministry of Industry	M⊠	F□	Υ□	N 🖂	Υ□	$N \boxtimes$	
Asst.Prof. Beyza Doğanay Erdoğan, MD	Biostatistics	Faculty of Medicine, Ankara University	м□	F⊠	Υ□	N⊠	Υ□	N⊠	(Signature)
Spc. Ece GÜL İBRİŞİM, MD	Biochemistry	Zekai Tahir Burak Training & Research Hospital	м□	F⊠	Υ□	N 🖂	Y 🗆	N	(Signature)
Prof. Ömer ERDEVE, MD	Neonatology	Faculty of Medicine, Ankara University	M⊠	F□	Υ□	N 🖂	Y 🗆	N⊠	(Signature)
Prof. H.Zafer GÜNEY, MD	Pharmacology	Faculty of Medicine, Ankara University	M⊠	F□	Υ□	N 🖂	Y 🗆	N 🛛	(Signature)
Prof. Tarkan KARAKAN, MD	Gastroenterology	Faculty of Medicine, Ankara University	M⊠	F□	Υ□	N 🖂	Υ□	N	(Signature)
Assoc.Prof. Elif Gül YAPAR EYİ, MD	Gynecology	Zekai Tahir Burak Training & Research Hospital	м□	F⊠	Y 🗆	N 🖂	Υ□	$N \boxtimes$	
Assoc.Prof. Sema ZERGEROĞLU, MD	Pathology	Zekai Tahir Burak Training & Research Hospital	м□	F⊠	Υ□	N 🖂	Υ□	N	(Signature)

*: Attending the Meeting

Title/Name/Surname of the Chairman of Ethics Committee: **Assoc. Prof. Sema ZERGEROĞLU, MD** Signature: (Signature)

Note: The Chairman of the Ethics Committee shall sign each page which does not contain his/her signature.

Appendix 2. Questionnaire



Turkey Nutrition and Health Survey

(TNHS)

2017

QUESTIONNAIRE (Aged 15 years and over)



INFORMED CONSENT FORM FOR STUDY FOR SURVEY/RESEARCH PURPOSES

(Researcher's Explanation)

Hello! My name is _____ I am from the Provincial Directorate of Public Health.

As the Ministry of Health, we conduct a survey on nutrition and health issues in our county. I would like to ask you a few questions about your nutritional and health status. You have been randomly selected for the study by the Turkish Statistical Institute using the scientific method.

The findings to be obtained from this study are significant in terms of revealing the obesity, chronic diseases, nutritional status in our country and bringing solutions to the identified problems.

We recommend you to participate in the survey. You are free to participate or not participate in this survey. Your participation in this study is entirely voluntary.

If you agree to participate in the survey, we will ask you some questions. These questions include questions to determine *your nutritional and health status and physical activity level*. Again, with your permission, your height and weight will be measured by the healthcare personnel in order to be able to carry out this study. As part of the health screening, tests for your fasting blood glucose, anemia, vitamin D, calcium, cholesterol and blood fats will be carried out. The results will be sent to your primary care physician. *During blood draw*, you may feel slight pain due to needle prick, temporary bruising may occur in the area where blood is drawn, you may feel unwell or rarely faint while drawing blood, there may be prolonged bleeding after a needle prick or risk of infection. For prevention thereof, blood will be drawn by the healthcare personnel by following the necessary rules.

All your answers and information will be kept strictly confidential, will be used in scientific studies and will not be used other than for survey purposes. Your participation in this study will contribute to improvement of nutrition and health services in our country.

Do you accept being interviewed?



Thank you for agreeing the interview.

Now, I am going to ask you some questions about your nutritional and health status. The interview will last approximately 45-60 minutes.

TURKEY NUTRITION AND HEALTH SURVEY (TNHS)-2017

POLLSTER CODE (MANDATORY FIELD) Consists of 4 digits											
FAMILY MEDICINE UNIT NO.						T		 	 		 _
R.T. IDENTITY NO. (MANDATORY FIELD) (Must be limited to 11 digits)						T			T		
(Must be limited to 11 agas) Province Traffic Code ((MANDATORY FIELD) Must be limited to 2 digits							 <u> </u>				
	· ·	(M	DRESS ANDAT ust be li	ORY		T					
TELEPHONE NUMBER: HOME- MOBILE	0									8	

RESULT CODES	T
QUESTIONNAIRE COMPLETED	01
NO HOUSEHOLD MEMBER AT HOME DURING THE SURVEY PERIOD	02
REFUSED	03
INTERVIEW INTERRUPTED	04
NO RESIDENTS AT THE ADDRESS / NOT A RESIDENTIAL ADDRESS	05
RESIDENCE DESTROYED	06
ADDRESS NOT FOUND	07
QUESTIONNAIRE COULD NOT BE FILLED AS THE INDIVIDUAL DID NOT HAVE ENOUGH	08
INFORMATION/ABILITY	
OTHER	09

SECTION 1. GENERAL INFORMATION (THE QUESTIONS WILL BE MARKED AS SINGLE OPTION)

101	Gender	Male1
		Female2
102	Could you tell me your <u>date of birth</u> (day, month, year)?	Day/month/year
	If doesn't know, enter code 99 99 9999.	
		Doesn't know99 99 9999
103	IF DOESN'T KNOW; How old are you exactly now?	
	What age have you completed?	Completed age (year)
	IF OLDER THAN 95 YEARS, WRITE ''95''	
	If descrift here and a contact of the	Doesn't know 99
104	If doesn't know, enter code 99. How many people live in your household?	
	(how many people including you, live in your family)	
	March Handes 2 dista	
105	Must be limited to 2 digits What is your level of education?	Not literate1
105	what is your level of education.	Literate
	Could you tell me the last school you completed?	Elementary school
		Elementary education
		Secondary education
		High school and equivalent7
106	Total number of years of education?	Higher education
100	Total number of years of education:	
107	What is your marital status?	Never married1
		Married2 Widowed
	(Consider cohabitating couple as married)	Divorced
		Lives separately5
108	How old were you when you got married? (Must be limited to two digits)	
	(If married more than once, write the age at the <u>first</u>)	Age at marriage (years)
	marriage, and consider the cohabitating couple as	
109	married)	Government employee 1
107	Could you tell your current job?	Non-government (private sector) employee 2
		Self-employed
		Student
		Retired 6
		Unemployed, able to work
		Unemployed, unable to work
110	Could you tell me which option best represents your	We can easily make it till the end of month with
	condition, including all monthly incomes your household	our income
	earns in a month?	We can make it till the end of month with our income without serious problems2
		We barely make it till the end of the month with our
		income
		We can't make it till the end of the month with our income
		Doesn't know
111	What type of house do you currently live in?	Detached house
		Apartment
		Dormitory 4
		Other
112	Who owns the house you live in?	Own house
		No rent paid (owned by mother, father, etc.)3
		Lodging 4
1		Other 5

SECTION 2. ANTHROPOMETRIC MEASUREMENTS

200	Measured: (1) Refused: (2) Not measured (for special reasons) (3) Skip to Que Skip to Que	
201	Weight (kg) ATTENTION! ENTER WEIGHT! Must be limited up to 3 digits, one digit after the comma	
202	Height (cm) ATTENTION! ENTER HEIGHT! Must be limited up to 3 digits, one digit after the comma	
	IF PREGNANT OR LACTATING WOMEN	SKIP TO SECTION 3
203	Waist circumference (cm)Must be limited up to 3 digits, one digit after the commaIf refuses, enter code 00	
204	Hip circumference (cm) Must be limited up to 3 digits, one digit after the comma If refuses, enter code 00	
205	Neck circumference (cm)Must be limited up to 2 digits, one digit after the commaIf refuses, enter code 00	
206	What do you think about your body and appearance? (Mark only one option)	Underweight/thin
207	Are you currently on a diet or do you do other practice to lose weight? (<i>Mark only one option</i>)	No, my weight is just fine 1 No, I need to loss some weight 2 No, I need to gain weight
207A	If answer is NO, skip to Section 3. If your answer is YES; Which practice do you do you?	Yes
207B	If your answer is YES; From whom do you get the diet or any other practice?	Dietitian

SECTION 3. DISEASE STATUS (HEALTH CONDITION)

301	Do you have any chronic	No 1	If YES , medication use					
	disease(s) diagnosed by a	Skip to Question 314	status					
	physician/doctor?		Mark as below:					
	(MORE THAN ONE OPTION CAN BE MARKED)	Yes 2	No 1 Yes2					
302	Cancer	No 1 Yes2	No:1 Yes: 2					
302A	If he/she HAS cancer	Oral cavity and oropharyngeal cancers1Liver cancer2Colon/rectum (colorectal) cancer3Lymphoma and multiple myeloma4Leukemia5Melanoma and other skin cancers6Breast cancer7Bladder cancer8Stomach cancer9Esophageal cancer10Pancreatic cancer12Uterus cancer13Cervical cancer14Thyroid cancers15Trachea, bronchus and lung cancer16Ovarian cancer17Other malignant tumors18						
302B	If use of medication is NO ; For those who HAVE a disease, but respond NO to the use of medication	 No medication needed, the disease is under a I don't want it myself, I cannot use medication I cannot buy medication Other 						
303	Diabetes mellitus	No 1 Yes2	No:1 Yes: 2					
303A	If he/she HAS diabetes mellitus	Type 1 1 Type 2 2 Insulin resistance 3	Oral antidiabetics1 Insulin preparations2 Doesn't know9					
303B	If use of medication is NO ; For those who HAVE a disease, but respond NO to the use of medication	 No medication needed, the disease is under I don't want it myself, I cannot use medication I cannot buy medication Other 						
304	Other endocrine disorders	No	No:1 Yes: 2					
304A	If he/she HAS other endocrine disorders	Goiter	Anti-obesity medications (except metformin)1 Metformin2 Lipid regulators3 Thyroid medications4 Cortisone5 Other6 Doesn't know9					
304B	If use of medication is NO ; For those who HAVE a disease, but respond NO to the use of medication	 No medication needed, the disease is under a I don't want it myself, I cannot use medicati I cannot buy medication Other 						

305	Neuropsychiatric disorders	No 1 Yes 2	No: 1 Yes: 2
disorders Alzheimer and o Bipolar affectiv Epilepsy Insomnia (prima Mental retardati Migraine Multiple scleros Obsessive-comp Panic attacks Parkinson's diso Schizophrenia Post-traumatic s Unipolar depres Substance-relate Eating disorders Bulimia nervosa Soil/clay/plaster		Disorders related to alcohol use1Alzheimer and other dementias2Bipolar affective disorders3Epilepsy4Insomnia (primary)5Mental retardation6Migraine7Multiple sclerosis8Obsessive-compulsive disorder9Panic attacks10Parkinson's disease11Schizophrenia12Post-traumatic stress disorders13Unipolar depressive disorders (depression)14Substance-related disordersSubstance-related disorders15Eating disorders (Anorexia nervosa, Bulimia nervosa, etc.)16Soil/clay/plaster/ice eating disorder (pica)1718	Antidepressants1 Antipsychotics2 Antiepileptics3 Migraine medications4 Doesn't know9
305B	If use of medication is NO ; For those who HAVE a disease, but respond NO to the use of medication	 No medication needed, the disease is under conditional conditita conditita conditional conditional conditita conditional cond	
306	Disorders of the sense organs	No1 Yes2	No: 1 Yes: 2
306A	If he/she HAS disorders of the sense organs	Glaucoma (eye tension) 1 Cataract 2 Age-related visual impairments (macular degeneration etc.) 3 Hearing loss in adults 4 Other disorders of sense organs 5	
307	Cardiovascular Diseases	No	No: 1 Yes: 2
307A	If he/she HAS cardiovascular diseases	Hypertension 1 Hypertensive heart disease 2 Ischemic heart disease 3 Inflammatory heart disease 4 Rheumatic heart disease 5 Cerebrovascular disease/stroke 6 Other cardiovascular diseases 7	Cholesterol medications (lipid regulator) 1 Blood pressure medications
307B	If use of medication is NO ; For those who HAVE a disease, but respond NO to the use of medication	Other cardiovascular diseases	
308 308A	Diseases of the Respiratory System If he/she HAS diseases of the respiratory system	No 1 Yes 2 Asthma 1 1 1 Chronic obstructive lung disease (COPD) 2 2 Sleep apnea 3 3 Other diseases of respiratory system 4	No: 1Yes: 2Cortisones1Other (specify)2Doesn't know9
308B	If use of medication is NO ; For those who HAVE a disease, but respond NO to the use of medication	 No medication needed, the disease is under control I don't want it myself, I cannot use medication. I cannot buy medication Other 	
309	Diseases of the Digestive System	No	No: 1 Yes: 2
309A	If he/she HAS diseases of the digestive system	Liver cirrhosis	H1 Blockers1 Proton Pump Inhibitor

309B	If use of medication is NO :	1. No medication needed, the disease is un	der control
309D	For those who HAVE a disease, but	 I don't want it myself, I cannot use media 	
	respond NO to the use of medication	3. I cannot buy medication	
		4. Other	
310	Diseases of the Genitourinary System	No	No: 1 Yes: 2
310A	If he/she HAS reproductive system and	Nephritic syndrome 1	
	kidney diseases	Nephrotic syndrome	
		Obstructive and reflux nephropathy 3	
		Prostate hypertrophy 4 Chronic kidney failure	
		Other diseases of genitourinary system 6	
311	Skin Diseases	No	No: 1 Yes: 2
311A	If he/she HAS skin diseases	Psoriasis	Cortisones 1
•	<i>y</i> no, she 1115 shirt diseases	Dermatitis2	Other2
		Other skin diseases	Doesn't know9
312	Diseases of the Musculoskeletal System	No	No: 1 Yes: 2
312A	If he/she HAS diseases of the	Low back pain 1	Painkillers1
	musculoskeletal system	Gout2	Rheumatism meds2
		Rheumatoid arthritis	Gastroprotective meds (PPI,
		Systemic lupus erythematosus	antiacids etc.)
		Osteoporosis	Doesn't know9
		Osteoarthritis	
		Osteopenia	
		Cervical disk disorders	
		Intervertebral disk disorders10	
		Other diseases of musculoskeletal system11	
312B	If use of medication is NO ;	1. No medication needed, the disease is u	
	For those who HAVE a disease, but	 I don't want it myself, I cannot use me I cannot buy medication 	edication.
	respond NO to the use of medication	4. Other	
313	Congenital/Chromosomal Anomalies	No	No: 1 Yes: 2
313A	If he/she HAS congenital/chromosomal	Anorectal atresia	
	anomalies	Down syndrome2	
		Absence of peritonium 3	
		Congenital heart anomalies4	
		Esophagus atresia	
		Renal agenesis	
		Spina bifida	
		Cleft palate	
		Cleft lip/(harelip)10	
		Other congenital anomalies11	
314	Oral and Dental Health Problems	No 1 Yes	No: 1 Yes: 2
314A	If he/she HAS oral and dental health	Tooth decay1	
	problems	Filling tooth	
		Edentulism (partial/full tooth loss)	
		Periodontal disease	
315	Have you attended to any healthcare	No1 Yes2	
515	facility for any reason (illness/control)	1 100	
	in the last 3 months?	If YES, which one did you attended?	
	(Mark only one option)	· · · · ·	
		Primary Care Physician	
		Hospital (public, university, private)	
		Oral and Dental Health Center	
		Public Health Center	4
316	What is the reason for your latest	Illness (outpatient clinic)	1
510	attendance to a healthcare facility?	Surgical procedures (<i>including surgeries</i>)	
1		Control / Medication prescription	
	(Mark only one option)		
	(Mark only one option)	Emergency	

317	Have you been vaccinated against Hepatitis B?	No
318	If YES, How many doses of hepatitis B vaccine have you had?	1 dose

320	Do you have any physical or mental disability?	No

320A. If Yes, specify the Type, Reason and Duration of the Disability					
Type of Disability	Reason of	Disability	Percent	age (%)	Duration
	Congenital1	Acquired2	Two	digits	Disability onset date
			(If there is		(year)
			enter co	ode 00)	
1. Visual	1	2			
2. Hearing	1	2			
3. Language and speech	1	2			
4. Mental	1	2			
5. Orthopedic	1	2			
6. Psychological/ emotional	1	2			
7. Chronic illness	1	2			
8. Unclassified	1	2			

321	USE OF TOBACCO AND TOBACCO PRODUCTS Now I am going to ask you some questions about 'tobacco use'. When I say tobacco, answer thinking about <i>manufactured cigarettes, hand-rolled cigarettes, tobacco pipes, cigars and hookahs.</i>				
	Question	Response			
322	Do you " <i>currently</i> " use tobacco?	No, never smoked1 No, I quit smoking2 Yes			
323	If YES, how often do you use it? Every day 1 Not every day / Occasionally/Rarely	1. Cigarette122. Hand-rolled cigarette123. Hookah124. Tobacco pipe125. Cigar12			
324	Does anyone smoke cigarette/cigar/pipe in your indoor (at home, work)?	No1 Yes2			

SECTION 4. PHYSICAL ACTIVITY STATUS

Next I am going to ask you about the time you spend doing different types of physical activity IN A WEEK. Please answer these questions even if you do not consider yourself to be a physically active person. Think first about the time you spend doing work. Think of work as the things that you have to do such as paid or unpaid work, study/training, household chores, harvesting food/crops, fishing or hunting for food, etc.

In answering the following questions 'vigorous-intensity activities' are activities that require hard physical effort and cause large increases in breathing or heart rate, 'moderate-intensity activities' are activities that require moderate physical effort and cause small increases in breathing or heart rate.

	Question	Response		
	Time spent at work/workplace	F F		
401	Vigorous-intensity activities Does your work involve vigorous-intensity activity that causes large increases in breathing or heart rate like carrying or lifting heavy loads, digging or construction work for <u>at least 10 minutes continuously</u> ?	No 1 Yes 2 If No, skip to 402		
401A	If YES; <u>How many days in a week</u> do you do vigorous-intensity activities as part of your work?	our Number of days:		
401B	How many hours/minutes do you spend doing vigorous-intensity activities at work <u>on a day</u> ?	Hours : minutes		
402	Moderate-intensity activities No 1 Yes 2 In breathing or heart rate such as brisk walking or carrying light loads for at least 10 minutes continuously? If No, skip to 403			
402A	If YES; <u>How many days in a week</u> do you do moderate-intensity activities as part of your work?	Number of days:		
402B	How many hours/minutes_do you spend doing moderate-intensity activities at work <u>on a day</u> ?	Hours : minutes		
	Transportation	1		
	The next questions exclude the physical activities at work that you have already me ask you about the usual way you travel to and from places in a day, for example to to school, to mosque, etc			
403	Do you walk for at least 10 minutes continuously to get to and from places?	No 1 Yes 2 If No, skip to 404		
403A	If YES; <u>How many days a week</u> do you walk <u>for at least 10 minutes</u> continuously to get to and from places?	Number of days:		
403B	How many hours/minutes in a day do you spend walking to get to and from places?	Hours : minutes		

	Recreational and Leisure-Time Activities	
	xt questions exclude the work and transport activities that you have already menti- ports, fitness and recreational/leisure-time activities	oned. Now I would like to ask you
404	Vigorous-intensity sports activities Do you do any vigorous-intensity sports activities that cause large increases in breathing or heart rate like <i>weightlifting</i> , <i>fast cycling</i> , <i>swimming</i> , <i>plowing</i> , <i>playing</i> <i>tennis</i> , <i>running or playing football</i> <u>for at least 10 minutes continuously</u> ?	No 1 Yes 2 If No, skip to 405
404A	If YES; <u>How many days a week</u> do you do vigorous -intensity sports or recreational/leisure-time activities?	Number of days:
404B	<u>How many hours</u> a day do you spend doing vigorous-intensity sports, recreational or leisure activities?	Hours : minutes
405	Moderate intensity sports activities Do you do any moderate-intensity recreational or leisure activities that cause a small increase in breathing or heart rate such as <i>brisk walking, cycling, swimming, volleyball, carrying light loads, milking, drawing water from the well, painting work, gardening</i> for <u>at least 10 minutes</u> continuously?	No 1 Yes 2 If No, skip to 406
405A	<u>How many days a week</u> do you do moderate-intensity sports, recreational (leisure) activities?	Number of days:
405B	<u>How many hours/minutes</u> a day do you spend doing moderate-intensity sports?	Hours : minutes
	The following questions is about the time spent sitting at work, at home, gettin friends or reclining (lying down) (traveling in car, bus, train, reading book-news computer or smartphone, or watching television). The time spent sleeping is not included.	
406	<u>How much time</u> do you usually spend sitting or reclining (lying down) in a day?	Hours : minutes

407. I am going to ask you about the activities you do in a day. What time did you wake up yesterday morning?? What time did you go to bed the last night? What did you do after waking up? WRITE THE APPROPRIATE ACTIVITY CODE FOR ALL ACTIVITIES IN THE TIME ACTIVITY BOX.

ACTIVITY	CODE	Hour		Activity	Hour	Minute	Activity
Sleeping	1		00-14			00-14	
		00	15-29		12	15-29	
			30-44		12	30-44	
			45-59			45-59	
Activities done reclining (lying down)	2		00-14			00-14	
		0.1	15-29			15-29	
(resting, watching TV, reading book-newspaper,		01	30-44		13	30-44	
listening to music)			45-59			45-59	
Activities done sitting	3		00-14	<u> </u>		00-14	
Watching TV,	5		15-29			15-29	
Office works (typing, computer, desk works)			30-44		14	30-44	
Housework (vegetables sorting, knitting, sewing,		02	45-59			45-59	
ironing) Other (driving a car-tractor, painting, playing							
musical instruments, playing cards, carpet weaving,							
polishing shoes, fishing etc.)							
LIGHT intensity standing activities	4	03	00-14		15	00-14	
Walking slowly		03	15-29		15	15-29	
House cleaning, child care, cooking, laundering,			30-44	1		30-44	
dishwashing etc., carpenter works, baking, waste			45-59			45-59	
collecting, tailoring							
MODERATE intensity standing activities	5		00-14			00-14	
Walking at medium speed (with or without load),		04	15-29		16	15-29	
gardening, mechanized field works, animal care-			30-44		16	30-44	
feeding-grooming, milking, drawing water from well,			45-59			45-59	
painting works, etc.							
VIGOROUS intensity standing activities	6		00-14			00-14	
Field works (harvesting, fertilizing, threshing, digging		05	15-29		-	15-29	
etc.)		0.5	30-44		17	30-44	
Tree-wood cutting, load lifting, porterage, construction			45-59			45-59	
works							
LIGHT exercises/sports activities	7		00-14	<u> </u>		00-14	
Aerobics, brisk walking			15-29		18	15-29	
		06	30-44			30-44	
			45-59			45-59	
MODERATE exercises/sports activities	8		00-14	+		00-14	
Volleyball, tennis, dancing, billiards	o	07	15-29	┼───┨	19	15-29	
, one youn, comis, canoniz, onnaids		07	30-44	┼───┨		30-44	
			45-59	1 1		45-59	
VIGOROUS exercises/sports activities	9		00-14	+		00-14	
Basketball, football, rowing, swimming, squash, long-	у	08	15-29	<u> </u>	20	15-29	
distance running, martial arts, bodybuilding		00	30-44	┼───┨		30-44	
distance running, martiar arts, bodybunding			45-59	+ 1		45-59	
			00-14			00-14	
			15-29	1 1	21	15-29	
ATTENTION: ALL BOXES IN THE ACTIVITY BOX		09	30-44			30-44	1
MUST BE MUST BE FILLED WITH APPROPRIATE			45-59	1		45-59	
ACTIVITY CODE!			00-14			00-14	
		10	15-29		22	15-29	
THERE MUST NOT BE BLANK LINES		10	30-44	↓]		30-44	
			45-59	ļ		45-59	
		11	00-14	∔	23	00-14	
			15-29	∔ I		15-29	+
			30-44 45-59	∔		30-44 45-59	
	1		45-59			45-59	

SECTION 5. NUTRITIONAL HABITS

501	Do you usually have a BREAKFAST?	No1 Yes
501		
501A	If NO ; why do not you have breakfast?	No time
		Doesn't want to eat, no appetite
		Food was not prepared
	WHAT IS THE <u>USUAL</u> REASON FOR NOT HAVING	No habit
	BREAKFAST AMONG WHAT IS MENTIONED?	Economic reasons
	(Mark only one option)	Has a snack instead
	(mark only one option)	Wakes up late
		I believe in 2 meals a day
		I don't believe in the importance of breakfast 10
		Other
	Do you usually eat or drink anything at MID-	No1 —> Skip to 503
502	MORNING SNACK (between breakfast and lunch)?	Yes
	If YES; what do you usually consume?	Healthy snacks (Milk, cheese, fruit, yoghurt, etc). 1
		Unhealthy snacks (chips, carbonated beverages, sweets,
		confectionery products, etc.)
502	Do you usually have LUNCH ?	No1
503		Yes
503A	Why do not you have lunch?	No time
505A		Doesn't want to eat, no appetite
	WHAT IS THE <u>USUAL</u> REASON FOR NOT HAVING	Food was not prepared
	LUNCH AMONG WHAT IS MENTIONED?	Wants to lose weight
	(Mark only one option)	No habit
	(Has a snack instead
		Wakes up late
		Not healthy
		Eats two meals a day (breakfast, dinner)
		Other
	Do you usually eat or drink anything	No
504	at MID-AFTERNOON SNACK?	Yes 2
		Healthy snacks (Milk, cheese, fruit, yoghurt, etc) 1
		Unhealthy snacks (chips, carbonated beverages,
		sweets, confectionery products, etc.)
	Do you usually have DINNER ?	No1
505		Yes
	Why don't you have dinner?	No time
505A		Doesn't want to eat, no appetite
	WHAT IS THE USUAL DEAGON EOD NOT HAVING	Food was not prepared
	WHAT IS THE USUAL REASON FOR NOT HAVING DINNER AMONG WHAT IS MENTIONED?	Wants to lose weight 4
		No habit5
	(Mark only one option)	Economic reasons
		Has a snack instead
		Wakes up late
		Not healthy
		Eats two meals a day (breakfast, lunch) 10
506	Do you usually eat or drink anything BEFORE	Eats two meals a day (breakfast, lunch) 10 Other
506	Do you usually eat or drink anything BEFORE BEDTIME at night?	Eats two meals a day (breakfast, lunch)10 Other
506		Eats two meals a day (breakfast, lunch) 10 Other
506	BEDTIME at night?	Eats two meals a day (breakfast, lunch)
	BEDTIME at night? <i>If YES; what do you usually consume?</i>	Eats two meals a day (breakfast, lunch) 10 Other
506	BEDTIME at night?	Eats two meals a day (breakfast, lunch) 10 Other 11 No 1 Yes 2 Healthy snacks (Milk, cheese, fruit, yoghurt, etc) 1 Unhealthy snacks (chips, carbonated beverages, sweets,

508	What drinking water do you USUALLY use (except those added to	Tap (mains) water1
	meals and tea)?	Gallon /pet bottled water2
	(Mark only one option)	Spring water3
		Well water4

	only one option)			
509	Are you vegetarian?	No1 Skip to Question		
		511 Yes		
	If YES	Yes2		
509A	Lacto-vegetarian (consumes milk and dairy products, doesn't	1		
307A	consume meat and eggs)	1		
509B	Ovo-vegetarian (consumes eggs, doesn't consume meat, milk and	2		
	dairy products)			
509C	Lacto-ovo-vegetarian (consumes milk and dairy products, doesn't	3		
	consume meat)			
509D	Pescatarian (Consumes fish, doesn't consume any other meat)	4		
509E	Vegan (doesn't consume any food of animal origin-meat, milk, eggs, honey)	5		
509F	Semi-vegetarian (consumes chicken or fish, doesn't consume red	6		
500 G	meat)			
509G	Macrobiotic diet (Consumed: unprocessed vegan diet, whole grain-	7		
	brown rice, small amount of fruits, large amount of vegetables, white			
	beans and other legumes-lentils and dried peas, sometimes fish; Not consumed: Meat, milk, dairy products, sugar and refined oils)			
510	What is the main reason for you to become a vegetarian? (<i>Mark on</i>	nhy and antian)		
510	what is the main reason for you to become a vegetarian: (wark of			
	To be healthier / to eat healthier	1		
	Animal ethics	2		
	For reasons of religion/belief	3		
	Ecologic and environmental reasons	4		
	Weight control	5		
	My friends or family are vegetarian	6		
	I don't like meat	7		
	Other	8		
	Salt consumption	-		
511	Is salt added to foods while cooking (preparing foods) in your	No, no added/cooked without salt1		
	household?	Skip to 511B		
		Yes, salt is added2		
		Don't know3		
511A	If your answer is YES;	Iodized table salt1		
		Non-iodized table salt2		
	What kind of salt is usually used when preparing/cooking food?	Grinding table salt/Himalayan salt		
	(Mark only one option)	Low-sodium salt substitute		
		Liquid salt (spring water salt)		
		Other		
511B	Do you add salt to your meals at the table without tasting them?	I never add1		
511 D	Do you add sait to your mouls at the abie without asting tief.	I add rarely/ occasionally		
		I always add/without tasting		
511C	What kind of salt do you usually use at the table/in a salt shaker?	I don't have a salt shaker on the table/don't use		
	(Mark only one option)	salt1		
		Iodized table salt		
		Non-iodized table salt3		
		Grinding table salt/Himalayan salt4		
		Low-sodium salt substitute5		
		Liquid salt (spring water salt)		
		Other		

512	Do you consume edible herbs? MORE THAN ONE OPTION CAN BE MARKED	No
512A	Wild mushrooms (Lactarius salmonicolor, Amanita caesarea,	If YES; which ones?
	Morchella esculenta, etc.)	
512B	Herbs with edible leaves (Indian knotweed, wild radish, Tragopogon (Tragopogon porrifolius), stinging nettle, Rumex acetosella (Rumex crispus), Trachystemon orientalis, Lamb's quarters ormelde, Mustard greens, malva sylvestris vb.)	2
512C	Herbs with edible stems and shoots (<i>Ribes, ivy butt, Bitter Herb, Glasswort, ferula communis, prickly ivy, etc.</i>)	3
512D	Herbs with edible roots (Gundelia tournefortii, Ornithogalum umbellatum, etc.)	4
512E	Herbs with edible fruits (<i>Blackthorn, wild pear, hawthorn, celtis, blackberry, eriolobus trilobatus, corncockle, bilberry, strawberry tree, rose hip, myrtus, etc.</i>)	5
512F	Herbs with edible seeds (common nettle seed, turpentine tree, vb.)	6
512G	Herbs with edible flowers (Lamium, primula, chamomile, etc.)	7
512H	Medical plants consumed as tea (<i>Rose hip tea, cranberry, common thyme, Greek sage, salvia, tilia, etc.</i>)	8
512 I	Medicinal plants consumed as spice (common thyme, Rhus, Mentha longifolia (pennyroyal), tarhana herb, etc.)	9

513	FOOD SHOPPING Do you <u>usually</u> do shopping yourself for foods and beverages?	No
513A	What do you pay attention to the most in foods and drinks (in packaged products) you buy while shopping? MARK MAXIMUM 3 OPTIONS	I don't pay attention 1 Price 2 Brand's reliability and recognition 3 Nutrition fact label and ingredients 4 Health and nutrition claims 5 Expiry date 6 Statements/pictures/damages on the package 7 Registration/approval number of Ministry of Agriculture and Forestry. 8 Promotion 9 Doesn't know 10

514 COOKING METHODS											
	How do you USUALLY cook each kind of food that I am going to list to you? For example, baking, frying, boiling, roasting. Mark only one option	BAKING/ GRILLING/ TEFLON PAN (WITHOUT OIL)	COOKING IN A SMALL OR LARGE AMOUNT OF WATER/STEAMING	BOILING AND DRAINING	STEAMING	ROASTING	GRILLING SUCH AS EMBER/BARBECUE	DEEP FRYING	COOKING IN PRESSURE COOKER	MICROWAVING	DOESN'T COOK/ DOESN'T KNOW
514A	Vegetables dishes (with/without meat)	1	3	4	5	6	7	8	9	10	11
514B	Legumes (with/without meat)	1	3	4	5	6	7	8	9	10	11
514C	Red meat	1	3	4	5	6	7	8	9	10	11
514D	Chicken	1	3	4	5	6	7	8	9	10	11
514E	Fish	1	3	4	5	6	7	8	9	10	11
514F	Rices/Pilafs	1	3	4	5	6	7	8	9	10	11
514G	Pasta/Macaroni	1	3	4	5	6	7	8	9	10	11
514H	Pastries	1	3	4	5	6	7	8	9	10	11
514İ	Eggs	1	3	4	5	6	7	8	9	10	11

SECTION 6. GENERAL INFORMATION AND NUTRITIONAL HABITS OF WOMEN WHO HAVE EXPERIENCED PREGNANCY and LACTATING

WOMEN WHO HAVE EXPERIENCED PREGNANCY and LACTATING (1)		MALE (2) WOMEN WHO HAVE NOT EXPERIENCED PREGNANCY and LACTATING (3)	\rightarrow	Skip to Section 7
601	How old (year) were you when you first got p (Must be limited to two digits) If she doesn't know, enter the code 99.	regnant?		
602	How many pregnancies have you had in total be limited to two digits) If she doesn't know, enter the code 99.	? (Must		

603	Are you currently pregnant?	No1 Skip to Question 604 Yes2
603A	If yes; how many weeks pregnant are you? (<i>limited to two digits</i>) If she doesn't know, enter the code 99.	Week of pregnancy
603B	How much did you weigh before you got pregnant? (Must be limited to three digits and one digit after comma) If she doesn't know, enter the code 000.0.	Weight before pregnancy (kg):
604	Do you have a child that you are still breastfeed?	No1 Yes2 Skip to Section 7
604A	If yes; how many months have you been breastfeeding? (month) (Must be limited to two digits) IF LESS THAN ONE MONTH, WRITE "00"	

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SECTION 7. FREQUENCY OF FOOD CONSUMPTION

701			ng about the <u>L</u> nat I am going			w frequently d	lo you persona	ally cons	ume the
-	701A. MILK AND DIARY PRODUCTS		Less than once a month	1-3 times per month	Once a week	2-3 times per week	4-5 times per week	Every day (6-7 times)	Doesn't know/ No response
1	Yoghurt, ayran (diluted yoghurt)	1	2	3	4	5	6	7	8
2	Probiotic yoghurt	1	2	3	4	5	6	7	8
3	Cheese	1	2	3	4	5	6	7	8
4	Sweetened/fruit/cocoa/ chocolate flavored milks	1	2	3	4	5	6	7	8
5	Sweetened/fruit/cocoa/ chocolate flavored yogurts	1	2	3	4	5	6	7	8
6	Cream/clotted cream	1	2	3	4	5	6	7	8
7	Ice-cream	1	2	3	4	5	6	7	8
8	Milk desserts (kazandibi (white pudding with blackened surface), sütlaç (rice pudding), pudding, milk pudding	1	2	3	4	5	6	7	8

	701B. MEAT-EGGS-LEGUMES AND SEEDS		Less than once a month	1-3 times per month	Once a week	2-3 times per week	4-5 times per week	Every day (6-7 times)	Doesn't know/ No response
9	Beef	1	2	3	4	5	6	7	8
10	Lamb/mutton	1	2	3	4	5	6	7	8
11	Chicken	1	2	3	4	5	6	7	8
12	Turkey	1	2	3	4	5	6	7	8
13	Goose/duck	1	2	3	4	5	6	7	8
14	Fish	1	2	3	4	5	6	7	8
15	Meat products (salami, sausage, fermented sausage, pastrami, etc.)	1	2	3	4	5	6	7	8
16	Nuts (hazelnuts, peanuts, pistachios, walnuts, etc.)	1	2	3	4	5	6	7	8
17	Legumes (dry beans, chickpeas, lentils, etc.)	1	2	3	4	5	6	7	8
18	Eggs	1	2	3	4	5	6	7	8

	701C. VEGETABLES AND FRUITS		Less than once a month	1-3 times per month	Once a week	2-3 times per week	4-5 times per week	Every day (6-7 times)	Doesn't know/ No response
19	Vegetables, total	1	2	3	4	5	6	7	8
20	Fruits, total	1	2	3	4	5	6	7	8
21	Green leafy vegetables	1	2	3	4	5	6	7	8
22	Other fresh vegetables (leek, cabbage)	1	2	3	4	5	6	7	8
23	Tomato	1	2	3	4	5	6	7	8
24	Green pepper (village pepper, banana pepper, long pepper, etc.)	1	2	3	4	5	6	7	8
25	Mushroom	1	2	3	4	5	6	7	8
26	Corn	1	2	3	4	5	6	7	8
27	Frozen vegetables /fruits	1	2	3	4	5	6	7	8
28	Dried vegetables	1	2	3	4	5	6	7	8
29	Dried fruits	1	2	3	4	5	6	7	8
30	Citrus fruits	1	2	3	4	5	6	7	8
31	Other fresh fruits	1	2	3	4	5	6	7	8

701	701D. BREAD-CEREALS		Less than once a month	1-3 times per month	Once a week	2-3 times per week	4-5 times per week	Every day (6-7 times)	Doesn't know/ No response
32	White bread	1	2	3	4	5	6	7	8
33	Whole grain bread, rye bread, wholemeal bread, etc.	1	2	3	4	5	6	7	8
34	Home-made unleavened breads (phyllo dough, etc)	1	2	3	4	5	6	7	8
35	Rice	1	2	3	4	5	6	7	8
36	Bulghur	1	2	3	4	5	6	7	8
37	Macaroni (pasta), noodles, couscous	1	2	3	4	5	6	7	8
38	Pastry, cake, bun	1	2	3	4	5	6	7	8
39	Cookies	1	2	3	4	5	6	7	8
40	Tarhana (fermented dried yoghurt and flour mixture)	1	2	3	4	5	6	7	8
41	Biscuits, crackers	1	2	3	4	5	6	7	8
42	Bagel	1	2	3	4	5	6	7	8
43	Breakfast cereals (muesli, cornflakes, wheat flakes, etc.)	1	2	3	4	5	6	7	8

701E. BEVERAGES		Never	Less than once a month	1-3 times per month	Once a week	2-3 times per week	4-5 times per week	Every day (6-7 times)	Doesn't know/ No response
44	Ready-made fruit juices	1	2	3	4	5	6	7	8
45	Freshly squeezed fruit juices	1	2	3	4	5	6	7	8
46	Freshly squeezed vegetables juices	1	2	3	4	5	6	7	8
47	Regular cola drinks	1	2	3	4	5	6	7	8
48	Light/zero cola drinks	1	2	3	4	5	6	7	8
49	Ice tea	1	2	3	4	5	6	7	8
50	Tea (black)	1	2	3	4	5	6	7	8
51	Green tea	1	2	3	4	5	6	7	8
52	Herbal tea	1	2	3	4	5	6	7	8
53	Mineral water, soda	1	2	3	4	5	6	7	8
54	Instant (granulated) coffee	1	2	3	4	5	6	7	8
55	Filter coffee	1	2	3	4	5	6	7	8
56	Turkish coffee	1	2	3	4	5	6	7	8
57	Energy drinks	1	2	3	4	5	6	7	8
58	Alcoholic beverages	1	2	3	4	5	6	7	8

	?. OIL, FATS, SUGAR, SSERTS	Never	Less than once a month	1-3 times per month	Once a week	2-3 times per week	4-5 times per week	Every day (6-7 times)	Doesn't know/ No response
59	Olive oil	1	2	3	4	5	6	7	8
60	Hazelnut oil	1	2	3	4	5	6	7	8
61	Sunflower oil	1	2	3	4	5	6	7	8
62	Corn oil	1	2	3	4	5	6	7	8
63	Soybean oil	1	2	3	4	5	6	7	8
64	Canola oil	1	2	3	4	5	6	7	8
65	Butter	1	2	3	4	5	6	7	8
66	Tail fat, tallow	1	2	3	4	5	6	7	8
67	Hard margarine	1	2	3	4	5	6	7	8
68	Soft margarine	1	2	3	4	5	6	7	8
69	Hamburger, fried chicken pieces etc.	1	2	3	4	5	6	7	8
70	Doner, kebab, etc.	1	2	3	4	5	6	7	8
71	Pita, Turkish pizza, pizza, pancake, etc.	1	2	3	4	5	6	7	8
72	Chips, corn snacks, etc.	1	2	3	4	5	6	7	8
73	Honey, jam, molasses	1	2	3	4	5	6	7	8
74	Table sugar	1	2	3	4	5	6	7	8
75	Sweets, Turkish Delight, chocolate	1	2	3	4	5	6	7	8
76	Pastry desserts, syrup sweetened (tulumba, lokma, baklava)	1	2	3	4	5	6	7	8
77	Pastry products with cream filling (cake, eclair, etc.)	1	2	3	4	5	6	7	8
78	Artificial sweeteners	1	2	3	4	5	6	7	8
79	Instant soups	1	2	3	4	5	6	7	8
80	Smoked products	1	2	3	4	5	6	7	8
81	Meat bouillon cube, chicken bouillon cube	1	2	3	4	5	6	7	8

Thinking about the **LAST 12 MONTHS**, how frequently do you personally consume the foods that I am going to list now?

Т	Thinking about the LAST 12 MONTHS, how frequently do you personally consume the foods that I am going to list now?											
FOC and	A: FREQUENCY OF OD CONSUMPTION AMOUNT OF FOOD NSUMED	Never	Less than once a month	1-3 times per month	Once a week	2-3 times per week	4-5 times per week	Every day (6-7 times)	Doesn't know/ No response	AMOUNT (Write amount consumed at one occasion)		
82	Pasteurized milk	1	2	3	4	5	6	7	8	mL		
83	UHT milk	1	2	3	4	5	6	7	8	mL		
84	Loose milk	1	2	3	4	5	6	7	8	mL		
85	Probiotic milk and dairy products (Kefir, etc.)	1	2	3	4	5	6	7	8	mL		
86	Seafood (calamars, shrimps, mussels, etc.)	1	2	3	4	5	6	7	8	g		
87	Offals (liver, kidney, spleen, etc.)	1	2	3	4	5	6	7	8	g		
88	Raisin	1	2	3	4	5	6	7	8	g		
89	Ready-made canned vegetables	1	2	3	4	5	6	7	8	g		
90	Home-made canned vegetables	1	2	3	4	5	6	7	8	g		
91	French fries	1	2	3	4	5	6	7	8	g		

Г

SECTION 8. FOOD SECURITY

I am going to ask you some questions about food status. Which of the following best reflects situation for you or your household in the past year? Now I am going to ask you some questions about your food consumption. Have you experienced in the <u>last 12 months</u>?

001	Ware you wormind you would not have anough food to get house of a	No 0
801	Were you worried you would not have enough food to eat because of a	No0
	lack of money or other resources?	Yes1
		Don't know2
000		No response3
802	Still thinking about the last 12 months, was there a time when you were	No0
	unable to eat healthy and nutritious food because of a lack of money or	Yes1
	other resources?	Don't know2
		No response3
803	Still thinking about the last 12 months, was there a time when you ate	No0
	only a few kinds of foods because of a lack of money or other resources?	Yes1
		Don't know2
		No response3
804	Still thinking about the last 12 months, was there a time when you had to	No0
	skip a meal because there was not enough money or other resources to	Yes1
	get food?	Don't know2
		No response3
805	Considering the last 12 months, was there a time when you ate less than	No0
	you thought you should because of a lack of money or other resources?	Yes1
		Don't know2
		No response3
806	Still thinking about the last 12 months, was there a time when your	No0
	household ran out of food because of a lack of money or other resources?	Yes1
		Don't know2
		No response3
807	Still thinking about the last 12 months, was there a time when you (or any	No0
	other adult in the household) were hungry but did not eat because there	Skip to Question 808
	was not enough money or other resources for food?	Yes1
	If YES, continue.	Don't know2
		No response3
807A	How often in the past 12 months you had to skip meal despite being	Only once or twice0
	hungry due to lack of money or other resources for food?	Some months, but not every monthl
	If the response is "not in the last 12 months", go back to the Question 807	Almost every month2
	and mark it as "No".	Don't know3
		No response4
808	Still thinking about the last 12 months was there a time when you went	No0 Skip to Section 9.
	without eating for a whole day because of a lack of money or other	Yes1
	resources?	
	If YES, continue.	
808A	How often in the past 12 months you went without eating for a whole day	Only once or twice0
	because of a lack of money or other resources?	Some months, but not every monthl
	If the response is "not in the last 12 months", go back to the Question 808	Almost every month2
	and mark it as "No".	Don't know
		No response4

SECTION 9. FOOD SUPPLEMENTS

901. Do you use food supplements?	No1 Yes2	\rightarrow	Skip to Section 10.

If YES; which ones do you consume?

Use the codes in the instruction table below while questioning the food supplements used.

901A. Food Supplements	Name/ Brand	Who recommended	Reason for Use	Period of Use	Frequency of Use	Form of Use	Amount/dose used (at one occasion) (IU, mg, mcg, drop)
Vitamin D							
Vitamin A							
Vitamin C							
Vitamin E							
Vitamin B group							
Vitamin B ₁₂							
Folate/folic acid							
Multivitamin-with minerals							
Multivitamin (without minerals)							
Selenium							
Iron							
Calcium							
Zinc							
Magnesium							
Omega-3							
Fish oil							
Probiotic or prebiotic							
Eye-related (Lutein, etc.)							
Bodybuilding supplements (carnitine, creatine, amino acids, protein powder, etc.)							
Vegetables oils, capsules, (black seed oil, sesame oil, etc.)							
Algae-seaweed, etc.							
Other							

Who recommended	CODE	Reason for Use	CODE	Period of Use	CODE	Frequency of Use	CODE	Form of Use	CODE
Doctor	1	Illness	1	Lest than a week	1	3 times per day	1	Drops	1
Pharmacist	2	Malaise	2	1 week-1 month	2	2 times per day	2	Dessert spoon	2
Dietitian	3	Curiosity	3	1-3 months	3	Once a day	3	Piece/tablet	3
Midwife/nurse	4	Immune System	4	4-6 months	4	4-5 times per week	4	Sachet/powder pack	4
Relative	5	Nutritional support	5	7-12 months	5	2-3 times per week	5	Lozenges, etc.	5
Friend	6	Being active	6	More than a year	6	Once a week	6	Liquid ampoule	6
Media	7	Sports/exercise	7	Doesn't know/remember	7	1-3 times per week	7	Doesn't know	7
Themselves	8	Pregnancy/ lactating	8			Less than 1 per month	8		
Sports trainer	9	Weight loss	9						
		Weight gain	10						

SECTION 10. FOOD CONSUMPTION STATUS-1.

1001	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
	1	2	3	4	5	6	7

Mark the day when the food was consumed.

	Breakfast	Mid-Morning Snack	Lunch	Mid-Afternoon Snack	Dinner	Before Bedtime
1001A. Where was						
eaten						
A. Didn't eat	1	1	1	1	1	1
B. Ate at home	2	2	2	2	2	2
C. Ate in the car	3	3	3	3	3	3
D. Ate at workplace	4	4	4	4	4	4
E. Ate at restaurant	5	5	5	5	5	5
F. Ate on the street	6	6	6	6	6	6
G. Ate at school	7	7	7	7	7	7
H. Ate at dormitory	8	8	8	8	8	8
I. Other	9	9	9	9	9	9
1001B. Where was						
prepared						
1. At home	1	1	1	1	1	1
2. Outside	2	2	2	2	2	2

24-Hour Dietary Recall Form-1

RESULT CODES	
QUESTIONNAIRE COMPLETED	01
REFUSED	02
INTERVIEW INTERRUPTED	03
COULD NOT BE CARRIED OUT DUE TO HEALTH PROBLEM	05

Appendix 3. TNHS 2017 24-Hour Dietary Recall Form (1st Interview)



Turkey Nutrition and Health Survey (TNHS)

2017

24-Hour Dietary Recall Form

1st Interview (..../..../2017)

POLLSTER CODE (MANDATORY FIELD) Must be limited to 4 digits						
FAMILY MEDICINE UNIT NO.					 	
R.T. IDENTITY NO. (MANDATORY FIELD) (Must be limited to 11 digits)						

Province traffic code (MANDATORY FIELD) Must be limited to 2 digits

		ELD) M	S NO (M lust be li						
TELEPHONE NUMBER HOME-MOBILE	0								_

RESULT CODES	
QUESTIONNAIRE COMPLETED	01
REFUSED	02
INTERVIEW INTERRUPTED	03
COULD NOT BE CARRIED OUT DUE TO HEALTH PROBLEM	04

INFORMED CONSENT FORM FOR STUDY FOR SURVEY/RESEARCH PURPOSES

(Researcher's Explanation)

Hello! My name is

I am from the Provincial Directorate of Public Health.

As the Ministry of Health, we conduct a survey on nutrition and health issues in our county. I would like to ask you a few questions about your nutritional and health status. You have been randomly selected for the study by the Turkish Statistical Institute using the scientific method.

The findings to be obtained from this study are significant in terms of revealing the obesity, chronic diseases, nutritional status in our country and bringing solutions to the identified problems.

We recommend you to participate in the survey. You are free to participate or not participate in this survey. Your participation in this study is entirely voluntary.

If you agree to participate in the survey, we will ask you some questions. These questions include questions to determine *your nutritional and health status and physical activity level*. Again, with your permission, your height and weight will be measured by the healthcare personnel in order to be able to carry out this study. As part of the health screening, tests for your fasting blood glucose, anemia, vitamin D, calcium, cholesterol and blood fats will be carried out. The results will be sent to your primary care physician. *During blood draw,* you may feel slight pain due to needle prick, temporary bruising may occur in the area where blood is drawn, you may feel unwell or rarely faint while drawing blood, there may be prolonged bleeding after a needle prick or risk of infection. For prevention thereof, blood will be drawn by the healthcare personnel by following the necessary rules.

All your answers and information will be kept strictly confidential, will be used in scientific studies and will not be used other than for survey purposes. Your participation in this study will contribute to improvement of nutrition and health services in our country.

Do you accept being interviewed?

Agreed to be interviewed



Thank you for agreeing the interview.

Now, I am going to ask you some questions about your nutritional and health status. The interview will last approximately 45-60 minutes.

PARTICIPANT'S CONSENT

(Participant's Statement)

I was informed that a nutrition and health survey would be carried out in the name of the Ministry of Health and I was given the above information about this survey by Mr./Mrs...... . Following this information, I was invited to the survey as a "participant".

If I participate in this survey, I believe that the confidentiality of my information will be protected with great care and will be treated with respect. I was assured that the results of the survey would not be used other than educational and scientific purposes, and my personal information would be protected.

I can withdraw from the survey during execution of the project without indicating any reason. However, I am aware that it would be appropriate to inform the researchers in advance that I would withdraw from the survey in order not to put the researchers in a difficult situation. I might be excluded from the survey by the researcher in cases where my medical condition is not suitable.

I do not take any financial responsibility for the expenses to be made for the survey. I will not be paid either.

In case of any health problem that I might have due to execution of the survey, whether directly or indirectly, I was given necessary guarantee that all kinds of medical interventions would be provided. I will not be under any financial burden regarding these medical interventions.

In case I encounter any health problem during the survey, I know that I can contact the interviewer Mr./Mrs..... on work phone or mobile phone number 05....., phone number or address of Family Health Center, at any time.

I am not obliged to participate in this survey and I may not. I have not encountered any compulsive behavior regarding my participation in the survey. If I refuse participating, I know that this will not do any harm to my health care.

I have fully understand all the explanations made to me. After I took certain time to think about it, I have decided to participate in this survey project of the Ministry of Health as a "participant". I voluntarily accept the invitation and use of the results in scientific studies.

If requested, this copy must be given to the participant.

Participant:	Interviewer:	Interview witness/guardian (If younger
Name Surname:	Name Surname:	than 18):
Address:	Address:	Name Surname:
Tel:	Tel:	Address:
Signature:	Signature:	Tel:
		Signature:



PARTICIPANT'S CONSENT

(Participant's Statement)

I was informed that a nutrition and health survey would be carried out in the name of the Ministry of Health and I was given the above information about this survey by Mr./Mrs...... . Following this information, I was invited to the survey as a "participant".

If I participate in this survey, I believe that the confidentiality of my information will be protected with great care and will be treated with respect. I was assured that the results of the survey would not be used other than educational and scientific purposes, and my personal information would be protected.

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I have fully understand all the explanations made to me. After I took certain time to think about it, I have decided to participate in this survey project of the Ministry of Health as a "participant". I voluntarily accept the invitation and use of the results in scientific studies.

If requested, this copy must be given to the participant.

Participant:	Interviewer:	Interview witness/guardian (If
Name Surname:	Name Surname:	younger than 18):
Address:	Address:	Name Surname:
Tel:	Tel:	Address:
Signature:	Signature:	Tel:
		Signature:



1002 BREAKFAST	Now I am going to ask you questions what you ate and drank yesterday during the time between waking up and going to bed in evening. Did you eat anything at BREAKFAST yesterday?	No1 Skip to	o 1003	
1002A	Could you please tell me in chronological order wh WRITE DOWN THE FIRST MENTIONED FOOL THEN RECORD THE FOOD ITEMS (INGREDIE BEVERAGES ON 1002C .	OR BEVERAGE IN TH	E 1 st ROW ON 1	-
1002B FOODS AND BEVERAGES CONSUMED AT THE BREAKFAST	1002C WHAT FOOD ITEMS (INGREDIENTS) DID IT INCLUDE? ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE.	AMOUN HOUSEHOLD MEASURE	T mL/Gram	FOOD ITEM CODE
The amount of FAT (butter,	olive oil, sunflower oil, corn oil, etc.) used or a	dded at breakfast MUS	ST BE ASKED!	

1002B	FOODS AND	1002C WHAT FOOD ITEMS (INGREDIENTS)	AMOUNT	FOOD
BEVE	RAGES CONSUMED E BREAKFAST	DID IT INCLUDE? ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE.	HOUSEHOLD MEASURE	mL/Gram ITEM CODE
	WATER AND			
01	BEVERAGES			
02				
03				
04				
05				
06				
07				
08				
	Was there any food	or beverage you ate and drank for breakfast other than	No1	→ Skip to 1003.
1002D	what you listed/spe	cified/? MENTIONED FOODS AND BEVERAGES ON	Yes2	

1003	Did you eat or drink anything at the MID - MORNING (during the time between breakfast and lunch) yesterday?	No1
MID-MORNING		Yes2

1003A	Could you tell me in chronological order what you at between breakfast and lunch) yesterday? WRITE DOWN THE FIRST MENTIONED FOOD THEN RECORD THE FOOD ITEMS (INGREDIEN BEVERAGES ON 1003C .	OR BEVERAGE IN TI	HE 1 st ROW ON	1003B AND
1003B FOODS AND	1003C WHAT FOOD ITEMS (INGREDIENTS)	AMOUI	NT	FOOD ITEM
BEVERAGES CONSUMED AT THE MID-MORNING	DID IT INCLUDE? ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE.	HOUSEHOLD MEASURE	mL/Gram	_ CODE
01				
				<u> </u>

The amount of FAT (butter, olive oil, sunflower oil, corn oil, etc.) used or added at the mid-morning MUST BE ASKED!

1003B FOODS AND		1003C WHAT FOOD ITEMS (INGREDIENTS)	AMOUNT		FOOD ITEM	
BEVERAGES C AT THE MID-M		DID IT INCLUDE? ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE.	HOUSEHOLD MEASURE	mL/Gram	CODE	
WATER BEVER	AGES					
01						
02						
03						
04						
05						
06						
07						
08						

Was there any food or beverage you ate and drank at mid-morning other than what you listed/specified/?	No1	Skip to 1004 .
 IF YES, ADD THE MENTIONED FOODS AND BEVERAGES ON 1003B AND 1003C.	Yes2	

1004	Did you eat or drink anything at LUNCH yesterday?	No1	Skip to 100.	5	
LUNCH		Yes2			
1004A	Could you tell me in chronological order what you a WRITE DOWN THE FIRST MENTIONED FOOD THEN RECORD THE FOOD ITEMS (INGREDIE BEVERAGES ON 1004C .	OR BEVERAGE IN TH	IE 1 st ROW ON 1	D	
1004B FOODS AND BEVERAGES CONSUMED AT LUNCH	1004C WHAT FOOD ITEMS (INGREDIENTS) DID IT INCLUDE? ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE.	AMOUN HOUSEHOLD MEASURE	NT mL/Gram	FOOD ITEN CODE	
)1					

1004B FOODS AND	1004C WHAT FOOD ITEMS (INGREDIENTS)	AMOUNT		FOOD ITEM	
BEVERAGES CONSUMED AT LUNCH	DID IT INCLUDE? ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE.	HOUSEHOLD MEASURE	mL/Gram	CODE	
WATER AND					
BEVERAGES					
01					
02					
03					
04					
05					
06					
07					
08					

			•
	Was there any food or beverage you ate and drank at lunch other than what	No1	Skip to 1005.
10040	you listed/specified/?		
1004D	IF YES, ADD THE MENTIONED FOODS AND BEVERAGES ON		
	1004B AND 1004C.	Yes2	

1005	Did you eat or drink anything at the MID - AFTERNOON (during the time between lunch and dinner) yesterday?	No1 Skip to 1006
MID- AFTERNOON		Yes2

1005A		Could you tell me in chronological order what you ate and drank at the MID-AFTERNOON (during the time between lunch and dinner) yesterday? WRITE DOWN THE FIRST MENTIONED FOOD OR BEVERAGE IN THE 1 st ROW ON 1005B AND			
		WRITE DOWN THE FIRST MENTIONED FOOD THEN RECORD THE FOOD ITEMS (INGREDIEN BEVERAGES ON 1005C .			
1005B FOODS AND		1005C WHAT FOOD ITEMS (INGREDIENTS)	AMOUN	Τ	FOOD ITEM
	RAGES CONSUMED AT 11D-AFTERNOON	DID IT INCLUDE? ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE.	HOUSEHOLD MEASURE	mL/Gram	CODE
01					

The amount of FAT (butter, olive oil, sunflower oil, corn oil, etc.) used or added to the meals eaten at the mid-afternoon MUST BE ASKED!

1005B FOODS AND		1005C WHAT FOOD ITEMS (INGREDIENTS)	AMOUNT		FOOD ITEM	
BEVE	RAGES CONSUMED IE MID-AFTERNOON	DID IT INCLUDE? ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE.	HOUSEHOLD MEASURE	mL/Gram	CODE	
	WATER AND BEVERAGES					
01						
02						
03						
04						
05						
06						
07						
08				1		

Was there any food or beverage you ate and drank at mid-afternoon other than what you listed/specified/?	No1	\rightarrow	Skip to 1006.
 IF YES, ADD THE MENTIONED FOODS AND BEVERAGES ON 1005B AND 1005C.	Yes2		

	1006	Did you eat or drink anything at DINNER yesterday?	No1	Skip to 100	7	
]	DINNER		Yes2			
1006A Could you tell me in chronological order what you ate and drank at DINNER WRITE DOWN THE FIRST MENTIONED FOOD OR BEVERAGE IN THI THEN RECORD THE FOOD ITEMS (INGREDIENTS) INCLUDED IN THE BEVERAGES ON 1006C.			HE 1 st ROW ON 1006B AND			
1006B FOODS AND BEVERAGES CONSUMED AT DINNER		1006C WHAT FOOD ITEMS (INGREDIENTS) DID IT INCLUDE? ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE.	AMOUI HOUSEHOLD MEASURE	NT mL/Gram	FOOD ITEM CODE	
01						

1006B FOODS AND	1006C WHAT FOOD ITEMS (INGREDIENTS)	AMOUNT		FOOD ITEM
BEVERAGES CONSUMED AT DINNER	 DID IT INCLUDE? ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE. 	HOUSEHOLD MEASURE	mL/Gram	CODE
WATER AND				
BEVERAGES				
01				
02				
03				
04				
05				
06				
07				
08				

	Was there any food or beverage you ate and drank at dinner other than what you listed/specified/?	No1	Skip to 1007.
1000D	IF YES, ADD THE MENTIONED FOODS AND BEVERAGES ON 1006B AND 1006C.	Yes2	

1007 BEFORE	Did you eat or drink anything BEFORE BEDTIME yesterday?	No1	→ THE END						
BEDTIM	E	Yes2							
1007A	WRITE DOWN THE FIRST MENTIONED FO	Could you tell me in chronological order what you ate and drank BEFORE BEDTIME yesterday? WRITE DOWN THE FIRST MENTIONED FOOD OR BEVERAGE IN THE 1 st ROW ON 1007B AND THEN RECORD THE FOOD ITEMS (INGREDIENTS) INCLUDED IN THE FOODS AND BEVERAGES ON 1007C .							
1007B FOODS AND BEVERAGES CONSUN BEFORE BEDTIME	1007C WHAT FOOD ITEMS (INGREDIENTS DID IT INCLUDE? ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE.) AMOUI HOUSEHOLD MEASURE	NT mL/Gram	FOOD ITEM CODE					
01									
The amount of FAT (i BE ASKED!	putter, olive oil, sunflower oil, corn oil, etc.) used o	r added to the meals eat	en before bedti	ime MUST					

1007B FOODS	AND	1007C WHAT FOOD ITEMS (INGREDIENTS)	AMOUNT		FOOD ITEM
BEVERAGES (BEFORE THE)	CONSUMED BEDTIME	DID IT INCLUDE? ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY	HOUSEHOLD MEASURE	mL/Gram	CODE
		ONE.			
				ļ	
		-			
				ļ	
				<u> </u>	
WATEI				 	
BEVER	AGES				
01					
02		1			
03			1		
04					
05					
06				ļ	
07					
08					

1007D	Was there any food or beverage you ate and drank before bedtime other than what you listed/specified/?	No1
1007D	IF YES, ADD THE MENTIONED FOODS AND BEVERAGES ON 1007B AND 1007C.	Yes2

PROVINCE TRAFFIC CODES				
01 ADANA	21 DİYARBAKIR	41 KOCAELİ	61 TRABZON	
02 ADIYAMAN	22 EDİRNE	42 KONYA	62 TUNCELİ	
03 AFYON	23 ELAZIĞ	43 KÜTAHYA	63 ŞANLIURFA	
04 AĞRI	24 ERZİNCAN	44 MALATYA	64 UŞAK	
05 AMASYA	25 ERZURUM	45 MANİSA	65 VAN	
06 ANKARA	26 ESKİŞEHİR	46 K.MARAŞ	66 YOZGAT	
07 ANTALYA	27 GAZİANTEP	47 MARDİN	67 ZONGULDAK	
08 ARTVİN	28 GİRESUN	48 MUĞLA	68 AKSARAY	
09 AYDIN	29 GÜMÜŞHANE	49 MUŞ	69 BAYBURT	
10 BALIKESİR	30 HAKKARİ	50 NEVŞEHİR	70 KARAMAN	
11 BİLECİK	31 HATAY	51 NİĞDE	71 KIRIKKALE	
12 BİNGÖL	32 İSPARTA	52 ORDU	72 BATMAN	
13 BİTLİS	33 İÇEL	53 RİZE	73 ŞIRNAK	
14 BOLU	34 İSTANBUL	54 SAKARYA	74 BARTIN	
15 BURDUR	35 İZMİR	55 SAMSUN	75 ARDAHAN	
16 BURSA	36 KARS	56 SİİRT	76 İĞDIR	
17 ÇANAKKALE	37 KASTAMONU	57 SİNOP	77 YALOVA	
18 ÇANKIRI	38 KAYSERİ	58 SİVAS	78 KARABÜK	
19 ÇORUM	39 KIRKLARELİ	59 TEKİRDAĞ	79 KİLİS	
20 DENİZLİ	40 KIRŞEHİR	60 TOKAT	80 OSMANİYE	
			81 DÜZCE	
90 FOREIGN COUNTRY				





Turkey Nutrition and Health Survey (TNHS)

2017

24-Hour Dietary Recall Form

2nd Interview (..../..../2017)

POLLSTER CODE (MANDATORY FIELD) <i>Must be limited to 4 digits</i>									
FAMILY MEDICINE UNIT NO.									
R.T. IDENTITY NO. (MANDATORY FIELD) (Must be limited to 11 digits)									
Province traffic code (MANDATORY FIELD) Must be limited to 2 digits									
		FIEI	LD)	NO. (M					
TELEPHONE NUMBER HOME-MOBILE	0								

RESULT CODES	
QUESTIONNAIRE COMPLETED FACE-TO-FACE	01
QUESTIONNAIRE COMPLETED BY PHONE	02
REFUSED	03
INTERVIEW INTERRUPTED	04
COULD NOT BE REACHED BY PHONE	05
DID NOT COME TO THE APPOINTMENT	06
COULD NOT BE CARRIED OUT DUE TO HEALTH PROBLEM	07



1002 BREAKFAST	Now I am going to ask you questions what you ate and drank yesterday during the time between waking up and going to bed in evening. Did you eat anything at BREAKFAST yesterday?	No1 Skip to 1003 Yes 2			
1002A 1002B FOODS AND	Could you please tell me in chronological order what you ate and drank at the breakfast yesterday? WRITE DOWN THE FIRST MENTIONED FOOD OR BEVERAGE IN THE 1 st ROW ON 1002B AND THEN RECORD THE FOOD ITEMS (INGREDIENTS) INCLUDED IN THE FOODS AND BEVERAGES ON 1002C. 1002C WHAT FOOD ITEMS (INGREDIENTS) AMOUNT FOOD				
1002B FOODS AND BEVERAGES CONSUMED AT THE BREAKFAST	1002C WHAT FOOD ITEMS (INGREDIENTS) DID IT INCLUDE? ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE.	HOUSEHOLD mL/Gram CO MEASURE			
		Image: Constraint of the sector of the se			
The amount of FAT (butter,	olive oil, sunflower oil, corn oil, etc.) used or a	dded at breakfast MUST BE ASKED.	, ,		

1002B	FOODS AND	1002C WHAT FOOD ITEMS (INGREDIENTS)	AMOUNT	FOOD
BEVE	RAGES CONSUMED IE BREAKFAST	ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE.	HOUSEHOLD MEASURE	mL/Gram ITEM CODE
	WATER AND BEVERAGES			
01				
02				
03				
04				
05				
06				
07				
08				
1002D	what you listed/spe	or beverage you ate and drank for breakfast other than cified/?	No1	Skip to 1003.
	IF YES, ADD THE 1002B AND 10020	MENTIONED FOODS AND BEVERAGES ON	Yes2	

1003	Did you eat or drink anything at the MID - MORNING (during the time between breakfast and lunch) yesterday?	No1 Skip to 1004
MID-MORNING		Yes2

1003A	Could you tell me in chronological order what you at between breakfast and lunch) yesterday? WRITE DOWN THE FIRST MENTIONED FOOD THEN RECORD THE FOOD ITEMS (INGREDIEN	OR BEVERAGE IN TI	HE 1 st ROW ON	1003B AND
1003B FOODS AND BEVERAGES CONSUME AT THE MID-MORNING	ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY	AMOUI HOUSEHOLD MEASURE	NT mL/Gram	FOOD ITEN CODE
01	ONE.			

The amount of FAT (butter, olive oil, sunflower oil, corn oil, etc.) used or added at the mid-morning MUST BE ASKED!

1003B FOODS AND	1003C WHAT FOOD ITEMS (INGREDIENTS)	AMOUN		FOOD ITEN
BEVERAGES CONSUMED AT THE MID-MORNING	DID IT INCLUDE? ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE.	HOUSEHOLD MEASURE	mL/Gram	CODE
WATER AND BEVERAGES				
01				
02				
03 04				
05				
06				
07				
08				

	Was there any food or beverage you ate and drank at mid-morning other than what you listed/specified/?	No1	Skip to 1004.
1003D	IF YES, ADD THE MENTIONED FOODS AND BEVERAGES ON 1003B AND 1003C.	Yes2	

1004	Did you eat or drink anything at LUNCH yesterday?	No1	Skip to 100.	5
LUNCH		Yes2		
1004A	Could you tell me in chronological order what you a WRITE DOWN THE FIRST MENTIONED FOOD THEN RECORD THE FOOD ITEMS (INGREDIE BEVERAGES ON 1004C .	FOOD OR BEVERAGE IN THE 1 st ROW ON 1004B AND		
1004B FOODS AND BEVERAGES CONSUMED AT LUNCH	1004C WHAT FOOD ITEMS (INGREDIENTS) DID IT INCLUDE? ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE.	AMOUN HOUSEHOLD MEASURE	NT mL/Gram	FOOD ITEN CODE
)1	UNL.			

1004B	FOODS AND	1004C WHAT FOOD ITEMS (INGREDIENTS)	AMOUNT		FOOD ITEM
BEVE AT LU	RAGES CONSUMED JNCH	DID IT INCLUDE? ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE.	HOUSEHOLD MEASURE	mL/Gram	CODE
	WATER AND BEVERAGES				
01					
02					
03					
04					
05					
06					
07					
08					

	Was there any food or beverage you ate and drank at lunch other than what you listed/specified/?	No1	Skip to 1005 .
1004D	IF YES, ADD THE MENTIONED FOODS AND BEVERAGES ON 1004B AND 1004C.	Yes2	

1005	Did you eat or drink anything at the MID - AFTERNOON (during the time between lunch and dinner) yesterday?	No1
MID- AFTERNOON		Yes2

1005A	Could you tell me in chronological order what you a time between lunch and dinner) yesterday? WRITE DOWN THE FIRST MENTIONED FOOD THEN RECORD THE FOOD ITEMS (INGREDIEN BEVERAGES ON 1005C .	OR BEVERAGE IN TH	IE 1 st ROW ON	1005B AND
1005B FOODS AND	1005C WHAT FOOD ITEMS (INGREDIENTS)	AMOUI	NT	FOOD ITEM
BEVERAGES CONSUMED A THE MID-AFTERNOON	T DID IT INCLUDE? ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE.	HOUSEHOLD MEASURE	mL/Gram	_ CODE
01				

The amount of FAT (butter, olive oil, sunflower oil, corn oil, etc.) used or added to the meals eaten at the mid-afternoon MUST BE ASKED!

1005B FOO		1005C WHAT FOOD ITEMS (INGREDIENTS)	AMOUNT		FOOD ITEM
BEVERAGI AT THE MI	ES CONSUMED ID-AFTERNOON	DID IT INCLUDE? ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE.	HOUSEHOLD MEASURE	mL/Gram	CODE
WA BEV	TER AND /ERAGES				
01				·	
02					
03					
04					
05					
06					
07					
08					

1005D	Was there any food or beverage you ate and drank at mid-afternoon other than what you listed/specified/?	No1	Skip to 1006 .
1005D	IF YES, ADD THE MENTIONED FOODS AND BEVERAGES ON 1005B AND 1005C.	Var. 2	
	1005B AND 1005C.	1652	

		Did you eat or drink anything at DINNER yesterday?	No1	Skip to 100	7
	1006			-	
	DINNER		Yes2		
-		-			
1006	•	Could you tell me in chronological order what you	ate and drank at DINNE	R yesterday?	
1000	•	WRITE DOWN THE FIRST MENTIONED FOOD THEN RECORD THE FOOD ITEMS (INGREDIE BEVERAGES ON 1006C .	OD OR BEVERAGE IN THE 1 st ROW ON 1006B AND DIENTS) INCLUDED IN THE FOODS AND		
	FOODS AND ERAGES CONSUMED AT	1006C WHAT FOOD ITEMS (INGREDIENTS) DID IT INCLUDE?	AMOUNT		FOOD ITEM CODE
DINN		ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE.	HOUSEHOLD MEASURE	mL/Gram	
01					
The d	umount of FAT (butter, o	live oil, sunflower oil, corn oil, etc.) used or ad	lded to the dinner MU	ST BE ASKEI	D!

1006B FOODS AND	1006C WHAT FOOD ITEMS (INGREDIENTS)	AMOUNT		FOOD ITEM
BEVERAGES CONSUMED AT DINNER	DID IT INCLUDE? ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE.	HOUSEHOLD MEASURE	mL/Gram	CODE
WATER AND BEVERAGES				
01				
02 03				
04				
05 06				
07				
08				

Was there any food or beverage you ate and drank at dinner other than what you listed/specified/?	No1	Skip to 1007.
IF YES, ADD THE MENTIONED FOODS AND BEVERAGES ON 1006B AND 1006C.	Yes2	

1007 BEFORE	Did you eat or drink anything BEFORE BEDTIME yesterday?	No1 THE END					
BEDTIME		Yes2					
1007A Could you tell me in chronological order what you ate and drank BEFORE BEDTIME yester WRITE DOWN THE FIRST MENTIONED FOOD OR BEVERAGE IN THE 1 st ROW ON 1 THEN RECORD THE FOOD ITEMS (INGREDIENTS) INCLUDED IN THE FOODS AND BEVERAGES ON 1007C.				1007B AND			
1007B FOODS AND BEVERAGES CONSUMED BEFORE BEDTIME	1007C WHAT FOOD ITEMS (INGREDIENTS) DID IT INCLUDE? ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE.	AMOU! HOUSEHOLD MEASURE	NT mL/Gram	FOOD ITEM CODE			
01							

The amount of FAT (butter, olive oil, sunflower oil, corn oil, etc.) used or added to the meals eaten before bedtime MUST BE ASKED!

1007B	FOODS AND	1007C WHAT FOOD ITEMS (INGREDIENTS)	AMOUNT		FOOD ITEM
BEVE BEFO	RAGES CONSUMED RE THE BEDTIME	DID IT INCLUDE? ASK FOR AND RECORD FOOD ITEMS INCLUDED IN IT (INGREDIENTS) ONE BY ONE.	HOUSEHOLD MEASURE	mL/Gram	CODE
	WATER AND BEVERAGES				
01					
02					
03					
04					
05					
06					
07					
08					

1007D	Was there any food or beverage you ate and drank before bedtime other than what you listed/specified/?	No1
1007D	IF YES, ADD THE MENTIONED FOODS AND BEVERAGES ON 1007B AND 1007C.	Yes2

PROVINCE TRAFFIC CODES				
01 ADANA	21 DİYARBAKIR	41 KOCAELİ	61 TRABZON	
02 ADIYAMAN	22 EDİRNE	42 KONYA	62 TUNCELİ	
03 AFYON	23 ELAZIĞ	43 KÜTAHYA	63 ŞANLIURFA	
04 AĞRI	24 ERZİNCAN	44 MALATYA	64 UŞAK	
05 AMASYA	25 ERZURUM	45 MANİSA	65 VAN	
06 ANKARA	26 ESKİŞEHİR	46 K.MARAŞ	66 YOZGAT	
07 ANTALYA	27 GAZİANTEP	47 MARDİN	67 ZONGULDAK	
08 ARTVİN	28 GİRESUN	48 MUĞLA	68 AKSARAY	
09 AYDIN	29 GÜMÜŞHANE	49 MUŞ	69 BAYBURT	
10 BALIKESİR	30 HAKKARİ	50 NEVŞEHİR	70 KARAMAN	
11 BİLECİK	31 HATAY	51 NİĞDE	71 KIRIKKALE	
12 BİNGÖL	32 İSPARTA	52 ORDU	72 BATMAN	
13 BİTLİS	33 İÇEL	53 RİZE	73 ŞIRNAK	
14 BOLU	34 İSTANBUL	54 SAKARYA	74 BARTIN	
15 BURDUR	35 İZMİR	55 SAMSUN	75 ARDAHAN	
16 BURSA	36 KARS	56 SİİRT	76 İĞDIR	
17 ÇANAKKALE	37 KASTAMONU	57 SİNOP	77 YALOVA	
18 ÇANKIRI	38 KAYSERİ	58 SİVAS	78 KARABÜK	
19 ÇORUM	39 KIRKLARELİ	59 TEKİRDAĞ	79 KILIS	
20 DENİZLİ	40 KIRŞEHİR	60 TOKAT	80 OSMANİYE	
			81 DÜZCE	
90 FOREIGN COUNTRY				



Appendix 5. TNHS 2017 Individual Laboratory Samples Form

HEALTH SCREENING

INDIVIDUAL LABORATORY SAMPLES FORM

POLLSTER CODE (MANDATORY FIELD) Must be limited to 4 digits							
FAMILY MEDICINE UNIT NO.							
R.T. IDENTITY NO. (MANDATOR FIELD) (<i>Must be limited to 11 digits</i>)							
Province traffic code (MANDATORY FIELD) Must be limited to 2 digits							
		(M	S NO. TORY I imited to				
TELEPHONE NUMBER HOME-MOBILE	0						

LABORATORY RESULT CODE	1.SAMPLE WAS COLLECTED
	2. SAMPLE WAS NOT/COULD NOT BE
	COLLECTED

ATTENTION: BEFORE YOU START SAMPLING, CONFIRM THE INTERVIEWED PERSON INFORMATION TO ENSURE THAT THE PERSON FROM WHICH YOU DRAW A BLOOD SAMPLE IS **THE RIGHT PERSON**. **DON'T MAKE** CORRECTIONS IF PERSON DECLARES DIFFERENT AGE.

Could you tell me your <u>date of birth</u> ?					
(day, month, year)	GENDER:	MALE1 FEMALE2			
If doesn't know, enter the code 99 99 9999.					
IF DOESN'T KNOW; How old are you exactly no	ow?				
What age have you completed?	What age have you completed?				
IF OLDER THAN 95 YEARS, WRITE ''95''					
If doesn't know, enter the code 99.					
SAMPLING DATE:	SAMPLING				
DATE (DAY-MONTH):					
	HOUR-MINU				

IS HE/SHE HUNGRY? : NO (1) YES(2)	THE LAST HOUR HE/SHE ATE: HOUR-MINUTE
BLOOD GROUP:	A (1) B (2) O (3) AB (4) DOESN'T KNOW (5)
CENTRIFUGE DATE (DAY-MONTH):	CENTRIFUGE HOUR: HOUR-MINUTE

HEALTH CONDITION AND MEDICAL HISTORY

1	Do you fool yourself healthy?	NO (1) YES (2)
1	Do you feel yourself healthy?	NO (1) YES (2)
2	Do you have diabetes and do you receive oral therapy or insulin therapy?	NO (1) YES (2)
3	Do you have or have you ever had chronic liver or kidney diseases?	NO (1) YES (2)
4	Have you been hospitalized or had a serious illness in the last 4 weeks?	NO (1) YES (2)
5	Have you donated blood <u>in the last 3</u> <u>months?</u>	NO (1) YES (2)
6	Are you carrier of HBV, HCV or HIV?	NO (1) YES (2)
7	ASK WOMEN! Are you pregnant or are you in the 1 st year following giving birth?	NO (1) YES (2)
8	Have you become ill in the last 4 weeks (in the previous month)?	NO (1) YES (2)
9	If EVET , mark the disease.	 Infection diseases Cancers Cardiovascular diseases Diseases of the respiratory system Endocrine system diseases Diseases of the gastrointestinal tract Neuropsychiatric diseases Diseases of the musculoskeletal system Diseases of the genitourinary system Other
10	Have you used painkillers in the last 4 weeks?	NO (1) YES (2)
11	<u>Have you been exposed to dangerous</u> <u>chemicals during your professional</u> <u>activity?</u>	NO (1) YES (2)
12	If yes, what was it?	

	ALCOHOL		
1	Did you consume any alcohol in the last	NO (1)	YES (2)
	<u>48 hours</u> ?		

	TO BE FILLED FOR FEMALE PARTICIPANTS (NOT BE ASKED TO WOMEN WHO ARE PREGNANT OR IN POSTPARTUM PERIOD)					
1	How is your menstrual cycle?	Regular (1) Irregular (2)				
		Menopause (3)				
		Use Hormone Therapy or Oral				
		Contraceptives (4)				
2	What is the average period of your menstrual cycle?					
	IF MENOPAUSE, ENTER "OO"	DAYS				
3	When did your last period start?					
	IF MENOPAUSE, ENTER "OO"	DAY-MONTH				



Appendix 6. TNHS 2017 Executive Committee

NAME	INSTITUTION NAME	
Prof. Haydar DEMİREL, MD	H.U., Faculty of Sport Sciences	
Prof. Elif N.ÖZMERT, MD	H.U., Faculty of Medicine, Department of Pediatrics, Unit of Social Pediatrics	
Prof. Neslişah RAKICIOĞLU, MD	H.U., Faculty of Health Sciences, Department of Nutrition and Dietetics	
Prof. Gülsen YILMAZ, MD Ankara Yıldırım Beyazıt University, Faculty Medicine, Department of Medical Biochen		
Assoc. Prof.Aydoğan AYDOĞDU, MD	Turkey Association of Endocrinology and Metabolism, Gulhane Training and Research Hospital, Clinic of Endocrinology and Metabolism Diseases	
Spec. Banu AYAR, MD	General Directorate of Health Research	
Banu EKİNCİ, MD	Department of Chronic Diseases, Elderly. Health and Disabled	
Begüm ERGAN, MD	Turkish Thoracic Society Dokuz Eylül University, Faculty of Medicine, Department of Chest Diseases	
Güldane BOYACI, MD	Department of Family Medicine Practice	
Nilgün CAYLAN, MD	Department of Child and Adolescent Health	
Gönül ÇULHA, MD	Department of Tobacco and Other Addictive Substances Control	
Şule HÖKELEKLİ, MD	Department of Public Health Services	
Kanuni KEKLİK, MD	Department of Public Health Services	
Sertaç POLAT, MD	Department of Tobacco and Other Addictive Substances Control	
Başak TEZEL, MD	Department of Child and Adolescent Health	
Hanife AYAN	Ministry of Agriculture and Forestry	
Gülay ERDEN	Turkish Statistical Institute	
Tuğba KANDAR	Turkish Statistical Institute	
Zehra KARAHAN (Physiotherapist)	Turkish Thoracic Society	
F. Nevra ÖZCAN	Ministry of Agriculture and Forestry	
Assoc.Prof. Nazan YARDIM, MD	Department of Healthy Nutrition and Active Life	
Spec. Sabahattin KOCADAĞ, MD	Department of Healthy Nutrition and Active Life	
Dietitian Nermin ÇELİKAY	Department of Healthy Nutrition and Active Life	
Dietitian E. Zehra KELAT	Department of Healthy Nutrition and Active Life	
Dietitian Fatma AYKUL	Department of Healthy Nutrition and Active Life	



Appendix 7. Ministry of Health Working Group and Field Interviewers List

NAME	INSTITUTION NAME
Nazan YARDIM	Assoc. Prof. (Head of Department)
Sabahattin KOCADAĞ	Specialist Physician
Nermin ÇELİKAY	Dietitian
Zehra KELAT	Dietitian
Fatma AYKUL	Dietitian
Faika Betül AYDIN	Dietitian
Duygu ÜNAL	Specialist Dietitian
Beytül YILMAZ	Specialist Dietitian
Şeniz ILGAZ	Specialist Dietitian
Meral ÇARKCI	Dietitian
Hatice Berna KARAKAŞ	Dietitian
Melek ATABEY	Dietitian
Özlem SARIŞEN ADIGÜZEL	Specialist Physician
Meryem SAYGI	Midwife
Sibel GÖGEN	Specialist Physician
Osman OKATAN	Computer Operator

TNHS 2017 Interviewers List									
PROVINCE	Name-Surname	Title	Pollster Code						
ADANA	Simay ALTUN	Dietitian	0110						
ADANA	Emrah GÜLEK	Dietitian	0111						
ADANA	Çiğdem GAÇTİ	Dietitian	0112						
ADANA	Eda BUZ	Dietitian	0113						
ADIYAMAN	Ülger Yüksel CEREN	Dietitian	0210						
ADIYAMAN	Abdullah TEPE	Dietitian	0211						
AFYONKARAHİSAR	Özge Aliye PARMAK	Dietitian	0310						
AFYONKARAHİSAR	Melek TURGUT	Dietitian	0311						
AĞRI	Esra KURU	Dietitian	0410						
AĞRI	Merve BAŞKARA	Dietitian	0411						
AKSARAY	Ayşenur ACAR	Dietitian	6810						
AKSARAY	Ali KARABULUT	Dietitian	6811						
AMASYA	Zeynep AKAR	Dietitian	0510						
AMASYA	Merve CEYLAN	Dietitian	0511						
ANKARA	Süeda GÜRDAĞ İLGAR	Dietitian	0610						
ANKARA	Emel YILMAZ	Dietitian	0611						
ANKARA	Ayşe ÖZDEMİR	Dietitian	0612						
ANKARA	Derya DOĞAR	Dietitian	0613						
ANKARA	Muratcan ATEŞ	Dietitian	0614						
ANKARA	Öznur ERCAN	Dietitian	0615						

ANKARA	Beril NÜKTE	Dietitian	0616
ANKARA	Dilek ALPERGÜN	Dietitian	0617
ANKARA	Gülcan BALTA	Dietitian	0618
ANKARA	Merve Deniz DEMİREL	Dietitian	0619
ANKARA	Kemal Cem YILDIZ	Dietitian	0620
ANKARA	Hümeyra ARSLAN	Dietitian	0621
ANKARA	Semra AKEL	Dietitian	0622
ANTALYA	Leyla ALMAZ	Dietitian	0710
ANTALYA	Ümmü HOCAOĞLU	Dietitian	0711
ANTALYA	Raziye ÇOBAN	Dietitian	0712
ANTALYA	Tuğba ÖZDEMİR	Dietitian	0713
ANTALYA	Ömer AKIDAN	Dietitian	0714
ARDAHAN	Aslıhan DURMUŞ	Dietitian	7510
ARDAHAN	Şeyma BULUT	Dietitian	7511
ARTVİN	Gökhan KARAKURT	Physician	0810
ARTVİN	Çağla HAKYEMEZOĞLU	Dietitian	0811
AYDIN	Fırat KAYA	Dietitian	0912
AYDIN	Fatma Hande ASLAN	Dietitian	0910
AYDIN	Dilek GÜRMAN	Dietitian	0911
BALIKESİR	Aydın KARADAYI	Dietitian	1012
BALIKESİR	Aslı KANBUR	Dietitian	1010
BALIKESİR	Fatma HAN	Dietitian	1011
BARTIN	Müzeyyen Elmas KARA	Dietitian	7410
BARTIN	Melike BAŞOL UYANIK	Dietitian	7411
BATMAN	Gizem KARAMAN	Dietitian	7210
BATMAN	Muhammed Fatih MEŞE	Dietitian	7211
BAYBURT	Doğan Can ŞARA	Dietitian	6910
BAYBURT	Arzu KESKİN	Midwife	6911
BİLECİK	Ali İhsan VURGUN	Dietitian	1110
BİLECİK	Öznur GÜNGÖR	Dietitian	1111
BİNGÖL	Fatih DİNLER	Dietitian	1210
BİNGÖL	Melike ÇELİK	Midwife	1211
BİTLİS	Burak KOÇ	Dietitian	1310
BİTLİS	Abdullah iNCiOĞLU	Dietitian	1311
BOLU	Merve AÇAR	Dietitian	1410
BOLU	Songül ÖZDEMİR	Dietitian	1411
BURDUR	Öner ÖZDEMİR	Dietitian	1510
BURDUR	Ali İLERİ	Dietitian	1511
BURSA	Hatice KARAKOÇ	Dietitian	1610
BURSA	Gülhan GÜNGÖR	Dietitian	1611
BURSA	Eda DEMİR	Dietitian	1612
BURSA	Umur Doğay ÖNAL	Dietitian	1613

BURSA	Sevde YÜCE	Dietitian	1614
ÇANAKKALE	Özlem Şeyma ÖZTÜRK	Dietitian	1710
ÇANAKKALE	Tuğçe KÖSE	Dietitian	1711
ÇANKIRI	Esra KOCAMIŞ BAŞ	Dietitian	1810
ÇANKIRI	Vesile CANÇATAL	Dietitian	1811
ÇORUM	Ayşe ÇEKMEZ	Dietitian	1910
ÇORUM	Selma Şeyma KAYA	Dietitian	1911
DENİZLİ	Gizem KARAKUŞ MUTLU	Dietitian	2010
DENİZLİ	Tuba SÖZER	Dietitian	2011
DİYARBAKIR	Abbas ŞEN	Dietitian	2110
DİYARBAKIR	Sercan APARI	Dietitian	2111
DİYARBAKIR	Gülay KIZIL	Dietitian	2112
DİYARBAKIR	Tarık DURGUN	Dietitian	2113
DÜZCE	Serpil HÜRSGÜNEL	Dietitian	8110
DÜZCE	Hande KÜNDEŞ	Dietitian	8111
EDİRNE	Dilara OKCUOĞLU	Dietitian	2210
EDİRNE	Eyüp İPEK	Dietitian	2211
ELAZIĞ	Tuğçe SEKİN	Dietitian	2310
ELAZIĞ	Berivan KÜÇÜK	Dietitian	2311
ERZİNCAN	Nida Işık TEKÇE	Dietitian	2410
ERZİNCAN	Serpil YILMAZ	Health Technician	2411
ERZURUM	Samet POLAT	Dietitian	2510
ERZURUM	Merve AKÇAY	Dietitian	2511
ESKİŞEHİR	Nuri Caner ARIBAKIR	Dietitian	2610
ESKİŞEHİR	Rukiye Gözde İZMİR	Dietitian	2611
GAZİANTEP	Merve YÜKSEL	Dietitian	2710
GAZİANTEP	Zuhal BULUT	Dietitian	2711
GAZİANTEP	Ezgi YILDIZ	Dietitian	2712
GAZİANTEP	Haydar YÜCETAŞ	Dietitian	2713
GİRESUN	Derya TUNA	Dietitian	2810
GİRESUN	Derya YAŞIYAN	Dietitian	2811
GÜMÜŞHANE	Zeynep Burcu KURT	Dietitian	2910
GÜMÜŞHANE	Ayşe AKAYDİN	Dietitian	2911
HAKKARİ	Demet BURAN	Dietitian	3010
HAKKARİ	Seda BAŞKAN	Dietitian	3011
НАТАҮ	Eda ATEŞ	Dietitian	3110
НАТАҮ	Meltem SÖĞÜT	Dietitian	3111
НАТАҮ	Yunus Emre ÇAĞATAY	Dietitian	3112
IĞDIR	Veli KAŞ	Dietitian	7610
IĞDIR	Mesut YILMAZ	Dietitian	7611
ISPARTA	Yasemin DEMİRBİLEK	Dietitian	3210
ISPARTA	Aydan KÜLCÜ	Dietitian	3211

İSTANBUL	Burcu BORU	Dietitian	3410
İSTANBUL	Selin SAYGILI	Dietitian	3411
İSTANBUL	Özge YILMAZ	Dietitian	3412
İSTANBUL	Büşra SÖGÜT	Dietitian	3413
İSTANBUL	Ezgi KAYA	Dietitian	3414
İSTANBUL	Şükrü Arman AKSOY	Dietitian	3415
İSTANBUL	Kübra ÖZTEKİN	Dietitian	3416
İSTANBUL	Beyzanur YILDIRIM	Dietitian	3417
İSTANBUL	Onur ŞİMŞEK	Dietitian	3418
İSTANBUL	Nursel PAKÖZ	Dietitian	3419
İSTANBUL	İrem ÖZKAN	Dietitian	3420
İSTANBUL	Esra KANDEMİR	Dietitian	3421
İSTANBUL	Begüm TEMEL	Dietitian	3422
İSTANBUL	Elif TOSUN	Dietitian	3423
İSTANBUL	Hilal YILMAZ	Dietitian	3424
İSTANBUL	Gülten YILMAZ	Dietitian	3425
İSTANBUL	Kübra ADA	Dietitian	3426
İSTANBUL	Hanım Şeyma ÖZMEN	Dietitian	3427
İSTANBUL	İlknur EKER	Dietitian	3428
İSTANBUL	İsmail BİLDİRİCİ	Dietitian	3429
İSTANBUL	Nurbanu ÖZTAYINCI	Dietitian	3430
İSTANBUL	Zeynep KAYA	Dietitian	3431
İSTANBUL	Aslı BOZKURT	Dietitian	3432
İSTANBUL	Nur Sinem BÜYÜK	Dietitian	3433
İSTANBUL	Aydan SÜRÜL	Dietitian	3434
İSTANBUL	Meryem Sümeyye KARDAŞLAR	Dietitian	3435
İSTANBUL	Aslı ERKAYA	Dietitian	3436
İSTANBUL	Cansu GENÇ	Dietitian	3437
İSTANBUL	Elif EFE	Dietitian	3438
İSTANBUL	Fazilet TÜTÜNCÜ	Dietitian	3439
İSTANBUL	Hüseyin Feyzi ÖZMEN	Dietitian	3440
İSTANBUL	Meral GÜRSEL	Dietitian	3441
İSTANBUL	Şeyma Melis İLERİOK	Dietitian	3442
İSTANBUL	Esra ÇELMELİ	Dietitian	3443
İZMİR	Burcu AVCI BAYGIN	Dietitian	3510
İZMİR	Gülçin KOÇ	Dietitian	3511
İZMİR	Deniz ERSAN	Dietitian	3512
İZMİR	Mehmet AKANÇAY	Dietitian	3513
İZMİR	Özen YAMAN	Dietitian	3514
İZMİR	Merve EMRE	Dietitian	3515
İZMİR	Seher Şevval KASIMOĞULLARI	Dietitian	3516
İZMİR	Sevinç BAYGIN KURU	Dietitian	3517

İZMİR	Zehra Sibel SERİN	Dietitian	3518
İZMİR	İzzet AK	Dietitian	3519
İZMİR	Uğur GÜLTEKİN	Dietitian	3520
KAHRAMANMARAŞ	Hatice Sevde YENİ	Dietitian	4610
KAHRAMANMARAŞ	Büşra ERDOĞAN	Dietitian	4611
KARABÜK	Fadime AYDIN KÜÇÜK	Dietitian	7810
KARABÜK	Nur Zümer TAŞDELEN	Dietitian	7811
KARAMAN	Mehmet ALAN	Dietitian	7010
KARAMAN	Ayşegül OKUTAN	Dietitian	7011
KARS	Ceren ÖZKAN TOPALOĞLU	Dietitian	3610
KARS	Mehmet Can ATİK	Dietitian	3611
KASTAMONU	Tuba HIZIROĞLU	Dietitian	3710
KASTAMONU	Ayşe Aytül NAMDAR	Midwife	3711
KAYSERİ	Sümeyra GÜMÜŞ	Dietitian	3810
KAYSERİ	Fatma KILIÇ	Dietitian	3811
KAYSERİ	Ahmet AVCI	Dietitian	3812
KIRIKKALE	Esra BAKÇEPINAR	Psychologist	7110
KIRIKKALE	İlyas YEŞİLYURT	Environmental Health	7111
		Technician	
KIRKLARELİ	Nevin SIRCAN	Dietitian	3910
KIRKLARELİ	Zeyney ZENGİN	Dietitian	3911
KIRŞEHİR	Burçin YEĞİT	Dietitian	4010
KIRŞEHİR	Servet BIYIKLI	Dietitian	4011
KILIS	Esra KOYUNCU	Dietitian	7910
KILIS	Gülfem AKBEY	Midwife	7911
KOCAELİ	Müge ÇINAR	Dietitian	4110
KOCAELİ	Fatma YILDIRIM	Dietitian	4111
KOCAELİ	Kübra AZDEMİR	Dietitian	4112
KONYA	Kübra KIYAR	Dietitian	4210
KONYA	Elif Sena AĞARTAN	Dietitian	4211
KONYA	Ayşe ÖZBİLİR	Dietitian	4212
KONYA	Beyza ÖZ	Dietitian	4213
KONYA	Gökçen TATLISU	Dietitian	4214
KÜTAHYA	Sercan GÜMÜŞ	Dietitian	4310
КÜТАНҮА	Ferhat SAĞLAM	Dietitian	4311
MALATYA	Seda KIZILTEPE	Dietitian	4410
MALATYA	Bahar AKBEZ	Dietitian	4411
MANİSA	Aslı BAHŞI	Dietitian	4510
MANİSA	Berna YÜKSEL	Dietitian	4511
MANİSA	Selin ERDOĞAN	Dietitian	4512
MARDİN	Hüseyin GEZER	Dietitian	4710
MARDİN	Emine Kübra TORAMAN	Dietitian	4711
MERSIN	Yıldız Çisem YÖNEY	Dietitian	3310

MERSİN	Müzeyyen Berat ÖZDEMİR	Dietitian	3311
MERSİN	Seda KOŞAR	Dietitian	3312
MERSİN	Dilek ÇOBAN	Dietitian	3313
MUĞLA	Esra BULUT	Dietitian	4810
MUĞLA	Hande ALACA	Dietitian	4811
MUŞ	Hamza KARAPINAR	Dietitian	4910
MUŞ	Edip TAŞ	Dietitian	4911
NEVŞEHİR	Zerrin YÜCE	Dietitian	5010
NEVŞEHİR	Beyza Gülten ÖZKAN	Dietitian	5011
NİĞDE	Neslihan ÖZGEN	Dietitian	5110
NİĞDE	Merve SAKCA	Dietitian	5111
ORDU	Eda TUNCER YILDIZ	Dietitian	5210
ORDU	Şeyma BİNGÖL	Dietitian	5211
OSMANİYE	Gülhanım İNÇ	Dietitian	8010
OSMANİYE	Müjde Elif ALKAN	Dietitian	8011
RİZE	Sümeyye TOPÇU KURTOĞLU	Dietitian	5310
RİZE	Burcu ÖZGÜRLER	Dietitian	5311
SAKARYA	Yasemin TUNCER	Dietitian	5410
SAKARYA	Zeliha UÇAR	Dietitian	5411
SAMSUN	Betül BAHADIR	Dietitian	5510
SAMSUN	Merve ÖZCAN	Dietitian	5511
SAMSUN	Merve SÖZEN	Dietitian	5512
SİİRT	Nevzat ERTAŞ	Dietitian	5610
SİİRT	Mehmet Emin ŞİRİN	Dietitian	5611
SINOP	Ayşe KAPLAN	Dietitian	5710
SİNOP	Beyza AĞILLI	Dietitian	5711
SİVAS	Saadet ÜNVER	Dietitian	5810
SİVAS	Uğur MERD	Dietitian	5811
ŞANLIURFA	Hatice Nur ANAMUR	Dietitian	6310
ŞANLIURFA	Şeyma EKŞİ	Dietitian	6311
ŞANLIURFA	Tuğçe Zeynep ÜNAL	Dietitian	6312
ŞANLIURFA	Tamer ÜÇKILINÇ	Dietitian	6313
ŞIRNAK	Tuba GÜLTEKİN	Dietitian	7310
ŞIRNAK	Emine GENÇ	Dietitian	7311
TEKİRDAĞ	Özlem YİRCİ	Dietitian	5910
TEKİRDAĞ	Tanju KUŞDİL	Dietitian	5911
ТОКАТ	Nurcan GÜZEY	Dietitian	6010
ТОКАТ	Metehan ALTUNEL	Dietitian	6011
TRABZON	Dilek KAYA	Dietitian	6110
TRABZON	Demet YILMAZ	Dietitian	6111
TUNCELİ	Ebru TEKİN	Dietitian	6210
TUNCELİ	Yasemin TEKKILIÇ	Midwife	6211

LICAK		Dietitian	C 44 0
UŞAK	Zeynep ZEYBEK	Dietitian	6410
UŞAK	Suhide Bilge DENİZ	Dietitian	6411
VAN	Tuğba TEKİN	Dietitian	6510
VAN	Selin TALKAN	Dietitian	6511
YALOVA	Merve YÜCEL	Dietitian	7710
YALOVA	Derya ANAPALİ	Dietitian	7711
YOZGAT	Meryem Betül BAŞER	Dietitian	6610
YOZGAT	Merve ÜNALAN	Dietitian	6611
ZONGULDAK	Emine AYDOĞAN	Dietitian	6710
ZONGULDAK	Rabia Cansu TEKİN	Dietitian	6711



APPENDIX 8: Comparison of Certain Food Groups, Intake Amounts of Foods and Regional Analyses Thereof According to Data of TNHS 2010 and TNHS 2017

Although the NUTS tables in this chapter do not give regional estimations, they provide a regional representation. Therefore, careful interpretation of regional results in the tables is recommended.

The comparison of average amount of foods consumed daily (g, ml/person/day) by individuals aged 19 and over according to the data of TNHS 2010 and TNHS 2017, is given in Appendix 8.1.

While the daily consumption of meat group in males was 87.7 grams in TNHS 2010, it was 111.7 grams in TNHS 2017. While the daily consumption of meat group in females was 47.9 grams in TNHS 2010, it was 62.2 grams in TNHS 2017. Overall, while the daily consumption of meat group was 69.3 grams in TNHS 2010, it was 86.8 grams in TNHS 2017.

While the daily consumption of eggs in males was 27.1 grams in TNHS 2010, it was 0.6 grams in TNHS 2017. While the daily consumption of eggs in females was 21.3 grams in TNHS 2010, it was 24.8 grams in TNHS 2017. Overall, while the consumption amount of eggs was 24.4 grams in TNHS 2010, it was 27.7 grams in TNHS 2017.

While the daily consumption of legumes in males was 10.0 grams in TNHS 2010, it was 16.7 grams in TNHS 2017. While the daily consumption of legumes in females was 8.1 grams in TNHS 2010, it was 13.2 grams in TNHS 2017. Overall, while the daily consumption amount was 9.1 grams in TNHS 2010, it was 14.9 grams in TNHS 2017.

While the daily consumption of seeds in males was 7.5 grams in TNHS 2010, it was 10.8 grams in TNHS 2017. While the daily consumption of seeds in females was 6.1 grams in TNHS 2010, it was 9.0 grams in TNHS 2017. Overall, while the daily consumption of legumes was 6.9 grams in TNHS 2010, it was 9.9 grams in TNHS 2017.

While the daily consumption of milk and dairy products in males was 205.9 grams in TNHS 2010, it was 205.7 grams in TNHS 2017. While the daily consumption of milk and dairy products in females was 169.1 grams in TNHS 2010, it was 171.0 grams in TNHS 2017. Overall, while the daily consumption of milk and dairy products was 188.9 grams in TNHS 2010, it was 188.2 grams in TNHS 2017.

While the daily consumption of vegetables and fruits group in males was 544.9 grams in TNHS 2010, it was 420.3 grams in TNHS 2017. While the daily consumption of vegetables and fruits group in females was 552.2 grams in TNHS 2010, it was 409.8 grams in TNHS 2017. Overall, while the daily consumption amount was 548.3 grams in TNHS 2010, it was 415.0 grams in TNHS 2017.

While the daily consumption of bread and cereals in males was 325.3 grams in TNHS 2010, it was 328.2 grams in TNHS 2017. While the daily consumption of bread and cereals in females was 221.4 gram in TNHS 2010, it was 217.1 gram in TNHS 2017. Overall, while the daily consumption of bread and cereals was 277.2 grams in TNHS 2010, it was 272.3 gram in TNHS 2017.

While the daily consumption of total fat and oil group in males was 33.9 grams in TNHS 2010, it was 54.9 grams in TNHS 2017. While the daily consumption of total fat and oil group in females was 31.5 grams in TNHS 2010, it was 45.6 grams in TNHS 2017. Overall, while the daily consumption of total fat and oil group was 32.8 grams in TNHS 2010, it was 50.2 grams in TNHS 2017.

While the daily consumption of fat in males was 10.8 grams in TNHS 2010, it was 13.7 grams in TNHS 2017. While the daily consumption of fat in females was 7.9 grams in TNHS 2010, it was 9.2 grams in TNHS 2017. Overall, while the daily consumption of fat was 9.4 grams in TNHS 2010, it was 11.4 grams in TNHS 2017.

While the daily consumption of oil in males was 22.1 grams in TNHS 2010, it was 23.1 grams in TNHS 2017. While the daily consumption of oil in females was 20.4 grams in TNHS 2010, it was 20.5 grams in TNHS 2017. Overall, while the consumption amount is 21.3 grams in TNHS 2010, it was 21.8 grams in TNHS 2017.

While the daily consumption of sugar and sweets in males was 36.6 grams in TNHS 2010, it was 34.9 grams in TNHS 2017. While the daily consumption of sugar and sweets in females was 28.7 grams in TNHS 2010, it was 26.4 grams in TNHS 2017. Overall, while the daily consumption of sugar and sweets was 33.0 grams in TNHS 2010, it was 30.6 grams in TNHS 2017.

While the daily consumption of water and other beverages in males was 1841.9 grams in TNHS 2010, it was 1882.8 grams in TNHS 2017. While the daily consumption of water and other beverages in females was 1497.2 grams in TNHS 2010, it was 1576.3 grams in TNHS 2017. Overall, while the daily consumption of water and other beverages was 1682.3 grams, it was 1728.6 grams in TNHS 2017.

		M	ALES	FEMALES					OVE	RALL		
Food Groups	20	10	20:	2017		2010		17	2	010	2017	
	x	Sx	x	Sx	x	Sx	x	Sx	x	Sx	x	Sx
Meat Group	87.8	1.68	111.7	1.77	47.9	1.26	62.2	1.12	69.3	1.10	86.8	1.10
Eggs	27.1	0.57	30.6	0.62	21.3	0.49	24.8	0.40	24.4	0.38	27.7	0.37
Legumes	10.0	0.37	16.7	0.44	8.1	0.40	13.2	0.34	9.1	0.27	14.9	0.28
Seeds	7.5	0.33	10.8	0.48	6.1	0.32	9.0	0.29	6.9	0.23	9.9	0.28
Milk and Dairy Products	205.9	3.00	205.7	3.03	169.1	2.63	171.0	2.20	188.9	2.03	188.2	1.89
Vegetables and Fruits Group	544.9	7.85	420.3	5.08	552.2	7.76	409.8	3.90	548.3	5.54	415.0	3.20
Bread and Cereals	325.3	2.70	328.2	2.78	221.4	2.21	217.1	1.99	277.2	1.87	272.3	1.82
Total Fats and Oils Group	33.9	0.41	54.9	0.59	31.5	2.23	45.6	0.42	32.8	1.06	50.2	0.36
Fats	10.8	0.24	13.7	0.30	7.9	0.3	9.2	0.19	9.4	0.17	11.4	0.18
Oils	22.1	0.3	23.1	0.30	20.4	0.3	20.5	0.24	21.3	0.21	21.8	0.20
Sugar and Sweets	36.6	0.64	34.9	0.61	28.7	0.58	26.4	0.46	33.0	0.44	30.6	0.38
Water and Other Beverages	1841.9	17.60	1882.8	18.80	1497.2	13.73	1576.3	13.06	1682.3	1027.87	1728.6	11.65

Appendix 8.1. Comparison of daily average amounts of foods consumed (g, mL/per person/per day) in individuals aged 19 years and over between TNHS 2010 and TNSH 2017

The comparison of daily intakes of energy and nutrients (per person/per day) among individuals aged 19 years and over according to data of TNHS 2010 and TNHS 2017 is given in Appendix 8.2.

Intakes of Energy and Macronutrients

While the daily energy intake for males in the age group 19 years and over was 2162.0 kcal according to the TNHS 2010, it was 2196.0 kcal in TNHS 2017. While the daily energy intake for females was 1617.4 kcal in TNHS 2010, it was 1617.0 kcal in TNHS 2017. Overall, while the daily energy intake was 1909.9 kcal in TNHS 2010, it was 1904.6 kcal in TNHS 2017.

Daily intake of protein for males was 70.7 grams in TNHS 2010 and 81.3 g in TNHS 2017, whereas for females it was 51.4 grams in TNHS 2010 and 57.4 grams in TNHS 2017. Overall, while the intake of protein was 61.8 grams in TNHS 2010, it was 69.2 grams in TNHS 2017.

While the percentages of energy provided from protein, fat and carbohydrate in males were 13.6%, 33.75%, 51.86%, respectively in TNHS 2010, they were 15.4%, 33.6%, 50.7% in TNHS 2017. While the percentages of energy provided from protein, fat and carbohydrate in females were 13.2%, 35.12%, 52.6%, , respectively in TNHS 2010, they were 14.8%, 35.4%, 49.7% in TNHS 2017. Overall, while the percentages of energy provided from protein, fat and carbohydrate were 13.4%, 34.4%, 51.7%, respectively in TNHS 2010, they were 15.1%, 34.5%, 50.2%, respectively in TNHS 2017.

While the daily intake of Omega-3 fatty acids for males was 1.50 grams in TNHS 2010, it was 1.6 grams in TNHS 2017. For females, the daily intake of Omega-3 fatty acids was 1.17 grams in TNHS 2010, whereas it was 1.2 grams in TNHS 2017. Overall, while the daily intake of Omega-3 fatty acids was 1.35 grams in TNHS 2010, it was 1.4 grams in TNHS 2017.

While the daily intake of dietary fiber for males was 23.3 grams in TNHS 2010, it was 24.4 grams in TNHS 2017. For females, the daily intake of dietary fiber was 20.1 grams in TNHS 2010, whereas it was 20.3 grams in TNHS 2017. Overall, while the daily intake of dietary fiber was 21.8 grams in TNHS 2010, it was 22.4 grams in TNHS 2017.

		M	ALES		FEMALES				OVERALL			
Energy and Nutrients	20	10	20)17	20	10	201	L7	2010		2017	
	x	SD	x	SD	x	SD	x	SD	x	SD	x	SD
Energy (kcal)	2162.0	819.97	2196.0	765.03	1617.4	647.06	1617.0	568.33	1909.9	792.85	1904.6	732.86
Protein (g)	70.7	30.34	81.3	30.39	51.4	23.42	57.4	21.38	61.8	29.00	69.2	28.84
Protein E%	13.6	3.54	15.4	3.40	13.2	3.70	14.8	3.35	13.4	3.62	15.1	3.39
Plant protein (g)	36.83	15.99	44.7	17.69	27.97	13.17	33.1	13.11	32.73	15.40	38.8	16.61
Fat (g)	81.8	40.26	83.0	35.62	64.2	32.20	64.6	27.59	73.6	37.77	73.7	33.14
Fat E%	33.75	9.86	33.6	8.03	35.12	9.97	35.4	8.01	34.4	9.94	34.5	8.07
Saturated fat (g)	27.01	16.00	27.2	12.87	20.91	12.31	20.6	9.45	24.19	14.73	23.9	11.75
Monounsaturated fat (g)	28.98	15.85	28.8	13.85	22.41	12.53	22.6	10.76	25.94	14.78	25.7	12.78
Polyunsaturated fat (g)	20.29	13.26	19.8	11.66	16.62	11.82	15.8	9.58	18.59	12.74	17.8	10.86
Omega 3 (g)	1.50	1.03	1.6	1.44	1.17	0.88	1.2	1.20	1.35	0.98	1.4	1.33
Omega 6 (g)	18.65	12.69	17.8	10.83	15.35	11.40	14.3	8.97	17.12	12.22	16.0	10.09
Cholesterol (mg)	249.10	191.95	290.3	197.12	180.59	148.40	211.0	135.63	217.39	176.48	250.4	173.58
Carbohydrate (g)	272.4	115.05	273.2	110.97	202.5	89.60	197.2	80.01	240.1	109.72	235.0	103.83
Carbohydrate E%	51.86	10.5	50.7	9.25	52.6	10.5	49.7	9.05	51.7	10.51	50.2	9.16
Dietary fiber (g)	23.3	11.27	24.4	10.89	20.1	10.23	20.3	8.65	21.8	10.92	22.4	10.04
Water-soluble fiber (g)	7.57	3.89	8.3	3.83	6.24	3.42	6.5	3.06	6.95	3.74	7.4	3.57
Water-insoluble fiber (g)	15.15	7.47	15.9	7.66	13.17	6.76	13.5	6.25	14.23	7.22	14.7	7.09

Appendix 8.2. Comparison of daily intakes of energy and nutrients among individuals aged 19 years and over (per person/per day) according to data of TNHS 2010 and TNHS 2017

Micronutrients

The intakes of vitamins and minerals are given in Appendix 8.2 (continued table).

While the intake of vitamin A for males was 1411.2 mcg in TNHS 2010 and 1431.5 mcg in TNHS 2017, for females was 1129.5 mcg in TNHS 2010 and 1113.0 mcg in TNHS 2017, overall it was 1280.8 mcg in TNHS 2010 and 1271.2 mcg in TNHS 2017.

While the intake of vitamin E for males was 17.1 mg in TNHS 2010 and 19.5 mg in TNHS 2017, for females was 15.1 mg in TNHS 2010 and 16.6 mg in TNHS 2017, overall it was 16.2 mg in TNHS 2010 and 18.0 mg in TNHS 2017.

While the intake of vitamin B_1 for males was 1.02 mg in TNHS 2010 and 1.0 mg in TNHS 2017, for females was 0.82 mg in TNHS 2010 and 0.8 mg in TNHS 2017, overall it was 0.93 mg in TNHS 2010 and 0.9 mg in TNHS 2017.

While the intake of vitamin B₂ for males was 1.47 mg in TNHS 2010 and 1.4 mg in TNHS 2017, for females was 1.14 mg in TNHS 2010 and 1.1 mg in TNHS 2017, overall it was 1.32 mg in TNHS 2010 and 1.3 mg in TNHS 2017.

While the intake of niacin for males was 14.08 mg in TNHS 2010 and 16.7 mg in TNHS 2017, for females was 10.35 mg and 11.5 mg in TNHS 2017, overall it was 12.35 mg in TNHS 2010 and 14.1 mg in TNHS 2017.

While the intake of vitamin B_6 for males was 1.63 mg in TNHS 2010 and 1.4 mg in TNHS 2017, for females was 1.33 mg in TNHS 2010 and 1.1 mg in TNHS 2017, overall it was 1.49 mg in TNHS 2010 and 1.2 mg in TNHS 2017.

While the intake of folate for males was 399.8 mcg in TNHS 2010 and 352.4 mcg in TNHS 2017, for females was 326.7 mcg in TNHS 2010 and 291.5 mcg in TNHS 2017, overall it was 366.0 mcg in TNHS 2010 and 321.7 mcg in TNHS 2017.

While the intake of vitamin B_{12} for males was 4.40 mcg in TNHS 2010 and 6.51 mcg in TNHS 2017, for females was 2.71 mcg in TNHS 2010 and 3.8 mcg in TNHS 2017, overall it was 3.62 mcg in TNHS 2010 and 5.1 mcg in TNHS 2017.

White the intake of vitamin C for males was 138.6 mg in TNHS 2010 and 116.9 mg in TNHS 2017, for females was 138.2 mg in TNHS 2010 and 114.2 mg in TNHS 2017, overall it was 138.4 mg in TNHS 2010, it is 115.5 mg in TNHS 2017.

While the intake of vitamin D for males was 1.3 mcg in TNHS 2010 and 3.7 mcg in TNHS 2017, for females was 0.8 mcg in TNHS 2010 and 3.0 mcg in TNHS 2017, overall it was 1.1 mcg in TNHS 2010 and 3.3 mcg in TNHS 2017.

While the intake of sodium for males was 2343.0 mg in TNHS 2010 and 4733.1 mg in TNHS 2017, for females was 1648.5 mg in TNHS 2010 and 3638.0 mg in TNHS 2017, overall it was 2021.5 mg in TNHS 2010 and 4181,9 mg in TNHS 2017. The reason for higher intake of sodium in TNHS 2017 compared to data in TNHS 2010 is that the approximate amount of salt added to the meals was also included.

While the intake of potassium for males was 2640.8 mg in TNHS 2010 and 2683.7 mg in TNHS 2017, for females was 2292.9 mg in TNHS 2010 and 2217.1 mg in TNHS 2017, overall it was 2479.7 mg in TNHS 2010 and 2448.9 mg in TNHS 2017.

While the intake of calcium for males was 714.5 mg in TNHS 2010 and 881.6 mg in TNHS 2017, for females was 594.2 mg in TNHS 2010 and 721.2 mg in TNHS 2017, overall it was 658.8 mg in TNHS 2010 and 800.9 mg in TNHS 2017.

While intake of magnesium for males was 293.7 mg in TNHS 2010 and 324.3 mg in TNHS 2017, for females was 248.7 mg in TNHS 2010 and 260.3 mg in TNHS 2017, overall it was 272.9 mg in TNHS 2010 and 292.1 mg in TNHS 2017.

While intake of phosphorus for males was 1157.1 mg in TNHS 2010 and 1226.5 mg in TNHS 2017, for females was 890.1 mg in TNHS 2010 and 927.3 mg in TNHS 2017, overall it was 1033.5 mg in TNHS 2010 and 1075.9 mg in TNHS 2017.

While intake of iron for males was 12.6 mg in TNHS 2010 and 11.9 mg in TNHS 2017, for females was 10.2 mg in TNHS 2010 and 9.4 mg in TNHS 2017, overall it was 11.5 mg in TNHS 2010 and 10.6 mg in TNHS 2017.

While intake of zinc for males was 11.2 mg in TNHS 2010 and 11.3 mg in TNHS 2017, for females was 8.5 mg in TNHS 2010 and 8.2 mg in TNHS 2017, overall it was 9.90 mg in TNHS 2010 and 9.8 mg in TNHS 2017.

Appendix 8.2. Comparison of daily intakes of energy and nutrients among individuals aged 19 years and over (per person/per day) according to data of	
TNHS 2010 and TNHS 2017 (continued table)	

		M	ALES		FEMALES OVERALL							
Energy and Nutrients	20	010	20	17	2	010	2	017	2	2010	2017	
	x	SD	x	SD	x	SD	x	SD	x	SD	x	SD
Vitamin A (mcg)	1411.2	2790.95	1431.5	3126.25	1129.5	1976.95	1113.0	2347.99	1280.8	2451.92	1271.2	2766.61
Carotene (mg)	3.0	3.0	3.3	3.79	3.01	2.99	3.4	3.91	3.0	2.99	3.4	3.85
Vitamin E (mg)	17.1	12.23	19.5	11.52	15.1	11.09	16.6	9.85	16.2	11.76	18.0	10.81
Vitamin B ₁ (mg)	1.02	0.47	1.0	0.41	0.82	0.39	0.8	0.33	0.93	0.44	0.9	0.39
Vitamin B ₂ (mg)	1.47	0.76	1.4	0.73	1.14	0.57	1.1	0.52	1.32	0.70	1.3	0.65
Niacin (mg)	14.08	9.20	16.7	9.95	10.35	6.5	11.5	6.95	12.35	8.33	14.1	8.94
Vitamin B ₆ (mg)	1.63	1.20	1.4	0.68	1.33	0.73	1.1	0.49	1.49	1.02	1.2	0.61
Folate (mcg)	399.8	174.35	352.4	159.21	326.7	148.8	291.5	126.81	366.0	167.04	321.7	147.01
Vitamin B ₁₂ (mcg)	4.40	8.61	6.51	10.85	2.71	6.01	3.8	5.65	3.62	7.57	5.1	8.74
Vitamin C (mg)	138.6	117.59	116.9	97.80	138.2	109.40	114.2	92.43	138.4	113.86	115.5	95.14
Vitamin D (mcg)	1.3	3.5	3.7	8.88	0.8	2.3	3.0	12.45	1.1	3.02	3.3	10.83
Sodium (mg)	2343.0	1356.2	4733.1	1874.04	1648.5	1221.64	3638.0	1452.66	2021.5	1341.05	4181.9	1762.42
Potassium (mg)	2640.8	1145.02	2683.7	1026.0	2292.9	1033.96	2217.1	847.19	2479.7	1108.59	2448.9	968.72
Calcium (mg)	714.5	365.42	881.6	341.61	594.2	294.59	721.2	274.61	658.8	339.82	800.9	319.92
Magnesium (mg)	293.7	134.43	324.3	123.37	248.7	120.78	260.3	97.52	272.9	130.24	292.1	115.63
Phosphorus (mg)	1157.1	491.09	1226.5	445.33	890.1	399.67	927.3	338.90	1033.5	470.29	1075.9	422.73
Iron (mg)	12.6	5.30	11.9	4.87	10.2	4.76	9.4	3.83	11.5	5.20	10.6	4.55
Zinc (mg)	11.2	4.83	11.3	4.47	8.5	3.75	8.2	3.17	9.90	4.56	9.8	4.17
lodine (mcg)	70.5	47.8	156.9	76.21	58.9	26.9	120.8	58.69	65.1	39.9	138.7	70.32

The data on meeting intakes of energy and macronutrients for individuals in the age groups of 15-17, 18-64, \geq 15, \geq 19, \geq 65 years according to EFSA dietary reference values (DRV) are presented in Appendix 8.3.1.

When all individuals (aged \geq 15 years) were evaluated, the proportion of those whose energy intake was below the recommended value (AR) was 72%, while the proportion of those whose energy intake was above the recommended value (AR) was 28%. According to AR, protein intake was determined to be below recommended level for 72% and above recommended level for 28% of individuals, whereas according to AMRD it was below recommended level for 5.6%, at recommended level for 86% and above recommended for 8.4% of individuals.

When the carbohydrate intakes of individuals were evaluated according to AMDR, 25% of individuals have carbohydrate intake below the recommended level, 70.4% have at recommended level, and 4.6% have above recommended level. When the dietary fiber intakes were evaluated according to AI, 67.2% of individuals have fiber intake below the recommended level and 32.8% have above the recommended level.

When total fat intake was evaluated according to AMDR, it was determined that 3.4% of individuals have folate intake below the recommended level, 51.8% have at recommended level, and 44.8% have above the recommended level. When saturated fat intake was evaluated according to AMDR, the proportion of those whose saturated fat intake was below recommended level was found to be 37.7%, whereas it was 62.3% for those whose intake was above recommended level.

The data on meeting intakes of micronutrients for individuals in the age groups of 15-17, 18-64, \geq 15, \geq 19, \geq 65 years according to EFSA dietary reference values (DRV) are presented in Appendix 8.3.2.

When daily dietary vitamin intake of individuals (aged \geq 15 years) was evaluated, it was found that 26.6% of them take vitamin A, 32.9% vitamin E, 96% vitamin D, 23.9% vitamin B₁, 63.2% vitamin B₂, 7.9% niacin, 69.2% vitamin B₆, 34.4% folate, 60.7% vitamin B₁₂, 45.1% vitamin C below the recommended levels; 76.1% take vitamin B₁, 36.8% vitamin B2, 92.1% niacin, 30.8% vitamin B₆, 65.6% folate, 39.3% vitamin B₁₂ and 54.9% vitamin C above the recommended levels.

When the daily dietary mineral intake of all individuals was evaluated, it was found that 52.6% of them take calcium, 68% magnesium, 87.8% potassium, 7.3% phosphorus and 41.2% copper below the recommended levels; and 54.9% take calcium, 32% magnesium, 12.2% potassium, 92.7% phosphorus and 58.8% copper above the recommended levels.

According to AR, 15.1% of individuals aged 15 year and over take iron and 59.4% take zinc below the recommended level, while 84.9% take iron and 40.6% take zinc above the recommended level. According to PRI, 66.4% take iron and 81.2% take zinc above the recommended level, while 33.6% take iron and 18.8% take zinc above the recommended level.

When daily sodium intake of all individuals is evaluated, it was found that 2.9% of them take 1500 mg and less, 4.3% take between 1501-2000 mg, 44.7% take between 2001-4000 mg, and 48.0% take 4001 mg and above.

Energy and Macronutrients	15-17 years							18-64 years						
	Males (N:150)		Females (N:140)		Overall (N: 290)		Males N:4502)		Females (N:5510)		Overall (N: 10012)			
	N	%	N	%	N	%	N	%	N	%	N	%		
Energy (AR)														
Below	119	77.9	113	80.8	232	79.2	3009	66.9	4130	74.6	7139	70.7		
Above	31	22.1	27	19.2	58	20.8	1493	33.1	1380	25.4	2873	29.3		
Protein (AR)														
Below	11	9.3	23	17.9	34	13.2	530	10.2	1644	27.2	2174	18.7		
Above	139	90.7	117	82.1	256	86.8	3972	89.8	3866	72.8	7838	81.3		
Protein (AMDR)														
Below	5	3.8	6	4.6	11	4.2	146	3.3	270	5.1	416	4.2		
Recommended	134	89.1	126	90.2	260	89.6	3983	87.2	4834	87.5	8817	87.4		
Above	11	7.1	8	5.2	19	6.3	373	9.5	406	7.4	779	8.5		
Carbohydrate (AMDR)														
Below	20	10.3	27	17.0	47	13.3	1073	23.5	1547	27.3	2620	25.4		
Recommended	121	82.4	107	78.6	228	80.7	3208	71.6	3760	68.9	6968	70.3		
Above	9	7.3	6	4.5	15	6.0	221	4.9	203	3.8	424	4.3		
Dietary Fiber (AI)														
Below	74	46.6	95	69.1	169	56.8	2564	58.5	4108	75.2	6672	66.8		
Above	76	53.4	45	30.9	121	43.2	1938	41.5	1402	24.8	3340	33.2		
Fat (AMDR)														
Below	6	5.4	5	4.0	11	4.8	168	3.9	125	2.4	293	3.1		
Recommended	98	63.7	76	55.2	174	59.8	2455	55.6	2535	47.0	4990	51.3		
Above	46	30.9	59	40.8	105	35.4	1879	40.5	2850	545	4729	45.5		
Saturated fat (AMDR)														
Below	66	49.2	44	33.6	110	42.1	1763	39.1	1929	35.9	3692	37.5		
Above	84	50.8	96	66.4	180	57.9	2739	60.9	3581	64.1	6320	62.5		

Energy and Macronutrients	≥15 years						≥19 years						
	Males (N:5570)		Females (N:6883)		Overall (N: 12453)		Males (N:5325)		Females (N:6622)		Overall (N: 11947)		
	N	%	N	%	N	%	N	%	N	%	N	%	
Energy (AR)													
Below	3857	68.6	5196	75.4	9053	72.0	3670	68.0	4980	74.7	8650	71.4	
Above	1713	31.4	1687	24.6	3400	28.0	1655	32.0	1642	25.3	3297	28.6	
Protein (AR)													
Below	819	12.0	2276	29.5	3095	20.8	803	12.3	2236	30.6	3039	21.5	
Above	4751	88.0	4607	70.5	9358	79.2	4522	87.7	4386	69.4	8908	78.5	
Protein (AMDR)													
Below	309	4.4	541	6.8	850	5.6	297	4.4	525	6.9	822	5.6	
Recommended	4811	86.4	5822	85.6	10633	86.0	4596	86.2	5592	85.3	10188	85.7	
Above	450	9.2	520	7.6	970	8.4	432	9.4	505	7.8	937	8.6	
Carbohydrate (AMDR)													
Below	1309	22.8	1898	27.1	3207	25.0	1276	23.8	1843	27.8	3119	25.8	
Recommended	3969	72.1	4687	68.8	8656	70.4	3771	71.2	4497	68.4	8268	69.8	
Above	292	5.1	298	4.1	590	4.6	278	5.0	282	3.8	560	4.4	
Dietary Fiber (AI)													
Below	3236	58.5	5189	75.8	8425	67.2	3105	59.1	4993	75.7	8098	67.5	
Above	2334	41.5	1694	24.2	4028	32.8	2220	40.9	1629	24.3	3849	32.5	
Fat (AMDR)													
Below	220	4.0	197	2.7	417	3.4	210	3.9	185	2.5	395	3.2	
Recommended	3051	55.8	3232	47.9	6283	51.8	2897	55.4	3101	47.5	5998	51.4	
Above	2299	40.1	3454	49.4	5753	44.8	2218	40.7	3336	50.0	5554	45.4	
Saturated fat (AMDR)													
Below	2198	39.6	2441	35.8	4639	37.7	2092	38.8	2349	35.6	4441	37.2	
Above	3372	60.4	4442	64.2	7814	62.3	3233	61.2	4273	64.4	7506	62.8	

Appendix 8.3.1. Meeting the macronutrient intakes of individuals according to EFSA Dietary Reference Values (DRV) (%), TNHS 2017 (continued table)

Energy and			≥6	5 years		
Macronutrients	Males	(N:918)	Females	(N:1233)	Overall	(N: 2151)
	Ν	%	N	%	Ν	%
Energy (AR)						
Below	729	79.2	953	78.5	1682	78.8
Above	189	20.8	280	21.5	469	21.2
Protein (AR)						
Below	278	29.6	609	49.1	887	40.7
Above	640	70.4	624	50.9	1264	59.3
Protein (AMDR)						
Below	158	15.3	265	19.5	423	17.7
Recommended	694	77.3	862	70.9	1556	73.7
Above	66	7.4	106	9.6	172	8.6
Carbohydrate (AMDR)						
Below	216	23.1	324	29.1	540	26.5
Recommended	640	70.9	820	64.9	1460	67.5
Above	62	6.1	89	6.0	151	6.0
Dietary Fiber (AI)						
Below	598	65.5	986	82.2	1584	75.0
Above	320	34.5	247	17.8	567	25.0
Fat (AMDR)						
Below	46	4.6	67	4.5	113	4.6
Recommended	498	53.6	621	51.1	1119	52.2
Above	374	41.8	545	44.4	919	43.3
Saturated fat (AMDR)						
Below	369	38.3	468	35.8	837	36.9
Above	549	61.7	765	64.2	1314	63.1

Appendix 8.3.1. Meeting the macronutrient intakes of individuals according to EFSA Dietary Reference Values (DRV) (%), TNHS 2017 (continued table)

Macronutrients		15-17 years							18-64 years						
	Males	(N:150)	Female	s (N:140)	Overal	(N: 290)	Males (N:4502)	Female	es (N:5510)	Overall (N:10012)			
	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%			
Vitamin A (AR)															
Below	63	39.3	50	39.3	113	39.3	1159	25.8	1282	24.2	2441	25.0			
Above	87	60.7	90	60.7	177	60.7	3343	74.2	4228	75.8	7571	75.0			
Vitamin E (AI)															
Below	66	40.4	45	31.4	111	36.3	1406	30.9	1759	30.2	3165	30.6			
Above	84	59.6	95	68.6	179	63.7	3096	69.1	3751	69.8	6847	69.4			
Vitamin D (AI)															
Below	145	97.8	139	99.4	284	98.5	4278	95.4	5293	96.5	9571	95.9			
Above	5	2.2	1	0.6	6	1.5	224	4.6	217	3.5	441	4.1			
Vitamin B ₁ (AR)															
Below	63	42.1	1233	22.7	114	41.1	918	20.0	1233	22.7	2151	21.4			
Above	87	57.9	4277	77.3	176	58.9	3584	80.0	4277	77.3	7861	78.6			
Vitamin B ₂ (AR)															
Below	99	67.8	111	85.1	210	75.7	2247	49.1	4029	73.4	6276	61.2			
Above	51	32.2	29	14.9	80	24.3	2255	50.9	1481	26.6	3736	38.8			
Niacin (AR)															
Below	7	3.6	14	11.8	21	7.3	138	3.0	545	9.9	683	6.4			
Above	143	96.4	126	88.2	269	92.7	4364	97.0	4965	90.1	9329	93.6			
Vitamin B ₆ (AR)															
Below	111	74.2	108	81.0	219	77.3	2938	63.5	3895	71.2	6833	67.3			
Above	39	25.8	32	19.0	71	22.7	1564	36.5	1615	28.8	3179	32.7			
Folate (AR)															
Below	58	35.0	85	60.6	143	46.6	1039	24.2	2200	41.3	3239	32.7			
Above	92	65.0	55	39.4	147	53.4	3463	75.8	3310	58.7	6773	67.3			

Appendix 8.3.2. Meeting the micronutrient intakes of individuals according to EFSA Dietary Reference Values (DRV) (%), TNHS 2017

Micronutrients				≥15 years			≥19 years						
	Males (N:5570)	Females	(N:6883)	Overall (N: 12453)	Males (I	N:5325)	Womer	n (N:6622)	Overall (N: 11947)	
	N	%	Ν	%	N	%	N	%	N	%	N	%	
Vitamin A (AR)													
Below	1559	27.5	1729	25.8	3288	26.6	1469	26.8	1637	24.7	3106	25.7	
Above	4011	72.5	5153	74.2	9165	73.4	3856	73.2	4985	75.3	8841	74.3	
Vitamin E (AI)													
Below	1927	33.1	2399	32.6	4326	32.9	1830	32.7	2317	32.7	4147	32.7	
Above	3643	66.9	4484	67.4	8127	67.1	3495	67.3	4305	67.3	7800	67.3	
Vitamin D (AI)													
Below	5298	95.4	6616	96.6	11914	96.0	5060	95.2	6359	96.4	11419	95.8	
Above	272	4.6	267	3.4	539	4.0	265	4.8	263	3.6	528	4.2	
Vitamin B ₁ (AR)													
Below	1313	22.6	1724	25.2	3037	23.9	1234	21.6	1639	24.4	2873	23.0	
Above	4257	77.4	5159	74.8	9416	76.1	4091	78.4	4983	75.6	9074	77.0	
Vitamin B ₂ (AR)													
Below	2947	51.6	5129	74.7	8076	63.2	2799	50.8	4929	74.3	7728	62.6	
Above	2623	48.4	1754	25.3	4377	36.8	2526	49.2	1693	25.7	4219	37.4	
Niacin (AR)													
Below	246	3.8	864	11.9	1110	7.9	237	3.9	833	11.7	1070	7.8	
Above	5324	96.2	6019	88.1	11343	92.1	5088	96.1	5789	88.3	10877	92.2	
Vitamin B ₆ (AR)													
Below	3774	65.6	4980	72.8	8754	69.2	3604	65.3	4779	72.1	8383	68.7	
Above	1796	34.4	1903	27.2	3699	30.8	1721	34.7	1843	27.9	3564	31.3	

Appendix 8.3.2. Meeting the micronutrient intakes of individuals according to EFSA Dietary Reference Values (DRV) (%), TNHS 2017, (continued table)

Folate (AR) Below

Above

1406

4164

25.6

74.4

2882

4001

43.1

56.9

4288

8165

34.4

65.6

1320

4005

25.0

75.0

2721

3901

41.4

58.6

4041

7906

33.3

66.7

Micronutrients			≥65	5 years		
	Males (N:918)	Females (N:1233)	Overall	(N:2151)
	N	%	Ν	%	N	%
Vitamin A (AR)						
Below	337	36.2	397	32.0	734	33.8
Above	581	63.8	836	68.0	1417	66.2
Vitamin E (AI)						
Below	455	49.7	595	49.1	1050	49.4
Above	463	50.3	638	50.9	1101	50.6
Vitamin D (Al)						
Below	875	94.3	1184	96.4	2059	95.5
Above	43	5.7	49	3.6	92	4.5
Vitamin B ₁ (AR)						
Below	332	34.8	440	37.3	772	36.2
Above	586	65.2	793	62.7	1379	63.8
Vitamin B ₂ (AR)						
Below	601	65.3	989	79.9	1590	73.6
Above	317	34.7	244	20.1	561	26.4
Niacin (AR)						
Below	101	11.4	305	25.7	406	19.6
Above	817	88.6	928	74.3	1745	80.4
Vitamin B ₆ (AR)						
Below	725	79.6	977	80.8	1702	80.3
Above	193	20.4	256	19.2	449	19.7
Folate (AR)						
Below	309	33.2	597	49.3	906	42.4
Above	609	66.8	636	50.7	1245	57.6

Appendix 8.3.2. Meeting the micronutrient intakes of individuals according to EFSA Dietary Reference Values (DRV) (%), TNHS 2017, (continued table)

Micronutrients			15-	17 years					18	-64 years		
	Males	(N:150)		s (N:140)	<u>Overal</u>	l (N: 290)	Males (N:450 <u>2)</u>		s (N:5510)	Ov <u>erall</u> (N: 11947)
	N	%	N	%	N	%	N	%	N	%	N	%
Vitamin B ₁₂ (AI)												
Below	76	53.2	100	74.0	176	62.6	2165	46.3	3951	71.6	6116	58.9
Above	74	46.8	40	26.0	114	37.4	2337	53.7	1559	28.4	3896	41.1
Vitamin C (AR)												
Below	99	62.2	69	49.7	168	56.5	2071	47.5	2167	41.5	4238	44.5
Above	51	37.8	71	50.3	122	43.5	2431	52.5	3343	58.5	5774	55.5
Calcium (AI)												
Below	107	71.4	118	88.7	225	79.2	1720	39.2	3300	60.9	5020	50.0
Above	43	28.6	22	11.3	65	20.8	2782	60.8	2210	39.1	4992	50.0
Magnesium (AI)												
Below	86	57.8	77	56.3	163	57.1	2834	63.9	3817	69.4	6651	66.6
Above	64	42.2	63	43.7	127	42.9	1668	36.1	1693	30.6	3361	33.4
Iron (AR)												
Below	40	25.8	49	35.8	89	30.3	251	5.5	1114	20.7	1365	13.1
Above	110	74.2	91	64.2	201	69.7	4251	94.5	4396	79.3	8647	86.9
Iron (PRI)												
Below	81	55.5		84.0	197	68.4	2081	46.4	4554	84.0	6635	65.1
Above	69	44.5	24	16.0	93	31.6	2421	53.6	956	16.0	3377	34.9
Zinc (AR)												
Below	101	66.2	103	76.3	204	70.8	2332	51.4	3423	61.8	5755	56.6
Above	49	33.8	37	23.7	86	29.2	2170	48.6	2087	38.2	4257	43.4
Zinc (PRI)												
Below	122	79.9	127	91.3	249	85.1	3451	76.5	4559	83.0	8010	79.7
Above	28	20.1	13	8.7	41	14.9	1051	23.5	951	17.0	2002	20.3

Appendix 8.3.2. Meeting the micronutrient intakes of individuals according to EFSA Dietary Reference Values (DRV) (%), TNHS 2017, (continued table)

Micronutrients		≥15 years							≥19 years					
	Males (I	N:5570)	Females	(N:6883)	Overall (N:12453)	Males (N:5325)	Female	s (N:6622)	Overall (N: 11947)		
	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%		
Vitamin B ₁₂ (AI)														
Below	2861	48.5	5037	72.7	7898	60.7	2736	48.1	4846	72.4	7582	60.3		
Above	2709	51.5	1846	27.3	4555	39.3	2589	51.9	1776	27.6	4365	39.7		
Vitamin C (AR)														
Below	2592	48.2	2740	42.0	5332	45.1	2445	47.3	2605	41.1	5050	44.2		
Above	2978	51.8	4143	58.0	7121	54.9	2880	52.7	4017	58.9	6897	55.8		
Calcium (AI)														
Below	2308	42.1	4273	63.0	6581	52.6	2147	40.1	4066	61.4	6213	50.8		
Above	3262	57.9	2610	37.0	5872	47.4	3178	59.9	2556	38.6	5734	49.2		
Magnesium (AI)														
Below	3659	65.2	4931	70.7	8590	68.0	3505	65.5	4766	71.4	8271	68.4		
Above	1911	34.8	1952	29.3	3863	32.0	1820	34.5	1856	28.6	3676	31.6		
Iron (AR)														
Below	425	7.4	1552	22.7	1977	15.1	382	6.6	1471	22.0	1853	14.3		
Above	5145	92.6	5331	77.3	10476	84.9	4943	93.4	5151	78.0	10094	85.7		
Iron (PRI)														
Below	2775	48.6	5698	84.0	8473	66.4	2644	48.1	5465	83.5	8109	65.9		
Above	2795	51.4	1185	16.0	3980	33.6	2681	51.9	1157	16.5	3838	34.1		
Zinc (AR)														
Below	3134	54.4	4479	64.3	7613	59.4	2979	53.7	4291	63.4	7270	58.6		
Above	2436	45.6	2404	35.7	4840	40.6	2346	46.3	2331	36.6	4677	41.4		
Zinc (PRI)														
Below	4406	78.0	5804	84.3	10210	81.2	4206	77.9	5573	83.8	9779	80.9		
Above	1164	22.0	1079	15.7	2243	18.8	1119	22.1	1049	16.2	2168	19.1		

Appendix 8.3.2. Meeting the micronutrient intakes of individuals according to EFSA Dietary Reference Values (DRV) (%), TNHS 2017, (continued table)

Appendix 8.3.2. Meeting the micronutrient intakes of individuals according to EFSA Dietary Reference Values (DRV) (%), TNHS 2017, (continued table)

Micronutrients			≥6!	5 years		
	Males ((N:918)	Females ((N:1233)	Overall	(N: 2151)
	Ν	%	N	%	N	%
Vitamin B ₁₂ (AI)						
Below	620	66.6	986	79.6	1606	74.0
Above	298	33.4	247	20.4	545	26.0
Vitamin C (AR)						
Below	422	46.6	504	42.9	926	44.5
Above	496	53.4	729	57.1	1225	55.5
Calcium (AI)						
Below	481	52.1	855	68.5	1336	61.4
Above	437	47.9	378	31.5	815	38.6
Magnesium (AI)						
Below	739	81.4	1037	84.9	1776	83.4
Above	179	18.6	196	15.1	375	16.6
Iron (AR)						
Below	134	14.8	389	32.4	523	24.8
Above	784	85.2	844	67.6	1628	75.2
Iron (PRI)						
Below	613	65.0	1028	84.1	1641	75.9
Above	305	35.0	295	15.9	510	24.1
Zinc (AR)						
Below	701	74.8	953	77.1	1654	76.1
Above	217	25.2	280	22.9	497	23.9
Zinc (PRI)						
Below	833	90.5	1118	90.8	1951	90.7
Above	85	9.5	115	9.2	200	9.3

Micronutrients				15-17 yea	rs		18-64 years					
	Males	Males (N:150)		s (N:140)	Overal	(N: 290)	Males (N:4502)	Female	s (N:5510)	Overall (N: 10012)
	N	%	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%
Potassium (AI)												
Below	128	85.1	128	93.0	256	88.7	3679	81.8	5083	92.5	8762	87.1
Above	22	14.9	12	7.0	34	11.3	823	18.2	427	7.5	1250	12.9
Phosphorus (AI)												
Below	11	5.9	29	21.1	40	12.8	115	2.4	520	9.2	635	5.8
Above	139	94.1	111	78.9	250	87.2	4387	97.6	4990	90.8	9377	94.2
Copper (Al)												
Below	43	28.8	51	36.2	94	32.2	1613	37.0	2279	41.7	3892	39.3
Above	107	71.2	89	63.8	196	67.8	2889	63.0	3231	58.3	6120	60.7
Sodium (mg)												
≤1500	2	1.2	6	5.3	8	3.1	52	1.2	206	4.2	258	2.7
1501-2000	3	1.7	16	10.9	19	5.9	102	2.5	281	5.3	383	3.9
2001-4000	57	36.7	73	54.0	130	44.6	1477	32.2	3074	55.1	4551	43.6
≥4001	88	60.3	45	29.8	133	46.5	2871	64.0	1949	35.3	4820	49.8

Appendix 8.3.2. Meeting the micronutrient intakes of individuals according	g to EFSA Dietary Reference Values (DRV) (%), TNHS 2017, (continued table)

Appendix 8.3.2. Meeting the micronutrient intake of individuals according to EFSA Dietary Reference Intake Values (DRV) (%), TNHS 2017 (continued table)

Micronutrients				≥15 years			≥19 years					
	Males (I	Males (N:5570)		Females (N:6883)		Overall (N:12453)		Meles (N:5325)		Females (N:6622)		N: 11947)
	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%	Ν	%
Potassium (AI)												
Below	4627	82.7	6377	92.8	11004	87.8	4417	82.6	6137	92.7	10554	87.7
Above	943	17.3	506	7.2	1449	12.2	908	17.4	485	7.3	1393	12.3
Phosphorus (AI)												
Below	216	3.3	818	11.4	1034	7.3	203	3.2	776	11.0	979	7.1
Above	5354	96.7	6065	88.6	11419	92.7	5122	96.8	5846	89.0	10968	92.9
Copper (AI)												
Below	2175	38.4	3087	44.1	5262	41.2	2093	38.7	2970	44.0	5063	41.4
Above	3395	61.6	3796	55.9	7191	58.8	3232	61.3	3652	56.0	6884	58.6
Sodium (mg)												
≤1500	84	1.4	288	4.5	372	2.9	81	1.4	276	4.4	357	2.9
1501-2000	136	2.6	413	6.1	549	4.3	131	2.5	393	5.9	524	4.2
2001-4000	1962	33.8	3870	55.5	5832	44.7	1880	33.9	3720	55.3	5600	44.7
≥4001	3388	62.3	2312	33.9	5700	48.0	3233	62.2	2233	34.4	5466	48.2

Appendix 8.3.2. Meeting the micronutrient intakes of individuals according to EFSA Dietary Reference Values
(DRV) (%), TNHS 2017 (continued table)

Micronutrients			≥€	55 years		
	Males	(N:918)	Female	es (N:1233)	Overall	(N: 2151)
	Ν	%	Ν	%	Ν	%
Potassium (AI)						
Below	820	90.1	1166	94.9	1986	92.9
Above	98	9.9	67	5.1	165	7.1
Phosphorus (AI)						
Below	90	9.3	269	22.8	359	16.9
Above	828	90.7	964	77.2	1792	83.1
Copper (AI)						
Below	519	56.3	757	63.3	1276	60.3
Above	399	43.7	476	36.7	875	39.7
Sodium (mg)						
≤1500	30	3.0	76	6.1	106	4.7
1501-2000	31	3.4	116	9.4	147	6.8
2001-4000	428	46.4	723	58.8	1151	53.5
≥4001	429	47.2	318	25.8	747	35.0

Mean daily consumption of certain foods in individuals aged 15 years and over are given in Appendix 8.4. The mean daily consumption of individuals was 33.6±100.25 mL for pasteurized milk, 75.1±141.43 mL for UHT milk, 92.2±132.43 mL for loose milk, 13.6±54.59 mL for probiotic milk and dairy products. The mean consumption was 18.9±58.61 grams for seafood, 58.9±73.09 grams for offals, 28.9±30.80 grams for raisins, 15.1±46.54 grams for ready-made canned vegetables, 73.1±82.89 grams for home-made canned vegetables, and 93.6±76.62 grams for French fries.

Appendix 8.4. Mean daily	y consumption of certain food	ds in all individuals aged 15	years and over, TNHS 2017

Food Items	OVERALL (≥15) (N:12984)		
	x	SD	95%Cl
Pasteurized milk (mL)	33.6	100.25	31.3-35.9
UHT milk (mL)	75.1	141.43	71.9-78.4
Loose milk (mL)	92.2	132.43	89.3-95.2
Probiotic milk and dairy products (mL)	13.6	54.59	12.4-14.8
Seafood (g)	18.9	58.61	17.7-20.3
Offals (g)	58.9	73.09	57.3-60.6
Raisin (g)	28.9	30.80	28.2-29.6
Ready-made canned vegetables (g)	15.1	46.54	14.0-16.2
Home-made canned vegetables (g)	73.1	82.89	71.2-74.9
French fries (g)	93.6	76.62	91.8-93.3

The mean, standard deviation and 95% confidence interval values of food intakes of individuals aged 15 years and over are given in Appendix 8.5 by NUTS regions, and in Appendix 8.6 for across Turkey.

According to these data, while the mean consumption of milk and dairy products across Turkey is 188.2±146.91 mL, considering NUTS regions, the least consumption is in Central Anatolia region (161.7±126.08 mL), and the highest consumption is in Southeastern Anatolia region (227.2±173.61 mL).

While the mean consumption of red meat and white meat across Turkey is 86.2 ± 88.39 grams, the least consumption is in Mediterranean region (69.3 ± 71.23 grams), and the highest consumption is in Eastern Black Sea region (96.0 ± 92.79 grams).

While the mean consumption of eggs across Turkey is 31.6±34.56 grams, the least consumption is in Southeastern Anatolia region (25.6±31.36 grams), and the highest consumption is in Eastern Marmara region (36.5±38.06 grams).

While the mean consumption of legumes across Turkey is 16.8±26.09 grams, the least consumption is in Central Eastern Anatolia region (14.5±21.23 grams), and the highest consumption is in Western Marmara region (22.9±36.58 grams).

While the mean consumption of seeds across Turkey is 9.9±23.30 grams, the least consumption is in Southeastern Anatolia region (6.7±16.87 grams), and the highest consumption is in Eastern Black Sea region (14.1±62.04 grams).

While the mean consumption of vegetables across Turkey is 256.2±166.54 grams, the least consumption is in Eastern Marmara region (213.79±145.61 grams), and the highest consumption is in Western Black Sea region (281.3±181.14 grams).

While the mean consumption of fruits across Turkey is 158.8±192.17 grams, the least consumption is in Northeastern Anatolia region (123.4±136.49 grams), and the highest consumption is in Central Anatolian region (205.8±230.25 grams).

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While the mean consumption of total vegetables and fruits across Turkey is 415.0±271.58 grams, the lowest consumption is in Northeastern Anatolian region (337.9±212.24 grams), and the highest consumption is in Mediterranean region (466.2±340.41 grams).

While the mean consumption of bread and cereals across Turkey is 272.3±146.63 grams, the lowest consumption is in Eastern Black Sea region (248.3±137.39 grams), and the highest consumption is in Northeastern Anatolian region (343.8±189.80 grams).

While the mean consumption of total oils and fats across Turkey is 50.2±30.32 grams, the lowest consumption is in Southeastern Anatolia region (41.0±26.17 grams), and the highest consumption is in Western Marmara region (57.8±37.02 grams).

While the mean consumption of fat across Turkey is 11.4±14.31 grams, the lowest consumption is in Southeastern Anatolia region (8.3±11.87 grams), and the highest consumption is in Northeastern Anatolia region (19.2±16.34 grams).

While the mean consumption of oil across Turkey is 21.7±16.04 grams, the lowest consumption is in Northeastern Anatolia region (12.4±13.19 grams), and the highest consumption is in Aegean region (25.1±17.40 grams).

While the mean consumption of sugar and sweets across Turkey is 30.6±31.61 grams, the lowest consumption is in Southeastern Anatolia region (27.9±29.39 grams), and the highest consumption is in Northeastern Anatolia region (44.1±34.35 g).

While the average consumption of non-alcoholic beverages across Turkey is 1721.8±922.93 mL, the lowest consumption is in Eastern Black Sea region (1357.3±770.25 mL), and the highest consumption is in Western Anatolia region (1931.5±909.84 mL).

While the average consumption of water and mineral water across Turkey is 1169.9±819.97 mL, the lowest consumption is in Eastern Black Sea region (850.8±713.24 mL), and the highest consumption is in Aegean region (1340.3±793.37 mL).

Appendix 8.5. Arithmetic mean (\bar{x}), standard deviation (SD) and 95%CI (Confidence interval) values of daily
food intakes (g/mL) of individuals aged 15 years and over by NUTS regions, TNHS 2017

FOOD ITEMS	x	SD	95% CI
ISTANBUL (N=1811)	~	00	5076 61
Milk and dairy products	191.6	144.66	182.5-200.6
Red meat and poultry	94.7	96.03	88.6-100.8
Eggs	35.2	35.46	32.9-32.4
Legumes	18.4	27.86	16.6-20.1
Seeds	10.4	20.81	10.5-13.1
Vegetables	256.2	161.77	246.8-265.6
Fruits	127.3	152.64	117.7-136.8
Vegetables and fruits	383.5		269.7-397.4
Bread and cereals	253.3	234.10 132.22	244.9-261.7
Fats and oils	51.9	34.22	49.8-53.9
Fats	12.4	16.42	11.3-13.5
Oils	23.6	16.29	22.5-24.6
Sugar and sweets	29.4	30.39	27.4-31.4
Non-alcoholic beverages	1628.1	852.90	1575.2-1681.0
Mineral water and water	1119.6	768.26	1068.8-1170.3
WESTERN MARMARA (N=673)			
Milk and dairy products	196.5	136.06	184.3-208.7
Red meat and poultry	93.7	100.82	84.2-103.3
Eggs	33.8	36.05	30.5-37.2
Legumes	22.9	36.58	19.6-26.3
Seeds	9.8	21.83	7.7-11.8
Vegetables	242.9	150.75	230.0-255.7
Fruits	145.1	169.38	129.8-160.4
Vegetables and fruits	388.0	250.33	365.6-410.4
Bread and cereals	270.6	139.26	258.0-283.3
Fats and oils	57.8	37.02	54.4-61.2
Fats	12.8	13.02	11.6-14.0
Oils	21.4	18.73	19.8-23.1
Sugar and sweets	30.0	30.99	27.4-32.6
Non-alcoholic beverages	1747.2	934.54	1661.4-1832.9
Mineral water and water	1191.2	757.16	1118.9-1263.6
AEGEAN (N=2204)			
Milk and dairy products	181.3	140.12	174.1-188.5
Red meat and poultry	86.9	93.96	81.8-92.0
Eggs	30.2	31.92	28.5-32.0
Legumes	15.8	23.89	14.6-17.1
Seeds	8.6	18.8	7.6-9.5
Vegetables	277.7	168.16	269.1-286.2
Fruits	167.6	189.70	158.0-177.2
Vegetables and fruits	455.4	268.94	431.9-458.8
Bread and cereals	262.8	137.43	255.6-270.1
Fats and oils	55.1	32.81	53.1-57.0
Fats	9.3	12.11	8.7-10.0
Oils	25.1	17.40	24-26.0
Sugar and sweets	30.3	32.04	28.4-32.1
Non-alcoholic beverages	1888.7	883.46	1841.9-1935.5
Mineral water and water	1340.3	793.37	1298.6-1382.1

Appendix 8.5. Arithmetic mean (x), standard deviation (SD) and 95%CI (Confidence interval) values of daily
food intakes (g/mL) of individuals aged 15 years and over by NUTS regions, TNHS 2017 (continued table)

FOOD ITEMS	, , , , , , , , , , , , , , , , , , ,	SD SD	95% CI
EASTERN MARMARA (N=1315)			
Milk and dairy products	179.9	131.77	170.8-189.0
Red meat and poultry	83.7	78.83	78.3-89.2
Eggs	36.5	38.06	33.9-39.0
Legumes	18.7	26.10	16.9-20.5
Seeds	10.0	19.39	8.8-11.2
Vegetables	213.7	145.61	203.6-223.7
Fruits	139.7	169.73	127.8-151.6
Vegetables and fruits	353.4	235.64	337.4-369.4
Bread and cereals	254.1	136.72	243.7-264.5
Fats and oils	53.6	29.00	51.7-55.4
Fats	13.8	15.75	12.6-14.9
Oils	23.8	16.56	22.6-24.9
Sugar and sweets	31.9	31.74	29.8-34.1
Non-alcoholic beverages	1797.9	824.67	1739.5-1856.3
Mineral water and water	1277.9	739.7	1226.2-1329.5
EASTERN ANATOLIA (N=1143)	1277.5	735.7	1220.2-1329.5
Milk and dairy products	179.3	149.25	168.2-190.4
Red meat and poultry	85.2	82.19	
			79.3-91.1
Eggs	32.1	29.40	29.9-34.2
Legumes	16.1	25.30	14.3-17.9
Seeds	9.7	19.5	8.4-11.0
Vegetables	255.9	161.03	244.6-267.3
Fruits	182.5	195.98	168.9-196.2
Vegetables and fruits	438.5	277.93	419.1-457.9
Bread and cereals	266.6	137.41	256.6-276.6
Fats and oils	48.5	24.93	46.8-50.2
Fats	12.9	14.18	11.9-13.9
Oils	19.5	14.32	18.5-20.5
Sugar and sweets	29.4	29.91	27.3-31.5
Non-alcoholic beverages	1931.5	909.84	1861.2-2001.8
Mineral water and water	1293.4	822.00	1229.6-1357.3
MEDITERRANEAN (N=1734)			
Milk and dairy products	196.7	45.16	187.9-205.5
Red meat and poultry	69.3	71.23	64.9-73.8
Eggs	30.9	37.67	28.3-33.4
Legumes	14.6	22.7	13.1-16.0
Seeds	10.0	22.37	8.6-11.5
Vegetables	276.5	166.32	265.5-287.4
Fruits	189.7	264.07	171.2-208.3
Vegetables and fruits	466.2	340.41	442.5-490.0
Bread and cereals	278.8	154.74	268.7-288.9
Fats and oils	51.7	29.96	49.9-53.4
Fats	9.0	10.89	8.4-9.6
Oils	20.7	13.53	19.9-21.6
Sugar and sweets	30.7	34.37	28.5-33.0
Non-alcoholic beverages	1829.3	980.98	1767.2-1891.4
Mineral water and water	1300.4	876.92	1244.9-1351.9

Appendix 8.5. Arithmetic mean (\bar{x}), standard deviation (SD) and 95%CI (Confidence interval) values of daily
food intakes (g/mL) of individuals aged 15 years and over by NUTS regions, TNHS 2017 (continued table)

FOOD ITEMS	x	SD	95% CI
CENTRAL ANATOLIA (N=667)			
Milk and dairy products	161.7	126.08	150.0-173.5
Red meat and poultry	86.3	85.37	77.5-95.1
Eggs	31.5	34.51	28.0-35.0
Legumes	17.7	28.72	15.2-20.1
Seeds	11.1	30.07	7.9-14.3
Vegetables	254.4	180.75	237.6-271.2
Fruits	205.8	230.25	182.7-229.0
Vegetables and fruits	460.2	309.70	429.9-490.6
Bread and cereals	288.1	166.50	272.3-304.0
Fats and oils	43.7	26.22	41.2-46.2
Fats	10.5	12.82	9.4-11.6
Oils	19.0	16.95	17.3-20.7
Sugar and sweets	30.4	31.56	27.5-33.2
Non-alcoholic beverages	1486.7	959.24	1395.9-1577.5
Mineral water and water	857.0	799.35	783.6-930.3
	657.0	799.55	785.0-950.5
WESTERN BLACK SEA (N=828)	465.0	450.00	140.4.404.0
Milk and dairy products	165.0	150.02	148.1-181.9
Red meat and poultry	84.1	100.60	76.2-92.1
Eggs	28.9	29.23	26.3-31.5
Legumes	19.3	27.22	16.7-21.8
Seeds	11.3	26.00	9.1-13.5
Vegetables	281.3	181.14	265.2-297.5
Fruits	166.8	180.47	148.9-184.8
Vegetables and fruits	448.2	268.80	422.3-474.2
Bread and cereals	264.4	138.31	152.2-276.6
Fats and oils	49.5	27.03	47.0-52.1
Fats	13.8	17.47	11.9-15.7
Oils	22.8	15.67	21.5-24.1
Sugar and sweets	29.9	29.94	27.3-32.5
Non-alcoholic beverages	1618.1	929.43	1534.1-1702.2
Mineral water and water	1055.6	773.7	981.1-1130.1
EASTERN BLACK SEA (N=389)			
Milk and dairy products	170.4	131.76	153.9-187.0
Red meat and poultry	96.0	92.79	84.2-107.8
Eggs	30.2	36.26	24.9-35.5
Legumes	15.6	21.32	12.8-18.4
Seeds	14.1	62.04	5.6-22.6
Vegetables	246.3	164.29	228.0-264.7
Fruits	172.1	185.41	146.7-197.6
Vegetables and fruits	418.5	262.02	386.6-450.4
Bread and cereals	248.3	137.39	228.5-268.1
Fats and oils	49.5	25.77	46.2-52.8
Fats	12.6	16.35	10.0-15.1
Oils	22.7	18.17	20.3-25.1
Sugar and sweets	31.6	29.55	28.3-34.9
Non-alcoholic beverages	1357.3	770.25	1251.9-1462.6
Mineral water and water	850.8	713.24	751.5-950.1

Appendix 8.5. Arithmetic mean (\bar{x}), standard deviation (SD) and 95%CI (Confidence interval) values of daily
food intakes (g/mL) of individuals aged 15 years and over by NUTS regions, TNHS 2017 (continued table)

FOOD ITEMS	x	SD	95% CI
NORTHEASTERN ANATOLIA (N=256)			
Milk and dairy products	182.9	182.25	126.0-230.8
Red meat and poultry	85.0	88.60	60.1-109.9
Eggs	32.8	42.74	19.7-45.9
Legumes	15.5	23.88	11.3-19.8
Seeds	8.1	18.8	5.1-11.0
Vegetables	214.4	148.85	190.3-238.5
Fruits	123.4	136.49	101.6-145.2
Vegetables and fruits	337.9	212.24	303.9-371.9
Bread and cereals	343.8	189.80	305.6-382.0
Fats and oils	45.2	26.46	41.5-48.8
Fats	19.2	16.34	16.8-21.7
Oils	12.4	13.19	9.7-15.0
Sugar and sweets	44.1	34.35	38.4-49.8
Non-alcoholic beverages	1882.9	1174.97	1583.4-2182.4
Mineral water and water	960.9	1099.91	623.7-1298.0
MIDDLE EASTERN ANATOLIA (N=542)			
Milk and dairy products	190.9	144.70	175.4-206.4
Red meat and poultry	84.4	73.40	75.7-93.0
Eggs	25.9	33.55	21.7-30.0
Legumes	14.5	21.23	12.1-16.9
Seeds	7.1	14.13	5.6-8.6
Vegetables	229.0	171.14	211.4-246.5
Fruits	160.4	160.57	143.4-177.4
Vegetables and fruits	389.4	254.00	363.8-415.0
Bread and cereals	308.6	153.46	291.9-325.3
Fats and oils	42.4	24.63	39.5-45.4
Fats	10.8	13.07	9.3-12.2
Oils	19.1	13.22	17.3-20.8
Sugar and sweets	35.8	34.89	31.6-40.1
Non-alcoholic beverages	1520.3	938.86	1403.6-1637.1
Mineral water and water	889.4	800.52	790.6-988.2
SOUTH EASTERN ANATOLIA (N=891)			
Milk and dairy products	227.2	173.61	211.6-242.9
Red meat and poultry	91.2	89.19	83.0-99.5
Eggs	25.6	31.36	22.8-28.4
Legumes	13.9	26.31	11.7-16.2
Seeds	6.7	16.87	5.1-8.3
Vegetables	255.5	177.50	238.8-272.2
Fruits	143.3	173.18	129.1-157.5
Vegetables and fruits	398.9	252.03	378.4-419.3
Bread and cereals	310.6	162.18	296.2-325.1
Fats and oils	41.0	26.17	38.6-43.4
Fats	8.3	11.87	7.1-9.4
Oils	18.5	14.96	17.0-20.0
Sugar and sweets	27.9	29.39	25.4-30.4
Non-alcoholic beverages	1594.0	954.00	1504.9-1683.1
Mineral water and water	1124.5	839.79	1042.4-1202.6

Appendix 8.6. Arithmetic mean (x), standard deviation (SD) and 95%CI (Confidence interval) values of daily
food intakes (g/mL) of all individuals aged 15 years and over, TNHS 2017 (N=12453)

	• •	•	-
ACROSS TURKEY	x	SD	95% CI
Milk and dairy products	188.2	146.91	184.5-191.9
Red meat and poultry	86.2	88.39	84.1-88.4
Eggs	31.6	34.56	30.7-32.4
Legumes	16.8	26.09	16.2-17.4
Seeds	9.9	23.30	9.3-10.4
Vegetables	256.2	166.54	252.3-260.0
Fruits	158.8	192.17	154.2-163.3
Vegetables and fruits	415.0	271.58	408.7-421.3
Bread and cereals	272.3	146.63	268.7-275.9
Fats and oils	50.2	30.32	49.5-50.9
Fats	11.4	14.31	11.0-11.7
Oils	21.7	16.04	21.4-22.1
Sugar and sweets	30.6	31.61	29.8-31.3
Non-alcoholic beverages	1721.8	922.93	1699.0-1744.6
Mineral water and water	1169.9	819.97	1148.8-1191.0

The distribution of overweight, obese and morbid obese individuals aged 15 years and over by NUTS regions and genders are given in Annex 8.7.

In Istanbul region, while 42.3% of males are overweight, 26.2% are obese, 1.5% are morbid obese, these proportions for females are 26.7%, 35.1% and 7.5%, respectively; and overall, 34.5% of individuals in Istanbul region are overweight, 30.7% are obese, 4.5% are morbid obese.

In Western Marmara region, while 40.4% of males are overweight, 26.5% are obese, 0.8% are morbid obese; 30.0% of females are overweight, 44.0% are obese; 6.3% are morbid obese; and overall, 36.1% of individuals are overweight, 33.7% are obese, and 3.1% are morbid obese.

In Aegean region, while 39.8% of males are overweight, 28.6% are obese, 1.1% are morbid obese; 30.5% of females are overweight, 37.8% are obese, 5.7% are morbid obese; and overall, 35.3% of individuals are overweight, 33.1% are obese, 3.3% are morbid obese.

In Eastern Marmara region, while 42.5% of males are overweight, 24.9% are obese, 1.2% are morbid obese; 30.0% of females are overweight, 40.1% are obese, 7.2% are morbid obese; and overall, 36.7% of individuals are overweight, 32.0% are obese, 4.0% are morbid obese.

In Western Anatolia region, while 43.2% of males are overweight, 25.8% are obese, 0.5% are morbid obese; 28.4% of females are overweight, 39.0% are obese, 5.5% are morbid obese; and overall, 35.6% of individuals are overweight, 32.6% are obese, 3.1% are morbid obese.

In Mediterranean region, while 38.1% of males are overweight, 25.4% are obese, 1.8% are morbid obese; 26.3% of females are overweight, 39.5% are obese, 6.5% are morbid obese; and overall, 32.5% of individuals are overweight, 32.1% are obese, 4.1% are morbid obese.

In Central Anatolian region, while 44.3% of males are Overweight, 25.5% are obese, 2.0% are morbid obese; 28.3% of females are overweight, 49.2% are obese, 10.0% are morbid obese; and overall, 36.5% of individuals are overweight, 36.9% are obese, 5.9% are morbid obese.

In Western Black Sea region, while 34.7% of males are overweight, 29.1% are obese, 1.8% are morbid obese; 28.2% of females are overweight, 47.1% are obese, 7.7% are morbid obese; and overall, 31.6% of individuals are overweight, 37.5% are obese, 4.6% are morbid obese.

In Eastern Black Sea region, while 42.9% of males are overweight, 22.7% are obese, 2.8% are morbid obese; 27.3% of females are overweight, 48.2% are obese, 3.7% are morbid obese; and overall, 35.2% of individuals are overweight, 35.4% are obese, 3.2% are morbid obese.

In Northeastern Anatolia region, while 36.9% of males are overweight, 16.2% are obese, 26.1% are morbid obese; 26.1% of females are overweight, 34.9% are obese, 3.6% are morbid obese; and overall, 32.0% of individuals are overweight, 24.7% are obese, 1.7% are morbid obese.

In Central Eastern Anatolia region, while 39.3% of males are overweight, 12.6% are obese; 22.1% of females are overweight, 38.3% are obese, 5.0% are morbid obese; and overall, 31.3% of individuals are overweight, 24.5% are obese, 2.3% are morbid obese.

In Southeastern Anatolia region, while 33.7% of males are overweight, 17.1% are obese, 1.4% are morbid obese; 24.6% of females are overweight, 32.9% are obese, 4.7% are morbid obese; and overall, 29.6% of individuals are overweight, 24.2% are obese, 2.9% are morbid obese.

Appendix 8.7	. Distribution of overweight and obese individ	uals aged 15 years and over by NUTS regions	

NUTS Regions		MALES								FEMALES			OVERALL								
	OVER- WEIG		-	BESE e-Morbid obese)		RBID BESE	N	-	VER- /EIGHT	-	BESE e-Morbid obese)		DRBID BESE	N	-	VER- EIGHT	-	BESE e-Morbid obese)	-	RBID BESE	N
	%	95% Cl	%	95% Cl	%	95% Cl		%	95% Cl	%	95% Cl	%	95% Cl		%	95% Cl	%	95% Cl	%	95% Cl	
Istanbul	42.3	37.9-46.8	26.2	22.6-30.1	1.5	0.7-3.0	600	26.7	23.1-30.8	35.1	30.5-40.0	7.5	4.1-13.3	645	34.5	31.5-37.6	30.7	27.7-33.8	4.5	2.6-7.5	1245
Western Marmara	40.4	34.8-46.3	26.5	21.7-31.8	0.8	0.3-2.2	281	30.0	24.6-35.9	44.0	38.0-50.2	6.3	4.0-9.9	271	36.1	32.1-40.3	33.7	29.9-37.8	3.1	2.0-4.7	552
Aegean	39.8	36.0-43.7	28.6	25.3-32.3	1.1	0.6-1.9	752	30.5	27.2-34.0	37.8	34.5-41.3	5.7	4.3-7.4	850	35.3	32.8-37.9	33.1	30.7-35.6	3.3	2.6-4.2	1602
Eastern Marmara	42.5	37.5-47.6	24.9	21.0-29.4	1.2	0.5-2.9	434	30.0	25.8-34.6	40.1	35.7-44.6	7.2	5.3-9.8	509	36.7	33.3-40.1	32.0	29.0-35.2	4.0	3.0-5.4	943
Western Anatolia	43.2	38.2-48.3	25.8	21.8-30.3	0.5	0.1-2.0	439	28.4	24.3-32.7	39.0	34.6-43.6	5.5	3.9-7.6	521	35.6	32.3-38.9	32.6	29.5-35.8	3.1	2.2-4.2	960
Mediterranean	38.1	33.9-42.5	25.4	21.8-29.3	1.8	1.0-3.1	556	26.3	22.9-30.1	39.5	35.6-43.6	6.5	5.0-8.5	715	32.5	29.7-35.4	32.1	29.4 -34.9	4.1	3.2-5.2	1271
Central Anatolia	44.3	37.4-51.3	25.5	19.8-32.2	2.0	0.5-8.0	228	28.3	22.6-34.7	49.2	42.6-55.9	10.0	6.9-14.4	291	36.5	32.0-41.3	36.9	32.4-41.8	5.9	3.9-8.7	519
Western Black Sea	34.7	28.9-40.9	29.1	23.6-35.2	1.8	0.8-4.3	296	28.2	22.8-34.4	47.1	41.1-53.1	7.7	5.4-11.0	338	31.6	27.6-35.9	37.5	33.3-42.0	4.6	3.3-6.5	634
Eastern Black Sea	42.9	33.7-52.5	22.7	16.1-31.0	2.8	1.2-6.0	127	27.3	20.9-34.8	48.2	40.3-56.3	3.7	1.9-7.0	179	35.2	29.4-41.4	35.4	29.8-41.4	3.2	1.9-3.5	306
Northeastern Anatolia	36.9	26.7-48.5	16.2	10.2-24.7	-	-	85	26.1	17.3-37.5	34.9	24.6-46.7	3.6	1.4-8.9	84	32.0	25.0-39.9	24.7	18.6-32.0	1.7	0.7-4.1	169
Central Eastern Anatolia	39.3	31.5-47.8	12.6	8.5-18.1	-	-	167	22.1	28.8-37.5	38.3	31.0-46.0	5.0	2.8-8.9	202	31.3	26.4-36.7	24.5	20.1-29.5	2.3	1.3-4.2	369
Southeastern Anatolia	33.7	27.9-39.9	17.1	12.5-22.9	1.4	0.5-3.7	257	24.6	19.9-30.0	32.9	27.4-38.8	4.7	2.8-7.8	305	29.6	25.7-33.7	24.2	20.5-28.3	2.9	1.8-4.6	562

NUTS Regions	MALES										FEMALES				OVERALL							
	OVE WEIG		(Obes	BESE e-Morbid bese)	-	ORBID BESE	N	-	VER- EIGHT	(Obes	BESE e-Morbid bese)		DRBID BESE	N	OVI WEI		(Obese	ESE -Morbid bese)	MOR OBI		N	
	%	95% Cl	%	95% Cl	%	95% Cl		%	95% Cl	%	95% Cl	%	95% Cl		%	95% Cl	%	95% Cl	%	95% Cl		
Istanbul	44.3	39.8-48.9	27.7	23.9-31.8	1.5	0.7-3.1	751	27.0	23.3-31.1	37.1	32.2-42.2	7.6	4.0-13.9	868	35.6	32.6-38.8	32.4	29.3-35.7	4.5	2.6-7.8	1619	
Western Marmara	41.9	36.2-47.6	27.4	22.5-32.9	0.6	0.2-2.2	380	30.7	25.2-36.8	45.6	39.4-51.9	6.6	4.2-10.2	338	37.2	33.1-43.5	35.0	31.1-39.2	3.1	2.0-4.8	718	
Aegean	42.1	38.2-46.2	29.9	26.3-33.7	1.0	0.5-1.8	943	31.3	27.9-34.8	40.1	36.7-43.7	6.1	4.7-7.9	1083	36.8	34.2-39.5	34.9	32.4-37.5	3.5	2.7-4.9	2026	
Eastern Marmara	44.4	39.3-49.6	26.1	21.9-30.6	1.3	0.5-3.1	586	31.1	26.9-35.7	42.7	38.2-47.3	8.0	5.9-10.8	627	38.4	35.0-42.0	33.6	30.4-36.9	4.3	3.2-5.8	1213	
Western Anatolia	45.9	40.8-51.1	27.7	23.4-32.4	0.6	0.2-2.1	543	29.8	25.6-34.3	42.7	38.1-47.5	6.0	4.3-8.4	662	37.7	34.3-41.1	35.4	32.2-38.7	3.4	2.4-4.6	1205	
Mediterranean	40.1	35.7-44.7	27.2	23.4-31.4	2.0	1.1-3.5	711	26.1	22.6-30.0	43.0	38.8-47.3	7.0	5.4-9.2	887	33.4	30.5-36.4	34.8	31.9-37.8	4.4	3.4-5.6	1598	
Central Anatolia	48.0	41.0-55.1	25.0	19.4-31.6	0.7	0.1-3.1	270	28.8	22.9-35.4	53.3	46.5-60.0	11.0	7.6-15.8	330	38.5	33.8-43.4	39.0	34.3-43.9	5.8	4.0-8.3	600	
Western Black Sea	35.8	29.7-42.3	31.1	25.3-37.6	2.0	0.8-4.6	382	28.5	22.9-34.9	50.7	44.4-56.9	8.3	5.8-11.8	404	32.3	28.2-36.8	40.3	35.8-45.0	5.0	3.5-6.9	786	
Eastern Black Sea	42.2	32.9-51.9	24.0	17.1-32.7	2.9	1.3-6.4	169	26.1	19.7-33.6	51.4	43.3-59.5	3.9	2.0-7.5	218	34.2	28.5-40.5	37.5	31.7-43.7	3.4	2.0-5.6	387	
Northeastern Anatolia	42.2	31.0-54.4	18.5	11.7-27.9	-	-	117	29.0	19.3-41.1	38.7	27.5-51.2	4.0	1.6-9.8	109	36.1	28.4-44.5	27.9	21.2-35.8	1.9	0.7-4.6	226	
Central Eastern Anatolia	41.5	33.3-50.4	12.5	8.5-18.1	-	-	231	26.0	19.6-33.6	46.4	38.3-54.7	6.1	3.4-10.7	240	34.7	29.3-40.6	27.3	22.4-32.7	2.7	1.5-4.8	471	
Southeastern Anatolia	36.5	30.2-43.2	19.3	14.1-25.7	1.2	0.4-3.7	367	26.9	21.7-32.8	36.4	30.4-42.8	4.6	2.8-7.4	401	32.2	28.0-36.7	27.0	22.9-31.4	2.7	1.7-4.3	768	

Appendix 8.7. Distribution of overweight and obese i	ndividuals aged 15 years and over by NUTS regions (continued table)

APPENDIX 9. Tables contained certain medical conditions and laboratory test results by NUTS regions

Although the NUTS tables in this chapter cannot give regional estimations, they provide regional representation. Therefore, careful interpretation of regional results in the tables is recommended.

Appendix 9.1. Distribution of physically inactive individuals aged 15 and over by NUTs Regions (distribution of physical activity levels according to Physical Activity Questionnaire (GPAQ) recommendations), TNHS 2017

		М	ALES			FE	MALES		OVERALL					
		LOW A	CTIVITY			LOW	ACTIVITY	,		LOW	ΑCTIVITY			
NUTS Regions	N	%	Sx	95% Cl	N	%	Sx	95% Cl	N	%	Sx	95% Cl		
Istanbul	285	32.2	2.1	28.3-36.5	523	47.4	2.2	43.1-51.8	808	40.2	1.5	37.2-43.2		
Western Marmara	101	25.9	2.6	21.1-31.3	189	47.5	3.1	41.5-53.5	290	35.4	2.0	31.5-39.4		
Aegean	353	33.8	1.9	30.2-37.5	674	54.4	1.8	50.9-57.9	1027	44.2	1.3	41.6-46.9		
Eastern Marmara	212	34.2	2.5	29.4-39.2	408	57.2	2.2	52.8-61.5	620	45.3	1.7	42.0-48.7		
Western Anatolia	214	36.4	2.5	31.7-41.4	456	59.7	2.3	55.1-64.2	670	48.9	1.7	45.5-52.3		
Mediterranean	282	33.7	2.1	29.6-38.0	611	57.0	2.1	52.8-61.1	893	45.3	1.5	42.3-48.3		
Central Anatolia	93	29.8	3.2	24.0-36.3	226	54.9	3.3	48.5-61.2	319	42.3	2.3	37.8-47.0		
Western Black Sea	131	28.7	2.8	23.5-34.5	230	49.5	3.0	43.7-55.3	361	38.8	2.2	34.7-43.2		
Eastern Black Sea	54	31.7	4.7	23.2-41.5	101	34.4	3.6	27.7-41.7	155	33.0	2.9	27.5-39.0		
Northeastern Anatolia	24	19.1	5.0	11.1-30.8	60	36.2	5.3	26.6-47.0	84	27.6	3.7	21.0-35.3		
Central Eastern Anatolia	85	29.7	3.9	22.7-37.8	190	62.1	3.6	54.9-68.7	275	45.9	2.9	40.3-51.6		
Southeastern Anatolia	136	28.2	3.0	22.8-34.3	315	56.3	2.9	50.4-61.9	451	41.8	2.2	37.7-46.1		

Considering NUTS regions, the prevalence of low level of physical activity among physically inactive individuals aged 15 years and over was found in the Western Anatolia Region for males with 36.4% and in the Central Eastern Anatolia Region for females with 62.1%. Overall, Western Anatolia Region was observed to be the region with the lowest physical activity with 48.9%.

Appendix 9.2. Distribution of prevalence of diabetes mellitus among individuals aged 15 years and over by
NUTS Regions, TNHS 2017

		N	IALES			FE	MALES		OVERALL				
NUTS Regions	N	%	Sx	95% Cl	N	%	Sx	95% Cl	N	%	Sx	95% Cl	
İstanbul	122	12.2	1.3	9.9-15.0	140	11.1	1.2	8.9-13.6	262	11.6	0.9	10.0-13.5	
Western Marmara	54	11.5	1.8	8.4-15.6	71	14.4	1.9	11.1-18.6	125	12.8	1.3	10.4-15.6	
Aegean	186	13.6	1.1	11.5-16.0	211	12.9	1.0	11.1-15.0	397	13.2	0.8	11.8-14.8	
Eastern Marmara	90	11.2	1.3	8.9-14.1	119	13.7	1.4	11.2-16.8	209	12.4	1.0	10.7-14.5	
Western Anatolia	71	9.9	1.5	7.2-13.3	97	10.3	1.2	8.1-12.9	168	10.1	1.0	8.3-12.1	
Mediterranean	120	12.0	1.3	9.7-14.7	177	13.2	1.2	11.1-15.6	297	12.6	0.9	11.0-14.4	
Central Anatolia	50	11.4	2.0	8.0-16	62	14.9	2.4	10.8-20.3	112	13.1	1.6	10.3-16.6	
Western Black Sea	70	14.5	2.0	11.0-18.8	82	14.3	1.8	11.1-18.3	152	14.4	1.4	11.9-17.3	
Eastern Black Sea	27	13.2	3.5	7.7-21.8	44	12.4	2.1	8.8-17.2	71	12.8	2.1	9.3-17.4	
Northeastern Anatolia	19	12.3	3.1	7.4-19.7	18	12.5	3.7	6.9-21.7	37	12.4	2.4	8.4-17.9	
Central Eastern Anatolia	26	7.7	1.7	4.9-11.9	48	14.9	2.4	10.7-20.3	74	11.3	1.5	8.6-14.6	
Southeastern Anatolia	55	11.8	2.2	8.1-16.9	68	11.3	1.7	8.4-15.0	123	11.5	1.4	9.1-14.6	

According to the distribution of diabetes mellitus in individuals aged 15 years and over (those who reported having DM, or those whose HbA1c level is 6.5 and above, or those whose fasting blood glucose level is 126 and above) by NUTS Regions, the highest prevalence was observed in Western Black Sea Region for males with 14.5%, whereas this rate was 14.9% for females in Central Eastern Anatolia and Central Anatolia regions. Overall, the highest prevalence of DM was in Western Black Sea region with 14.4%.

Appendix 9.3. Distribution of certain laboratory test results in individuals aged 15 years and over by NUTS Regions, TNHS 2017

		(M: <13 –	oglobin F: <12 g/ emia)	dL)		(<6	ic acid ng/mL) lequate)		Vitamin D (<30 ng/mL) (inadequate/low/very low)				
NUTS Regions	N	%	Sx	95% Cl	N	%	Sx	95% Cl	N	%	Sx	95% Cl	
Istanbul	245	17.4	1.8	14.2-21.1	410	46.1	2.3	41.7-50.6	1232	92.2	1.0	89.9-93.9	
Western Marmara	111	12.7	1.4	10.2-15.6	214	31.3	2.1	27.4-35.6	626	88.6	1.4	85.5-91.1	
Aegean	293	14.7	1.0	12.9-16.9	794	44.5	1.4	41.7-47.3	1790	89.1	0.9	87.3-90.8	
Eastern Marmara	195	14.5	1.2	12.3-17.0	508	44.7	1.8	41.2-48.2	1072	89.5	1.0	87.3-91.2	
Western Anatolia	118	8.6	0.9	7.0-10.6	409	36.6	1.8	33.2-40.1	982	88.4	1.1	86.0-90.5	
Mediterranean	229	12.9	1.0	11.1-15.0	547	39.6	1.7	36.4-42.9	1300	83.0	1.2	80.5-85.2	
Central Anatolia	75	10.1	1.3	7.8-13.0	195	37.1	2.5	32.3-42.1	525	86.1	1.6	82.6-89.0	
Western Black Sea	161	21.6	1.8	18.2-25.4	240	36.0	2.4	31.4-40.9	667	88.2	1.5	85.0-90.8	
Eastern Black Sea	38	8.6	1.6	5.9-12.4	128	37.2	3.4	30.9-44.0	337	90.2	2.0	85.4-93.5	
Northeastern Anatolia	19	7.0	1.9	4.0-11.7	66	28.1	3.7	21.4-36.0	190	91.2	2.2	85.9-94.7	
Central Eastern Anatolia	45	8.5	1.5	6.0-12.0	145	32.6	2.9	27.2-38.6	457	95.3	1.2	92.2-97.2	
Southeastern Anatolia	71	11.2	1.9	8.0-15.5	258	49.7	2.8	44.2-55.3	568	89.1	1.7	85.3-92.0	

		(<22	B 12 3 pg/mL dequate			-	TSH .3 mIU/L (high)	.)	Total Cholesterol (≥200 mg/dL) (high)					
NUTS Regions	N % Sx 95% CI				N	%	Sx	95% Cl	N	%	Sx	95% Cl		
Istanbul	899	65.5	1.8	61.9-68.9	109	7.3	0.9	5.7-9.2	541	38.5	1.9	35.0-42.2		
Western Marmara	194	25.9	1.9	22.3-29.8	58	7.0	1.1	5.1-9.5	272	40.7	2.3	36.3-45.3		
Aegean	518	25.9	1.2	23.6-28.3	166	7.5	0.7	6.2-8.9	807	38.4	1.4	35.7-41.1		
Eastern Marmara	415	34.1	1.7	30.9-37.5	110	8.4	0.9	6.7-10.4	438	34.8	1.7	31.5-38.3		
Western Anatolia	308	28.6	1.7	25.4-32.1	77	5.9	0.8	4.5-7.6	306	26.8	1.7	23.6-30.3		
Mediterranean	541	34.8	1.6	31.8-38.0	96	5.3	0.7	4.2-6.8	471	30.3	1.6	27.3-33.5		
Central Anatolia	169	28.3	2.4	23.9-33.2	60	9.5	1.5	6.9-12.8	199	33.4	2.5	28.7-38.5		
Western Black Sea	225	30.8	2.2	26.7-35.3	52	6.9	1.1	5.0-9.5	254	34.6	2.4	30.0-39.4		
Eastern Black Sea	85	22.1	2.6	17.4-27.6	24	6.0	1.6	3.6-10.0	130	38.7	3.5	32.1-45.7		
Northeastern Anatolia	74	30.3	3.8	23.4-38.3	39	15.8	3.0	10.8-22.5	54	30.7	4.7	22.4-40.5		
Central Eastern Anatolia	131	27.8	2.6	22.9-33.2	88	15.0	1.8	11.8-18.9	130	27.3	2.7	22.4-32.8		
Southeastern Anatolia	275	35.7	2.3	31.3-40.3	37	3.8	0.8	2.5-5.7	112	18.1	1.9	14.6-22.2		

Appendix 9.3. Distribution of some laboratory test results in individuals aged 15 years and over by NUTS Regions, TNHS 2017 (continued table)

In the evaluation of distribution of certain laboratory test results among individuals aged 15 years and over by NUTS regions, it was observed that the prevalence of hemoglobin level <13 for males– <12 for females (anemia) was highest in Western Black Sea Region with 21.6%; the prevalence of folic acid level <6 ng/mL (inadequate) was highest in Southeastern Anatolia Region with 49.7%; the prevalence of vitamin D (<30) (deficiency) was highest in Central Eastern Anatolia Region with 95.3%; the prevalence of vitamin B₁₂ level (<223 pg/mL) (deficiency) was highest in Istanbul with 65.5%; the prevalence of TSH (\geq 4.3 mIU/L) (high) was highest in Northeastern Anatolia Region with a rate of 40.7%.

PATTERN EFFECT

VADIAD		%	Standard Error	95%	% CI	Pattern	Unweighted
VARIAB	JLES	70	%	Lower Limit	Upper Limit	Effect (DEFT)	Number
BMI GROUP	Underweight	1.7	0.2	1.4	2.0	1.860	163
	Normal	32.8	0.6	31.6	34.0	2.067	3282
	Overweight	34.0	0.6	32.9	35.1	1.714	4273
	Obese	27.8	0.5	26.8	28.8	1.589	3874
	Morbid obese	3.7	0.3	3.2	4.3	2.541	545
Waist circumference	For males:<94 For females: <80	38.7	0.6	37.5	40.0	1.983	3752
group	For males:94-102 For females: 80-88	21.3	0.5	20.4	22.3	1.651	2656
	For males:>102 For females: >88	39.9	0.6	38.8	41.1	1.725	5625

Pattern Effects Calculated for Certain Anthropometric Variables in the Survey

Pattern Effects Calculated for Certain Variables in the Survey

MADIADI	F.C.	0/	Standard Error	959	% CI	Pattern	Unweighted
VARIABL	5	%	%	Lower Limit	Upper Limit	Effect (DEFT)	Number
Physical activity	Low	42.4	0.6	41.3	43.6	1.767	5953
(GPAQ)	Moderate	33.1	0.6	32.0	34.2	1.870	4188
	High	24.4	0.5	23.4	25.5	2.022	2846
Diabetes Mellitus	No	87.8	0.3	87.1	88.4	1.393	10993
	Those who reported having DM or FBA ≥126 or HBA1C ≥6.5	12.2	0.3	11.6	12.9	1.393	2027
Cardiovascular	No	83.8	0.4	83.0	84.6	1.620	10220
Diseases	Yes	16.2	0.4	15.4	17.0	1.620	2767
Cancer	No	99.0	0.1	99.0	99.4	1.033	12839
	Yes	0.8	0.1	0.6	1.0	1.033	148
Oral and Dental	Yes	70.7	0.6	69.6	71.8	1.943	9673
Health Conditions	No	29.3	0.6	28.2	30.4	1.943	3314
Disability	No	96.5	0.2	96.1	96.9	1.678	12491
	Yes	3.5	0.2	3.1	3.9	1.678	497
Tobacco use	No, I've never smoked	49.7	0.6	48.6	50.9	1.827	6455
	No, I quit smoking	17.1	0.4	16.2	18.0	1.840	2458
	Yes	33.2	0.6	32.1	34.3	1.858	4073

Pattern Effects Calculated for Certain Laboratory Variables in the Survey

		0/	Standard Error	959	% CI	Pattern Effect	Unweighted
VARIAB	LES	%	%	Lower Limit	Upper Limit	(DEFT)	Number
Total cholesterol	≤129	7.9	0.4	7.2	8.7	2.043	568
	130-199	58.7	0.7	57.4	60.0	1.734	5300
	≥200	33.4	0.6	32.2	34.6	1.605	3714
Triglyceride	<150	71.5	0.6	70.3	72.7	1.703	6702
	150-199	13.7	0.4	12.8	14.6	1.644	1451
	200-499	14.0	0.5	13.2	15.0	1.671	1462
	≥500	0.7	0.1	0.6	1.0	1.497	76
Hemoglobin	For males <13 For females <12	13.4	0.5	12.5	14.3	1.992	1600
	For males ≥13 For females ≥12	86.6	0.5	85.7	87.5	1.992	9551
	Total	100.0	0.0	100.0	100.0		11151
Vitamin B ₁₂ group	≤73	0.5	0.1	0.3	0.7	2.300	45
	74-148	9.8	0.4	9.0	10.7	2.480	983
	149-222	25.6	0.5	24.5	26.7	1.798	2806
	≥223	64.1	0.6	62.9	65.3	1.897	7721
TSH group	≤0.26	1.3	0.1	1.1	1.5	1.293	196
	0.27-4.29	91.5	0.3	90.9	92.1	1.467	10435
	≥4.3	7.2	0.3	6.7	7.8	1.485	916
Vitamin D	<10	18.2	0.5	17.3	19.2	1.722	2044
	10-19	44.7	0.6	43.5	46.0	1.804	4857
	20-29	25.9	0.5	24.8	27.0	1.730	2845
	30-79	10.9	0.4	10.1	11.6	1.633	1284
	≥80	0.3	0.1	0.2	0.4	1.231	37

Pattern Effects Calculated for Energy and Certain Foods in the Survey							
VARIABLES		%	Standard Error %	95% CI		Pattern Effect	Unweighted
				Lower Limit	Upper Limit	(DEFT)	Number
Energy kcal, average	1915.33	9.24	1897.20	1933.44	1.957	12453	568
Dietary fiber (g), average	22.24	0.12	22.00	22.47	1.818	12453	5300
Milk	34.45	1.01	32.46	36.43	2.200	12453	3714
Yoghurt	112.72	1.43	109.89	115.54	1.970	12453	6702
Cheese	38.98	0.40	38.17	39.77	1.865	12453	1451
Kefir	0.59	0.13	0.33	0.86	2.096	12453	1462
Dairy products (milk, yoghurt, cheese, kefir)	188.24	1.88	184.53	191.94	2.060	12453	76
Red meat	39.09	0.67	37.77	40.41	2.148	12453	1600
Poultry	28.24	0.72	26.81	29.67	2.144	12453	9551
Fish	13.17	0.57	12.03	14.29	1.596	12453	11151
Eggs	31.62	0.44	30.74	32.49	2.071	12453	45
Legumes	16.84	0.31	16.22	17.45	1.813	12453	983
Meat products	3.31	0.13	3.038	3.58	1.918	12453	2806
Bread	179.83	1.59	176.70	182.95	1.862	12453	7721
Fresh fruits	158.83	2.32	154.27	163.39	1.826	12453	196
Fresh vegetables	256.20	1.96	252.34	260.05	1.737	12453	10435
Sugar	19.90	0.29	19.32	20.47	1.857	12453	916
Total sugar	30.64	0.38	29.89	31.39	1.834	12453	2044
Table salt	10.18	0.05	10.08	10.28	1.877	12453	4857
Fresh vegetables and fruits	415.03	3.19	408.76	421.30	1.729	12453	2845
Meat group	86.29	1.09	84.14	88.44	1.918	12453	1284



1-Istanbul (İstanbul)

- 2-Western Marmara (Tekirdağ-Edirne-Kırklareli-Balıkesir-Çanakkale)
- 3-Aegean (İzmir-Aydın-Denizli-Muğla-Manisa-Afyonkarahisar-Kütahya-Uşak)
- 4-Eastern Marmara (Bursa-Eskişehir-Bilecik-Kocaeli-Sakarya-Düzce-Bolu-Yalova)
- 5-Western Anatolia (Ankara-Konya-Karaman)
- 6-Mediterranean (Antalya-Isparta-Burdur-Adana-Mersin-Hatay-Kahramanmaraş-Osmaniye)
- 7-Central Anatolia (Kırıkkale-Aksaray-Niğde-Nevşehir-Kırşehir-Kayseri-Sivas-Yozgat)
- 8-Western Black Sea (Zonguldak-Karabük-Bartın-Kastamonu-Çankırı-Sinop-Samsun-Tokat-Çorum-Amasya)
- 9-Eastern Black Sea (Trabzon-Ordu-Giresun-Rize-Artvin-Gümüşhane)
- 10-Northeastern Anatolia (Erzurum-Erzincan-Bayburt-Ağrı-Kars-Iğdır-Ardahan)
- 11- Central Eastern Anatolia (Malatya-Elazığ-Bingöl-Tunceli-Van-Muş-Bitlis-Hakkari)
- 12-Southeastern Anatolia (Gaziantep-Adıyaman-Kilis-Şanlıurfa-Diyarbakır-Mardin-Batman-Şırnak-Siirt

R.T. Ministry of Health

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