



**TURKEY CHILDHOOD  
(PRIMARY SCHOOL 2<sup>ND</sup> GRADE STUDENTS)  
OBESITY SURVEILLANCE INITIATIVE  
COSI-TUR 2016**

**ANKARA 2019**



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Turkey Childhood (Primary School 2nd Grade Students) Obesity Surveillance Initiative COSI-TUR 2016 has been conducted by the Republic of Turkey, Ministry of Health in partnership with the Ministry of National Education. The survey has been undertaken in accordance with the WHO European COSI protocol prepared by the World Health Organization Regional Office for Europe in partnership with its member countries. Financial support for the project has been provided by Republic of Turkey, Ministry of Health.

1st Print Edition : March 2019 /50 Copies  
ISBN : 978-975-590-713-0  
Ministry of Health Publication No : 1125  
Press : Artı6 Medya Reklam anıtım Matbaa Ltd. Şti.  
Özveren Sokak No:13/A Kızılay / ANKARA • Tel: 0312 229 37 41 - 42

**Interpreter:** Mustafa AY  
**Cover Photograph:** Kadir EKİNCİ  
**[www.beslenmehareket.hsgm.gov.tr](http://www.beslenmehareket.hsgm.gov.tr)**

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## PREFACE

The fact that there were only 15 member countries have national data sets and 19 member countries have overweight and obesity surveillance policies for children aged 6-10 at the “WHO European Ministerial Conference on Counteracting Obesity” which took place in Istanbul between 15-17 November 2006 was the reason for the decision to create a standardized childhood surveillance – observation initiative within the WHO European Region.

The WHO European Childhood Obesity Surveillance Initiative – COSI was conducted for the first time in the school year of 2007-2008 in 13 countries from the WHO European Region (Belgium, Bulgaria, Cyprus, Czech Republic, Ireland, Italy, Lithuania, Malta, Latvia, Norway, Portugal, Slovenia and Sweden). The second round of the survey was conducted in 17 countries (new members; Greece, Hungary, Spain and Macedonia) in the school year of 2009-2010 and the third round was conducted in 21 countries (new members; Albania, Moldova, Romania and Turkey) in the 2012-2013 school year. This international effort aims to monitor and compare the growth and development of school-aged children in the European region, to develop a permanent surveillance system and to use the results in health policies for children.

The 2013 survey, which included Turkey in the third round, was carried out through the cooperation of the Ministry of Health, Ministry of National Education and Hacettepe University within the framework of the criteria and protocols set by WHO. According to COSI TUR 2013 results; the incidence of obesity in primary school second grade children was 8.3% and overweight was 14.2%. The results of this study have played a decisive role in the implementation of the Healthy Nutrition and Active Life Program.

The 4th Round of the survey was conducted within the school year of 2016-2017 in which a total of 38 countries from the WHO European Region took part in the COSI Survey. The COSI TUR 2016 survey results, which still constitute one of the studies carried out by WHO with the most comprehensive participation, will make important contributions towards the evidence based procedures of the healthy lifestyle programs as well as their development and our multi-sectoral work.

I kindly thank everyone who contributed to this study.

**Fatih KARA, MD. Assoc. Prof.**  
**General Directorate of Public Health**



## **ACKNOWLEDGEMENTS**

We would like to thank the World Health Organization Regional Office for Europe and the COSI working team for their intensive collaboration as a part of the COSI Survey, the Turkish Statistical Institute and Nilay EROL for their intensive efforts towards the preparation of the study samples,

Academic Staff of Hacettepe University Hilal ÖZCEBE MD. Prof., Tülay Bağcı BOSI Diet. Phd. for their voluntary consultancy services and their support in the training of the field teams as well as the review of the surveys, Dear Mahmut Saadi YARDIM MD. Assoc. Prof. for enabling the cleanliness of the data, its analysis as well as preparation of the relevant tables,

The Ministry of National Education for their intensive cooperation, the Sarar and Kurtuluş Primary Schools for their cooperation and support during the pilot work and field survey training conducted in Ankara,

And to the provincial field coordinators, all our colleagues who worked during the field data collection phase, all school administrators, teachers, families and children who took part in our survey.

**Republic of Turkey Ministry of Health  
General Directorate of Public Health**





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# ABBREVIATIONS

BAZ	: BMI-for-age Z-score
BMI	: Body Mass Index
CDC	: Center for Disease Control (US Centers for Disease Control and Prevention)
COSI	: Childhood Obesity Surveillance Initiative
WHO	: World Health Organization
CI	: Confidence Interval
HAZ	: Height-for-age z-score
NUTS	: Nomenclature of Territorial Units for Statistics
MoNE	: Ministry of National Education
NUTS	: Turkey Regional Classification (The Nomenclature of Territorial Units for Statistics)
OR	: Odds Ratio (Estimated Relative Risk)
MoH	: Ministry of Health
SE	: Standard Error
SD	: Standard Deviation
TOÇBİ	: Surveillance on Growth Monitoring in School Aged Children in Turkey
TSİ	: Turkish Statistics Institution
WAZ	: Weight-for-age Z-score

## 1. INTRODUCTION

Obesity in the childhood age groups is becoming an increasingly important public health problem. The number of overweight and obese children in the 0-4 age group in the world increased from 32 million in 1990 to 41 million in 2016. The majority of overweight and obese children live in the developing countries. If the current rate of increase in the incidence of obesity continues, the number of overweight and obese children all over the world is estimated to reach 70 million by 2025. The likelihood of overweight babies and children becoming obese during adolescence and adulthood will also increase. It is known that childhood obesity is related to many serious health problems, especially diabetes and heart diseases (WHO, 2017).

Obesity is also considered a major health problem in the European Region. It is reported that about 7% of the national health budgets of countries in the European Region are spent on diseases related to obesity. Intervention programs are being developed to prevent obesity, which has been identified as an important problem since childhood. Comprehensive measures are included in the "Action Plan for Childhood Obesity 2014-2020" prepared by the European Union and it is aimed to strengthen cooperation between countries.

### **The Action Plan contains 8 main topics:**

- Support a healthy beginning to life;
- Develop healthy environments especially in schools and prior to school;
- Make the healthy option the easy option;
- Restrict marketing and advertising aimed at children;
- Inform and authorize the families;
- Encourage physical activity;
- Observe and assess;
- Increase survey (EU Action Plan for Childhood Obesity 2014-2020)

Nutrition is defined as consumption of nutrients for the maintenance of life, protection and development of health. The leading one of the basic behaviors that affect health is "adequate and balanced nutrition". Healthy nutrition directly contributes to improving the health potential of the individual, the family and the community, and raising the level of well-being (WHO, 2012).

Growth is a very good indicator that reflects the general health status of children. Inadequate and false nutrition affects a child's growth and is among the first and most important indications proving that his/her general health condition is deteriorating. Assessment of individual nutritional status of children can be achieved by monitoring their growth. During the baby follow-ups made by family physicians in our country, the growth of children is also observed. A joint monitoring program is being carried out by the family physician and the school under the scope of school health starting from the school period. However, the results of survey conducted with the representative sample of the population to assess the growth status of children at country level are generally used to assess the situation (MoH, 2013a).

In Turkey, the Surveillance on Growth Monitoring in School Aged Children in Turkey (TOÇBİ) Project enabled the monitoring of indicators related to nutrition in 2009. In the TOÇBİ survey, among the target group of children aged 6-9, 14.3% was found to be overweight and 6.5% to be obese. The results of the TOÇBİ (2009) survey show that one in five children in Turkey is at risk of overweight-related illnesses (MoH, 2011).

COSI TUR 2013 Survey was conducted over 5100 students in 2nd grades in 216 schools (163 urban, 53 rural) in 67 provinces that represent Turkey. In the study, 14.2% was found to be overweight and 8.3% to be obese. Obese (including overweight): 22.5% (Urban: 24.2%, Rural: 14.2%) (COSI TUR 2013).

There are strategies, goals and actions with the aim of increasing the healthy nutrition behaviors and physical activities of the children and youth as well as the adults within the scope of "Turkey Healthy Nutrition and Active Life Program (2010-2014)" which was prepared by the Ministry of Health. The 2014-2017 program is being implemented through updates (MoH, 2013b).

The 2006 Istanbul Charter, which was signed while our country was the host, stated that studies should be done to prevent obesity in children. As a result, COSI has been established and the first study was carried out in the year 2009-2010 in member countries in Europe. Nearly 40% of school-aged children were overweight and 15% of children were obese in the World Health Organization European Region in 2010. Overweight and obesity in childhood causes problems such as cardiovascular diseases, diabetes, movement system problems, mental problems, school failures and low self-esteem (WHO, 2013).

The World Health Organization repeats its Childhood Obesity Surveillance survey every three years in Member States in the European Region to monitor obesity in school-aged children. In order for a country to participate in the COSI Survey, an official competent organization-institution and Principal Investigator should be assigned for providing national coordination and management and then a cooperation agreement should be made between this organization and WHO Regional Office for Europe. COSI Network meetings were held in June 2007 (Paris, France), December 2007 (Madeira, Portugal), June 2009 (Copenhagen, Denmark), February 2010 (Rome, Italy) 2011 (Lisbon, Portugal), November 2012 (Oslo, Norway) and February 2014 (Athens, Greece), May 2015 Dubrovnik (Croatia), June 2016 in St. Petersburg (Russian Federation). This year is COSI's 10th Year Anniversary and the 10th Year Meeting was held in Malta under the Term Presidency of the EU.

The World Health Organization European Region Childhood Obesity Surveillance survey protocol was implemented in order to be able to compare the frequency of childhood obesity in Turkey with that of the WHO European Region, as well as provide data support for the assessment of the Healthy Nutrition and Active Life Program of Turkey being undertaken in Turkey.

## **1.1. OBJECTIVES**

In Turkey, it is aimed to;

- Define the nutritional behaviors and physical activity levels according to the statements of 2nd grade students (6-9 age group) and their families,
  - Carry out the anthropometric measurements (height and body weight) of children and identify the growth indicators (underweight, normal weight, overweight and obesity, stunting)
- Collect information about the schools' practices related to nutrition and physical activity.

Based on the results obtained, it is aimed to;

- assess the success of the programs for children's "healthy nutrition and growth"
- identify new strategies and enable the planning of interventions for children to acquire healthy lifestyle behaviors,
- monitor the growth of children by repeating the same study at country level every three years,
- make an international comparison of the results of this study using the survey methods and questionnaires determined by WHO.

## 2. BACKGROUND

This section will focus on three basic concepts related to survey. The first of these concepts is "healthy nutrition and its importance", the second is "obesity, its causes and problems it causes" and the third one is "anthropometric measures and methods of assessment".

### 2.1. Healthy Nutrition and Its Importance

The healthy lifestyle and economic development of the individual and the community depend on the health of the individuals who constitute the community. Health is based on an adequate and balanced nutrition. Adequate and balanced nutrition is also defined as healthy nutrition and optimal nutrition. Healthy nutrition is essential in all life stages from embryo to infancy, childhood, adolescence, adulthood and finally elderliness for surviving, growth and development, productivity, health and well-being.

It is known that growth and development are affected and health is impaired when any of the nutrients found in the nutrient structure are not taken or taken more or less than required. Choice of nutrition (food, nutrients) by the individuals is closely related to traditions, economic, cultural and environmental factors as well as age, gender, genetics and lifestyle.

In human life "Nutrition" is not just the consumption of food but also includes practices that are based on enjoyment while eating, socialization, practices made according to the traditions and customs. For healthy nutrition, all nutrients from various foods must be taken in an adequate and balanced manner. Some foods are rich in some nutrients, some are poor. In addition, various processes applied to foods, including cooking, causes the loss of some nutrients.

After the food is consumed and digested, it is separated into essential nutrients which are the smallest building stones in the digestive system and absorbed from the small intestines and transported to the tissues and organs through the blood. In the presence of oxygen through inhalation, energy is produced from the food. The disintegrating small parts come together again to provide the function of building new tissues, repairing the tissues, defending against diseases. All of these phenomena are called "metabolism", the process of breaking down nutrients or tissues to smaller forms is called "catabolism" and the combination of these small structures to form new structures is called "anabolism". All these processes are controlled and regulated by the help of vitamins and minerals, enzymes and hormones.

There are chemical substances (bioactive components or phytochemicals) that form the composition of foods and function as over 50 nutrients or nutrients necessary for the human organism.

#### 2.1.1. Nutrition and Essential Nutrients

**Nutrition (food, nutrients):** Nutrition is composed of plant and animal tissues that contain nutrients necessary for life when consumed on a daily diet (diet). Nutrients are found in foods that are necessary for the body.

**Essential nutrients:** Foods consist of building blocks called "nutrients". The nutrients found in the food's structure are divided into two large groups. "Macro nutrients" are those that are taken in excess during the daily diet, "micronutrients" are required by the body in small quantities although they are very important for the body.

Carbohydrates, fats and proteins are macro nutrients. Proteins are made up of amino acids, and fat is made up of fatty acids. The main advantage of macro nutrients is to provide energy to the body. Micronutrients help to

form energy. Vitamins and minerals are micronutrients. Water is essential for life and is regarded as an essential nutrient.

### 2.1.2. Food Groups

Healthy nutrition is based on dietary diversity and daily needs of energy and nutrients need to be taken into the body through foods. The Nutrition Guide of Turkey explains what constitutes a healthy plate of food and divides the food into five groups based on the essential nutrients they contain. These include milk and products group, meat, eggs, pulses and oil seed group, bread and cereals, vegetables and fruits.



## Eat Healthy Become Active for Health

**Milk and dairy products:** The foods in the milk and products group are important for the healthy growth of bones and teeth especially in children and adolescents due to their being rich in calcium and for the management of cardiovascular diseases, stroke, high blood pressure, Type II diabetes, osteoporosis, colon cancer and management of body weight in adults. Every day, adults should consume 3 portions while children, adolescents, pregnant and lactating women and post-menopausal women should consume 2-4 portions of milk and products.

**Meat and products, eggs and pulses and nuts/oilseeds:** Foods in this group provides growth and development. Nutrients that function in cell renewal, tissue repair and vision, blood production, nervous system, digestive system and skin health are most commonly found in this group. It is the most important food group that plays a role in gaining resistance to diseases. Adults and youth should consume 2.5-3 servings per day of the meat - Eggs - pulses - nuts / oily seeds group.

**Fresh vegetables and fruits:** Today, due to their importance in healthy nutrition, vegetables and fruits are treated as two separate food groups. However, there are similarities between their nutrient content. Therefore they are considered together. This food group is effective in; growth and development, cell renewal, tissue repair, skin and eye health, tooth and gum health, blood production and resistance to diseases. At least 5 servings (at least 400 g / day) of vegetables and fruits should be consumed per day, at least 2.5-3 portions of that should be vegetables and 2-3 portions should be fruits.

**Bread and cereals:** Grain group; bread, rice, pasta, noodles, couscous, bulgur, oats, barley, and breakfast cereals. These foods are made from grains such as wheat, oats, rice, rye, barley and corn. Cereals are especially important in our country in human nutrition. Grain consumption is mainly in the form of flour. What comes to mind first when flour is mentioned is wheat flour; other flours are known by the name of the cereal from which it is obtained.

Grain and cereal products are important foods because they contain vitamins, minerals, carbohydrates (starch, pulp) and other nutrients. Their carbohydrate content is higher. For this reason, cereals are the main energy source of the body. They serve important functions in maintaining the health of the nervous and digestive systems and skin as well as provide resistance to diseases. Grains contain an amount of protein although low in quality. Protein quality can be increased when pulses or foods such as meat, milk and eggs are consumed together.

Grains should be consumed an average of 4-7 servings per day. The amount of portion to be consumed depends on the body weight, age, gender and level of physical activity of the individual.

Unidentified in this group;

**Fats:** is a member of the macro nutrient group and contains various fatty acids.

**Carbohydrates:** are divided into two as simple and compound. Simple sugars are carbohydrates, while % 99.9 are saccharose. Therefore they just provide energy and have no nutritional value.

**Water** and other beverages are important in protecting the body water balance. The water which we define as the essential element for life must be obtained from clean sources. The visible/invisible water contained in mainly water and other beverages as well as foods are defined as "liquids" and the daily needs of the individual are met by the water they drink as well as the beverages and food items they consume. (TÜBER 2015).

## 2.2. Definition, Frequency, Causes and Related Health Issues of Obesity

Overweight and obesity are defined as "abnormal or excessive fat accumulation that presents a risk to health".

Obesity in the world has tripled compared to 1975. In 2016, there are 1.9 million overweight adults and 650 million obese adults in the world. In other words, 39% of the adults over the age of 18 are overweight and 13% are obese. Obesity is also increasing among children. Over the past 40 years, obesity has increased tenfold, in 2016, 41 million children at the ages of 0-4 and 340 million children at the age of 5-19 were either obese or overweight. If the numbers of overweight and obesity increase at this rate, it is expected to rise to 70 million in 2025. (WHO, 2017)

While there were 32 million overweight and obese children in the 0-5 age group worldwide in 1990, this number increased to 41 million in 2016. In this period, the number of overweight and obese children in the 0-5 age group in the African Region increased from 4 billion to 9 million. Increase rate of obesity and overweight is more

than 30% in developing countries, a large majority of the overweight or obese children live in the developing countries. (WHO <http://www.who.int/topics/obesity/en/>)

Excessive and false nutrition are among the leading factors causing obesity as well as inadequate physical activity. Furthermore, genetic, environmental, neurological, physiological, biochemical, socio-cultural and psychological reasons are other factors. It is accepted that the genetic factors as well as the environmental factors play a significant role in the increase of frequency of obesity during childhood period all over the world. It is assumed that the obesity epidemic is caused by an environment that promotes excessive food intake and inhibits physical activity. These conditions are mainly due to the changing family life dynamics directed by social conditions and affluence such as increasing marketing of ready-to-eat food called "fast food" and the increasing ease of access to these foods, the widespread use of sedentary forms of entertainment as watching television and video and dramatic increases in the number of working women (French SA, Story M, and Jeffrey RW, 2009). It is stated that the duration of sleep has an effect on obesity. While the amount of time spent for sleeping increases, both the spent energy and the amount of time left for physical activities decreases. On the other hand, short sleep duration is also among the causes of obesity (Must and Parisi, 2009).

Insufficient sleep duration and sleep quality are associated with metabolic and behavioral changes that promote obesity. During adolescence, changes in behavior, such as less sleep and late bedtime, are observed, and can play a role in adolescent obesity. It is thought that the development of a consistent sleep schedule on weekdays may be useful in the treatment of adolescent obesity. (Hayes JF et al. 2017).

In the United States, the relationship between inadequate sleep and overweight and obesity in infancy and early childhood has been assessed and it is stated that interventions aimed at increasing sleep quality and quantity will help prevent childhood obesity. (Ash T, Taveras EM, 2017)

One of the main reasons for the occurrence of obesity is nutritional habits. Nutritional habits include subheadings such as enjoying eating, responding to a meal offer, eating time, desire to drink, cognitive, uncontrollable and emotional eating habits (Webber, Hill, Saxton, et al. 2009) (Cappelleri, Bushmakie, Gerber, et al. 2009).

Innovations emerging with the rapid progress of technology today are being offered to the service of mankind and people are living a lifestyle which is changing day by day. In daily life, a lot of work is done by machines, even very short distances are traveled by car and thanks to the facilities provided by modern life, people are moving less. Emerging technology can also negatively affect people's eating habits. Changes in nutrition style and a lack of physical activity, combined with a number of adverse conditions, are leading to increased obesity (WHO, 2013).

Obesity is one of the main causes of premature deaths, as well as leading to non-communicable health problems. According to the World Health Organization data, nearly three million people around the world lose their lives every year because of their overweight or obesity status. The health problems caused by obesity lead to the development of diseases such as cardiovascular diseases, diabetes, hypertension, certain types of cancer, musculoskeletal diseases, and decrease in quality of life and deaths (WHO, 2016; Alemzadeh R, Rising R, Lifshitz F. *Pediatric Endocrinology* 2007),

Childhood eating habits are one of the most important determinants of child health. Survey has shown that childhood eating habits are also sustained in adulthood and affect health in adulthood.

### **2.3. Anthropometric Measurement Techniques and Methods of Assessment**

It is rather hard to assess overweight and obesity in childhood and adolescence. Due to the fact that children and adolescents are in the process of growth and development, body structures change rapidly. It is recommended that different indicators could be used depending on age (WHO 2007. 2013. WHO 2013).

For children and adolescents, there is no specific classification as is for adults; however, there are different approaches to definition of overweight and obesity. One of the most frequently used methods is the use of percentile and/or Z-score values at the individual and community level. Growth standards for children at the ages of 0-5 in 2006 and growth reference values for children and adolescents at the ages of 5-19 in 2007 have been defined by the World Health Organization. Thus, in today's children and adolescents, the classification of BMI Z-scores - Body weight Z-score values are used to classify as overweight-obesity, underweight and severe underweight while the Height Z-score is used to classify as stunting and severe stunting and excessive tallness. From the values obtained by the body weight measurements, the students' clothes are narrowed to obtain clear body weights and the body weight is corrected according to the clothes. Z-score assessment is performed with ANTHRO Plus 2007 program and extreme values are excluded from the analysis according to WHO recommendations (detailed information for this section is included in the methods section) (WHO 2009, 2013).



### 3. METHODS

The fact that there were only 15 member countries have national data sets and 19 member countries have overweight and obesity surveillance policies for children aged 6-10 at the “WHO European Ministerial Conference on Counteracting Obesity” which took place in Istanbul between 15-17 November 2006 was the reason for the decision to create a standardized childhood surveillance – observation initiative within the WHO European Region. The WHO European Childhood Obesity Surveillance Initiative – COSI was conducted for the first time in the school year of 2007-2008 in 13 countries from the WHO European Region (Belgium, Bulgaria, Cyprus, Czech Republic, Ireland, Italy, Lithuania, Malta, Latvia, Norway, Portugal, Slovenia and Sweden). The COSI protocol was developed in cooperation with the Member States and finalized in 2012 by the WHO European Region (TM Wijnhoven et al, 2012).

The second round was implemented in the education year of 2009-2010 with 17 countries (new members: Greece, Hungary, Spain and Macedonia) and the Third Round was in the education year of 2012-2013 with 21 countries (new members: Albania, Moldova, Romania and Turkey).

Turkey was involved in the survey in the 3<sup>th</sup> round in 2012-2013. The results of the survey were released to the press and public in December 2013 with the participation of the Ministers of Health, National Education and Food, Agriculture and Livestock, along with the WHO European Region Administrators, representatives of relevant institutions and organizations. All outcome reports of the survey have been communicated to relevant stakeholders and shared with WHO; also shared on the website of the Ministry of Health ([www.beslenme.gov.tr](http://www.beslenme.gov.tr)).

On behalf of Turkey, the COSI Survey is coordinated by the Ministry of Health, General Directorate of Public Health and is carried out in cooperation with the faculty members of Hacettepe University, Faculty of Medicine, Public Health Department. Turkey is a member of the World Health Organization COSI advisory group, and takes an active participation in the preparation of the World Health Organization protocols, guidelines and questionnaires, as well as is an active member of the COSI national and international publications committee. Turkey has participated in the WHO 8<sup>th</sup> COSI Meeting held in Croatia in 2015 and in the WHO 9<sup>th</sup> COSI Meeting held in Russia in 2016 and shared the COSI survey results with European Region member countries. 2017 is 10<sup>th</sup> Anniversary and 10<sup>th</sup> Year Meeting was held in Malta under the Term Presidency of EU. The fourth round of the survey was repeated in 2016 with the attendance of 32 Member States of the WHO European Region and number of the participant countries continues to increase every year.

The WHO European Childhood Obesity Surveillance Initiative (COSI) October 2015 Manual of Data Collection Procedures and Protocol have been used in this survey.

#### 3.1. Survey Type

This study is a cross-sectional epidemiological study carried out in cooperation with the Republic of Turkey Ministry of Health, WHO European Region, Republic of Turkey Ministry of National Education and Hacettepe University.

## **3.2. Survey Variables**

### **3.2.1. Independent Variables;**

Primary School 2<sup>nd</sup> Grade Students (Ages 6-9);

- Gender
- Certain nutritional habits
- Doing physical activities
- Time spent watching TV and homework
- Time spent physical activity

Socio-demographic characteristics of their families

- Age
- Educational Status
- Occupational Status

Features of schools

- Geographic region
- Environmental conditions
- Opportunities and practices regarding nutrition and physical activity

### **3.2.2. Dependent Variables;**

Primary School 2<sup>nd</sup> Grade Students (Ages 6-9);

- Underweight
- Overweight
- Obesity
- Stunting

## **3.3. Target Population/Sampling of Survey**

The Turkish Statistical Institute provided the sampling of the survey which was conducted in accordance with the protocol signed between the Republic of Turkey Ministry of Health, the General Directorate for Public Health, Department of Healthy Nutrition and Active Life and the WHO European Region.

The COSI-TUR 2016 Survey was conducted in the first half of 2016-2017 school year with the cooperation of the Republic of Turkey Ministry of National Education.

The target group of the "WHO European Childhood Obesity Surveillance Initiative" was the second grade students of the primary schools affiliated to the Ministry of National Education. For this purpose, the Ministry of

National Education (MoNE) provided a list of schools in which school, branch, student and gender based details are included for 2015-2016 school year. A total of 1,273,884 first grade students were identified in this list in totally 2,150 schools within the scope of this survey. The first grade students' information on the list of the year 2015-2016 from the MoNE served as the basis of the determination of the survey sample.

1. 271 schools closed by the Ministry of Education in the school year of 2016-2017 were removed from the lists.
2. In the WHO European Childhood Obesity Surveillance Initiative (COSI) protocol document, it is suggested that if less than 1% of the students under target population are enrolled in schools with specialized training (schools within the Special Education and Practice Center where mentally, visually and hearing impaired students are trained), then they can be removed from the sample. 366 Special Education and Practice Schools determined to be in line with this criterion were excluded from the scope of the study.
3. 506 schools without second grade class branches and students were excluded from the scope of the study.

The sampling design of the survey was carried out in 25,019 schools, 57,306 branches and 1,260,721 students. Childhood Obesity Surveillance Initiative Survey has been planned to give an estimation based on gender and the Nomenclature of Territorial Units for Statistics Classification based on Level 1 (NUTS1) x gender. The stratification variables according to the estimation dimension are given below. The provinces in the NUTS1 Region Classification are stated in Table 3-1.

**Table 3-1. NUTS Statistics Region Classification**

TR1	ISTANBUL
TR2	WEST MARMARA (Balıkesir, Canakkale, Edirne, Kırklareli, Tekirdag)
TR3	AEGEAN (Afyon, Aydın, Denizli, İzmir, Kütahya, Manisa, Muğla, Uşak)
TR4	EAST MARMARA (Bilecik, Bolu, Bursa, Eskisehir, Kocaeli, Sakarya, Yalova, Düzce)
TR5	WEST ANATOLIA (Ankara, Konya, Karaman)
TR6	MEDITERRANEAN (Adana, Antalya, Burdur, Hatay, Isparta, Mersin, Kahramanmaraş, Osmaniye)
TR7	CENTRAL ANATOLIA (Kayseri, Kırşehir, Nevşehir, Niğde, Sivas, Yozgat, Aksaray, Kırıkkale)
TR8	WEST BLACK SEA (Amasya, Çankırı, Çorum, Kastamonu, Samsun, Sinop, Tokat, Zonguldak, Bartın, Karabük)
TR9	EAST BLACK SEA (Artvin, Giresun, Gümüşhane, Ordu, Rize, Trabzon)
TRA	NORTHEAST ANATOLIA (Ağrı, Erzincan, Erzurum, Kars, Bayburt, Ardahan, Iğdır)
TRB	MIDDLE EAST ANATOLIA (Bingöl, Bitlis, Elazığ, Hakkari, Malatya, Mus, Tunceli, Van)
TRC	SOUTHEAST ANATOLIA (Adıyaman, Diyarbakır, Gaziantep, Mardin, Siirt, Sanliurfa, Batman, Sirnak, Kilis)

The sample volume for the survey has been calculated as 12,394 by taking into account the estimation levels and the 2013 COSI application loss rate.

The following formula is used in the calculation of sample volume.

$$n = \frac{t^2 pq}{d^2} * deff * h$$

n = total sample volume

t = 1.96 (value in student-t table at 0.95 significance level)

α = acceptable risk (probability of error = 0.05)

p = the ratio of units with a certain characteristic (prevalence frequency is 0.5)

q = 1 - p

d = amount of absolute precision (0.05)

Deff = 1.2 (design effect proposed in COSI document)

h = number of layers (taken as 12 regions\*gender = 24.)

The calculated sample volume is distributed to the regions by means of compromised distribution. By this distribution, it is aimed to provide the optimum distribution that can produce the desired level of estimations. Layout distribution in the compromised distribution method is as follows:

$$nh = \bar{n} [ K^2 + (1 - K^2) Mh^2 ]^{1/2}$$

$\bar{n}$  = average sample volume observed

$Mh = Nh / (N / H) = H.Wh$

K = Relative importance

$n_{min} = K.\bar{n}$  smallest sample volume

h = Number of layers

After the distribution of the sample volume by region, it was planned to select a class from each school in the sample/paradigm, so the average number of students per branch was found in the region. The total number of schools (585 schools) to be chosen was reached by dividing the sample volume per region by the average number of students per class in the district. The choice of sample schools was made proportionally with probability proportional to size (PPS) in the region. The number of students in the relevant age group of the schools was taken as the size indicator.

Although the target sample size is 12394, in accordance with the average number of students in the school following the sample selection, it is estimated that 14655 students from 585 sample schools will be reached. In the post-questionnaire application, the relative weights were re-calculated through reflecting to the weights the unresponsiveness caused in certain cases by some students not being present at school etc., thus correcting the unresponsiveness. In this way, different weights were calculated for each school and the total number of estimations was reached by attaching the appropriate weight ratio to the information contained within the student response forms in the schools.

Table 3-2 shows the distribution of the sampling schools according to the NUTS1 Regions. One school each from Istanbul, Tokat, Konya, Van and Erzurum were excluded from the analysis due to the problems in the collection of school data or the lack of data. Analyzes were conducted over 580 schools with appropriate data. The percentages of responses of the questionnaires are shown in Table 3-3. Table 3-4 gives the numbers of boys and girls reached during the survey and their distribution according to the participation status.

**Table 3-2. The Distribution of the Number of Schools Determined as Sample by NUTS Regions**

		Number of Schools Determined by the Turkish Statistical Institute
<b>TR1</b>	Istanbul	51
<b>TR2</b>	West Marmara	37
<b>TR3</b>	Aegean	54
<b>TR4</b>	East Marmara	43
<b>TR5</b>	West Anatolia	44
<b>TR6</b>	Mediterranean	58
<b>TR7</b>	Central Anatolia	44
<b>TR8</b>	West Black Sea	48
<b>TR9</b>	East Black Sea	40
<b>TRA</b>	Northeast Anatolia	53
<b>TRB</b>	Middle East Anatolia	48
<b>TRC</b>	Southeast Anatolia	65
<b>Total</b>		585

### 3.4. Data Collection Stage - Data Collection Forms

#### 3.4.1. Data Collection Forms

In the COSI survey conducted by the World Health Organization European Region, data collection forms have been standardized to allow international comparisons. Examiner, Family and School data collection forms prepared by WHO consist of two parts which are mandatory and voluntary. In the study of "Turkey Childhood Obesity Surveillance Initiative", mandatory and voluntary parts of the data collection forms were applied together by the Turkey working group. (WHO European Childhood Obesity Surveillance Initiative Manual of Data Collection Procedures, Version October 2015). Data collection forms have been translated into Turkish, preliminary tests have been made to bring them in compliance with the society, no changes have been made to question numbers and options to enable the international comparison of data sets. Questionnaires issued for Turkey were prepared in accordance with optical coding and data collection guidelines were prepared for each form. The three data collection forms below have been printed on the optical coding form.

**School Registration Form:** It is the form used to assess the opportunities and practices of nutrition and physical activity in schools. It has been filled by the examiner and/or together with the school official when the school was first visited for the interviews in accordance with the survey program or within the day when the anthropometric measurements were conducted.

**Family Registration Form (Volunteer):** It is filled by the students' families. The family registration forms have been delivered to the family in a closed envelope together with the survey filling instructions when the school was first visited for the interview. A consent form has been attached to the front side of the envelope for consent on the participation of their children in the survey. The forms were filled by the families and delivered to the students in envelopes and then they were picked up from the school when the anthropometric measurements of the students were taken.

**Student Registration Form:** It is the form used by field teams to perform anthropometric measurements of students at school and to process data. A separate form has been used for each student who has been given consent by their families. The trained provincial field survey team (doctors, dietitians, nurses, health officials and child development experts) filled in the information regarding the students in accordance with the data collection schedule and recorded the anthropometric measurements of the students.

### **3.4.2. Provincial Survey Teams**

The provincial survey teams were formed by the Republic of Turkey Ministry of Health Department of Healthy Nutrition and Active Life for the purpose of collecting data on the field in provinces where samplings were taken. In accordance with the number of schools and students in the provinces, survey teams were formed from dietitians, nurses, health officers, and child development experts.

The examiners who will collect data on the field are composed of staff of the provincial directorates of health, sections of non-communicable diseases and community health centers. Each team consists of two people, one of whom is a responsible dietitian. A total of 115 field teams were formed within the scope of the survey.

"COSI-TUR 2016 Field Examiners Training" was given to the provincial field team leaders who took part in the survey in Ankara between November 29 and December 1, 2016 in order to provide national and international standardization training during data collection. Provincial field survey team leaders have identified and trained "assistant examiners" for themselves to assist during the data collection phase of the survey. During the study, anthropometric measurements were conducted by field team leaders trained by consultants. The assistant examiner has provided convenience in the work environment by performing tasks such as taking the students into the classroom and preparing them for the measurements.

### **3.4.3. Field Coordinators and Field Teams**

The majority of the examiners who collect data from the field are dietitians working in provincial directorates of health, sections of non-communicable diseases, community health centers, also include the nurses, midwives and child development experts. Each team consists of a responsible dietitian and a deputy. In accordance with the sample taken from TUIK (Turkish Statistics Institute), there are 115 Field Teams, each consisting of two persons (230 persons) according to the school numbers in the provinces (for example there are 8 field teams for Istanbul, 2 field teams for Kars).

### **3.5. Standardization**

#### **3.5.1. Training of Provincial Field Survey Teams and Data Collection Standardization**

During the training meeting held in Ankara between November 29 and December 1, 2016, theoretical and practical training was given to ensure the standardization of the examiners that were determined from the provinces. The training of examiners was carried out by the consultants in the format determined by the World Health Organization, with the supervision and support of the consultants. The training was supported with guidelines and directions prepared to fill out the forms. The field survey teams were made to perform the data collection forms application and coding practices. The questionnaires that were filled out were checked by the consultants and the errors that were found to be made by the examiners were corrected through reapplication.

#### **3.5.2. Ensuring Standardization among Observers**

In order to ensure that the anthropometric measurement was performed to the maximum extent and accuracy by all examiners, height and weight measurement practices were conducted in schools where students in the survey age group were present. During the training, preliminary studies were done with adults to measure height and body weight, and training was conducted to make standardized measurements accurately and precisely. The preliminary application was made in two primary schools in Ankara (MEB Sarar and Kurtuluş Primary Schools) which are not survey schools. Each examiner, under the supervision of counselor and educator, repeated the measurements of three students from the second grade of primary school two times.

Following the theoretical anthropometric measurement training, the examiner undertook a practical anthropometric measurement. The same person's measurement was also taken by an expert and the examiner and the expert assessed the results of the anthropometric measurements together. In case of difference between two measurements, this application practice was continued until there was no difference.

During practical applications, 2 measurements were made and recorded for every adult and child by examiners. After completing all application practices, the measurements were assessed by the consultants and the correlation coefficient between the measurements was calculated. Correlation coefficient between the first and second measures of the examiners was determined to be 0.98.

#### **3.5.3. Measuring Instruments and Calibration**

In line with the view of WHO, the body weight scales with code SECA 813 and the portable height measurement instrument with code SECA 213 as well as the WHO COSI survey standard data collection forms were used by the Turkey project group in all survey groups.

During the course of the survey, the examiners were introduced to the anthropometric measurements, the calibration method was taught, and the application standardization of the measuring instruments and calibration materials to be used during the application was provided. Scales measuring body weight and instruments measuring height were checked and calibrated at every twenty five measurements, and the examiners were trained in calibrating techniques. All of the controls of the scales conducted by the examiners were recorded on the calibration form by writing the date of the calibration control, the process continued by marking that the calibration was implemented.

*Calibration of the body weight scale:* Not later than one minute after opening the body weight scale, the 0.0 value is read on the solar screen and the calibration form is marked. Calibration of the body weight scale was

performed by the entire study group using 5 liters water-filled bottle of the same brand. The calibration was repeated on the morning of each measurement day and the calibration results were recorded.

*Calibration of the height measurement device:* The height measurement device was checked to see whether or not once the head and foot board pointed to the minimum value on the device when they were set to the minimum value. The tailor meter of which the height was known (100 cm) was positioned in a manner where it went from top to bottom and set up so that the head board made contact with the meter itself, the height value was then written on the calibration form.

### 3.5.4. Standardization of Application Conditions

The field work of this survey was completed between November 2016 and February 2017. Empty classrooms or private rooms in the schools were used in the measurements made during field data collection used. The measurements were taken between morning and noon whenever possible, however if the class which was chosen as a sample had appeared in a group which received training in the afternoon, then the measurements were taken following the first lesson.

Body weight was measured in kilograms and recorded with a sensitivity of 100 grams. The scale was placed horizontally on a flat, hard surface and all of the clothing which provided extra weight on the children (jacket, cardigan, coat etc.) as well as wallets, mobile phones, key-chains, belts or any other objects were removed, thus taking into consideration the sensitivities of the child, the process was explained to the child, the child was made to stand upright on the middle of the scale and the measurement was taken.

In order for the height measurement to be taken, the height measurement board was mounted at the location where a flat surface and vertical surface met (intersected) thus ensuring that the vertical angle presented a triangle shape and ensuring that the vertical surface was utilized. The vertical and horizontal pieces were connected in a manner which presented the correct angle, with the mobile piece being used as the head board and the recording of the height was done so in centimeters with a closeness ratio of 0.1 cm.

### 3.5.5. Number of Schools and Children Reached

The percentages of the respondents to the questionnaires are given in Table 3-3 and the numbers of the boys and girls reached in the survey as well as their participation status are given in Table 3-4.

**Table 3-3. Number of Questionnaires Answered in the Field and Included in the Analysis**

Question Forms	Number of Samples	Number of Questionnaires Answered		Number of Questionnaires Included in the Analysis	
		n	%	n	%
School	585	585	100.0	580	99.1
Family	14,144	11,876	84.0	11,669 *	82.5
Student	14,144	11,732	82.9	11,523	81.5

\* There are 151 family questionnaires for which no school code is specified.

**Table 3-4. Number of Boys and Girls Reached During the Survey and Participating in the Survey**

	Girls		Boys		Total	
	N	%*	N	%*	N	%*
<b>Participated **</b>	5,744	82.6	5,988	83.2	11,732	82.9
<b>Not Present</b>	600	8.6	560	7.8	1,160	8.2
<b>Not Permitted by his/her Family</b>	541	7.8	573	8.0	1,114	7.9
<b>Not Want to Participate</b>	66	1.0	72	1.0	138	1.0
<b>Total</b>	6,951	100.0	7,193	100.0	14,144	100.0

\* Column percentage

\*\* 8 students with unknown genders were distributed to girls and boys groups as 4 persons each, but they were excluded from the analysis.



COSI-TUR 2016 Survey has been carried out with the participation of 11,732 students from 585 primary schools in 79 provinces (excluding Şırnak and Hakkari), in cooperation with the Republic of Turkey Ministry of National Education in the first half of the 2016-2017 school year, in accordance with sample size in Turkey, 12 NUTS Regions, based on male-female genders.

### 3.6. Data Processing and Analysis

After completion of the data collection phase at each school, all data collection forms were sent to the central team within 10 days following the data collection by the field teams. Data collection forms from the central team have been transferred to the electronic medium using optical character recognition technology for electronic coding of the optical coding forms. Electronically transferred data sets were transferred one by one to MS Excel files. Archiving of data collection forms was carried out by the Ministry of Health working group while the creation of variables, clearing of the data sets, implementation of the controls, configuration of the coding and backing up the data set were undertaken by the consultant who also acted as the data manager.

Table 3-5 shows the distribution of the schools in the sample by NUTS1 Regions. One each school from Istanbul, Tokat, Konya, Van and Erzurum provinces were excluded from the analysis due to the problems in the collection of school data or the lack of data. Analyzes were conducted over 580 schools with appropriate data.

**Table 3-5. Distribution of the Number of Schools Determined as Sample and Included in Analysis by Regions**

Region	Number of Schools Included in the TUIK Sample	Number of Schools Included in the Analysis
Istanbul	51	50
West Marmara	37	37
Aegean	54	54
East Marmara	43	43
West Anatolia	44	43
Mediterranean	58	58
Central Anatolia	44	44
West Black Sea	48	47
East Black Sea	40	40
Northeast Anatolia	53	52
Middle East Anatolia	48	47
Southeast Anatolia	65	65
<b>Total</b>	<b>585</b>	<b>580</b>

The Ministry of Health Working Group has created databases and data cleanups for each Excel data set in SPSS 23. Assessments were made on the quality of the data, the examiner's carefully filling in the forms, and the correct and accurate coding of the supervisor's forms. Verification of validation intervals and consistency checks of the data were implemented. Checks for inconsistent and incomplete data as well as data cleaning, validation (such as extreme-outlier values, data input errors and out of range values) and backup of data were undertaken by the consultant who also acted as the data manager.

The unresponsiveness rate caused by the fact that some students were not present at the school during the data collection phase in the field was taken into account through re-calculating the weights based on this development and making the necessary adjustments before the analysis phase. In this way, different weights

were calculated for each school, and the total number of estimations was reached by attaching the appropriate weight ratio to the information contained within the student response forms in the schools.

### 3.6.1. Calculation of Age Groups

Students who were reached during the study and whose age was below 72 months or higher than 120 months were not included in the analysis. Students whose age groups were suitable but according to the WHO criteria who had a Weight-for-age Z-score  $< -6$  SD and/or  $> +5$  SD, and with a Height-for-age Z-score  $< -6$  SD and / or  $> +6$ SD as well as a BMI Z-score of  $< -5$  SD and / or  $> +5$  SD were excluded from the analysis.

Variables were analyzed by the SPSS Complex Sample menu, taking into account the cluster effect of schools according to gender and NUTS1 regions. Thus, the confidence intervals for the calculated frequencies were obtained in a manner appropriate to the nature of the multistage cluster sample.

Prior to the analysis of the anthropometric measurements, the net weights were determined by deducting the tare weight of the clothes that the students wore during the measurement. In order to determine the tare weight of the clothes that the students wore during measurement, the clothes were coded by the examiners and the weight of these clothes were determined through measurement by the survey team with the average weight for underwear 120 gr., sports clothes (t-shirt worn under the track suit) 260 gr, thin clothes (apron) 275 gr. and thick clothes (jeans, sweater) 560 gr., thus allowing the analysis to be conducted based on these average weights.

Weight-for-age (WAZ), Height-for-age (HAZ) and the body mass index (BMI) for age Z-scores were calculated. WHO ANTRO Plus (WHO AntroPlus for Personal Computers manual: Software for assessing growth of the ehav's children and adolescents, Geneva: WHO, 2009. <http://www.who.int/growthref/tools/en/>, access date: 24 July) program was used for the calculation of the scores. The measured students were classified as underweight, normal weight, overweight and obese according to BMI-for-age Z-score (BAZ) values. The frequency levels of being classified as underweight according to the Weight-for-age Z-score (WAZ) as well as being classified as stunting according to the Height-for-age Z-score (HAZ) were calculated.

The weight for age, height and body mass index Z-scores classification and intersection points used in the assessment of the growth of children have been provided in Table 3-6.

**Table 3-6. Z-score Classification of Anthropometric Measurements (WHO 2007)**

Z-score	Height for Age <sup>a</sup>	Weight for Age	Body Mass Index
> 2.00		<sup>b</sup>	Obese
1.01 - 2.00			Overweight
-2-1	Normal	Normal	Normal
<-2.00	Stunting	Underweight	Underweight

<sup>a</sup> Tallness can be a problem in very rare circumstances. If there is a case of excessive tallness, the child should be assessed according to endocrine causes.

<sup>b</sup> A child in this range has a growth problem, but it is more appropriate to assess it with BMI.

### **3.7. Ethical Issues**

The approval of the Ministry of National Education has been obtained for the survey to be carried out in the schools.

Survey Ethics Committee approval has been obtained from the Ministry of Health Kecioren Training and Survey Hospital (Annex 3).

During the data collection phase of the study, the examiners;

- have obtained appointments from the school principals by conducting a preliminary meeting in which the objectives of the survey were explained and information was provided on the questionnaire to be applied.
- Received "Informed Written Consent Forms" from the parents.
- learned and recorded the reasons of the families, who have not consented their children to take part in the survey, why they did not allow their children to take part.
- Took care of confidentiality during the anthropometric measurements of the children, the measurements were made in a private room and alone. During the measurement, the field team leader and assistant examiner were present together.
- The anthropometric measurements of the students were made with the lightest clothes available on them.
- The names of the children have not been taken, the student's personal identification information have not been included in the form or in the electronic medium.

## 4. FINDINGS:

Other than the tables about school characteristics, anthropometric measurements and percentages and averages in the tables related to the data obtained from family form are weighted analysis results, while the figures are given as unweighted.

### 4.1. DISTRIBUTIONS OF CHARACTERISTICS OF THE SCHOOLS

During the survey, 580 school administrators or responsible persons were interviewed. Information was obtained on the school's environmental conditions, nutrition and physical activity practices, and transportation of children to the school.

**Table 4-1. The Duties of Individuals Responding the School Form in the Survey**

School Official Interviewed	n	%
Manager	536	92.4
Teacher	36	6.2
Other	8	1.4
<b>Total</b>	<b>580</b>	<b>100.0</b>

School characteristics were mostly obtained from interviews with principals (92.4%). Information regarding eight schools was obtained from school officials other than principals and teachers (Table 4-1).

**Table 4-2. Distribution of the Statements of School Administrators regarding Providing Outdoor Playgrounds and Indoor Gyms in Schools by Regions**

Region	Total Number of Schools	Outdoor Playground Areas		Indoor Gym	
		n	%	n	%
Istanbul	50	49	98.0	14	28.0
West Marmara	37	37	100.0	4	10.8
Aegean	54	54	100.0	12	22.2
East Marmara	43	43	100.0	10	23.3
West Anatolia	43	42	97.7	14	32.6
Mediterranean	58	58	100.0	4	6.9
Central Anatolia	44	44	100.0	4	9.1
West Black Sea	47	46	97.9	9	19.1
East Black Sea	40	40	100.0	5	12.5
Northeast Anatolia	52	52	100.0	5	9.6
Middle East Anatolia	47	45	95.7	10	21.3
Southeast Anatolia	65	64	98.5	5	7.7
<b>Total</b>	<b>580</b>	<b>574</b>	<b>99.0</b>	<b>96</b>	<b>16.6</b>

99.0% of the sampling schools have open spaces in which children can play (Table 4-2). Schools with indoor gym constitute 16.6% of the sampling schools.

**Table 4-3. The Distribution of Whether Children are Allowed to Play in Outdoor Playgrounds in Extreme Weather Conditions and outside School Hours by Regions**

Region	Total Number of Schools	Permission to Play in Outdoor Playgrounds During Extreme Weather Conditions		Permission to Play in Outdoor Playgrounds out of School Hours	
		n	%	n	%
Istanbul	50	7	14.0	30	60.0
West Marmara	37	11	29.7	35	94.6
Aegean	54	9	16.7	51	94.4
East Marmara	43	10	23.3	37	86.0
West Anatolia	43	12	27.9	40	93.0
Mediterranean	58	10	17.2	54	93.1
Central Anatolia	44	9	20.5	40	90.9
West Black sea	47	11	23.4	43	91.5
East Black sea	40	6	15.0	38	95.0
Northeast Anatolia	52	8	15.4	52	100.0
Middle East Anatolia	47	14	29.8	41	87.2
Southeast Anatolia	65	10	15.4	57	87.7
<b>Total</b>	<b>580</b>	<b>117</b>	<b>20.2</b>	<b>518</b>	<b>89.3</b>

79.8% of schools reported that students were not allowed to play outdoors in extreme weather conditions. 10.7% of schools do not allow use of open areas outside school hours (Table 4-3).

**Table 4-4. The Distribution of Whether Children are Allowed to Use the Indoor Gyms outside School Hours by Regions**

Region	Total Number of Schools	Permission to Use Indoor Gym Outside School Hours					
		Yes		No		School doesn't have an indoor gym	
		n	%	n	%	n	%
Istanbul	50	8	16.0	6	12.0	36	72.0
West Marmara	37	2	5.4	2	5.4	33	89.2
Aegean	54	5	9.3	7	13.0	42	77.8
East Marmara	43	3	7.0	7	16.3	33	76.7
West Anatolia	43	5	11.6	9	20.9	29	67.4
Mediterranean	58	2	3.4	2	3.4	54	93.1
Central Anatolia	44	1	2.3	3	6.8	40	90.9
West Black Sea	47	7	14.9	2	4.3	38	80.9
East Black Sea	40	2	5.0	3	7.5	35	87.5
Northeast Anatolia	52	3	5.8	2	3.8	47	90.4
Middle East Anatolia	47	4	8.5	6	12.8	37	78.7
Southeast Anatolia	65	3	4.6	2	3.1	60	92.3
<b>Total</b>	<b>580</b>	<b>45</b>	<b>7.8</b>	<b>51</b>	<b>8.8</b>	<b>484</b>	<b>83.4</b>

83.4% of the schools do not have an indoor gym. The total number of schools with indoor gym is 96, 45 out of these do not allow the use of such halls during the times outside school hours (Table 4-4).

**Table 4 – 5. The Distribution of Organization of Sports/ Physical Activity in Schools at Least Once a Week outside School Hours by Regions**

Region	Total Number Of Schools	Organization of Sports/ Physical Activities outside School Hours					
		Yes, for all classes		Yes, for some classes		Not organized	
		n	%	n	%	n	%
Istanbul	50	20	40.0	9	18.0	21	42.0
West Marmara	37	16	43.2	4	10.8	17	45.9
Aegean	54	14	25.9	11	20.4	29	53.7
East Marmara	43	8	18.6	8	18.6	27	62.8
West Anatolia	43	10	23.3	10	23.3	23	53.5
Mediterranean	58	10	17.2	10	17.2	38	65.5
Central Anatolia	44	9	20.5	7	15.9	28	63.6
West Black Sea	47	14	29.8	8	17.0	25	53.2
East Black Sea	40	12	30.0	7	17.5	21	52.5
Northeast Anatolia	52	8	15.4	7	13.5	37	71.2
Middle East Anatolia	47	5	10.6	6	12.8	36	76.6
Southeast Anatolia	65	9	13.8	12	18.5	44	67.7
<b>Total</b>	<b>580</b>	<b>135</b>	<b>23.3</b>	<b>99</b>	<b>17.1</b>	<b>346</b>	<b>59.7</b>

23.3% of the schools organize sports/physical activities apart from school hours at least once a week for all classes. Percentage of schools that do not organize any sports/physical activities outside school hours is 59.7%. (Table 4-5).

**Table 4-6. The Distribution of Children’s Participation in Sports/ Physical Activities in Schools (n=234) where they are Organized Once a Week by Regions**

Region	Total Number of Schools	Levels of Children’s Participation in Physical Activities					
		More than half		Less than half		None	
		n	%	n	%	n	%
Istanbul	29	11	37.9	18	62.1	-	-
West Marmara	20	16	80.0	4	20.0	-	-
Aegean	25	14	56.0	11	44.0	-	-
East Marmara	16	9	56.3	7	43.8	-	-
West Anatolia	20	6	30.0	13	65.0	1	5.0
Mediterranean	20	10	50.0	10	50.0	-	-
Central Anatolia	16	8	50.0	8	50.0	-	-
West Black Sea	22	15	68.2	7	31.8	-	-
East Black Sea	19	11	57.9	8	42.1	-	-
Northeast Anatolia	15	9	60.0	6	40.0	-	-
Middle East Anatolia	11	9	81.8	1	9.1	1	9.1
Southeast Anatolia	21	15	71.4	6	28.6	-	-
<b>Total</b>	<b>234</b>	<b>133</b>	<b>56.8</b>	<b>99</b>	<b>42.3</b>	<b>2</b>	<b>0.9</b>

More than half of the children participate in these activities at least once a week in 56.8% of the schools that organize a sports/ physical activity outside school hours (Table 4-6).

**Table 4-7. The Distribution of Availability Status of the School Shuttles for the Transportation of Children by Regions**

Region	Total Number of Schools	School Shuttle for Transportation of Students									
		Yes, to all children		Only to some grade levels		Only to pupils from rural areas		Only to pupils living far away		No Shuttle	
		n	%	n	%	n	%	n	%	n	%
Istanbul	50	32	64.0	5	10.0	-	-	8	16.0	5	10.0
West Marmara	37	4	10.8	7	18.9	-	-	16	43.2	10	27.0
Aegean	54	3	5.6	7	13.0	4	7.4	10	18.5	30	55.6
East Marmara	43	12	27.9	2	4.7	-	-	12	27.9	17	39.5
West Anatolia	43	17	39.5	6	14.0	-	-	11	25.6	9	20.9
Mediterranean	58	15	25.9	9	15.5	1	1.7	15	25.9	18	31.0
Central Anatolia	44	7	15.9	4	9.1	1	2.3	20	45.5	12	27.3
West Black Sea	47	9	19.1	3	6.4	3	6.4	21	44.7	11	23.4
East Black Sea	40	8	20.0	4	10.0	10	25.0	6	15.0	12	30.0
Northeast Black Sea	52	9	17.3	1	1.9	5	9.6	9	17.3	28	53.8
Middle East Anatolia	47	4	8.5	4	8.5	4	8.5	17	36.2	18	38.3
Southeast Anatolia	65	15	23.1	11	16.9	4	6.2	6	9.2	29	44.6
<b>Total</b>	<b>580</b>	<b>135</b>	<b>23.3</b>	<b>63</b>	<b>10.9</b>	<b>32</b>	<b>5.5</b>	<b>151</b>	<b>26.0</b>	<b>199</b>	<b>34.3</b>

All children take shuttles to go to the schools in 23.3% of the schools. The percentage of schools where no school service is available is 34.3%. (Table 4-7).

**Table 4-8. The Distribution of School Administrators' Opinions regarding Safety of Routes to and from school for most pupils to walk or ride a bicycle by Regions**

Region	Total Number of Schools	Safety score*	Standard Deviation	Standard Error	Median
Istanbul	50	6.1	2.5	0.4	6
West Marmara	37	6.6	2.9	0.5	7
Aegean	54	5.2	2.9	0.4	5
East Marmara	43	6.9	2.4	0.4	7
West Anatolia	43	6.2	2.6	0.4	7
Mediterranean	58	6.0	2.6	0.3	6
Central Anatolia	44	5.8	3.2	0.5	6
West Black Sea	47	5.7	2.8	0.4	5
East Black Sea	40	6.1	2.9	0.5	6
Northeast Anatolia	52	4.7	2.7	0.4	4
Middle East Anatolia	47	5.9	2.6	0.4	6
Southeast Anatolia	65	5.6	2.6	0.3	6
<b>Total</b>	<b>580</b>	<b>5.8</b>	<b>2.7</b>	<b>0.1</b>	<b>6</b>

\*Ranges between 1 and 10 Higher score means "less safe".

The safety score was calculated for the relevant persons' opinions regarding safety of routes for walking or riding a bicycle to and from school for children. Safety score ranges between 1-10. Higher score means less safety and less score means more safety. Average safety score specified by the school administration was found as 5.8 (Table 4-8).

**Table 4-9. The Distribution of Providing Drinking Water in the Schools by Regions**

Region	Total Number Of Schools	Drinking Water					
		Free of Charge		Paid		Not Available	
		n	%	n	%	n	%
Istanbul	50	10	20.0	39	78.0	1	2.0
West Marmara	37	9	24.3	22	59.5	6	16.2
Aegean	54	24	44.4	27	50.0	3	5.6
East Marmara	43	16	37.2	26	60.5	1	2.3
West Anatolia	43	17	39.5	24	55.8	2	4.7
Mediterranean	58	47	81.0	7	12.1	4	6.9
Central Anatolia	44	18	40.9	14	31.8	12	27.3
West Black Sea	47	16	34.0	30	63.8	1	2.1
East Black Sea	40	11	27.5	25	62.5	4	10.0
Northeast Anatolia	52	14	26.9	12	23.1	26	50.0
Middle East Anatolia	47	14	29.8	17	36.2	16	34.0
Southeast Anatolia	65	24	36.9	29	44.6	12	18.5
<b>Total</b>	<b>580</b>	<b>220</b>	<b>37.9</b>	<b>272</b>	<b>46.9</b>	<b>88</b>	<b>15.2</b>

In 37.9% of the schools, the children have access to drinking water free of charge. In 46.9% of the schools, children have access to drinking water for a certain fee. 15.2% of the schools do not have drinking water. (Table 4-9).

**Table 4-10. The Distribution of Providing Milk, Yoghurt, Ayran in the Schools by Regions**

Region	Total Number Of Schools	Milk, Yoghurt, Ayran					
		Free of Charge		Paid		Not Available	
		n	%	n	%	n	%
Istanbul	50	7	14.0	39	78.0	4	8.0
West Marmara	37	4	10.8	27	73.0	6	16.2
Aegean	54	6	11.1	39	72.2	9	16.7
East Marmara	43	7	16.3	33	76.7	3	7.0
West Anatolia	43	10	23.3	31	72.1	2	4.7
Mediterranean	58	13	22.4	36	62.1	9	15.5
Central Anatolia	44	7	15.9	14	31.8	23	52.3
West Black Sea	47	4	8.5	32	68.1	11	23.4
East Black Sea	40	5	12.5	25	62.5	10	25.0
Northeast Anatolia	52	4	7.7	17	32.7	31	59.6
Middle East Anatolia	47	13	27.7	17	36.2	17	36.2
Southeast Anatolia	65	22	33.8	28	43.1	15	23.1
<b>Total</b>	<b>580</b>	<b>102</b>	<b>17.6</b>	<b>338</b>	<b>58.3</b>	<b>140</b>	<b>24.1</b>

Milk, yoghurt and ayran is available free of charge in 17.6% of schools and is available for a certain fee in 58.3% of schools. Milk, ayran and yoghurt are not available in 24.1% of schools (Table 4-10).



**Table 4-11. The Distribution of Providing Fresh Fruit in the Schools by Regions**

Region	Total Number of Schools	Free of Charge		Fresh Fruit Paid		Not Available	
		n	%	n	%	n	%
Istanbul	50	1	2.0	25	50.0	24	48.0
West Marmara	37	-	-	13	35.1	24	64.9
Aegean	54	3	5.6	22	40.7	29	53.7
East Marmara	43	2	4.7	22	51.2	19	44.2
West Anatolia	43	2	4.7	18	41.9	23	53.5
Mediterranean	58	2	3.4	19	32.8	37	63.8
Central Anatolia	44	-	-	7	15.9	37	84.1
West Black Sea	47	1	2.1	18	38.3	28	59.6
East Black Sea	40	4	10.0	16	40.0	20	50.0
Northeast Anatolia	52	1	1.9	5	9.6	46	88.5
Middle east Anatolia	47	1	2.1	8	17.0	38	80.9
Southeast Anatolia	65	3	4.6	15	23.1	47	72.3
<b>Total</b>	<b>580</b>	<b>20</b>	<b>3.4</b>	<b>188</b>	<b>32.4</b>	<b>372</b>	<b>64.1</b>

The fruit is available free of charge in 3.4% of schools and the paid fruit is available in 32.4% of schools. Milk, ayran and yoghurt are not available in 64.1% of schools (Table 4-11).

**Table 4-12. The Distribution of Providing Vegetable in the Schools by Regions**

Region	Total Number of Schools	Free of Charge		Vegetable Paid		Not Available	
		n	%	n	%	n	%
Istanbul	50	1	2.0	6	12.0	43	86.0
West Marmara	37	-	-	4	10.8	33	89.2
Aegean	54	3	5.6	3	5.6	48	88.9
East Marmara	43	2	4.7	6	14.0	35	81.4
West Anatolia	43	1	2.3	4	9.3	38	88.4
Mediterranean	58	2	3.4	3	5.2	53	91.4
Central Anatolia	44	-	-	1	2.3	43	97.7
West Anatolia	47	-	-	4	8.5	43	91.5
East Black Sea	40	2	5.0	4	10.0	34	85.0
Northeast Anatolia	52	-	-	1	1.9	51	98.1
Middle East Anatolia	47	1	2.1	4	8.5	42	89.4
Southeast Anatolia	65	3	4.6	4	6.2	58	89.2
<b>Total</b>	<b>580</b>	<b>15</b>	<b>2.6</b>	<b>44</b>	<b>7.6</b>	<b>521</b>	<b>89.8</b>

Fresh vegetables are available free of charge in 2.6% of schools and the paid ones are available in 7.5% of schools.

89.8% of the schools do not have fresh vegetables (Table 4-12).

**Table 4-13. The Distribution of Providing Canteens and Buffets/Cafeterias in the Schools by Regions**

Region	Total Number of Schools	Canteen		Buffet / Cafeteria	
		n	%	n	%
Istanbul	50	46	92.0	2	4.0
West Marmara	37	28	75.7	2	5.4
Aegean	54	42	77.8	5	9.3
East Marmara	43	40	93.0	4	9.3
West Anatolia	43	34	79.1	5	11.6
Mediterranean	58	46	79.3	10	17.2
Central Anatolia	44	18	40.9	5	11.4
West Black Sea	47	39	83.0	1	2.1
East Black Sea	40	31	77.5	3	7.5
Northeast Anatolia	52	16	30.8	10	19.2
Middle east Anatolia	47	24	51.1	4	8.5
Southeast Anatolia	65	43	66.2	7	10.8
<b>Total</b>	<b>580</b>	<b>407</b>	<b>70.2</b>	<b>58</b>	<b>10.0</b>

70.2% of the schools have a canteen and 10.0% have a buffet/cafeteria. During the survey, it was observed that three schools had automatic sales machines.

**Table 4-14. The Distribution of The Advertising and Marketing Prohibition of Any Energy-Dense and Nutrient-Poor Foods and Beverages That Could Undermine The Promotion of Healthy, Balanced Diet in The Schools by Regions**

Region	Total Number of Schools	Advertising Prohibition					
		Yes		No			
		n	%	n	%		
Istanbul	50	23	46.0	27	54.0		
West Marmara	37	27	73.0	10	27.0		
Aegean	54	41	75.9	13	24.1		
East Marmara	43	34	79.1	9	20.9		
West Anatolia	43	30	69.8	13	30.2		
Mediterranean	58	37	63.8	21	36.2		
Central Anatolia	44	30	68.2	14	31.8		
West Black Sea	47	35	74.5	12	25.5		
East Black Sea	40	36	90.0	4	10.0		
Northeast Black Sea	52	32	61.5	20	38.5		
Middle east Anatolia	47	26	55.3	21	44.7		
Southeast Anatolia	65	43	66.2	22	33.8		
<b>Total</b>	<b>580</b>	<b>394</b>	<b>67.9</b>	<b>186</b>	<b>32.1</b>		

## 4.2. CHARACTERISTICS OF FAMILIES AND THEIR OPINIONS ON THEIR CHILDREN'S LIFESTYLE

In this section, some socio-demographic characteristics of the families/ parents and their opinions on the lifestyle of their children have been learned.

**Table 4-15. Relationship of Respondents to the Children in the Regions**

NUTS	Respondent	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Mother	68.7	0.8	67.1	70.2	7780
	Father	27.7	0.8	26.2	29.3	3180
	Other	3.6	0.3	3.1	4.2	390
	Total	100.0	0.0	100.0	100.0	11350
İstanbul	Mother	76.7	1.7	73.2	79.8	893
	Father	20.6	1.7	17.4	24.2	241
	Other	2.8	0.6	1.9	4.1	33
	Total	100.0	0.0	100.0	100.0	1167
West Marmara	Mother	72.5	2.6	67.2	77.2	516
	Father	24.5	2.4	20.1	29.6	172
	Other	3.0	1.1	1.5	5.9	14
	Total	100.0	0.0	100.0	100.0	702
Aegean	Mother	77.3	1.9	73.3	80.8	803
	Father	20.4	1.9	16.9	24.5	222
	Other	2.3	0.5	1.4	3.5	21
	Total	100.0	0.0	100.0	100.0	1046
East Marmara	Mother	74.5	2.4	69.4	79	670
	Father	22.9	2.3	18.7	27.6	210
	Other	2.6	0.7	1.6	4.3	24
	Total	100.0	0.0	100.0	100.0	904
West Anatolia	Mother	78.3	2.0	74.0	82.0	683
	Father	19.5	2.1	15.7	23.9	160
	Other	2.3	0.6	1.4	3.8	22
	Total	100.0	0.0	100.0	100.0	865
Mediterranean	Mother	72.2	2.2	67.7	76.3	856
	Father	24.7	2.3	20.4	29.5	306
	Other	3.1	0.7	2.0	4.9	30
	Total	100.0	0.0	100.0	100.0	1192
Central Anatolia	Mother	72.4	3.0	66.1	78.0	634
	Father	24.4	2.9	19.1	30.4	213
	Other	3.2	0.7	2.0	5.0	25
	Total	100.0	0.0	100.0	100.0	872
West Black Sea	Mother	76.1	2.6	70.7	80.8	683
	Father	20.8	2.2	16.8	25.5	185
	Other	3.1	0.7	1.9	4.8	22
	Total	100.0	0.0	100.0	100.0	890
East Black Sea	Mother	68.6	3.0	62.3	74.2	484
	Father	27.7	3.1	22.1	34.1	168
	Other	3.7	0.9	2.3	5.9	24
	Total	100.0	0.0	100.0	100.0	676
Northeast Anatolia	Mother	54.2	3.4	47.5	60.7	484
	Father	40.9	3.0	35.2	46.9	341
	Other	4.9	0.9	3.4	7.1	43
	Total	100.0	0.0	100.0	100.0	868
Middle East Anatolia	Mother	53.6	2.9	47.8	59.3	441
	Father	42.9	2.9	37.3	48.6	381
	Other	3.6	0.6	2.5	5.0	32
	Total	100.0	0.0	100.0	100.0	854
Southeast Anatolia	Mother	45.1	3.1	39.2	51.2	633
	Father	47.4	3.0	41.5	53.3	581
	Other	7.5	1.4	5.2	10.6	100
	Total	100.0	0.0	100.0	100.0	1314

For the questionnaires which contain the socio-demographic characteristics of the families and their opinions on their children's lifestyles, two third of such questionnaires (68.7%) were answered by mothers and approximately one third of the questionnaires (27.7%) were answered by fathers. The percentage of answering rate of fathers increases up to 50% in East Anatolia Region (Table 4-15).

#### 4.2.1. General Characteristics of the Family

**Table 4-16. The Distribution of Household Size by Regions**

Region	Household Size		95% Confidence Interval		Percentage		
	Average	Standard Error	Lower value	Upper Value	25%	50%	75%
Turkey (n=9,786)	5.1	0.0	5.0	5.2	4	5	6
İstanbul	4.7	0.1	4.5	4.8	4	4	5
West Marmara	4.5	0.1	4.3	4.7	4	4	5
Aegean	4.5	0.1	4.3	4.8	4	4	5
East Marmara	4.7	0.1	4.5	4.9	4	4	5
West Anatolia	4.6	0.1	4.4	4.8	4	4	5
Mediterranean	4.9	0.1	4.7	5.2	4	5	5
Central Anatolia	5.0	0.1	4.7	5.3	4	5	6
West Black Sea	4.8	0.1	4.6	5.1	4	4	6
East Black Sea	4.9	0.1	4.7	5.2	4	5	6
Northeast Anatolia	5.7	0.2	5.4	6.0	4	5	6
Middle East Anatolia	5.9	0.2	5.5	6.3	4	5	7
Southeast Anatolia	6.5	0.2	6.0	6.9	5	6	8

The average household population is 5.1 people in Turkey. In the Northeast, Middle East and Southeast Anatolian Regions, the number of average individuals who are living in the household is statistically and significantly higher compared to other regions of the country.

**Table 4-17. The Distribution of Number of Individuals under 18 in the Households by Regions**

Region	<18 years-old Individual		95 % Confidence Interval		Percentage		
	Average	Standard Error	Lower value	Upper Value	25%	50%	75%
Turkey (n=9,786)	2.6	0.0	2.5	2.7	2	2	3
İstanbul	2.3	0.0	2.2	2.3	2	2	3
West Marmara	2.2	0.1	2.0	2.3	2	2	2
Aegean	2.2	0.0	2.1	2.3	2	2	3
East Marmara	2.3	0.1	2.1	2.4	2	2	3
West Anatolia	2.3	0.1	2.2	2.4	2	2	3
Mediterranean	2.6	0.1	2.4	2.8	2	2	3
Central Anatolia	2.6	0.1	2.4	2.8	2	2	3
West Black Sea	2.2	0.1	2.1	2.4	2	2	3
East Black Sea	2.3	0.1	2.2	2.5	2	2	3
Northeast Anatolia	2.9	0.1	2.7	3.1	2	3	3
Middle East Anatolia	3.2	0.1	2.9	3.5	2	3	4
Southeast Anatolia	3.7	0.2	3.4	4.0	2	3	4

The average number of people under the age of 18 living in the household is 2.6. In the Middle East and Southeast Anatolia Regions, the number of people living under the age of 18 is statistically higher than the country average and other regions. (Table 4-17)

**Table 4-18. The Distribution of Level of Education of Mothers by Regions**

NUTS	Level of Education of Mother	%	95% Confidence interval			Unweighted Number
			Standard Error	Lower Value	Upper Value	
Turkey	Illiterate	9.4	0.8	8.0	11.0	1008
	Literate	3.6	0.3	3.0	4.2	370
	Primary School	35.6	1.0	33.6	37.6	4059
	Secondary School	17.8	0.6	16.6	19.1	2056
	High School	20.7	0.7	19.3	22.1	2425
	Higher Education	12.9	0.9	11.3	14.8	1434
	Total	100.0	0.0	100.0	100.0	11352
İstanbul	Illiterate	4.7	1.0	3.1	7.0	58
	Literate	2.3	0.5	1.6	3.5	31
	Primary School	35.8	3.2	29.9	42.2	447
	Secondary School	18.6	1.6	15.6	22.1	226
	High School	23.6	2.0	19.9	27.8	256
	Higher Education	15.0	2.8	10.3	21.3	147
	Total	100.0	0.0	100.0	100.0	1165
West Marmara	Illiterate	5.6	1.4	3.3	9.1	30
	Literate	2.5	1.0	1.2	5.3	14
	Primary School	32.6	3.2	26.6	39.2	215
	Secondary School	17.7	1.9	14.2	21.8	123
	High School	24.1	2.7	19.2	29.8	170
	Higher Education	17.5	3.6	11.5	25.8	140
	Total	100.0	0.0	100.0	100.0	692
Aegean	Illiterate	5.6	1.8	2.9	10.5	54
	Literate	2.2	0.6	1.2	3.8	23
	Primary School	36.8	3.1	30.9	43.1	366
	Secondary School	17.3	2.5	12.9	22.7	173
	High School	22.9	2.5	18.4	28.0	250
	Higher Education	15.4	2.9	10.4	22.0	173
	Total	100.0	0.0	100.0	100.0	1039
East Marmara	Illiterate	4.8	1.3	2.7	8.2	41
	Literate	3.2	1.1	1.7	6.1	28
	Primary School	38.4	3.4	32.0	45.2	340
	Secondary School	16.7	1.6	13.7	20.2	148
	High School	23.3	2.3	19.1	28.0	222
	Higher Education	13.7	2.6	9.4	19.5	125
	Total	100.0	0.0	100.0	100.0	904
West Anatolia	Illiterate	3.6	0.9	2.2	6.0	26
	Literate	1.1	0.3	0.6	2.0	9
	Primary School	28.6	2.7	23.5	34.2	245
	Secondary School	18.3	1.7	15.1	22.0	166
	High School	30.7	2.7	25.7	36.2	285
	Higher Education	17.8	3.6	11.7	26.1	130
	Total	100.0	0.0	100.0	100.0	861
Mediterranean	Illiterate	7.3	1.8	4.5	11.6	84
	Literate	3.0	0.8	1.8	4.9	38
	Primary School	32.1	2.5	27.5	37.2	386
	Secondary School	20.9	2.1	17.0	25.3	242
	High School	22.2	2.0	18.5	26.5	279
	Higher Education	14.5	2.5	10.3	20.0	177
	Total	100.0	0.0	100.0	100.0	1206

Continuation of Table 4-18			95% Confidence Interval			
NUTS	Level of Education of Mother	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Illiterate	2.5	1.1	1.1	6.0	24
	Literate	1.0	0.4	0.5	2.2	9
	Primary School	40.6	4.0	33.0	48.6	340
	Secondary School	24.6	2.6	19.9	30.0	218
	High School	22.8	3.2	17.1	29.6	213
	Higher Education	8.5	2.4	4.8	14.6	77
	Total	100.0	0.0	100.0	100.0	881
West Black Sea	Illiterate	2.2	0.9	1.0	5.0	21
	Literate	1.1	0.4	0.5	2.3	11
	Primary School	39.6	3.3	33.4	46.2	330
	Secondary School	19.6	2.3	15.5	24.5	171
	High School	22.3	2.0	18.6	26.6	207
	Higher Education	15.1	2.8	10.4	21.5	144
	Total	100.0	0.0	100.0	100.0	884
East Black Sea	Illiterate	1.8	0.6	1.0	3.4	12
	Literate	1.9	0.7	0.9	3.7	11
	Primary School	36.2	3.4	29.9	43.1	236
	Secondary School	22.6	2.1	18.8	27.1	150
	High School	24.3	2.6	19.4	29.8	172
	Higher Education	13.1	2.4	9.1	18.6	92
	Total	100.0	0.0	100.0	100.0	673
Northeast Anatolia	Illiterate	11.6	2.1	8.1	16.3	97
	Literate	3.6	0.9	2.2	6.0	31
	Primary School	43.5	2.1	39.4	47.7	363
	Secondary School	17.5	1.5	14.8	20.6	155
	High School	16.2	1.8	12.9	20.1	141
	Higher Education	7.6	1.7	4.9	11.7	72
	Total	100.0	0.0	100.0	100.0	859
Middle East Anatolia	Illiterate	21.9	3.1	16.4	28.7	211
	Literate	6.9	1.0	5.1	9.2	58
	Primary School	36.9	2.7	31.8	42.3	311
	Secondary School	13.0	1.4	10.4	16.1	105
	High School	13.3	2.4	9.3	18.7	123
	Higher Education	8.0	2.9	3.9	15.8	63
	Total	100.0	0.0	100.0	100.0	871
Southeast Anatolia	Illiterate	27.1	4.1	19.8	35.9	350
	Literate	9.2	1.5	6.6	12.6	107
	Primary School	35.4	3.1	29.5	41.7	480
	Secondary School	13.1	1.7	10.2	16.7	179
	High School	8.2	1.5	5.7	11.8	107
	Higher Education	7.0	2.3	3.7	13.0	94
	Total	100.0	0.0	100.0	100.0	1.317

The percentage of illiterate mother was found as 9.4% in this study, this percentage was 11.5% in Northeast Anatolia Region, 21.9% in the Middle East Anatolia Region and 27% in Southeast Anatolia Region. The percentage of mothers who are only literate is 3.6%, while it increases to 6.9% in the Middle East Anatolia and to 9.2% in Southeast Anatolia Region. (Table 4-18).

**Table 4-19. The Distribution of Level of Education of Fathers by Regions**

NUTS	Level of Education of Father	%	95% Confidence interval			Unweighted Number
			Standard Error	Lower Value	Upper Value	
Turkey	Illiterate	2.0	0.2	1.6	2.5	207
	Literate	2.0	0.2	1.6	2.5	209
	Primary School	31.4	1.0	29.5	33.4	3403
	Secondary School	18.9	0.6	17.8	20.0	2110
	High School	27.4	0.7	25.9	28.9	3229
	Higher Education	18.4	1.0	16.5	20.5	2082
	Total	100.0	0.0	100.0	100.0	11240
İstanbul	Illiterate	0.4	0.2	0.2	0.9	7
	Literate	0.7	0.2	0.4	1.3	10
	Primary School	30.2	2.9	24.9	36.1	373
	Secondary School	21.4	1.5	18.5	24.6	255
	High School	27.1	1.7	23.9	30.6	315
	Higher Education	20.2	3.4	14.3	27.6	195
	Total	100.0	0.0	100.0	100.0	1155
West Marmara	Illiterate	1.4	0.8	0.5	4.3	8
	Literate	1.1	0.4	0.5	2.3	7
	Primary School	30.3	3.9	23.3	38.4	184
	Secondary School	15.8	1.9	12.4	19.8	113
	High School	30.2	2.9	24.8	36.2	210
	Higher Education	21.2	3.8	14.6	29.7	161
	Total	100.0	0.0	100.0	100.0	683
Aegean	Illiterate	1.5	0.8	0.6	4.1	15
	Literate	0.7	0.3	0.3	1.6	7
	Primary School	30.1	3.0	24.6	36.2	309
	Secondary School	15.5	2.2	11.8	20.3	163
	High School	31.9	3.3	25.8	38.8	313
	Higher Education	20.2	2.9	15.1	26.5	215
	Total	100.0	0.0	100.0	100.0	1022
East Marmara	Illiterate	1.0	0.6	0.3	3.0	6
	Literate	2.0	0.8	0.9	4.5	18
	Primary School	30.2	3.5	23.9	37.4	250
	Secondary School	18.0	1.4	15.5	20.9	167
	High School	29.8	2.3	25.4	34.6	279
	Higher Education	19.0	2.8	14.1	25.2	175
	Total	100.0	0.0	100.0	100.0	895
West Anatolia	Illiterate	1.3	0.5	0.6	2.6	9
	Literate	0.8	0.3	0.4	1.8	6
	Primary School	23.8	2.5	19.2	29.1	198
	Secondary School	18.4	1.7	15.3	22.0	163
	High School	31.8	2.3	27.5	36.4	279
	Higher Education	23.9	3.6	17.6	31.6	191
	Total	100.0	0.0	100.0	100.0	846
Mediterranean	Illiterate	1.5	0.5	0.8	2.9	16
	Literate	2.5	0.7	1.4	4.4	29
	Primary School	32.2	2.9	26.7	38.2	360
	Secondary School	19.6	1.6	16.8	22.9	230
	High School	24.8	1.7	21.6	28.2	311
	Higher Education	19.4	2.8	14.4	25.6	249
	Total	100.0	0.0	100.0	100.0	1195

Continuation of Table 4-19			95% Confidence Interval			
NUTS	Level of Education of Father	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Illiterate	0.5	0.2	0.2	1.3	5
	Literate	0.4	0.3	0.1	1.3	4
	Primary School	35.8	4.2	28.0	44.4	298
	Secondary School	18.9	2.8	14.0	24.9	163
	High School	27.9	3.4	21.7	35.1	260
	Higher Education	16.4	3.2	11.0	23.7	154
	Total	100.0	0.0	100.0	100.0	884
West Black Sea	Illiterate	0.5	0.3	0.2	1.4	4
	Literate	0.5	0.2	0.2	1.3	4
	Primary School	28.2	3.6	21.8	35.7	229
	Secondary School	22.3	2.6	17.5	27.8	189
	High School	28.4	2.3	24.1	33.2	265
	Higher Education	20.1	3.3	14.5	27.3	182
	Total	100.0	0.0	100.0	100.0	873
East Black Sea	Illiterate	0.6	0.3	0.2	1.8	4
	Literate	1.0	0.4	0.5	2.0	7
	Primary School	27.9	2.9	22.6	33.9	184
	Secondary School	21.4	2.4	17.0	26.6	132
	High School	30.7	2.0	26.9	34.7	216
	Higher Education	18.5	3.1	13.2	25.3	125
	Total	100.0	0.0	100.0	100.0	668
Northeast Anatolia	Illiterate	1.8	0.5	1.1	3.1	19
	Literate	2.4	0.6	1.5	3.9	22
	Primary School	29.6	2.7	24.6	35.1	242
	Secondary School	19.1	1.5	16.2	22.2	150
	High School	29.8	2.1	25.8	34.2	263
	Higher Education	17.3	2.8	12.5	23.5	162
	Total	100.0	0.0	100.0	100.0	858
Middle East Anatolia	Illiterate	4.6	1.0	2.9	7.1	39
	Literate	2.4	0.6	1.4	3.9	22
	Primary School	35.4	3.9	28.2	43.3	301
	Secondary School	17.4	1.7	14.4	20.9	153
	High School	26.1	2.5	21.5	31.4	218
	Higher Education	14.1	2.7	9.6	20.2	121
	Total	100.0	0.0	100.0	100.0	854
Southeast Anatolia	Illiterate	5.9	1.3	3.7	9.2	75
	Literate	5.7	1.1	3.8	8.3	73
	Primary School	37.2	2.7	32.1	42.6	475
	Secondary School	18.3	1.6	15.5	21.6	232
	High School	20.8	2.2	16.8	25.4	300
	Higher Education	12.1	2.6	7.8	18.3	152
	Total	100.0	0.0	100.0	100.0	1307

Education levels of fathers are higher than mothers. Among fathers, the percentage of illiteracy is 2.0% and only literacy is 2.0%. However, these percentages are found as 4.6% and 2.4% in Middle East Anatolian Region and 5.9% and 5.7% in the Southeast Anatolian Region. (Table 4-19).



**Table 4-20. The Distribution of the Families' Opinions regarding their Economic Situations by Regions (passing the month with earnings)**

NUTS	The Status of Passing Month with Earnings	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Easily	25.5	0.8	24.0	27.1	2978
	Without serious problems	32.4	0.7	31.0	33.8	3665
	Have trouble meeting the ends	29.3	0.8	27.7	30.8	3266
	Barely meet the ends	12.8	0.6	11.8	14.0	1407
	Total	100.0	0.0	100.0	100.0	11316
Istanbul	Easily	27.3	2.2	23.2	31.8	292
	Without serious problems	34.7	1.8	31.3	38.4	404
	Have trouble meeting the ends	28.5	2.1	24.5	32.8	353
	Barely meet the ends	9.5	1.1	7.6	11.9	120
	Total	100.0	0.0	100.0	100.0	1169
West Marmara	Easily	30.9	3.0	25.4	37.0	219
	Without serious problems	30.8	2.6	26.1	36.0	228
	Have trouble meeting the ends	27.0	2.8	21.8	32.8	185
	Barely meet the ends	11.3	2.1	7.7	16.1	62
	Total	100.0	0.0	100.0	100.0	694
Aegean	Easily	28.3	3.1	22.6	34.7	290
	Without serious problems	36.1	2.9	30.6	41.9	388
	Have trouble meeting the ends	24.7	2.8	19.6	30.5	237
	Barely meet the ends	11.0	2.1	7.5	15.9	120
	Total	100.0	0.0	100.0	100.0	1035
East Marmara	Easily	24.5	1.9	20.9	28.5	235
	Without serious problems	40.3	2.6	35.4	45.4	353
	Have trouble meeting the ends	26.2	2.1	22.2	30.6	247
	Barely meet the ends	9.0	1.6	6.3	12.5	67
	Total	100.0	0.0	100.0	100.0	902
West Anatolia	Easily	27.0	2.9	21.6	33.2	222
	Without serious problems	36.4	2.0	32.6	40.3	319
	Have trouble meeting the ends	26.1	2.3	21.9	30.9	230
	Barely meet the ends	10.5	1.4	8.1	13.5	88
	Total	100.0	0.0	100.0	100.0	859
Mediterranean	Easily	25.9	2.3	21.6	30.8	305
	Without serious problems	30.9	1.9	27.4	34.7	376
	Have trouble meeting the ends	29.8	2.4	25.3	34.8	365
	Barely meet the ends	13.3	1.6	10.5	16.9	153
	Total	100.0	0.0	100.0	100.0	1199
Central Anatolia	Easily	28.4	3.1	22.6	34.9	260
	Without serious problems	29.6	3.1	24.0	36.0	267
	Have trouble meeting the ends	28.6	3.3	22.6	35.5	252
	Barely meet the ends	13.4	2.4	9.4	18.8	105
	Total	100.0	0.0	100.0	100.0	884
West Black Sea	Easily	29.1	2.8	23.9	34.9	268
	Without serious problems	33.9	2.6	29.0	39.1	308
	Have trouble meeting the ends	25.3	2.4	20.9	30.2	211
	Barely meet the ends	11.8	2.2	8.1	16.9	94
	Total	100.0	0.0	100.0	100.0	881

Continuation of Table 4-20			95% Confidence Interval			
NUTS	The Status of Passing Month with Earnings	%	Standard Error	Lower Value	Upper Value	Unweighted Number
East Black Sea	Easily	33.6	2.8	28.4	39.3	225
	Without serious problems	29.1	2.5	24.5	34.3	211
	Have trouble meeting the ends	24.7	2.5	20.0	30.0	163
	Barely meet the ends	12.6	2.2	8.9	17.5	72
	Total	100.0	0.0	100.0	100.0	671
Northeast Anatolia	Easily	28.0	1.8	24.5	31.7	245
	Without serious problems	29.0	2.0	25.3	33.1	246
	Have trouble meeting the ends	28.1	1.8	24.7	31.8	237
	Barely meet the ends	14.9	1.7	11.8	18.6	125
	Total	100.0	0.0	100.0	100.0	853
Middle East Anatolia	Easily	24.6	3.1	19.0	31.1	204
	Without serious problems	27.5	1.8	24.2	31.1	243
	Have trouble meeting the ends	31.7	2.3	27.4	36.3	284
	Barely meet the ends	16.2	2.2	12.4	20.9	138
	Total	100.0	0.0	100.0	100.0	869
SouthEast Anatolia	Easily	15.9	1.6	13.0	19.2	213
	Without serious problems	24.9	2.1	21.0	29.2	322
	Have trouble meeting the ends	39.2	2.4	34.5	44.0	502
	Barely meet the ends	20.1	2.0	16.5	24.3	263
	Total	100.0	0.0	100.0	100.0	1300

The opinions of the families about their economic situation were learned with the question " Including all your household earnings per month, please tick the box which best represents your household situation?". 25.5% of the families state that they can easily make ends meet, 32.3% state that they pass the month without serious problems with their earnings, 29.3% state that they have trouble meeting the ends the month with their earnings, 12.8% state that they barely meet the ends in the month with their earnings. (Table 4-20).

**Table 4-21. The Distribution of Employment Status of Mothers by Regions**

		95% Confidence interval				
NUTS	Employment Status of Mother	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Turkey	Government employed	5.7	0.5	4.8	6.8	662
	Non-government employed	7.7	0.5	6.9	8.6	872
	Self-employed	3.0	0.3	2.5	3.8	311
	Student	0.5	0.1	0.4	0.8	69
	Housewife	78.7	0.9	77.0	80.4	8934
	Unemployed, able to work	3.3	0.3	2.8	3.9	350
	Unemployed, unable to work	0.7	0.1	0.5	0.9	72
	Retired	0.3	0.1	0.2	0.4	28
	Total	100.0	0.0	100.0	100.0	11298
	İstanbul	Government employed	4.2	0.9	2.8	6.3
Non-government employed		10.7	1.7	7.7	14.5	111
Self-employed		2.7	0.5	1.8	3.9	33
Student		0.6	0.2	0.3	1.3	8
Housewife		77.6	2.3	72.8	81.7	924
Unemployed, able to work		3.1	0.7	2.0	4.7	33
Unemployed, unable to work		0.7	0.3	0.4	1.5	10
Retired		0.4	0.2	0.2	1.1	4
Total		100.0	0.0	100.0	100.0	1167

Continuation of Table 4-21		95% Confidence Interval				
NUTS	Employment Status of Mother	%	Standard Error	Lower Value	Upper Value	Unweighted Number
West Marmara	Government employed	9.2	2.3	5.6	14.8	74
	Non-government employed	16.3	2.0	12.8	20.5	115
	Self-employed	3.4	0.8	2.2	5.4	23
	Student	0.4	0.2	0.1	1.0	3
	Housewife	64.8	3.7	57.2	71.6	437
	Unemployed, able to work	5.1	1.5	2.8	9.0	32
	Unemployed, unable to work	0.5	0.3	0.2	1.6	3
	Retired	0.4	0.2	0.1	1.2	3
	Total	100.0	0.0	100.0	100.0	690
Aegean	Government employed	7.0	1.9	4.1	11.8	78
	Non-government employed	9.9	1.5	7.3	13.4	119
	Self-employed	5.5	1.9	2.7	10.8	50
	Student	0.4	0.3	0.1	1.8	2
	Housewife	71.0	3.5	63.8	77.4	730
	Unemployed, able to work	5.4	1.9	2.7	10.4	45
	Unemployed, unable to work	0.4	0.2	0.2	1.0	5
	Retired	0.3	0.2	0.1	0.9	3
	Total	100.0	0.0	100.0	100.0	1032
East Marmara	Government employed	4.8	1.0	3.2	7.3	43
	Non-government employed	12.8	1.9	9.6	16.9	113
	Self-employed	4.6	0.8	3.2	6.5	40
	Student	0.6	0.2	0.3	1.2	7
	Housewife	72.4	2.9	66.4	77.6	650
	Unemployed, able to work	3.6	0.7	2.4	5.3	36
	Unemployed, unable to work	0.6	0.5	0.2	2.6	3
	Retired	0.6	0.3	0.2	1.8	4
	Total	100.0	0.0	100.0	100.0	896
West Anatolia	Government employed	7.0	1.4	4.7	10.2	55
	Non-government employed	9.6	1.4	7.2	12.7	82
	Self-employed	2.3	0.9	1.0	5.0	14
	Student	0.6	0.3	0.2	1.4	5
	Housewife	76.9	2.8	71.0	82.0	671
	Unemployed, able to work	2.9	0.8	1.7	5.0	23
	Unemployed, unable to work	0.3	0.3	0.1	1.5	2
	Retired	0.3	0.2	0.1	1.0	3
	Total	100.0	0.0	100.0	100.0	855
Mediterranean	Government employed	6.9	1.5	4.5	10.5	84
	Non-government employed	6.7	1.1	4.8	9.4	83
	Self-employed	5.0	1.2	3.0	8.0	60
	Student	0.3	0.1	0.1	0.7	4
	Housewife	77.4	2.7	71.6	82.3	918
	Unemployed, able to work	3.0	0.5	2.1	4.3	36
	Unemployed, unable to work	0.5	0.2	0.2	1.2	8
	Retired	0.2	0.1	0.1	0.6	3
	Total	100.0	0.0	100.0	100.0	1196
Central Anatolia	Government employed	4.5	1.5	2.3	8.6	41
	Non-government employed	2.5	0.7	1.5	4.2	22
	Self-employed	1.3	0.5	0.6	2.8	13
	Student	1.6	1.1	0.4	6.1	12
	Housewife	88.1	2.5	82.4	92.1	772
	Unemployed, able to work	1.5	0.5	0.8	2.7	14
	Unemployed, unable to work	0.3	0.2	0.1	0.9	3
	Retired	0.2	0.2	0.1	0.9	2
	Total	100.0	0.0	100.0	100.0	879

Continuation of Table 4-21			95% Confidence Interval			
NUTS	Employment Status of Mother	%	Standard Error	Lower Value	Upper Value	Unweighted Number
West Black Sea	Government employed	8.6	2.7	4.5	15.6	71
	Non-government employed	11.4	1.5	8.8	14.7	109
	Self-employed	2.1	0.7	1.1	3.9	25
	Student	1.3	0.8	0.4	4.0	15
	Housewife	73.2	3.4	66.1	79.2	622
	Unemployed, able to work	3.0	0.7	2.0	4.6	29
	Unemployed, unable to work	0.4	0.2	0.1	1.0	4
	Retired	0.1	0.1	0.0	0.8	1
	Total	100.0	0.0	100.0	100.0	876
East Black Sea	Government employed	6.5	1.8	3.8	10.9	43
	Non-government employed	8.3	1.5	5.8	11.7	61
	Self-employed	1.0	0.4	0.4	2.4	9
	Student	-	-	-	-	-
	Housewife	80.3	2.5	74.8	84.8	525
	Unemployed, able to work	3.8	0.9	2.3	6.1	26
	Unemployed, unable to work	0.1	0.1	0.0	0.9	1
	Retired	-	-	-	-	-
	Total	100.0	0.0	100.0	100.0	665
Northeast Anatolia	Government employed	4.1	0.9	2.6	6.3	38
	Non-government employed	2.5	0.7	1.4	4.5	21
	Self-employed	1.8	0.5	1.0	3.2	15
	Student	0.4	0.2	0.2	1.2	4
	Housewife	87.8	1.7	84.0	90.8	758
	Unemployed, able to work	2.4	0.7	1.4	4.3	19
	Unemployed, unable to work	0.9	0.5	0.3	2.6	5
	Retired	-	-	-	-	-
	Total	100.0	0.0	100.0	100.0	860
Middle East Anatolia	Government employed	5.6	2.6	2.2	13.7	40
	Non-government employed	1.7	0.5	1.0	3.2	16
	Self-employed	1.4	0.5	0.7	2.7	12
	Student	0.3	0.2	0.1	1.0	3
	Housewife	87.0	3.0	79.9	91.8	769
	Unemployed, able to work	2.4	0.5	1.6	3.6	20
	Unemployed, unable to work	1.1	0.5	0.5	2.5	8
	Retired	0.4	0.3	0.1	1.7	2
	Total	100.0	0.0	100.0	100.0	870
Southeast Anatolia	Government employed	3.9	1.8	1.6	9.4	51
	Non-government employed	1.5	0.4	0.8	2.6	20
	Self-employed	1.3	0.4	0.8	2.3	17
	Student	0.4	0.2	0.2	1.1	6
	Housewife	88.1	1.9	83.8	91.5	1158
	Unemployed, able to work	3.1	0.6	2.1	4.6	37
	Unemployed, unable to work	1.4	0.4	0.8	2.5	20
	Retired	0.2	0.1	0.1	0.6	3
	Total	100.0	0.0	100.0	100.0	1312

82.0% of the mothers do not work in an income-generating business. The large majority of this group consists of housewives (78.7%). 3.3% of the mothers stated that they are unemployed.(Table 4-21).

**Table 4-22. The Distribution of the Employment Status of Fathers**

NUTS	Employment Status of Fathers	95% Confidence interval				
		% Standard Error	Lower Value	Upper Value	Unweighted Number	
Turkey	Government employed	12.2	0.6	11.1	13.5	1515
	Non-government employed	41.2	0.9	39.5	42.9	4533
	Self-employed	28.0	0.8	26.4	29.6	2970
	Student	0.1	0.0	0.1	0.2	16
	Household Works	1.2	0.2	1.0	1.6	143
	Unemployed, able to work	12.8	0.6	11.6	14.1	1348
	Unemployed, unable to work	2.4	0.2	2.0	2.9	264
	Retired	2.1	0.2	1.8	2.4	236
	Total	100.0	0.0	100.0	100.0	11025
İstanbul	Government employed	5.3	1.0	3.7	7.6	61
	Non-government employed	55.0	2.0	51.2	58.9	634
	Self-employed	29.1	2.1	25.1	33.5	312
	Student	-	-	-	-	-
	Household Works	0.4	0.2	0.2	0.9	6
	Unemployed, able to work	7.0	0.9	5.5	8.8	83
	Unemployed, unable to work	0.9	0.3	0.5	1.5	11
	Retired	2.3	0.5	1.5	3.4	26
	Total	100.0	0.0	100.0	100.0	1133
West Marmara	Government employed	15.0	2.8	10.3	21.2	98
	Non-government employed	44.0	3.9	36.6	51.7	336
	Self-employed	23.7	1.8	20.3	27.5	145
	Student	-	-	-	-	-
	Household Works	0.4	0.3	0.1	2.0	2
	Unemployed, able to work	11.3	2.2	7.7	16.4	57
	Unemployed, unable to work	2.8	1.0	1.4	5.6	11
	Retired	2.8	0.7	1.7	4.4	19
	Total	100.0	0.0	100.0	100.0	668
Aegean	Government employed	13.8	2.0	10.3	18.3	146
	Non-government employed	43.2	3.1	37.3	49.3	447
	Self-employed	29.4	2.8	24.2	35.2	297
	Student	-	-	-	-	-
	Household Works	0.6	0.3	0.3	1.5	7
	Unemployed, able to work	8.9	2.1	5.5	14.1	78
	Unemployed, unable to work	2.0	0.8	0.9	4.3	19
	Retired	2.1	0.4	1.4	3.2	23
	Total	100.0	0.0	100.0	100.0	1017
East Marmara	Government employed	10.1	1.5	7.6	13.4	88
	Non-government employed	52.7	2.8	47.1	58.1	469
	Self-employed	26.3	2.4	21.8	31.3	233
	Student	0.1	0.1	0.0	0.6	1
	Household Works	0.5	0.2	0.2	1.3	4
	Unemployed, able to work	7.0	1.5	4.5	10.7	52
	Unemployed, unable to work	1.3	0.4	0.7	2.4	12
	Retired	2.1	0.5	1.4	3.2	20
	Total	100.0	0.0	100.0	100.0	879
West Anatolia	Government employed	16.4	1.9	13.0	20.5	135
	Non-government employed	42.8	2.7	37.6	48.1	376
	Self-employed	27.5	2.4	23.0	32.6	219
	Student	0.4	0.3	0.1	1.5	2
	Household Works	0.9	0.3	0.4	1.9	7
	Unemployed, able to work	8.9	1.4	6.5	12.0	72
	Unemployed, unable to work	1.2	0.4	0.6	2.2	9
	Retired	2.0	0.6	1.1	3.5	17
	Total	100.0	0.0	100.0	100.0	837
Mediterranean	Government employed	12.7	1.7	9.7	16.5	164
	Non-government employed	38.7	2.5	33.8	43.8	462
	Self-employed	29.4	2.3	25.2	34.0	334
	Student	-	-	-	-	-

	Household Works	1.1	0.4	0.5	2.1	11
	Unemployed, able to work	13.5	1.9	10.2	17.6	140
	Unemployed, unable to work	2.7	0.9	1.3	5.2	34
	Retired	2.0	0.5	1.3	3.1	27
	Total	100.0	0.0	100.0	100.0	1172
Central Anatolia	Government employed	11.8	2.5	7.8	17.6	112
	Non-government employed	40.7	4.7	31.8	50.2	359
	Self-employed	31.2	4.1	23.7	39.8	260
	Student	0.1	0.1	0.0	0.5	1
	Household Works	2.1	0.7	1.0	4.1	19
	Unemployed, able to work	11.0	2.4	7.1	16.6	89
	Unemployed, unable to work	1.5	0.5	0.8	2.9	14
	Retired	1.7	0.6	0.9	3.3	15
	Total	100.0	0.0	100.0	100.0	869
West Black Sea	Government employed	17.2	2.7	12.6	23.1	157
	Non-government employed	42.0	2.6	37.0	47.1	361
	Self-employed	24.2	1.9	20.6	28.1	206
	Student	0.1	0.1	0.0	0.5	1
	Household Works	1.4	0.6	0.6	3.3	10
	Unemployed, able to work	10.8	1.8	7.7	15.0	82
	Unemployed, unable to work	1.6	0.5	0.9	2.8	15
	Retired	2.7	0.6	1.8	4.1	20
	Total	100.0	0.0	100.0	100.0	852
East Black Sea	Government employed	15.8	2.0	12.1	20.2	106
	Non-government employed	35.9	3.5	29.4	42.9	249
	Self-employed	25.6	2.2	21.5	30.0	172
	Student	0.2	0.2	0.0	1.2	1
	Household Works	2.3	0.8	1.1	4.6	16
	Unemployed, able to work	15.9	3.4	10.4	23.7	83
	Unemployed, unable to work	1.6	0.6	0.8	3.2	10
	Retired	2.8	0.6	1.9	4.3	21
	Total	100.0	0.0	100.0	100.0	658
Northeast Anatolia	Government employed	19.9	2.4	15.7	24.9	176
	Non-government employed	26.4	2.5	21.8	31.6	229
	Self-employed	27.2	2.1	23.3	31.4	234
	Student	0.2	0.2	0.0	1.0	2
	Household Works	1.6	0.6	0.8	3.2	12
	Unemployed, able to work	20.3	2.7	15.5	26.2	160
	Unemployed, unable to work	2.9	0.7	1.8	4.6	23
	Retired	1.4	0.4	0.8	2.5	12
	Total	100.0	0.0	100.0	100.0	848
Middle East Anatolia	Government employed	15.0	2.4	10.9	20.3	128
	Non-government employed	30.1	2.4	25.7	35.0	259
	Self-employed	24.8	2.4	20.4	29.9	211
	Student	0.2	0.2	0.1	0.9	2
	Household Works	2.8	0.8	1.6	5.0	22
	Unemployed, able to work	21.0	2.6	16.4	26.5	174
	Unemployed, unable to work	4.1	1.1	2.5	6.9	33
	Retired	1.8	0.5	1.1	3.1	15
	Total	100.0	0.0	100.0	100.0	844
Southeast Anatolia	Government employed	11.6	2.3	7.8	16.9	144
	Non-government employed	26.2	2.8	21.1	32.1	352
	Self-employed	28.4	2.4	23.9	33.5	347
	Student	0.4	0.2	0.2	1.0	6
	Household Works	2.4	0.8	1.3	4.5	27
	Unemployed, able to work	24.0	2.7	19.1	29.7	278
	Unemployed, unable to work	5.3	0.8	3.9	7.1	73
	Retired	1.6	0.4	1.0	2.5	21
	Total	100.0	0.0	100.0	100.0	1248

12.8% of fathers are able to work and unemployed, 2.4% of them are unable to work and unemployed and 2.1% of them are retired. 17.3% of fathers are not employed and 82.7% still work in income generating jobs.(Table 4-22).

**Table 4-23. The Distribution of Type of House in which Children Reside by Regions**

NUTS	Type of House	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Detached house	35.6	1.3	33.0	38.3	3813
	Apartment	57.4	1.5	54.5	60.3	6818
	Shanty house	4.6	0.5	3.7	5.6	505
	Other	2.4	0.3	1.9	3.1	239
	Total	100.0	0.0	100.0	100.0	11375
İstanbul	Detached house	9.9	1.8	6.9	14.0	113
	Apartment	86.9	2.1	82.1	90.5	1026
	Shanty house	1.2	0.3	0.7	2.1	14
	Other	2.1	0.7	1.1	4.0	19
	Total	100.0	0.0	100.0	100.0	1172
West Marmara	Detached house	31.9	4.7	23.5	41.6	183
	Apartment	59.4	5.9	47.6	70.2	474
	Shanty house	7.4	2.4	3.9	13.7	29
	Other	1.3	0.4	0.7	2.4	9
	Total	100.0	0.0	100.0	100.0	695
Aegean	Detached house	43.0	4.4	34.8	51.7	405
	Apartment	52.9	4.5	43.9	61.6	603
	Shanty house	3.1	1.3	1.4	7.0	25
	Other	0.9	0.3	0.5	1.8	10
	Total	100.0	0.0	100.0	100.0	1043
East Marmara	Detached house	41.1	4.0	33.5	49.1	342
	Apartment	53.9	4.7	44.6	62.9	522
	Shanty house	2.9	1.3	1.2	7.0	26
	Other	2.1	0.6	1.2	3.8	15
	Total	100.0	0.0	100.0	100.0	905
West Anatolia	Detached house	14.2	3.9	8.1	23.6	110
	Apartment	81	4.2	71.4	88.0	716
	Shanty house	3.3	1.4	1.4	7.3	24
	Other	1.5	0.4	0.9	2.6	13
	Total	100.0	0.0	100.0	100.0	863
Mediterranean	Detached house	48.6	4.4	40.1	57.3	525
	Apartment	44.7	4.8	35.7	54.1	607
	Shanty house	4.5	1.5	2.3	8.7	52
	Other	2.1	0.5	1.3	3.5	27
	Total	100.0	0.0	100.0	100.0	1211

Continuation of Table 4-23			95% Confidence Interval			
NUTS	Type of House	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Detached house	35.9	5.6	25.7	47.5	298
	Apartment	60.4	6.1	48.1	71.5	552
	Shanty house	3.4	1.0	1.9	5.9	33
	Other	0.3	0.2	0.1	1.0	3
	Total	100.0	0.0	100.0	100.0	886
West Black Sea	Detached house	33.6	4.9	24.7	43.8	250
	Apartment	63.8	5.0	53.5	72.9	610
	Shanty house	1.3	0.5	0.6	2.9	11
	Other	1.3	0.4	0.7	2.5	11
	Total	100.0	0.0	100.0	100.0	882
East Black Sea	Detached house	34.5	4.2	26.8	43.2	214
	Apartment	58.2	5.3	47.5	68.1	425
	Shanty house	4.1	1.8	1.7	9.6	15
	Other	3.2	1.7	1.1	9.0	12
	Total	100.0	0.0	100.0	100.0	666
Northeast Anatolia	Detached house	46.8	5.0	37.1	56.7	363
	Apartment	47.0	5.5	36.6	57.8	439
	Shanty house	4.1	1.0	2.5	6.5	41
	Other	2.1	0.6	1.2	3.6	17
	Total	100.0	0.0	100.0	100.0	860
Middle East Anatolia	Detached house	48.4	5.5	37.8	59.2	405
	Apartment	43.2	6.1	31.8	55.3	386
	Shanty house	5.4	1.1	3.6	7.9	59
	Other	3.0	0.8	1.9	4.9	27
	Total	100.0	0.0	100.0	100.0	877
Southeast Anatolia	Detached house	49.3	4.4	40.8	57.9	605
	Apartment	32.6	5.0	23.6	43.2	458
	Shanty house	12.0	2.0	8.6	16.6	176
	Other	6.0	1.5	3.6	9.8	76
	Total	100.0	0.0	100.0	100.0	1315

57.4% of the children live in apartment houses and 35.6% of them live in detached houses. 86.9% of the children live in apartments in Istanbul while this percentage is 81.0% in West Anatolian Region. In general, 35.6% of the children live in detached houses in Turkey, this percentage is 46.8% in Northern Anatolian Region, 48.4% in Middle East Region and 49.3% in Southeast Anatolian Region. (Table 4-23).



**Table 4-24. The Distribution of Ownership Status of Residence Houses by Regions**

NUTS	Ownership of the Household	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Landlord	59.6	0.9	57.8	61.3	6809
	Rent	32.3	0.9	30.6	34.1	3678
	Dwelling	1.5	0.2	1.1	2.0	179
	Other	6.6	0.4	5.9	7.4	682
	Total	100.0	0.0	100.0	100.0	11348
İstanbul	Landlord	54.0	1.7	50.7	57.3	621
	Rent	38.7	1.8	35.3	42.3	464
	Dwelling	1.0	0.4	0.4	2.2	11
	Other	6.3	0.7	5.0	7.8	75
	Total	100.0	0.0	100.0	100.0	1171
West Marmara	Landlord	61.5	2.9	55.6	67.1	427
	Rent	27.1	2.8	22.0	32.9	199
	Dwelling	3.2	1.4	1.3	7.3	15
	Other	8.2	1.2	6.1	10.9	49
	Total	100.0	0.0	100.0	100.0	690
Aegean	Landlord	61.9	3.5	54.9	68.4	635
	Rent	30.7	3.5	24.2	38.0	336
	Dwelling	0.7	0.3	0.3	1.5	8
	Other	6.7	2.0	3.7	11.9	51
	Total	100.0	0.0	100.0	100.0	1030
East Marmara	Landlord	61.4	2.5	56.4	66.1	544
	Rent	32.5	2.3	28.2	37.2	306
	Dwelling	0.4	0.3	0.1	1.9	3
	Other	5.7	0.9	4.1	7.8	53
	Total	100.0	0.0	100.0	100.0	906
West Anatolia	Landlord	54.8	2.7	49.4	60.1	478
	Rent	37.4	2.5	32.5	42.5	315
	Dwelling	1.4	0.5	0.7	2.9	11
	Other	6.4	1.1	4.6	8.8	58
	Total	100.0	0.0	100.0	100.0	862
Mediterranean	Landlord	59.1	2.5	54.2	63.9	692
	Rent	32.1	2.4	27.6	36.9	398
	Dwelling	2.2	1.3	0.7	6.9	29
	Other	6.6	1.0	5.0	8.8	82
	Total	100.0	0.0	100.0	100.0	1201
Central Anatolia	Landlord	65.8	4.3	57.0	73.6	581
	Rent	30.3	4.4	22.5	39.5	272
	Dwelling	0.6	0.2	0.3	1.3	6
	Other	3.4	0.9	2.0	5.5	28
	Total	100.0	0.0	100.0	100.0	887
West Black Sea	Landlord	56.2	3.3	49.7	62.6	511
	Rent	34.8	3.6	28.0	42.1	308
	Dwelling	0.8	0.3	0.4	1.7	7
	Other	8.2	2.2	4.7	13.7	57
	Total	100.0	0.0	100.0	100.0	883

Continuation of Table 4-24			95% Confidence Interval			
NUTS	Ownership of the Household	%	Standard Error	Lower Value	Upper Value	Unweighted Number
East Black Sea	Landlord	68.3	2.7	62.7	73.4	446
	Rent	25.5	3.0	20.0	31.8	191
	Dwelling	3.2	1.0	1.7	5.8	16
	Other	3.1	0.8	1.8	5.1	20
	Total	100.0	0.0	100.0	100.0	673
Northeast Anatolia	Landlord	66.1	2.5	60.9	70.9	552
	Rent	24.1	2.5	19.6	29.4	224
	Dwelling	3.2	0.9	1.8	5.6	30
	Other	6.5	1.2	4.5	9.4	50
	Total	100.0	0.0	100.0	100.0	856
Middle East Anatolia	Landlord	63.6	3.1	57.3	69.5	562
	Rent	27.2	3.0	21.7	33.5	235
	Dwelling	2.0	1.0	0.8	5.0	18
	Other	7.2	1.2	5.1	10.0	61
	Total	100.0	0.0	100.0	100.0	876
Southeast Anatolia	Landlord	60.2	2.9	54.3	65.8	760
	Rent	29.7	2.9	24.4	35.6	430
	Dwelling	1.9	0.7	0.9	3.8	25
	Other	8.2	1.1	6.3	10.6	98
	Total	100.0	0.0	100.0	100.0	1313

59.6% of the families are landlords and 32.3% of them rent their houses. The percentage of landlords varies from 54.0% to 68.3% and the percentage of the families who rent their houses varies from 24.1% to 38.7%. (Table 4-24).

#### 4.2.2. Children's Birth Stories and Their State of Receiving Breast milk

In this section, findings on birth weight, breastfeeding status and lifestyles of children of various families unit area.

**Table 4-25. The Distribution of Average Birth Weights of Children by Regions**

NUTS	Average Weight (gr)	Standard Error	95% Confidence interval		Percentage		
			Lower Value	Upper Value	25 %	50 %	75 %
<b>Turkey</b> (n = 9,628)	3179.5	7.6	3164.7	3194.3	2850	3240	3500
<b>İstanbul</b>	3167.0	22.9	3122.0	3212.1	2860	3250	3500
<b>West Marmara</b>	3243.1	33.9	3176.6	3309.6	2940	3250	3650
<b>Aegean</b>	3217.1	18.7	3180.4	3253.8	2950	3250	3600
<b>East Marmara</b>	3230.2	19.9	3191.0	3269.3	2900	3300	3600
<b>West Anatolia</b>	3217.7	20.4	3177.7	3257.6	2900	3250	3500
<b>Mediterranean</b>	3187.9	19.6	3149.3	3226.5	2900	3200	3500
<b>Central Anatolia</b>	3174.3	23.3	3128.6	3220.1	2820	3200	3500
<b>West Black Sea</b>	3214.0	23.0	3168.8	3259.2	2890	3250	3600
<b>East Black Sea</b>	3263.5	31.3	3202.0	3325.0	3000	3300	3600
<b>Northeast Anatolia</b>	3062.8	37.3	2989.4	3136.1	2700	3055	3500
<b>Middle East Anatolia</b>	3091.6	38.2	3016.6	3166.6	2700	3200	3500
<b>Southeast Anatolia</b>	3111.8	26.0	3060.7	3162.8	2800	3100	3500

The birth weights of the children have been learned according to the statements of their families. The median birth weight of the children was calculated as 3,240 gr and the average value was calculated as 3,179.5 gr. The median birth weight was lowest in Northeast Anatolian Region (3,055 gr) and highest in East Marmara and East Black Sea Regions (3,300 gr). (Table 4-25).

**Table 4-26. The Distribution of the Birth Timing of Children by Regions**

NUTS		%	Standard Error	95 % Confidence Interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Born at full term	80.9	0.6	79.7	82.0	8771
	Not born at full term	12.5	0.4	11.7	13.3	1404
	Unknown	6.6	0.4	5.9	7.5	712
	Total	100.0	0.0	100.0	100.0	10887
Istanbul	Born at full term	79	1.7	75.5	82.1	883
	Not born at full term	14.5	1.2	12.3	17.1	163
	Unknown	6.5	1.0	4.7	8.8	80
	Total	100.0	0.0	100.0	100.0	1126
West Marmara	Born at full term	86.0	1.8	82.0	89.3	567
	Not born at full term	10.2	1.5	7.6	13.5	69
	Unknown	3.8	1.0	2.3	6.2	27
	Total	100.0	0.0	100.0	100.0	663
Aegean	Born at full term	84.0	1.4	80.9	86.6	814
	Not born at full term	12.2	1.3	9.8	15.1	128
	Unknown	3.9	0.7	2.6	5.6	35
	Total	100.0	0.0	100.0	100.0	977
East Marmara	Born at full term	82.6	1.9	78.7	86.0	696
	Not born at full term	11.0	1.3	8.8	13.8	105
	Unknown	6.3	1.4	4.1	9.6	51
	Total	100.0	0.0	100.0	100.0	852
West Anatolia	Born at full term	85.0	1.5	81.8	87.6	687
	Not born at full term	10.9	1.1	9.0	13.2	94
	Unknown	4.1	1.1	2.5	6.8	34
	Total	100.0	0.0	100.0	100.0	815
Mediterranean	Born at full term	83.4	1.4	80.4	86.0	953
	Not born at full term	12.2	1.2	10.1	14.7	144
	Unknown	4.4	0.8	3.1	6.2	49
	Total	100.0	0.0	100.0	100.0	1146
Central Anatolia	Born at full term	79.8	2.5	74.5	84.2	694
	Not born at full term	14.6	1.9	11.4	18.7	124
	Unknown	5.6	1.3	3.5	8.8	43
	Total	100.0	0.0	100.0	100.0	861
West Black Sea	Born at full term	84.2	1.6	80.8	87.0	722
	Not born at full term	12.6	1.3	10.3	15.5	117
	Unknown	3.2	0.7	2.0	5.0	30
	Total	100.0	0.0	100.0	100.0	869
East Black Sea	Born at full term	83.4	1.7	79.8	86.4	553
	Not born at full term	11.8	1.6	9.0	15.4	82
	Unknown	4.8	1.1	3.0	7.7	27
	Total	100.0	0.0	100.0	100.0	662
Northeast Anatolia	Born at full term	78.8	1.9	75.0	82.3	645
	Not born at full term	13.6	1.6	10.8	17.0	119
	Unknown	7.5	1.4	5.2	10.9	59
	Total	100.0	0.0	100.0	100.0	823
Middle East Anatolia	Born at full term	76.7	1.9	72.7	80.3	641
	Not born at full term	11.7	1.5	9.1	15.0	96
	Unknown	11.6	1.5	8.9	15.0	105
	Total	100.0	0.0	100.0	100.0	842
Southeast Anatolia	Born at full term	74.8	2.1	70.5	78.6	916
	Not born at full term	12.3	1.1	10.3	14.5	163
	Unknown	12.9	1.8	9.8	16.9	172
	Total	100.0	0.0	100.0	100.0	1251

80.9% of the parents stated that their children were born at full term, 12.5% of them did not born at full term. Birth percentage of children on time varies from 74.8% to 86.0% per regions. (Table 4-26).

**Table 4-27. The Distribution of Being Breastfed by Regions**

NUTS	Status of Being Breastfed	%	Standard Error	95% Confidence Interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Yes	95.5	0.3	95.0	96.0	10941
	No	3.6	0.2	3.1	4.0	402
	Unknown	0.9	0.1	0.7	1.2	100
	Total	100.0	0.0	100.0	100.0	11443
İstanbul	Yes	95.8	0.6	94.4	96.9	1142
	No	3.5	0.6	2.5	4.9	38
	Unknown	0.7	0.2	0.3	1.3	9
	Total	100.0	0.0	100.0	100.0	1189
West Marmara	Yes	95.2	0.9	93.0	96.7	661
	No	4.0	0.8	2.8	5.8	30
	Unknown	0.8	0.5	0.2	2.7	4
	Total	100.0	0.0	100.0	100.0	695
Aegean	Yes	94.5	1.2	91.7	96.4	993
	No	4.7	1.1	3.0	7.3	43
	Unknown	0.8	0.4	0.3	2.2	6
	Total	100.0	0.0	100.0	100.0	1042
East Marmara	Yes	96.0	0.7	94.4	97.1	877
	No	3.5	0.6	2.5	4.8	30
	Unknown	0.6	0.3	0.2	1.6	5
	Total	100.0	0.0	100.0	100.0	912
West Anatolia	Yes	95.9	1.2	92.9	97.7	831
	No	2.7	0.7	1.6	4.5	22
	Unknown	1.4	1.0	0.3	5.5	11
	Total	100.0	0.0	100.0	100.0	864
Mediterranean	Yes	96.8	0.6	95.3	97.7	1165
	No	2.5	0.5	1.7	3.6	29
	Unknown	0.8	0.3	0.3	1.7	7
	Total	100.0	0.0	100.0	100.0	1201
Central Anatolia	Yes	95.8	0.7	94.2	96.9	859
	No	3.7	0.6	2.7	5.1	34
	Unknown	0.5	0.3	0.2	1.4	4
	Total	100.0	0.0	100.0	100.0	897
West Black Sea	Yes	95.1	0.9	93.1	96.6	856
	No	4.4	0.8	3.0	6.3	39
	Unknown	0.5	0.4	0.1	2.2	3
	Total	100.0	0.0	100.0	100.0	898
East Black Sea	Yes	95.9	0.9	93.6	97.4	651
	No	3.1	0.6	2.1	4.7	22
	Unknown	1.0	0.6	0.3	3.0	5
	Total	100.0	0.0	100.0	100.0	678
Northeast Anatolia	Yes	96.0	0.7	94.2	97.2	838
	No	3.2	0.6	2.2	4.7	29
	Unknown	0.8	0.3	0.4	1.8	7
	Total	100.0	0.0	100.0	100.0	874
Middle East Anatolia	Yes	94.3	1.0	91.9	95.9	825
	No	3.7	0.9	2.3	5.9	31
	Unknown	2.0	0.7	1.1	3.8	22
	Total	100.0	0.0	100.0	100.0	878
Southeast Anatolia	Yes	94.7	0.7	93.2	95.9	1243
	No	4.1	0.6	3.0	5.5	55
	Unknown	1.2	0.4	0.7	2.3	17
	Total	100.0	0.0	100.0	100.0	1315

95.5% of the families stated that their children were breastfed. Among the children, the percentage of children not breastfed is 3.6%. The percentage of breastfeeding among the regions varies between 94.3% and 96.8%. There was no significant difference for this percentage according to the regions (Table 4-27).

**Table 4-28. The Distribution of Duration of Exclusively Breastfed of Students by Regions**

NUTS	Average Time* (month)	Standard Error	95% Confidence Interval		Percentage		
			Lower Value	Upper Value	25 %	50 %	75 %
<b>Turkey (n = 8815)</b>	4.5	0.0	4.4	4.6	2	6	6
<b>İstanbul</b>	4.5	0.1	4.2	4.8	2	6	6
<b>West Marmara</b>	4.4	0.2	4.1	4.7	2	5	6
<b>Aegean</b>	4.4	0.2	4.1	4.7	1	5	6
<b>East Marmara</b>	4.3	0.2	4.0	4.6	1	6	6
<b>West Anatolia</b>	4.4	0.1	4.1	4.6	2	6	6
<b>Mediterranean</b>	4.7	0.1	4.4	4.9	3	6	6
<b>Central Anatolia</b>	4.5	0.2	4.2	4.8	2	5	6
<b>West Black Sea</b>	4.9	0.2	4.5	5.2	3	6	6
<b>East Black Sea</b>	4.5	0.1	4.3	4.8	3	6	6
<b>Northeast Anatolia</b>	4.4	0.2	4.1	4.7	0	5	6
<b>Middle East Anatolia</b>	4.5	0.2	4.2	4.9	1	6	6
<b>Southeast Anatolia</b>	4.3	0.1	4.0	4.6	0	5	6

The average feeding period with the state which is defined as "Exclusively breastfeeding" in which no additional nutrients and beverages (including water) are given apart from the breast milk was found as 4.5 months (Table 4-28). Considering the average outcome 4.2 which was found for the breast milk and the liquids with water content according to the date of TNSA in 2013, it was thought that this issue was understood as "breast milk and liquids with water content" instead of "only breast milk apart from water" by most of these parents.

**Table 4-29. The Distribution of Duration of Being Breastfed of Students by Regions**

NUTS	Average Time* (month)	Standard Error	95% Confidence Interval		Percentage		
			Lower Value	Upper Value	25 %	50 %	75 %
<b>Turkey (n = 9672)</b>							
<b>İstanbul</b>	15.5	0.2	15.0	16.0	7	15	24
<b>West Marmara</b>	14.7	0.5	13.8	15.6	6	15	22
<b>Aegean</b>	15.4	0.3	14.9	16.0	9	16	23
<b>East Marmara</b>	16.0	0.3	15.3	16.6	8	15	24
<b>West Anatolia</b>	16.1	0.4	15.4	16.8	8	18	24
<b>Mediterranean</b>	15.1	0.3	14.5	15.8	8	15	22
<b>Central Anatolia</b>	15.7	0.4	15.0	16.4	8	16	24
<b>West Black Sea</b>	16.5	0.5	15.6	17.4	7	18	24
<b>East Black Sea</b>	15.7	0.4	14.9	16.5	6	14	24
<b>Northeast Anatolia</b>	16.6	0.5	15.6	17.6	9	16	24
<b>Middle East Anatolia</b>	16.2	0.5	15.2	17.1	8	16	24
<b>Southeast Anatolia</b>	14.8	0.4	14.1	15.5	8	15	20

Breastfeeding duration for children is found as an average of 15.6 months and this value is the lowest in West Marmara Region (14.7 months) and Southeast Anatolia Region (14.8% month). (Table 4-29).

### 4.2.3. Children's Physical Activity Levels

In this section, information about physical activity levels of children, transportation, physical activity status (outside school hours), game play and sitting time are presented.

**Table 4-30. The Distribution of the Distances of Children's Schools to Their Homes by Regions**

NUTS	School's Distance	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	<1 km	53.2	1.1	51.1	55.3	6051
	1-2 km	25.3	0.6	24.1	26.6	2890
	3-4 km	9.2	0.5	8.3	10.2	1046
	5-6 km	4.6	0.3	4.0	5.3	493
	6+ km	7.7	0.7	6.5	9.2	740
	Total	100.0	0.0	100.0	100.0	11220
Istanbul	<1 km	53.3	3.2	47.0	59.4	628
	1-2 km	28.0	1.9	24.4	32.0	330
	3-4 km	9.6	1.5	7.0	13.1	98
	5-6 km	4.3	0.9	2.9	6.5	47
	6+ km	4.8	1.3	2.8	8.1	36
	Total	100.0	0.0	100.0	100.0	1139
West Marmara	<1 km	51.7	3.3	45.2	58.2	373
	1-2 km	28.8	2.5	24.1	34.1	194
	3-4 km	8.6	1.9	5.6	13.1	57
	5-6 km	3.6	0.9	2.1	5.8	24
	6+ km	7.3	1.9	4.3	12.0	38
	Total	100.0	0.0	100.0	100.0	686
Aegean	<1 km	55.5	3.5	48.6	62.3	572
	1-2 km	26.4	2.0	22.6	30.4	276
	3-4 km	6.6	1.1	4.7	9.2	73
	5-6 km	4.0	0.9	2.6	6.1	37
	6+ km	7.5	2.3	4.0	13.5	60
	Total	100.0	0.0	100.0	100.0	1018
East Marmara	<1 km	54.3	3.3	47.9	60.6	514
	1-2 km	25.2	2.0	21.5	29.4	225
	3-4 km	7.4	1.7	4.7	11.5	64
	5-6 km	5.1	1.0	3.4	7.6	38
	6+ km	8.0	2.7	4.0	15.3	46
	Total	100.0	0.0	100.0	100.0	887
West Anatolia	<1 km	50.8	3.8	43.3	58.3	452
	1-2 km	25.5	2.0	21.7	29.7	217
	3-4 km	8.6	1.5	6.1	12.0	75
	5-6 km	5.2	1.3	3.2	8.6	41
	6+ km	9.9	2.5	5.9	16.0	73
	Total	100.0	0.0	100.0	100.0	858

Continuation of Table 4-30			95% Confidence			
NUTS	School's Distance	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Mediterranean	<1 km	49.3	2.9	43.7	54.9	597
	1-2 km	25.1	1.9	21.5	29.0	307
	3-4 km	12.9	1.3	10.5	15.8	147
	5-6 km	4.9	0.9	3.4	7.1	58
	6+ km	7.7	2.1	4.5	13.0	78
	Total	100.0	0.0	100.0	100.0	1187
Central Anatolia	<1 km	54.3	3.2	48.0	60.5	471
	1-2 km	25.0	1.7	21.7	28.5	224
	3-4 km	10.0	1.7	7.1	13.8	90
	5-6 km	4.9	1.1	3.1	7.5	41
	6+ km	5.8	2.0	3.0	11.1	50
	Total	100.0	0.0	100.0	100.0	876
West Black Sea	<1 km	51.5	3.6	44.4	58.5	445
	1-2 km	28.2	2.1	24.3	32.6	261
	3-4 km	10.2	1.4	7.8	13.4	98
	5-6 km	3.3	1.0	1.8	5.9	28
	6+ km	6.7	2.5	3.2	13.5	43
	Total	100.0	0.0	100.0	100.0	875
East Black Sea	<1 km	42.5	3.7	35.5	49.8	296
	1-2 km	23.6	2.2	19.6	28.2	152
	3-4 km	13.6	1.9	10.3	17.8	85
	5-6 km	6.3	1.4	4.1	9.7	43
	6+ km	13.9	2.6	9.5	19.9	79
	Total	100.0	0.0	100.0	100.0	655
Northeast Anatolia	<1 km	58.7	2.8	53.2	63.9	493
	1-2 km	21.4	2.0	17.8	25.6	205
	3-4 km	9.0	1.3	6.8	11.8	80
	5-6 km	4.2	1.3	2.2	7.8	30
	6+ km	6.7	1.7	4.1	10.8	53
	Total	100.0	0.0	100.0	100.0	861
Middle East Anatolia	<1 km	58.1	3.6	51.0	65.0	507
	1-2 km	23.4	2.2	19.3	28.0	198
	3-4 km	8.9	1.9	5.8	13.3	76
	5-6 km	3.6	0.9	2.2	6.0	34
	6+ km	6.0	1.6	3.5	10.2	48
	Total	100.0	0.0	100.0	100.0	863
Southeast Anatolia	<1 km	54.6	3.2	48.3	60.8	703
	1-2 km	22.0	1.8	18.7	25.6	301
	3-4 km	7.6	1.1	5.6	10.1	103
	5-6 km	5.2	0.8	3.9	7.0	72
	6+ km	10.6	2.3	6.8	16.1	136
	Total	100.0	0.0	100.0	100.0	1315

53.2% of the children go to schools at a distance not more than one kilometer away from their homes and 25.3% go to schools at a distance around 1-2 km away from their homes. According to the regions, the percentage of those who reside within maximum one kilometer distance to schools varies from 42.5% to 58.7%. (Table 4-30).



**Table 4-31. The Distribution of Children’s Transportation Types from Home to School by Regions**

NUTS	Transportation Type	%	Standard Error	95% Confidence Interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Walking / Cycling	59.3	1.4	56.5	62.1	6756
	Motorised vehicles	32.6	1.4	29.9	35.5	3694
	All	8.1	0.4	7.4	8.8	944
	Total	100.0	0.0	100.0	100.0	11394
İstanbul	Walking / Cycling	59.1	4.4	50.3	67.4	750
	Motorised vehicles	31.7	4.3	23.8	40.7	312
	All	9.2	1.0	7.4	11.5	110
	Total	100.0	0.0	100.0	100.0	1172
West Marmara	Walking / Cycling	51.3	4.4	42.6	59.9	362
	Motorised vehicles	38.5	4.5	30.1	47.6	262
	All	10.2	1.4	7.8	13.3	74
	Total	100.0	0.0	100.0	100.0	698
Aegean	Walking / Cycling	57.9	4.3	49.3	66.1	589
	Motorised vehicles	31.3	4.4	23.4	40.5	323
	All	10.7	1.3	8.5	13.5	122
	Total	100.0	0.0	100.0	100.0	1034
East Marmara	Walking / Cycling	57.5	4.6	48.3	66.2	554
	Motorised vehicles	33.6	4.6	25.2	43.1	278
	All	8.9	1.3	6.7	11.7	77
	Total	100.0	0.0	100.0	100.0	909
West Anatolia	Walking / Cycling	58.1	4.5	49.1	66.6	520
	Motorised vehicles	34.1	4.5	25.8	43.5	277
	All	7.8	1.1	5.9	10.3	68
	Total	100.0	0.0	100.0	100.0	865
Mediterranean	Walking / Cycling	54.6	3.6	47.6	61.4	645
	Motorised vehicles	36.9	3.8	29.8	44.5	444
	All	8.6	1.2	6.5	11.1	111
	Total	100.0	0.0	100.0	100.0	1200
Central Anatolia	Walking / Cycling	64.8	4.2	56.2	72.4	558
	Motorised vehicles	26.3	3.8	19.5	34.4	244
	All	9.0	1.3	6.7	11.9	87
	Total	100.0	0.0	100.0	100.0	889
West Black Sea	Walking / Cycling	56.1	4.0	48.2	63.8	482
	Motorised vehicles	35.4	3.8	28.4	43.2	329
	All	8.4	1.3	6.2	11.4	79
	Total	100.0	0.0	100.0	100.0	890
East Black Sea	Walking / Cycling	40.2	4.2	32.2	48.7	286
	Motorised vehicles	52.4	4.4	43.9	60.8	336
	All	7.4	1.3	5.2	10.5	49
	Total	100.0	0.0	100.0	100.0	671
Northeast Anatolia	Walking / Cycling	65.3	4.1	56.8	72.9	554
	Motorised vehicles	28.3	3.8	21.4	36.3	259
	All	6.4	0.9	5.0	8.3	56
	Total	100.0	0.0	100.0	100.0	869
Middle East Anatolia	Walking / Cycling	67.0	4.0	58.7	74.4	577
	Motorised vehicles	27.8	4.1	20.5	36.5	247
	All	5.2	0.8	3.9	7.0	47
	Total	100.0	0.0	100.0	100.0	871
Southeast Anatolia	Walking / Cycling	66.6	4.5	57.2	74.9	879
	Motorised vehicles	28.8	4.4	20.9	38.1	383
	All	4.6	0.8	3.3	6.3	64
	Total	100.0	0.0	100.0	100.0	1326

The percentage of children who travel on foot or by bicycle is 59.3%. 32.6% of the children go to the school by motorised vehicles. Going by motorised vehicles was the highest in the West Marmara Region (38.5%), and the lowest in Central Anatolia (26.3%). (Table 4-31).

**Table 4-32. The Distribution of Families' Opinions Regarding Safety of Routes for Walking or Riding a Bicycle to and from School for Children by Regions**

NUTS	Average *	Standard Error	95% Confidence Interval		Percentage		
			Lower Value	Upper Value	25 %	50 %	75 %
Turkey (n=9845)	6.6	0.1	6.5	6.7	4	8	10
İstanbul	7.2	0.2	6.8	7.6	5	8	10
West Marmara	6.5	0.2	6.1	6.9	4	7	10
Aegean	6.6	0.2	6.1	7.1	4	7	10
East Marmara	7.0	0.2	6.6	7.4	5	8	10
West Anatolia	7.0	0.2	6.6	7.4	5	8	10
Mediterranean	6.7	0.2	6.4	7.1	4	8	10
Central Anatolia	6.1	0.3	5.6	6.7	3	7	10
West Black Sea	6.2	0.2	5.8	6.6	4	6	10
East Black Sea	6.5	0.2	6.2	6.9	4	8	10
Northeast Anatolia	5.8	0.3	5.3	6.4	2	6	10
Middle East Anatolia	6.1	0.2	5.6	6.6	3	6	10
Southeast Anatolia	6.1	0.2	5.6	6.6	3	7	10

\* It was evaluated between 1 and 10 points. High score is the indication of less safe.

The parents rated the level of safety of school routes by walking or cycling on the basis of 10 points as "1 very safe" and "10 very unsafe". Average point across the country is 6.6. (Table 4-32).

**Table 4-33. The Distribution of Attendance of Children to Any Dance or Sports Courses by Regions**

NUTS	Membership	Standard Error	95% Confidence Interval		Unweighted Number
	%		Lower Value	Upper Value	
Turkey	17.0	1.0	15.2	19.0	1769
İstanbul	25.5	3.3	19.5	32.6	270
West Marmara	26.0	4.9	17.6	36.6	183
Aegean	23.6	2.8	18.5	29.6	248
East Marmara	18.4	3.3	12.7	25.8	168
West Anatolia	20.2	3.3	14.6	27.4	164
Mediterranean	19.4	3.2	13.9	26.4	247
Central Anatolia	8.2	2.1	4.9	13.4	75
West Black Sea	14.2	2.5	10.0	19.9	130
East Black Sea	12.0	2.4	8.1	17.5	90
Northeast Anatolia	6.3	1.1	4.5	8.7	5
Middle east Anatolia	6.4	1.3	4.2	9.5	53
Southeast Anatolia	6.5	1.5	4.2	10.1	86

Only 17.0% of the families in Turkey have declared that their children have attended to any dance or sports course. The percentage of children participating in such activities is highest in the West Marmara Region (26.0%), İstanbul (25.5%) and Aegean Region (23.6%) and the lowest in the Northeast Anatolia Region (6.3%), Middle East Region (6.4%) and in Southeast Anatolia (6.5%) (Table 4-33).

**Table 4-34. The Distribution of Time spent by Children Who Are Members of Sports or Dance Courses/Clubs for Sports and Physical Activities per week by Regions**

NUTS		%	95% Confidence interval			Unweighted Number
			Standard Error	Lower Value	Upper Value	
Turkey	Never	6.6	0.8	5.2	8.3	115
	1-2 hours	58.1	2.0	54.2	61.9	943
	3-4 hours	23.7	1.6	20.7	26.9	412
	5 and over	11.7	1.0	9.8	13.8	221
	Total	100.0	0.0	100.0	100.0	1691
İstanbul	Never	4.4	1.5	2.2	8.5	14
	1-2 hours	68.2	4.6	58.7	76.4	173
	3-4 hours	18.9	3.8	12.5	27.6	50
	5 and over	8.5	1.9	5.4	13.0	26
	Total	100.0	0.0	100.0	100.0	263
West Marmara	Never	4.3	2.1	1.6	10.9	7
	1-2 hours	53.5	5.2	43.2	63.5	103
	3-4 hours	25.9	2.9	20.5	32.1	46
	5 and over	16.3	3.8	10.2	25.2	25
	Total	100.0	0.0	100.0	100.0	181
Aegean	Never	7.2	1.8	4.3	11.6	19
	1-2 hours	50.4	3.4	43.8	56.9	122
	3-4 hours	26.0	2.7	21.2	31.6	64
	5 and over	16.4	3.0	11.4	23.1	35
	Total	100.0	0.0	100.0	100.0	240
East Marmara	Never	3.7	1.9	1.3	9.9	6
	1-2 hours	58.7	6.6	45.5	70.7	99
	3-4 hours	29.2	6.6	18.0	43.6	42
	5 and over	8.4	2.9	4.2	16.3	16
	Total	100.0	0.0	100.0	100.0	163
West Anatolia	Never	3.5	1.6	1.4	8.3	6
	1-2 hours	60.7	4.5	51.6	69.0	100
	3-4 hours	26.1	4.2	18.6	35.2	39
	5 and over	9.8	2.9	5.4	17.1	17
	Total	100.0	0.0	100.0	100.0	162
Mediterranean	Never	6.7	2.0	3.7	11.8	15
	1-2 hours	63.0	4.9	53.0	72.0	148
	3-4 hours	20.1	3.7	13.8	28.4	46
	5 and over	10.2	2.3	6.4	15.7	25
	Total	100.0	0.0	100.0	100.0	234

Continuation of Table 4-34		95% Confidence Interval				
NUTS		%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	10.7	4.7	4.3	24.0	8
	1-2 hours	39.8	10.4	22.0	60.7	28
	3-4 hours	33.9	5.4	24.1	45.2	22
	5 and over	15.7	5.5	7.6	29.6	12
	Total	100.0	0.0	100.0	100.0	70
West Black Sea	Never	6.4	2.7	2.8	14.3	7
	1-2 hours	50.4	7.2	36.6	64.2	64
	3-4 hours	28.2	5.5	18.7	40.1	34
	5 and over	15.0	4.3	8.4	25.4	18
	Total	100.0	0.0	100.0	100.0	123
East Black Sea	Never	0.8	0.8	0.1	5.2	1
	1-2 hours	38.7	9.7	22.1	58.4	32
	3-4 hours	35.9	9.0	20.6	54.7	32
	5 and over	24.6	6.5	14.1	39.4	22
	Total	100.0	0.0	100.0	100.0	87
Northeast Anatolia	Never	10.7	3.8	5.2	20.9	5
	1-2 hours	36.9	6.7	24.9	50.7	19
	3-4 hours	24.3	6.8	13.4	39.9	13
	5 and over	28.1	7.7	15.6	45.2	13
	Total	100.0	0.0	100.0	100.0	50
Middle East Anatolia	Never	25.9	9.4	11.8	47.7	11
	1-2 hours	28.7	8.0	15.7	46.3	16
	3-4 hours	28.7	7.4	16.6	44.9	13
	5 and over	16.7	8.9	5.4	41.4	5
	Total	100.0	0.0	100.0	100.0	45
Southeast Anatolia	Never	22.0	7.4	10.9	39.6	16
	1-2 hours	51.1	11.9	29.2	72.6	39
	3-4 hours	18.2	7.1	8.0	36.3	11
	5 and over	8.7	4.4	3.1	22.2	7
	Total	100.0	0.0	100.0	100.0	73

6.6% of the member children do not participate in any activity on week days, 58.1% of them participate in this activity 1-2 hours a week. 35.4% of the children participate in such activities for 3 hours or more per week. (Table 4-34).

**Table 4-35. The Distribution of Student’s Sleeping Durations by Regions**

NUTS	Sleep Duration	95% Confidence Interval			Percentage		
	Average	Standard Error	Lower Value	Upper Value	25 %	50 %	75 %
Turkey (n = 9521)	10.3	0.0	10.2	10.4	9.5	10.0	11.0
İstanbul	10.5	0.1	10.3	10.7	10.0	10.5	11.0
West Marmara	10.2	0.1	10.0	10.4	9.5	10.0	11.0
Aegean	10.3	0.1	10.2	10.5	9.5	10.0	11.0
East Marmara	10.5	0.1	10.3	10.6	10.0	10.3	11.0
West Anatolia	10.2	0.1	10.0	10.4	9.5	10.0	11.0
Mediterranean	10.3	0.1	10.1	10.4	9.5	10.0	11.0
Central Anatolia	10.2	0.1	10.0	10.3	9.5	10.0	10.9
West Black Sea	10.0	0.1	9.9	10.2	9.5	10.0	10.5
East Black Sea	10.3	0.1	10.1	10.5	9.7	10.0	11.0
Northeast Anatolia	10.0	0.1	9.9	10.1	9.5	10.0	10.5
Middle East Anatolia	10.2	0.1	10.0	10.4	9.5	10.0	11.0
Southeast Anatolia	10.3	0.1	10.2	10.5	9.5	10.0	11.0

Children sleep on average at 21:32 in the evening, wake up at 08:07 in the morning, their average sleeping duration is 10.3 hours (Table 4-35).



**Table 4-36. The Distribution of Children’s Daily Playing Times on Weekdays During School Periods by Regions**

NUTS	Playing Time on Weekdays	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	9.5	0.4	8.8	10.3	1051
	<1 hour	19.9	0.5	18.9	20.9	2224
	1 hour	29.7	0.6	28.5	30.9	3295
	2 hours	28.3	0.6	27.1	29.4	3249
	3 hours and over	12.6	0.5	11.7	13.6	1417
	Total	100.0	0	100.0	100.0	11236
İstanbul	Never	11.8	1.4	9.2	14.9	125
	<1 hour	19.4	1.3	16.9	22.1	220
	1 hour	31.3	1.8	27.9	35	356
	2 hours	26.6	1.9	23	30.6	313
	3 hours and over	10.9	1	9.1	13.1	126
	Total	100.0	0	100.0	100.0	1140
West Marmara	Never	8.4	1.5	6	11.8	59
	<1 hour	19	1.5	16.2	22.2	132
	1 hour	32.5	2	28.7	36.5	223
	2 hours	28.3	1.9	24.8	32.1	200
	3 hours and over	11.7	1.6	8.9	15.4	76
	Total	100.0	0	100.0	100.0	690
Aegean	Never	10.3	1.3	8	13.2	112
	<1 hour	23.7	1.5	21	26.7	251
	1 hour	29.2	1.6	26.2	32.4	295
	2 hours	27.1	1.7	23.9	30.4	272
	3 hours and over	9.7	1.2	7.6	12.3	95
	Total	100.0	0	100.0	100.0	1025
East Marmara	Never	9.9	1.1	8	12.2	96
	<1 hour	15.9	1.6	13	19.3	139
	1 hour	28.2	1.9	24.6	32.1	255
	2 hours	32.1	1.9	28.6	35.9	289
	3 hours and over	13.9	1.7	10.8	17.7	116
	Total	100.0	0	100.0	100.0	895
West Anatolia	Never	9.3	1	7.5	11.5	83
	<1 hour	20.2	2	16.6	24.3	173
	1 Hour	30.8	1.9	27.2	34.5	258
	2 hours	27.6	1.7	24.4	30.9	243
	3 hours and over	12.2	1.9	8.9	16.4	102
	Total	100.0	0	100.0	100.0	859
Mediterranean	Never	9.4	1	7.6	11.5	117
	<1 hour	23	1.6	20.1	26.2	267
	1 hour	31.7	2.1	27.8	35.9	373
	2 hours	27.5	1.6	24.4	30.8	336
	3 hours and over	8.5	1.1	6.6	10.8	95
	Total	100.0	0	100.0	100.0	1188

Continuation of Table 4-36			95% Confidence Interval			
NUTS	Playing Times on Weekdays	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	7.7	1.2	5.6	10.5	69
	<1 hour	17.6	1.3	15.1	20.4	164
	1 hour	28.1	2.2	24	32.6	257
	2 hours	32	2.2	27.9	36.3	270
	3 hours and over	14.7	1.8	11.5	18.5	118
	Total	100.0	0	100.0	100.0	878
West Black Sea	Never	8.2	1	6.	10.3	76
	<1 hour	19.8	1.6	16.8	23.2	179
	1 hour	29.1	2.4	24.6	34	258
	2 hours	28.6	1.9	25	32.6	258
	3 hours and over	14.3	2.3	10.4	19.4	111
	Total	100.0	0	100.0	100.0	882
East Black Sea	Never	9.0	1.2	7	11.7	66
	<1 hour	16.1	1.8	12.8	20.1	109
	1 hour	26.5	1.5	23.7	29.6	188
	2 hours	33.5	2.2	29.3	37.9	213
	3 hours and over	14.8	1.7	11.8	18.5	94
	Total	100.0	0	100.0	100.0	670
Northeast Anatolia	Never	7.4	1.2	5.4	10.1	63
	<1 hour	18.3	1.8	15.1	22.1	153
	1 hour	28	2.4	23.6	32.9	229
	2 hours	29.2	2.4	24.8	34.1	259
	3 hours and over	17.1	2.2	13.2	21.7	155
	Total	100.0	0	100.0	100.0	859
Middle East Anatolia	Never	5.8	0.9	4.3	7.8	52
	<1 hour	22.4	1.9	18.9	26.3	187
	1 hour	27.6	2	23.8	31.7	235
	2 hours	29.1	1.7	25.9	32.5	253
	3 hours and over	15.2	1.4	12.6	18.2	135
	Total	100.0	0	100.0	100.0	862
Southeast Anatolia	Never	9.9	1.1	8	12.3	133
	<1 hour	17.9	1.4	15.4	20.8	250
	1 hour	28.4	1.5	25.5	31.5	368
	2 hours	26.9	1.7	23.8	30.3	343
	3 hours and over	16.9	1.9	13.5	20.8	194
	Total	100.0	0	100.0	100.0	1288

According to the statements of the parents, 9.5% of the children do not play any games on weekdays. 19.9% of children play less than one hour a day and 29.7% play an hour a day. 40.9% of children play 2 hours a day and more. (Table 4-36)



**Table 4-37. The Distribution of Children’s Daily Playing Times on Weekends During School Periods by Regions**

NUTS	Playing Times on Weekdays	%	95% Confidence interval			Unweighted Number
			Standard Error	Lower Value	Upper Value	
Turkey	Never	2.9	0.2	2.5	3.3	320
	<1 hour	8.8	0.4	8.1	9.6	927
	1 hour	12.1	0.4	11.3	13.0	1313
	2 hours	28.5	0.6	27.3	29.7	3095
	3 hours and over	47.7	0.7	46.3	49.1	5271
	Total	100.0	0.0	100.0	100.0	10926
İstanbul	Never	3.1	0.6	2.1	4.5	37
	<1 hour	11.3	1.5	8.7	14.6	116
	1 hour	12.4	1.2	10.2	14.9	135
	2 hours	29.2	1.8	25.8	32.9	316
	3 hours and over	44.0	2.2	39.8	48.4	492
	Total	100.0	0.0	100.0	100.0	1096
West Marmara	Never	2.3	0.6	1.4	3.7	17
	<1 hour	8.1	1.2	6.0	10.9	53
	1 hour	12.9	1.5	10.3	16.1	87
	2 hours	29.5	2.1	25.6	33.7	203
	3 hours and over	47.1	2.9	41.5	52.8	318
	Total	100.0	0.0	100.0	100.0	678
Aegean	Never	2.6	0.6	1.7	4.0	26
	<1 hour	8.4	0.9	6.8	10.5	85
	1 hour	14.1	1.5	11.4	17.3	136
	2 hours	28.8	1.6	25.8	32.0	296
	3 hours and over	46.1	2.1	42.1	50.1	448
	Total	100.0	0.0	100.0	100.0	991
East Marmara	Never	2.9	0.6	1.9	4.4	24
	<1 hour	7.4	1.0	5.6	9.7	66
	1 hour	9.9	1.2	7.8	12.5	87
	2 hours	30.1	2.0	26.3	34.2	266
	3 hours and over	49.7	2.3	45.2	54.2	433
	Total	100.0	0.0	100.0	100.0	876
West Anatolia	Never	3.9	0.7	2.7	5.4	33
	<1 hour	10.1	1.5	7.5	13.6	86
	1 hour	11.2	1.4	8.8	14.2	92
	2 hours	28.0	1.8	24.7	31.6	230
	3 hours and over	46.8	1.8	43.2	50.4	400
	Total	100.0	0.0	100.0	100.0	841
Mediterranean	Never	1.6	0.4	1.0	2.6	17
	<1 hour	8.8	1.0	7.0	11.1	103
	1 hour	11.2	1.0	9.3	13.4	131
	2 hours	31.1	1.9	27.4	35.0	361
	3 hours and over	47.4	2.2	43.1	51.7	539
	Total	100.0	0.0	100.0	100.0	1151

Continuation of Table 4-37			95% Confidence Interval			
NUTS	Playing Times on Weekdays	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	3.5	0.9	2.2	5.6	30
	<1 hour	6.3	0.9	4.7	8.3	57
	1 hour	10.3	1.2	8.2	12.9	90
	2 hours	29.0	1.6	25.9	32.2	248
	3 hours and over	50.9	2.5	46.1	55.7	423
	Total	100.0	0.0	100.0	100.0	848
West Black Sea	Never	3.0	0.5	2.1	4.2	26
	<1 hour	7.0	0.9	5.4	9.1	62
	1 hour	11.4	1.4	9.0	14.4	104
	2 hours	30.7	2.6	25.8	36.1	253
	3 hours and over	47.9	2.7	42.7	53.2	418
	Total	100.0	0.0	100.0	100.0	863
East Black Sea	Never	2.0	0.5	1.2	3.3	15
	<1 hour	6.4	1.1	4.5	8.9	44
	1 hour	10.8	1.3	8.5	13.8	77
	2 hours	24.4	2.4	19.9	29.5	152
	3 hours and over	56.4	2.4	51.6	61.1	371
	Total	100.0	0.0	100.0	100.0	659
Northeast Anatolia	Never	2.7	0.7	1.6	4.5	23
	<1 hour	8.5	1.4	6.2	11.7	70
	1 hour	12.0	1.4	9.4	15.2	91
	2 hours	26.3	2.0	22.6	30.4	218
	3 hours and over	50.4	3.4	43.7	57.0	437
	Total	100.0	0.0	100.0	100.0	839
Middle East Anatolia	Never	2.3	0.7	1.3	4.1	22
	<1 hour	8.9	1.0	7.1	11.2	72
	1 hour	11.7	1.4	9.2	14.8	102
	2 hours	27.8	1.6	24.8	31.1	231
	3 hours and over	49.2	2.4	44.5	53.9	414
	Total	100.0	0.0	100.0	100.0	841
Southeast Anatolia	Never	4.0	0.7	2.9	5.5	50
	<1 hour	8.6	0.8	7.2	10.3	113
	1 hour	14.3	1.4	11.8	17.2	181
	2 hours	24.4	1.7	21.1	27.9	321
	3 hours and over	48.7	1.9	45.0	52.4	578
	Total	100.0	0.0	100.0	100.0	1243

According to the statements of the families, 2.9% of the children do not play at the weekends. 8.8% of children play less than one hour a day and 12.1% play an hour a day. 76.2% of the children play 2 hours a day and more. (Table 4-37)

**Table 4-38. The Distribution of Times Spent by Children for Doing Daily Homework and Reading Books on Weekdays During School Periods by Regions.**

NUTS	Doing homework/ Reading Book on Weekdays	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	2.1	0.2	1.6	2.6	211
	<1 hour	18.3	0.6	17.3	19.5	1998
	1 hour	31.7	0.7	30.3	33.1	3531
	2 hours	36.1	0.7	34.7	37.6	4209
	3 hours and over	11.8	0.5	10.9	12.8	1412
	Total	100.0	0.0	100.0	100.0	11361
İstanbul	Never	1.6	0.4	1.1	2.5	19
	<1 hour	18.1	1.6	15.2	21.4	213
	1 hour	35.7	2.1	31.6	39.9	412
	2 hours	35.3	2.3	30.8	39.9	407
	3 hours and over	9.4	1.4	7.1	12.4	116
	Total	100.0	0.0	100.0	100.0	1167
West Marmara	Never	1.0	0.5	0.4	2.4	7
	<1 hour	18.0	2.9	13.0	24.3	100
	1 hour	28.2	2.2	24.1	32.6	186
	2 hours	39.3	3.1	33.4	45.5	297
	3 hours and over	13.5	2.3	9.7	18.6	109
	Total	100.0	0.0	100.0	100.0	699
Aegean	Never	1.0	0.3	0.6	2.0	12
	<1 hour	17.0	2.0	13.5	21.2	169
	1 hour	34.8	2.2	30.6	39.3	354
	2 hours	36.5	2.8	31.2	42.1	378
	3 hours and over	10.6	1.5	8.1	13.9	123
	Total	100.0	0.0	100.0	100.0	1036
East Marmara	Never	1.4	0.4	0.8	2.4	14
	<1 hour	17.1	1.7	14.0	20.8	145
	1 hour	33.3	2.2	29.2	37.7	301
	2 hours	36.4	2.5	31.7	41.4	341
	3 hours and over	11.7	1.6	9.0	15.2	104
	Total	100.0	0.0	100.0	100.0	905
West Anatolian	Never	2.3	0.6	1.3	3.9	20
	<1 hour	16.5	1.9	13.1	20.7	135
	1 hour	26.9	2.5	22.3	32.0	230
	2 hours	39.7	2.3	35.3	44.4	344
	3 hours and over	14.6	2.1	11.0	19.2	137
	Total	100.0	0.0	100.0	100.0	866
Mediterranean	Never	1.3	0.3	0.8	2.2	16
	<1 hour	16.3	1.4	13.8	19.2	191
	1 hour	26.7	1.7	23.5	30.1	311
	2 hours	40.7	1.9	37.1	44.5	499
	3 hours and over	14.9	1.4	12.4	17.8	179
	Total	100.0	0.0	100.0	100.0	1196

Continuation of Table 4-38			95% Confidence interval			
NUTS	Doing homework/ Reading Book on Weekdays	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolian	Never	1.7	0.5	0.9	2.9	14
	<1 hour	16.3	1.4	13.7	19.3	141
	1 hour	37.6	2.5	32.8	42.7	324
	2 hours	34.6	2.2	30.4	39.0	319
	3 hours and over	9.8	1.4	7.4	12.9	87
	Total	100.0	0.0	100.0	100.0	885
West Black Sea	Never	1.6	0.4	1.0	2.5	15
	<1 hour	18.0	2.8	13.2	24.1	139
	1 hour	30.3	2.2	26.2	34.9	273
	2 hours	35.7	2.0	31.8	39.8	331
	3 hours and over	14.4	1.8	11.2	18.3	131
	Total	100.0	0.0	100.0	100.0	889
East Black Sea	Never	1.0	0.4	0.5	2.1	7
	<1 hour	18.4	2.4	14.2	23.5	128
	1 hour	31.2	2.3	26.9	35.9	216
	2 hours	39.2	2.8	33.9	44.8	259
	3 hours and over	10.2	1.4	7.7	13.3	63
	Total	100.0	0.0	100.0	100.0	699
Northeast Anatolia	Never	2.0	0.5	1.2	3.4	20
	<1 hour	19.7	1.7	16.5	23.3	160
	1 hour	31.8	2.1	27.8	36.1	269
	2 hours	34.1	2.3	29.8	38.6	304
	3 hours and over	12.5	1.8	9.3	16.4	117
	Total	100.0	0.0	100.0	100.0	1036
Middle East Anatolia	Never	0.8	0.8	0.4	1.6	8
	<1 hour	22.4	1.9	19.0	26.3	189
	1 hour	30.4	2.6	25.6	37.7	301
	2 hours	34.4	2.4	29.9	41.4	341
	3 hours and over	12.0	1.5	9.4	15.2	108
	Total	100.0	0.0	100.0	100.0	871
Southeast Anatolia	Never	5.5	1.4	3.3	9.1	59
	<1 hour	22.3	1.5	19.4	25.5	288
	1 hour	31.3	1.9	27.7	35.1	396
	2 hours	30.7	1.9	27.0	34.6	423
	3 hours and over	10.2	1.1	8.2	12.6	138
	Total	100.0	0.0	100.0	100.0	1304

According to the statements of the families, around half of the students (47.9%) spend more than 2 hours for studying on weekdays during the school period. 31.7% of the children spend one-hour homework / book reading, and 18.3% spend less than one hour. 2.1% of the children do not spend any time on these matters (Table 4-38).

**Table 4-39. The Distribution of Times Spent by Children for Doing Daily Homework and Reading Books on Weekends During School Periods by Regions.**

NUTS	Doing homework/ Reading Book on Weekdays	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	2.6	0.2	2.2	3.1	277
	<1 hours	16.0	0.5	15.0	17.1	99
	1 hour	28.7	0.6	27.6	29.9	3155
	2 hours	32.6	0.6	31.5	33.8	3701
	3 hours and over	20.0	0.6	18.9	21.2	2269
	Total	100.0	0.0	100.0	100.0	11128
İstanbul	Never	2.3	0.5	1.5	3.5	25
	<1 hour	14.8	1.2	12.6	17.2	172
	1 hour	31.7	1.8	28.3	35.3	361
	2 hours	32.0	1.5	29.2	34.9	366
	3 hours and over	19.3	1.9	15.8	23.2	222
	Total	100.0	0.0	100.0	100.0	1146
West Marmara	Never	1.0	0.4	0.4	2.1	8
	<1 hours	18.7	2.9	13.7	25.1	99
	1 hour	27.6	2.3	23.4	32.3	199
	2 hours	33.4	2.4	29.0	38.2	229
	3 hours and over	19.3	2.6	14.7	24.8	150
	Total	100.0	0.0	100.0	100.0	685
Aegean	Never	2.0	0.5	1.2	3.2	21
	<1 hour	15.4	1.7	12.4	19.0	152
	1 hour	33.3	1.7	30.1	36.7	328
	2 hours	32.2	1.7	28.9	35.8	333
	3 hours and over	17.1	1.5	14.3	20.2	179
	Total	100.0	0.0	100.0	100.0	1013
East Marmara	Never	2.3	0.6	1.3	3.8	21
	<1 hour	16.9	1.6	14.0	20.3	144
	1 hour	29.0	2.0	25.1	33.1	256
	2 hours	33.7	1.7	30.5	37.0	313
	3 hours and over	18.1	1.8	14.9	21.9	154
	Total	100.0	0.0	100.0	100.0	888
West Anatolia	Never	2.2	0.5	1.3	3.5	20
	<1 hour	14.7	2.3	10.7	19.9	113
	1 hour	27.8	1.9	24.2	31.6	235
	2 hours	33.9	1.9	30.2	37.8	289
	3 hours and over	21.4	2.1	17.6	25.7	185
	Total	100.0	0.0	100.0	100.0	842
Mediterranean	Never	2.0	0.4	1.4	2.8	25
	<1 hour	14.5	1.5	11.8	17.7	171
	1 hour	23.9	1.5	21.1	27.0	281
	2 hours	34.8	1.7	31.6	38.1	406
	3 hours and over	24.8	1.7	21.5	28.4	289
	Total	100.0	0.0	100.0	100.0	1196

Continuation of Table 4-39			95% Confidence			
NUTS	Doing homework/ Reading Book on Weekdays	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	3.2	0.7	2.1	4.8	28
	<1 hour	15.6	1.2	13.4	18.2	135
	1 hour	29.0	1.9	25.3	32.9	257
	2 hours	34.3	2.2	30.2	38.7	292
	3 hours and over	17.9	1.6	14.9	21.3	151
	Total	100.0	0.0	100.0	100.0	863
West Black Sea	Never	1.8	0.4	1.2	2.9	19
	<1 hour	15.7	1.9	12.2	19.8	129
	1 hour	27.8	1.8	24.5	31.4	241
	2 hours	33.7	1.9	29.9	37.6	301
	3 hours and over	21.0	2.0	17.4	25.1	181
	Total	100.0	0.0	100.0	100.0	871
East Black Sea	Never	1.1	0.4	0.5	2.3	8
	<1 hour	14.5	1.9	11.2	18.6	99
	1 hour	25.6	1.6	22.5	28.9	174
	2 hours	37.7	2.1	33.7	41.9	258
	3 hours and over	21.1	2.7	16.3	26.9	120
	Total	100.0	0.0	100.0	100.0	659
Northeast Anatolia	Never	3.1	0.8	1.8	5.1	24
	<1 hours	14.7	1.4	12.2	17.7	128
	1 hour	25.9	1.8	22.6	29.5	223
	2 hours	33.1	1.7	29.9	36.6	276
	3 hours and over	23.2	1.9	19.6	27.2	204
	Total	100.0	0.0	100.0	100.0	855
Middle East Anatolia	Never	2.3	0.5	1.5	3.5	22
	<1 hour	16.7	1.7	13.5	20.4	141
	1 hour	28.7	2.1	24.8	33.0	237
	2 hours	30.6	2.0	26.8	34.6	269
	3 hours and over	21.7	2.0	18.2	25.8	191
	Total	100.0	0.0	100.0	100.0	860
Southeast Anatolia	Never	5.3	1.1	3.5	7.8	56
	<1 hour	19.4	1.8	16.1	23.1	243
	1 hour	28.7	1.8	25.2	32.4	363
	2 hours	29.0	1.7	25.8	32.4	369
	3 hours and over	17.7	1.6	14.8	20.9	243
	Total	100.0	0.0	100.0	100.0	1274

According to the statements of families, more than half of the students (52.6%) spare more than 2 hours for studying at the weekend during school period. 28.7% of the children spend one hour homework / book reading, and 16.0% spend less than one hour. 2.6% of children do not spend any time (Table 4-39).

**Table 4-40. The Distribution of Daily Times Spent by Children for Watching TV and Using Electronic Devices During Weekdays in School Periods by Regions**

NUTS	Watching TV/Using Electronic Devices on Weekdays	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	21.3	0.7	20.0	22.6	2278
	1 hour	42.5	0.7	41.1	43.8	4774
	2 hours	23.5	0.6	22.4	24.7	2679
	3 hours and over	12.7	0.5	11.8	13.7	1429
	Total	100.0	0.0	100.0	100.0	11160
İstanbul	Never	20.3	1.4	17.7	23.2	228
	1 hour	42.9	1.8	39.4	46.4	489
	2 hours	23.7	1.4	21.0	26.6	273
	3 hours and over	13.1	1.4	10.6	16.2	154
	Total	100.0	0.0	100.0	100.0	1144
West Marmara	Never	18.1	1.9	14.6	22.2	123
	1 hour	46.6	2.3	42.2	51.1	337
	2 hours	21.0	2.0	17.3	25.2	150
	3 hours and over	14.3	2.6	10.0	20.1	78
	Total	100.0	0.0	100.0	100.0	688
Aegean	Never	21.1	2.1	17.3	25.5	212
	1 hour	47.1	2.4	42.5	51.9	485
	2 hours	21.9	1.8	18.6	25.7	224
	3 hours and over	9.9	1.5	7.3	13.3	97
	Total	100.0	0.0	100.0	100.0	1018
East Marmara	Never	18.8	2.2	14.9	23.5	155
	1 hour	46.1	2.5	41.4	51.0	423
	2 hours	22.5	1.8	19.2	26.2	198
	3 hours and over	12.5	1.7	9.5	16.4	113
	Total	100.0	0.0	100.0	100.0	889
West Anatolia	Never	16.4	2.1	12.7	20.9	143
	1 hour	45.0	2.3	40.5	49.7	388
	2 hours	24.6	2.1	20.7	29.0	210
	3 hours and over	14.0	1.7	11.0	17.6	116
	Total	100.0	0.0	100.0	100.0	857
Mediterranean	Never	23.7	2.1	19.8	28.1	272
	1 hour	45.1	1.8	41.7	48.6	524
	2 hours	21.5	1.8	18.2	25.3	271
	3 hours and over	9.6	1.0	7.9	11.8	116
	Total	100.0	0.0	100.0	100.0	1183

Continuation of Table 4-40			95% Confidence interval			
NUTS	Watching TV/ Using Electronic Devices on Weekdays	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	17.4	1.7	14.3	21.0	157
	1 hour	42.6	2.0	38.7	46.5	379
	2 hours	25.4	2.0	21.6	29.5	216
	3 hours and over	14.7	1.5	12.0	17.9	122
	Total	100.0	0.0	100.0	100.0	874
West Black Sea	Never	16.6	3.0	11.6	23.2	131
	1 hour	46.5	2.2	42.2	50.9	412
	2 hours	25.2	2.2	21.2	29.7	228
	3 hours and over	11.7	1.5	9.1	15.1	108
	Total	100.0	0.0	100.0	100.0	879
East Black Sea	Never	20.6	2.1	16.7	25.0	130
	1 hour	44.8	2.4	40.2	49.5	305
	2 hours	24.3	2.1	20.5	28.6	161
	3 hours and over	10.3	1.8	7.3	14.4	67
	Total	100.0	0.0	100.0	100.0	663
Northeast Anatolia	Never	24.4	2.4	20.0	29.4	194
	1 hour	38.0	2.2	33.7	42.5	324
	2 hours	24.6	2.2	20.5	29.2	203
	3 hours and over	13.0	1.4	10.6	15.9	113
	Total	100.0	0.0	100.0	100.0	834
Middle East Anatolia	Never	21.9	1.9	18.4	25.8	188
	1 hour	35.4	2.6	30.5	40.7	291
	2 hours	25.3	2.0	21.5	29.4	224
	3 hours and over	17.4	2.1	13.7	21.8	154
	Total	100.0	0.0	100.0	100.0	857
Southeast Anatolia	Never	27.6	2.2	23.6	32.1	345
	1 hour	32.9	1.8	29.4	36.6	417
	2 hours	24.7	1.7	21.5	28.3	321
	3 hours and over	14.7	1.3	12.3	17.4	191
	Total	100.0	0.0	100.0	100.0	1274

According to the statements of the families, 21.3% of the children never watch TV and use electronic devices on weekdays. 42.5% of the children spend one hour per day, 23.5% for 2 hours and 12.7% for 3 hours and over watching TV / using electronic devices (Table 4-40).



**Table 4-41. The Distribution of Daily Times Spent by Children for Watching TV and Using Electronic Devices During Weekends in School Periods by Regions**

NUTS	Watching TV/ Using Electronic Devices on Weekdays	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	12.2	0.6	11.0	13.4	1271
	1 hour	17.9	0.5	17.0	18.9	1984
	2 hours	28.3	0.6	27.2	29.5	3176
	3 hours and over	41.6	0.7	40.2	43.0	4665
	Total	100.0	0.0	100.0	100.0	11096
İstanbul	Never	8.8	1.1	6.9	11.1	99
	1 hour	17.9	1.4	15.2	20.9	215
	2 hours	31.5	1.8	28.2	35.1	338
	3 hours and over	41.8	1.8	38.3	45.5	478
	Total	100.0	0.0	100.0	100.0	1130
West Marmara	Never	8.7	1.7	5.8	12.7	55
	1 hour	19.1	1.9	15.7	23.1	131
	2 hours	33.0	2.6	28.0	38.3	236
	3 hours and over	39.3	2.4	34.7	44.0	266
	Total	100.0	0.0	100.0	100.0	688
Aegean	Never	10.4	2.0	7.0	15.1	94
	1 hour	20.4	1.3	18.0	23.1	210
	2 hours	31.8	1.9	28.2	35.6	324
	3 hours and over	37.3	1.7	34.0	40.8	387
	Total	100.0	0.0	100.0	100.0	1015
East Marmara	Never	10.1	2.3	6.5	15.5	72
	1 hour	16.9	1.6	14.0	20.3	164
	2 hours	29.2	2.3	24.8	34.0	266
	3 hours and over	43.8	2.2	39.5	48.3	380
	Total	100.0	0.0	100.0	100.0	882
West Anatolia	Never	7.0	2.0	4.0	12.1	60
	1 hour	17.0	1.6	14.1	20.3	142
	2 hours	29.4	1.7	26.2	32.8	250
	3 hours and over	46.6	2.3	42.2	51.2	393
	Total	100.0	0.0	100.0	100.0	845
Mediterranean	Never	12.7	2.0	9.2	17.2	140
	1 hour	22.0	1.4	19.5	24.8	257
	2 hours	27.9	1.6	24.9	31.1	331
	3 hours and over	37.4	2.1	33.4	41.6	452
	Total	100.0	0.0	100.0	100.0	1180

Continuation of Table 4-41			95% Confidence interval			
NUTS	Watching TV/ Using Electronic Devices on Weekdays	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	11.0	1.4	8.5	14.1	94
	1 hour	16.8	1.3	14.4	19.4	145
	2 hours	29.4	2.0	25.7	33.5	271
	3 hours and over	42.8	2.2	38.6	47.1	360
	Total	100.0	0.0	100.0	100.0	870
West Black Sea	Never	10.3	3.0	5.8	17.7	69
	1 hour	17.8	1.7	14.7	21.5	163
	2 hours	27.8	2.0	24.0	31.8	246
	3 hours and over	44.1	2.2	39.8	48.5	400
	Total	100.0	0.0	100.0	100.0	878
East Black Sea	Never	11.6	1.7	8.7	15.5	70
	1 hour	17.7	1.7	14.6	21.3	122
	2 hours	31.5	2.6	26.5	36.9	205
	3 hours and over	39.2	2.6	34.2	44.4	263
	Total	100.0	0.0	100.0	100.0	660
Northeast Anatolia	Never	17.8	2.2	13.9	22.6	138
	1 hour	16.0	1.4	13.5	18.9	129
	2 hours	22.6	1.8	19.2	26.4	203
	3 hours and over	43.5	2.2	39.2	47.9	365
	Total	100.0	0.0	100.0	100.0	835
Middle East Anatolia	Never	15.1	1.8	11.8	19.1	127
	1 hour	13.1	1.6	10.3	16.5	111
	2 hours	24.6	2.0	20.8	28.7	203
	3 hours and over	47.3	2.4	42.5	52.1	404
	Total	100.0	0.0	100.0	100.0	845
Southeast Anatolia	Never	20.6	2.2	16.7	25.2	253
	1 hour	16.0	1.5	13.3	19.1	195
	2 hours	22.3	1.5	19.5	25.4	303
	3 hours and over	41.1	2.3	36.6	45.6	517
	Total	100.0	0.0	100.0	100.0	1268

According to the statements of the families, 12.2% of the children never watch TV and use electronic devices at the weekends. 17.9% of the children spend one hour per day, 28.3% for 2 hours and 41.6% for 3 hours and over watching TV/ using electronic devices (Table 4-41).

#### 4.2.4. Nutritional Behavior of Children According to Statements of Their Families

In this section, nutritional behavior and food consumption of children are presented.

**Table 4-42. The Distribution of the Breakfast Eating Frequencies of Children by Regions**

NUTS	Breakfast	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	3.7	0.3	3.2	4.3	405
	Some Days (1-3)	12.1	0.5	11.2	13.1	1468
	Most Days (4-6)	7.7	0.3	7.1	8.3	862
	Every Day	76.5	0.7	75.0	77.9	8654
	Total	100.0	0.0	100.0	100.0	11389
İstanbul	Never	3.9	0.8	2.6	5.8	43
	Some Days (1-3)	10.7	1.5	8.1	14.0	125
	Most Days (4-6)	7.3	0.8	5.8	9.1	87
	Every Day	78.1	2.3	73.3	82.2	918
	Total	100.0	0.0	100.0	100.0	1173
West Marmara	Never	4.7	1.2	2.8	7.6	26
	Some Days (1-3)	13.9	2.2	10.1	18.8	97
	Most Days (4-6)	7.2	1.5	4.8	10.7	50
	Every Day	74.2	3.0	67.9	79.7	526
	Total	100.0	0.0	100.0	100.0	699
Aegean	Never	3.9	0.9	2.5	6.0	41
	Some Days (1-3)	12.0	1.6	9.1	15.6	120
	Most Days (4-6)	8.8	1.1	6.9	11.2	86
	Every Day	75.3	2.3	70.5	79.6	786
	Total	100.0	0.0	100.0	100.0	1033
East Marmara	Never	2.6	0.8	1.4	4.8	26
	Some Days (1-3)	10.9	1.4	8.4	14.1	104
	Most Days (4-6)	7.3	1.3	5.1	10.4	54
	Every Day	79.2	2.4	74.2	83.4	728
	Total	100.0	0.0	100.0	100.0	912
West Anatolia	Never	4.9	1.4	2.8	8.5	37
	Some Days (1-3)	11.3	1.8	8.3	15.3	104
	Most Days (4-6)	6.9	0.9	5.4	8.8	58
	Every Day	76.8	2.7	71.0	81.7	667
	Total	100.0	0.0	100.0	100.0	866
Mediterranean	Never	2.3	0.6	1.4	3.8	24
	Some Days (1-3)	10.8	1.2	8.7	13.3	129
	Most Days (4-6)	7.1	0.8	5.6	8.9	84
	Every Day	79.8	1.6	76.5	82.8	967
	Total	100.0	0.0	100.0	100.0	1204

Continuation of Table 4-42			95% Confidence Interval			
NUTS	Breakfast	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	3.0	0.6	2.0	4.4	25
	Some Days (1-3)	15.0	2.0	11.4	19.4	122
	Most Days (4-6)	7.5	1.0	5.7	9.7	67
	Every Day	74.5	2.6	69.0	79.4	672
	Total	100.0	0.0	100.0	100.0	886
West Black Sea	Never	4.2	1.1	2.5	7.1	29
	Some Days (1-3)	16.9	2.0	13.4	21.1	155
	Most Days (4-6)	10.8	1.1	8.8	13.1	89
	Every Day	68.1	2.7	62.7	73.1	610
	Total	100.0	0.0	100.0	100.0	883
East Black Sea	Never	2.8	0.8	1.6	5.0	17
	Some Days (1-3)	14.5	1.7	11.4	18.3	94
	Most Days (4-6)	8.9	1.4	6.6	12.0	57
	Every Day	73.8	2.8	67.8	79	501
	Total	100.0	0.0	100.0	100.0	669
Northeast Anatolia	Never	5.0	0.9	3.5	7.0	49
	Some Days (1-3)	16.9	1.4	14.3	19.8	147
	Most Days (4-6)	6.1	0.9	4.6	8.1	57
	Every Day	72.0	1.8	68.3	75.5	617
	Total	100.0	0.0	100.0	100.0	870
Middle East Anatolia	Never	4.3	0.8	2.9	6.2	35
	Some Days (1-3)	12.7	1.5	10.0	16.0	116
	Most Days (4-6)	7.3	0.9	5.7	9.3	68
	Every Day	75.7	1.9	71.7	79.3	658
	Total	100.0	0.0	100.0	100.0	877
Southeast Anatolia	Never	4.1	1.0	2.5	6.6	53
	Some Days (1-3)	11.7	1.4	9.2	14.8	155
	Most Days (4-6)	8.0	1.0	6.3	10.1	105
	Every Day	76.2	2.3	71.3	80.5	1004
	Total	100.0	0.0	100.0	100.0	1317

76.5% of children have breakfast every day, percentage of children who have breakfast 1-3 days a week is 12.1% and the percentage of those who have for 4-6 days is 7.7%. (Table 4-42).

**Table 4-43. The Distribution of Food Consumption Frequencies of Children According to Statements of Their Families**

	Never	Less than Once a Week	Some Days (1-3 Days)	Most Days (4-6 days)	Every day	Unweighted Number of the Respondents
	%	%	%	%	%	n
<b>Meat</b>	6.1	18.9	41.8	26.3	7.0	10715
<b>Fish</b>	14.6	40.3	33.4	9.5	2.2	10637
<b>Cheese</b>	13.4	7.6	20.1	19.1	39.8	10649
<b>Low-fat/ semi-fat milk</b>	37.0	13.5	21.6	13.2	14.7	10434
<b>Whole milk</b>	23.0	12.8	23.5	17.8	22.9	10367
<b>Yoghurt, cacik, ayran</b>	4.9	5.7	22.1	30.0	37.3	10636
<b>Kefir</b>	85.3	5.7	5.3	2.1	1.7	9952
<b>Milk pudding / ready-made milk products</b>	20.5	32.6	31.0	11.1	4.7	10560
<b>Fresh fruit</b>	1.9	4.6	18.5	24.5	50.4	10355
<b>Vegetables (except potatoes)</b>	6.7	13.2	41.8	25.3	13.0	10355
<b>Fresh-squeezed fruit juice</b>	29.9	22.7	29.9	10.7	6.8	10319
<b>100% fruit juice (ready)</b>	21.1	20.7	29.6	14.1	14.4	10285
<b>Pizza, lahmacun (pancake with spicy meat filling), hamburger, hot dog/ sausage sandwich</b>	12.7	38.7	33.0	11.8	3.8	10785
<b>Salty snacks (potato chips, corn chips, appetizers)</b>	14.5	34.6	29.6	13.7	7.6	10679
<b>Biscuits, cakes, cookies</b>	3.5	20.0	39.2	25.3	11.9	10425
<b>Sugary bar, chocolate</b>	6.1	24.9	36.3	20.2	12.5	10587
<b>Flavored milk</b>	36.2	18.6	23.9	11.7	9.6	10413
<b>Diet or light drinks (excluding milk)</b>	88.6	4.6	4.2	1.4	1.2	10347
<b>Sugar-containing beverage</b>	25.2	28.2	28.2	10.7	7.7	10351

According to the statements of the families, 50.4% of the children eat fruit, 13.0% fresh vegetables and 6.8% fresh squeezed fruit juice. It is stated that 18.9% of children consume meat less than once a week and 6.1% consume no meat at all. It is stated that 14.6% of the children do not consume any fish. 21.0 % of the children consume cheese less than once a week or never. (Table 4-43)



**Table 4-44. The Distribution of Fresh Fruit Consumption Frequencies of Children by Regions**

NUTS	Consumption Frequency	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	1.9	0.2	1.6	2.3	202
	Less than once a week	4.6	0.3	4.1	5.2	520
	1-3 days	18.5	0.5	17.6	19.5	2074
	4-6 days	24.5	0.6	23.4	25.7	2695
	Every day	50.4	0.7	49.0	51.9	5374
	Total	100.0	0.0	100.0	100.0	10865
İstanbul	Never	2.6	0.5	1.9	3.8	30
	Less than once a week	5.3	0.8	3.8	7.1	52
	1-3 days	17.7	1.2	15.5	20.1	204
	4-6 days	23.4	1.7	20.2	27.0	277
	Every day	51.0	2.0	47.1	55.0	542
	Total	100.0	0.0	100.0	100.0	1105
West Marmara	Never	2.5	0.8	1.3	4.8	11
	Less than once a week	4.2	0.8	2.9	6.2	32
	1-3 days	20.9	1.8	17.5	24.7	133
	4-6 days	25.3	1.9	21.7	29.2	165
	Every day	47.1	2.5	42.3	52.0	334
	Total	100.0	0.0	100.0	100.0	675
Aegean	Never	1.1	0.3	0.6	2.0	12
	Less than once a week	3.5	0.6	2.4	4.9	37
	1-3 Days	16.1	1.2	13.8	18.7	160
	4-6 days	24.0	1.8	20.7	27.8	233
	Every Day	55.3	2.2	51.0	59.5	534
	Total	100.0	0.0	100.0	100.0	976
East Marmara	Never	1.3	0.3	0.8	2.2	12
	Less than once a week	2.8	0.6	1.9	4.3	24
	1-3 days	17.4	1.7	14.4	20.9	150
	4-6 days	28.5	1.9	25.0	32.3	240
	Every day	49.9	2.6	44.8	55.1	450
	Total	100.0	0.0	100.0	100.0	876
West Anatolia	Never	1.3	0.4	0.7	2.5	10
	Less than once a week	3.4	0.7	2.2	5.1	27
	1-3 days	16.8	1.5	13.9	20.0	135
	4-6 days	21.2	1.5	18.3	24.3	178
	Every day	57.4	2.1	53.2	61.5	488
	Total	100.0	0.0	100.0	100.0	838
Mediterranean	Never	2.0	0.6	1.1	3.6	19
	Less than once a week	3.0	0.5	2.1	4.1	30
	1-3 days	16.4	1.3	14.0	19.1	191
	4-6 days	22.9	1.7	19.7	26.5	275
	Every day	55.8	2.2	51.4	60.0	635
	Total	100.0	0.0	100.0	100.0	1150

Continuation of Table 4-44			95 % Confidence Interval			
NUTS	Consumption Frequency	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	1.9	0.5	1.1	3.3	17
	Less than once a week	4.4	1.0	2.9	6.8	39
	1-3 days	17.7	1.4	15.1	20.5	148
	4-6 days	26.2	1.8	22.7	29.9	225
	Every day	49.9	2.7	44.6	55.2	413
	Total	100.0	0.0	100.0	100.0	842
West Black Sea	Never	1.4	0.5	0.7	2.9	11
	Less than once a week	3.4	0.7	2.2	5.2	31
	1-3 days	15.1	1.3	12.8	17.8	134
	4-6 days	21.8	1.8	18.4	25.6	185
	Every day	58.3	2.4	53.5	62.9	476
	Total	100.0	0.0	100.0	100.0	837
East Black Sea	Never	2.7	0.6	1.7	4.3	18
	Less than once a week	4.9	1.0	3.3	7.2	29
	1-3 days	21.2	1.7	18.1	24.7	135
	4-6 days	27.0	1.7	23.7	30.5	176
	Every day	44.2	2.1	40.1	48.3	290
	Total	100.0	0.0	100.0	100.0	648
Northeast Anatolia	Never	1.5	0.4	0.9	2.5	14
	Less than once a week	7.1	1.0	5.3	9.5	60
	1-3 days	23.0	1.7	19.8	26.6	195
	4-6 days	27.1	1.8	23.8	30.7	230
	Every day	41.3	2.6	36.3	46.4	341
	Total	100.0	0.0	100.0	100.0	840
Middle East Anatolia	Never	2.3	0.8	1.2	4.5	21
	Less than once a week	6.7	1.1	4.8	9.2	63
	1-3 days	26.7	2.6	21.8	32.1	225
	4-6 days	24.6	1.7	21.4	28.1	205
	Every day	39.7	2.9	34.1	45.6	323
	Total	100.0	0.0	100.0	100.0	837
Southeast Anatolia	Never	2.2	0.7	1.2	4.0	27
	Less than once a week	7.5	1.2	5.5	10.2	96
	1-3 days	21.0	1.4	18.3	24.0	264
	4-6 days	26.3	1.6	23.3	29.6	306
	Every day	42.9	2.2	38.7	47.3	548
	Total	100.0	0.0	100.0	100.0	1241

50.4% of the children consume fresh fruit, 24.5% of them consume 4-6 days a week, 18.5% of them 1-3 days a week and 4.6% of them less than once a week. 1.9% of children do not consume any fruit (Table 4-44)



**Table 4-45. The Distribution of Vegetable (Excluding Potatoes) Consumption Frequencies of Children by Regions**

NUTS	Consumption Frequency	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	6.7	0.3	6.2	7.3	729
	Less than once a week	13.2	0.4	12.4	14.0	1368
	1-3 days	41.8	0.6	40.6	43.1	4362
	4-6 days	25.3	0.6	24.0	26.5	2634
	Every day	13.0	0.6	11.9	14.2	1262
	Total	100.0	0.0	100.0	100.0	10355
İstanbul	Never	7.1	0.8	5.6	8.8	80
	Less than once a week	13.5	1.2	11.4	16.1	141
	1-3 days	40.2	1.5	37.2	43.2	422
	4-6 days	25.7	1.7	22.5	29.2	274
	Every day	13.5	1.6	10.6	17.0	124
	Total	100.0	0.0	100.0	100.0	1041
West Marmara	Never	5.6	1.0	4.0	7.9	34
	Less than once a week	11.7	1.3	9.3	14.6	82
	1-3 days	47.3	2.7	42.1	52.5	290
	4-6 days	27.0	2.2	22.8	31.6	184
	Every day	8.5	1.4	6.1	11.6	62
	Total	100.0	0.0	100.0	100.0	652
Aegean	Never	6.5	0.9	5.0	8.4	65
	Less than once a week	12.7	1.2	10.6	15.2	116
	1-3 days	42.7	2.1	38.7	46.9	401
	4-6 days	26.7	1.9	23.1	30.6	259
	Every day	11.4	2.1	7.9	16.2	98
	Total	100.0	0.0	100.0	100.0	939
East Marmara	Never	7.1	1.0	5.4	9.3	63
	Less than once a week	14.7	1.2	12.4	17.2	118
	1-3 Days	42.9	1.8	39.4	46.4	364
	4-6 days	26.2	2.1	22.3	30.5	222
	Every Day	9.2	1.1	7.2	11.6	75
	Total	100.0	0.0	100.0	100.0	842
West Anatolia	Never	5.9	0.9	4.3	7.9	49
	Less than once a week	12.1	1.3	9.8	14.8	95
	1-3 days	43.6	2.4	39.0	48.4	351
	4-6 days	25.2	1.7	22.0	28.7	201
	Every day	13.2	2.0	9.7	17.7	103
	Total	100.0	0.0	100.0	100.0	799
Mediterranean	Never	5.9	0.7	4.7	7.5	68
	Less than once a week	12.4	1.3	10.1	15.1	134
	1-3 days	40.2	1.7	36.8	43.6	450
	4-6 days	25.8	1.8	22.5	29.4	296
	Every day	15.7	2.0	12.1	20.1	149
	Total	100.0	0.0	100.0	100.0	1097

Continuation of Table 4-45				95% Confidence Interval		Unweighted Number
NUTS	Consumption Frequency	%	Standard Error	Lower Value	Upper Value	
Central Anatolia	Never	7.0	1.1	5.1	9.4	53
	Less than once a week	13.7	1.4	11.2	16.7	115
	1-3 days	44.5	2.5	39.6	49.5	350
	4-6 days	22.7	1.7	19.5	26.2	183
	Every day	12.1	2.2	8.4	17.0	90
	Total	100.0	0.0	100.0	100.0	791
West Black Sea	Never	8.4	1.6	5.8	12.2	59
	Less than once a week	10.3	1.4	7.9	13.3	81
	1-3 days	41.8	1.8	38.3	45.4	345
	4-6 days	24.0	2.2	20.0	28.5	201
	Every day	15.4	1.6	12.6	18.8	123
	Total	100.0	0.0	100.0	100.0	809
East Black Sea	Never	7.3	1.2	5.2	10.1	48
	Less than once a week	12.4	1.4	9.8	15.5	82
	1-3 days	41.0	2.1	37.0	45.1	248
	4-6 days	26.0	1.7	22.8	29.5	165
	Every day	13.4	1.7	10.4	17.1	76
	Total	100.0	0.0	100.0	100.0	619
Northeast Anatolia	Never	7.7	0.9	6.1	9.6	62
	Less than once a week	15.6	1.4	13.0	18.5	119
	1-3 days	39.4	1.8	36.0	42.9	321
	4-6 days	21.1	1.5	18.3	24.2	178
	Every day	16.3	2.5	12.0	21.7	113
	Total	100.0	0.0	100.0	100.0	793
Middle East Anatolia	Never	6.4	0.8	5.0	8.2	60
	Less than once a week	13.3	1.6	10.5	16.7	109
	1-3 days	45.6	2.1	41.5	49.7	360
	4-6 days	22.8	1.8	19.5	26.6	185
	Every day	11.9	1.8	8.9	15.9	95
	Total	100.0	0.0	100.0	100.0	809
Southeast Anatolia	Never	6.8	0.9	5.3	8.8	88
	Less than once a week	14.5	1.3	12.2	17.1	176
	1-3 days	39.9	1.9	36.3	43.6	460
	4-6 days	25.3	2.3	21.1	30.0	286
	Every day	13.5	1.3	11.1	16.2	154
	Total	100.0	0.0	100.0	100.0	1164

13.4% of the children consume vegetables (excluding potatoes) every day, 25.3% of them consume 4-6 days a week, 41.8% of them consume 1-3 days a week and 13.2% of them less than once a week (Table 4-45).

**Table 4-46. The Distribution of 100% Fruit Juice (Ready-Made) Consumption Frequencies of Children by Regions**

NUTS	Consumption Frequency	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	21.1	0.7	19.8	22.5	2083
	Less than once a week	20.7	0.6	19.6	21.8	2105
	1-3 days	29.6	0.6	28.4	30.9	3121
	4-6 days	14.1	0.4	13.3	15.0	1476
	Every day	14.4	0.6	13.4	15.6	1500
	Total	100.0	0.0	100.0	100.0	10285
İstanbul	Never	23.5	2.2	19.4	28.1	232
	Less than once a week	18.9	1.6	16.0	22.2	198
	1-3 days	26.9	1.8	23.4	30.6	307
	4-6 days	13.3	1.1	11.3	15.5	143
	Every day	17.5	1.7	14.4	21.2	173
	Total	100.0	0.0	100.0	100.0	1053
West Marmara	Never	18.8	2.6	14.1	24.5	113
	Less than once a week	22.1	2.5	17.5	27.5	140
	1-3 days	30.6	2.7	25.6	36.0	206
	4-6 days	14.9	1.6	12.1	18.3	103
	Every day	13.6	1.8	10.5	17.6	87
	Total	100.0	0.0	100.0	100.0	649
Aegean	Never	17.0	1.5	14.2	20.2	159
	Less than once a week	23.9	1.9	20.4	27.8	220
	1-3 days	34.6	1.9	31.0	38.4	330
	4-6 days	14.6	1.6	11.7	18.1	135
	Every day	9.9	1.2	7.8	12.4	97
	Total	100.0	0.0	100.0	100.0	941
East Marmara	Never	19.9	2.0	16.3	24.0	153
	Less than once a week	20.6	1.6	17.6	23.9	167
	1-3 days	33.4	1.8	30.0	37.0	279
	4-6 days	13.8	1.2	11.6	16.3	114
	Every day	12.4	1.5	9.6	15.7	112
	Total	100.0	0.0	100.0	100.0	825
West Anatolia	Never	23.4	2.6	18.6	28.9	177
	Less than once a week	19.7	1.6	16.8	23.0	155
	1-3 days	29.9	2.1	26.0	34.2	240
	4-6 days	12.1	1.1	10.0	14.5	98
	Every day	14.9	2.1	11.3	19.5	119
	Total	100.0	0.0	100.0	100.0	789
Mediterranean	Never	20.8	1.8	17.4	24.6	206
	Less than once a week	20.0	1.5	17.3	23.1	222
	1-3 days	28.1	1.6	25.0	31.3	313
	4-6 days	16.6	1.4	14.1	19.5	177
	Every day	14.5	1.6	11.6	17.9	163
	Total	100.0	0.0	100.0	100.0	1081

Continuation of Table 4-46			%95 Confidence Interval			
NUTS	Consumption Frequency	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	19.2	1.5	16.5	22.3	146
	Less than once a week	18.4	1.6	15.5	21.7	147
	1-3 days	27.0	1.4	24.3	29.8	211
	4-6 days	16.9	1.4	14.4	19.8	131
	Every day	18.4	1.7	15.4	21.9	150
	Total	100.0	0.0	100.0	100.0	785
West Black Sea	Never	17.5	1.7	14.4	21.2	158
	Less than once a week	22.1	2.3	18.0	26.9	170
	1-3 days	30.6	2.3	26.3	35.2	230
	4-6 days	15.3	1.3	13.0	18.0	126
	Every day	14.4	2.5	10.2	20.0	110
	Total	100.0	0.0	100.0	100.0	794
East Black Sea	Never	24.1	2.1	20.3	28.5	155
	Less than once a week	25.0	2.2	21.0	29.5	136
	1-3 days	31.2	1.9	27.6	35.0	192
	4-6 days	10.1	1.4	7.7	13.2	70
	Every day	9.5	1.6	6.7	13.2	68
	Total	100.0	0.0	100.0	100.0	621
Northeast Anatolia	Never	19.8	1.9	16.4	23.7	154
	Less than once a week	20.6	1.6	17.6	24.0	154
	1-3 days	31.6	1.7	28.4	35.0	245
	4-6 days	13.0	1.4	10.5	16.0	110
	Every day	15.0	1.8	11.8	18.8	119
	Total	100.0	0.0	100.0	100.0	782
Middle East Anatolia	Never	24.2	2.4	19.9	29.1	190
	Less than once a week	23.4	1.8	20.1	27.1	181
	1-3 days	27.1	2.4	22.7	32.0	229
	4-6 days	13.9	1.4	11.4	16.8	110
	Every day	11.4	1.3	9.1	14.1	95
	Total	100.0	0.0	100.0	100.0	805
Southeast Anatolia	Never	22.3	2.3	18.1	27.2	240
	Less than once a week	19.6	2.0	15.9	23.9	215
	1-3 days	28.5	1.8	25.2	32.1	339
	4-6 days	13.2	1.5	10.6	16.4	159
	Every day	16.3	1.9	13.0	20.4	207
	Total	100.0	0.0	100.0	100.0	1160

For the 100% fruit juice (ready-made), 14.4% of the children consume every day and 14% of the children consume 4-6 days a week. The percentage of children that don't consume such fruit juice is 21.1 % (Table 4-46).

**Table 4-47. The Distribution of Fresh -squeezed Fruit Juice Consumption Frequencies of Children by Regions**

NUTS	Consumption Frequency	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	29.9	0.8	28.5	31.4	3109
	Less than once a week	22.7	0.6	21.6	23.8	2325
	1-3 days	29.9	0.6	28.7	31.1	3077
	4-6 days	10.7	0.4	9.9	11.5	1143
	Every day	6.8	0.3	6.2	7.5	665
	Total	100.0	0.0	100.0	100.0	10319
İstanbul	Never	29.3	1.7	26.1	32.9	309
	Less than once a week	25.0	1.6	22.0	28.3	265
	1-3 days	29.1	1.7	25.9	32.5	309
	4-6 days	10.0	1.2	7.9	12.6	103
	Every day	6.5	0.7	5.2	8.2	69
	Total	100.0	0.0	100.0	100.0	1055
West Marmara	Never	28.9	2.7	23.8	34.6	179
	Less than once a week	19.1	1.8	15.9	22.8	126
	1-3 days	28.3	2.3	24.1	33.0	197
	4-6 days	15.6	2.1	11.9	20.2	102
	Every day	8.1	1.4	5.7	11.4	47
	Total	100.0	0.0	100.0	100.0	651
Aegean	Never	22.1	1.8	18.8	25.7	207
	Less than once a week	21.3	1.8	18.0	25.0	200
	1-3 days	36.2	1.7	32.9	39.7	338
	4-6 days	14.1	1.4	11.5	17.1	131
	Every day	6.4	0.8	4.9	8.2	62
	Total	100.0	0.0	100.0	100.0	938
East Marmara	Never	29.6	2.1	25.6	33.9	249
	Less than once a week	26.0	1.9	22.4	29.8	212
	1-3 days	30.3	1.9	26.6	34.2	253
	4-6 days	8.8	1.0	7.0	11.0	77
	Every day	5.4	1.3	3.3	8.7	38
	Total	100.0	0.0	100.0	100.0	829
West Anatolia	Never	23.9	2.2	19.8	28.5	187
	Less than once a week	25.7	2.1	21.7	30.0	199
	1-3 days	31.8	1.9	28.2	35.7	258
	4-6 days	10.6	1.1	8.6	13.0	86
	Every day	8.0	1.4	5.7	11.1	66
	Total	100.0	0.0	100.0	100.0	796
Mediterranean	Never	16.8	1.5	14.1	19.8	174
	Less than once a week	22.2	1.7	19.1	25.7	247
	1-3 days	37.3	1.6	34.2	40.4	402
	4-6 days	12.7	1.2	10.6	15.2	153
	Every day	11.1	1.1	9.2	13.4	120
	Total	100.0	0.0	100.0	100.0	1096

Continuation of Table 4-47				95% Confidence Interval		
NUTS	Consumption Frequency	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	32.2	2.5	27.5	37.3	244
	Less than once a week	20.3	1.3	17.7	23.0	160
	1-3 days	30.9	2.2	26.8	35.3	244
	4-6 days	10.8	1.4	8.4	13.8	90
	Every day	5.8	0.8	4.4	7.7	46
	Total	100.0	0.0	100.0	100.0	784
West Black Sea	Never	29.8	3.3	23.7	36.7	223
	Less than once a week	23.5	1.8	20.1	27.2	193
	1-3 days	29.3	2.2	25.1	33.8	237
	4-6 days	11.8	1.2	9.7	14.4	97
	Every day	5.6	1.0	4.0	7.9	42
	Total	100.0	0.0	100.0	100.0	792
East Black Sea	Never	32.1	2.6	27.2	37.4	201
	Less than once a week	26.5	3.3	20.6	33.4	138
	1-3 days	29.1	2.3	24.7	33.9	188
	4-6 days	8.6	1.1	6.7	10.9	59
	Every day	3.8	0.8	2.4	5.7	26
	Total	100.0	0.0	100.0	100.0	612
Northeast Anatolia	Never	39.2	2.2	34.9	43.7	310
	Less than once a week	21.6	1.8	18.3	25.2	170
	1-3 days	23.6	1.8	20.2	27.4	194
	4-6 days	10.1	1.4	7.7	13.2	79
	Every day	5.5	1.2	3.6	8.3	38
	Total	100.0	0.0	100.0	100.0	791
Middle East Anatolia	Never	42.8	3.3	36.4	49.5	344
	Less than once a week	23.3	1.9	19.7	27.4	184
	1-3 days	21.6	2.1	17.8	26.0	175
	4-6 days	7.4	1.3	5.2	10.4	61
	Every day	4.8	0.8	3.4	6.7	41
	Total	100.0	0.0	100.0	100.0	805
Southeast Anatolia	Never	45.1	3.2	38.9	51.5	482
	Less than once a week	18.3	1.4	15.7	21.2	231
	1-3 days	22.6	1.8	19.2	26.4	282
	4-6 days	8.5	1.1	6.7	10.9	105
	Every day	5.5	0.8	4.2	7.2	70
	Total	100.0	0.0	100.0	100.0	1170

6.8% of the children consume fresh-squeezed fruit juice and 10.7% of them consume 4-6 days a week. 29.9% of the children do not consume fresh-squeezed fruit juice while 22.7% consume less than once a week (Table 4-47).

**Table 4-48. The Distribution of Sugar-containing Beverage Consumption Frequencies of Children by Regions**

NUTS	Consumption Frequency	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	25.2	0.6	24.0	26.4	2638
	Less than once a week	28.2	0.7	26.9	29.5	2884
	1-3 days	28.2	0.6	27.1	29.3	2908
	4-6 days	10.7	0.4	9.9	11.5	1097
	Every day	7.7	0.3	7.1	8.4	824
	Total	100.0	0.0	100.0	100.0	10351
İstanbul	Never	28.4	1.6	25.4	31.7	290
	Less than once a week	27.5	1.6	24.5	30.7	286
	1-3 days	26.5	1.4	23.8	29.4	280
	4-6 days	10.3	1.1	8.4	12.6	103
	Every day	7.2	0.8	5.8	9.0	80
	Total	100.0	0.0	100.0	100.0	1039
West Marmara	Never	25.9	2.7	21.0	31.5	160
	Less than once a week	27.7	1.8	24.3	31.3	189
	1-3 days	27.4	2.1	23.5	31.7	185
	4-6 days	11.0	1.6	8.2	14.4	67
	Every day	8.0	1.7	5.3	12.0	46
	Total	100.0	0.0	100.0	100.0	647
Aegean	Never	26.6	1.8	23.3	30.3	252
	Less than once a week	30.5	2.1	26.6	34.8	291
	1-3 days	27.2	1.7	24.1	30.6	264
	4-6 days	9.2	1.4	6.8	12.3	82
	Every day	6.5	1.0	4.7	8.7	64
	Total	100.0	0.0	100.0	100.0	953
East Marmara	Never	21.8	2.0	18.1	25.9	189
	Less than once a week	30.9	1.9	27.4	34.7	253
	1-3 days	28.8	1.7	25.6	32.2	229
	4-6 days	12.2	1.3	10.0	15.0	101
	Every day	6.3	1.0	4.6	8.5	53
	Total	100.0	0.0	100.0	100.0	825
West Anatolia	Never	25.4	2.2	21.3	29.9	197
	Less than once a week	27.1	2.0	23.5	31.1	217
	1-3 days	27.8	2.1	23.8	32.1	231
	4-6 days	10.9	1.4	8.5	13.9	80
	Every day	8.8	1.3	6.5	11.7	67
	Total	100.0	0.0	100.0	100.0	792
Mediterranean	Never	23.0	2.1	19.2	27.3	245
	Less than once a week	27.0	1.5	24.1	30.1	312
	1-3 days	32.2	1.6	29.1	35.6	345
	4-6 days	10.2	1.0	8.4	12.5	108
	Every day	7.6	0.9	6.1	9.5	81
	Total	100.0	0.0	100.0	100.0	1091

Continuation of Table 4-48				95% Confidence Interval		
NUTS	Consumption Frequency	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	24.4	1.9	20.9	28.4	193
	Less than once a week	29.8	2.5	25.0	34.9	238
	1-3 days	26.1	1.8	22.8	29.8	207
	4-6 days	10.5	1.5	7.9	13.9	82
	Every day	9.2	1.3	6.9	12.1	71
	Total	100.0	0.0	100.0	100.0	791
West Black Sea	Never	25.9	2.1	22.0	30.2	216
	Less than once a week	28.9	3.0	23.3	35.2	222
	1-3 days	28.6	1.9	25.0	32.5	227
	4-6 days	8.1	1.1	6.2	10.4	73
	Every day	8.6	1.3	6.3	11.5	67
	Total	100.0	0.0	100.0	100.0	805
East Black Sea	Never	31.2	2.3	27.0	35.8	196
	Less than once a week	28.6	2.7	23.6	34.2	172
	1-3 days	25.0	2.5	20.4	30.2	158
	4-6 days	10.7	1.5	8.1	14.0	69
	Every day	4.5	0.9	3.0	6.6	26
	Total	100.0	0.0	100.0	100.0	621
Northeast Anatolia	Never	24.7	2.2	20.6	29.3	202
	Less than once a week	23.8	1.6	20.8	27.0	189
	1-3 days	26.4	1.8	23.1	30.0	209
	4-6 days	12.9	1.5	10.3	16.0	103
	Every day	12.2	1.6	9.5	15.7	93
	Total	100.0	0.0	100.0	100.0	796
Middle East Anatolia	Never	25.7	2.3	21.4	30.5	199
	Less than once a week	26.7	1.9	23.1	30.5	208
	1-3 days	28.2	2.2	24.1	32.7	230
	4-6 days	11.0	1.4	8.6	14.0	96
	Every day	8.4	1.3	6.2	11.2	77
	Total	100.0	0.0	100.0	100.0	810
Southeast Anatolia	Never	23.5	1.6	20.6	26.7	299
	Less than once a week	28.4	2.5	23.6	33.6	307
	1-3 days	28.4	1.6	25.4	31.6	343
	4-6 days	11.7	1.4	9.2	14.8	133
	Every day	8.1	0.9	6.4	10.1	99
	Total	100.0	0.0	100.0	100.0	1181

7.7% of children consume sugar-containing beverages every day and 10.7% of them consume 4-6 days a week. Non-consumption of sugar-containing beverages is 25.2% while the consumption less than once a week is 28.2% (Table 4-48).



**Table 4-49. The Distribution of Flavored Milk Consumption Frequencies of Children by Regions**

NUTS	Consumption Frequency	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	36.2	0.8	34.7	37.7	3688
	Less than once a week	18.6	0.5	17.7	19.5	1917
	1-3 days	23.9	0.5	22.9	24.9	2507
	4-6 days	11.7	0.4	10.9	12.6	1236
	Every day	9.6	0.4	8.9	10.4	1065
	Total	100.0	0.0	100.0	100.0	10413
İstanbul	Never	27.7	2.0	23.9	31.9	281
	Less than once a week	18.5	1.3	16.1	21.1	196
	1-3 days	25.6	1.5	22.8	28.6	281
	4-6 days	15.2	1.3	12.8	17.9	159
	Every day	13.0	1.6	10.2	16.5	139
	Total	100.0	0.0	100.0	100.0	1056
West Marmara	Never	26.3	3.0	20.9	32.6	168
	Less than once a week	19.2	2.0	15.5	23.6	123
	1-3 days	29.6	2.5	24.9	34.8	189
	4-6 days	16.7	1.8	13.4	20.6	107
	Every day	8.1	1.5	5.7	11.5	68
	Total	100.0	0.0	100.0	100.0	655
Aegean	Never	36.3	2.2	32.1	40.7	329
	Less than once a week	19.8	1.4	17.1	22.7	187
	1-3 days	25.7	1.4	23.0	28.7	255
	4-6 days	10.3	1.1	8.4	12.7	101
	Every day	7.8	0.8	6.4	9.6	80
	Total	100.0	0.0	100.0	100.0	952
East Marmara	Never	29.8	2.1	25.9	34.0	236
	Less than once a week	20.2	1.7	17.1	23.8	167
	1-3 days	25.5	1.7	22.3	29.1	216
	4-6 days	14.9	1.7	11.8	18.7	134
	Every day	9.5	1.3	7.3	12.3	91
	Total	100.0	0.0	100.0	100.0	844
West Anatolia	Never	27.5	2.8	22.3	33.3	213
	Less than once a week	17.4	1.5	14.6	20.4	139
	1-3 days	26.5	1.8	23.2	30.1	219
	4-6 days	14.8	1.7	11.8	18.3	116
	Every day	13.9	1.4	11.3	16.9	121
	Total	100.0	0.0	100.0	100.0	808
Mediterranean	Never	38.7	1.9	35.1	42.4	403
	Less than once a week	19.0	1.2	16.8	21.4	212
	1-3 days	24.6	1.4	21.9	27.6	268
	4-6 days	9.7	1.1	7.7	12.0	109
	Every day	8.0	0.9	6.5	9.8	94
	Total	100.0	0.0	100.0	100.0	1086

Continuation of Table 4-49				95% Confidence interval		
NUTS	Consumption Frequency	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	36.4	3.1	30.6	42.7	282
	Less than once a week	14.6	1.8	11.5	18.5	123
	1-3 days	23.4	1.8	20.1	27.1	185
	4-6 days	11.3	1.4	8.9	14.3	90
	Every day	14.2	1.5	11.5	17.4	115
	Total	100.0	0.0	100.0	100.0	795
West Black Sea	Never	33.6	2.9	28.2	39.5	265
	Less than once a week	20.3	2.6	15.7	26.0	160
	1-3 days	23.5	1.7	20.4	27.0	194
	4-6 days	12.2	1.3	9.9	14.9	105
	Every day	10.3	1.5	7.7	13.6	92
	Total	100.0	0.0	100.0	100.0	816
East Black Sea	Never	49.0	3.2	42.7	55.3	285
	Less than once a week	15.6	1.8	12.3	19.6	101
	1-3 days	20.3	2.1	16.5	24.7	140
	4-6 days	9.9	1.3	7.7	12.7	64
	Every day	5.2	0.9	3.7	7.2	36
	Total	100.0	0.0	100.0	100.0	626
Northeast Anatolia	Never	38.9	2.6	33.9	44.2	303
	Less than once a week	16.3	1.4	13.7	19.4	133
	1-3 days	22.6	1.6	19.6	25.9	180
	4-6 days	10.1	1.2	8.0	12.8	82
	Every day	12.0	1.5	9.3	15.3	99
	Total	100.0	0.0	100.0	100.0	797
Middle East Anatolia	Never	46.4	2.9	40.8	52.1	368
	Less than once a week	19.7	1.8	16.3	23.5	159
	1-3 days	19.3	1.8	16.1	22.9	152
	4-6 days	8.1	1.1	6.2	10.5	67
	Every day	6.5	1.0	4.8	8.9	53
	Total	100.0	0.0	100.0	100.0	799
Southeast Anatolia	Never	48.8	2.6	43.7	54.0	555
	Less than once a week	18.2	1.3	15.8	21.0	217
	1-3 days	18.8	1.6	15.8	22.1	228
	4-6 days	7.9	1.1	6.0	10.4	102
	Every day	6.2	0.9	4.7	8.3	77
	Total	100.0	0.0	100.0	100.0	1179

9.6% of the children consume aromatic milk every day and 11.7% of them 4-6 days per week. Non-consumption of the aromatic milk is 3.2% while consumption less than once a week is 18.6% (Table 4-49).

**Table 4-50. The Distribution of Diet or Light Drinks (Excluding Milk) Consumption Frequencies of Children by Regions**

NUTS	Consumption Frequency	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	88.6	0.5	87.6	89.5	9137
	Less than once a week	4.6	0.3	4.2	5.2	509
	1-3 days	4.2	0.3	3.6	4.8	427
	4-6 days	1.4	0.1	1.1	1.7	144
	Every day	1.2	0.1	1.0	1.5	130
	Total	100.0	0.0	100.0	100.0	10347
İstanbul	Never	90.4	1.2	87.7	92.6	935
	Less than once a week	3.4	0.5	2.4	4.6	40
	1-3 days	3.9	1.0	2.4	6.3	42
	4-6 days	1.2	0.3	0.7	2.0	14
	Every day	1.1	0.4	0.5	2.1	12
	Total	100.0	0.0	100.0	100.0	1043
West Marmara	Never	89.1	3.1	81.5	93.9	578
	Less than once a week	3.8	0.8	2.5	5.6	25
	1-3 days	3.9	1.1	2.2	6.9	22
	4-6 days	2.8	1.8	0.8	9.8	14
	Every day	0.4	0.3	0.1	1.5	2
	Total	100.0	0.0	100.0	100.0	641
Aegean	Never	90.1	1.1	87.7	92.1	846
	Less than once a week	4.6	0.8	3.3	6.4	44
	1-3 days	3.7	0.8	2.5	5.5	35
	4-6 days	0.6	0.2	0.2	1.3	6
	Every day	1.0	0.4	0.5	2.1	11
	Total	100.0	0.0	100.0	100.0	942
East Marmara	Never	88.1	1.8	84.1	91.2	746
	Less than once a week	4.8	0.8	3.4	6.6	38
	1-3 days	5.0	1.4	2.8	8.6	34
	4-6 days	1.3	0.4	0.7	2.3	11
	Every day	0.9	0.3	0.5	1.7	9
	Total	100.0	0.0	100.0	100.0	838
West Anatolia	Never	91.7	1.1	89.2	93.6	736
	Less than once a week	3.3	0.6	2.3	4.8	26
	1-3 days	3.2	0.7	2.1	4.8	24
	4-6 days	1.4	0.5	0.7	2.9	10
	Every day	0.4	0.2	0.2	1.1	4
	Total	100.0	0.0	100.0	100.0	800
Mediterranean	Never	88.4	1.3	85.6	90.6	968
	Less than once a week	4.2	0.7	3.0	5.7	42
	1-3 days	4.3	0.7	3.1	5.9	50
	4-6 days	1.2	0.3	0.7	2.1	16
	Every day	2.0	0.5	1.2	3.2	23
	Total	100.0	0.0	100.0	100.0	1099

Continuation of Table 4-50				95% Confidence Interval		
NUTS	Consumption Frequency	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	88.8	1.6	85.3	91.5	694
	Less than once a week	4.2	0.8	2.9	6.2	36
	1-3 days	3.6	0.6	2.5	5.0	29
	4-6 days	1.5	0.5	0.8	3.0	12
	Every day	1.9	0.5	1.1	3.3	15
	Total	100.0	0.0	100.0	100.0	786
West Black Sea	Never	87.2	2.3	81.9	91.1	712
	Less than once a week	6.5	1.5	4.1	10.2	48
	1-3 days	3.5	0.9	2.1	5.8	26
	4-6 days	1.6	0.6	0.8	3.4	10
	Every day	1.2	0.4	0.6	2.3	8
	Total	100.0	0.0	100.0	100.0	804
East Black Sea	Never	90.1	1.6	86.6	92.8	557
	Less than once a week	4.7	1.2	2.8	7.8	23
	1-3 days	3.2	0.6	2.2	4.7	22
	4-6 days	0.9	0.4	0.4	2.1	6
	Every day	1.1	0.5	0.5	2.5	7
	Total	100.0	0.0	100.0	100.0	615
Northeast Anatolia	Never	83.6	2.1	79.1	87.4	671
	Less than once a week	7.4	1.0	5.6	9.6	60
	1-3 days	6.1	1.1	4.3	8.8	45
	4-6 days	0.7	0.3	0.3	1.8	7
	Every day	2.1	0.7	1.1	4.1	15
	Total	100.0	0.0	100.0	100.0	798
Middle East Anatolia	Never	85.0	2.4	79.6	89.2	684
	Less than once a week	7.0	1.5	4.6	10.6	55
	1-3 days	4.9	1.0	3.3	7.4	44
	4-6 days	2.4	0.7	1.4	4.3	17
	Every day	0.6	0.3	0.2	1.8	5
	Total	100.0	0.0	100.0	100.0	805
Southeast Anatolia	Never	86.7	1.4	83.7	89.2	1010
	Less than once a week	5.4	0.7	4.1	7.0	72
	1-3 days	4.6	0.8	3.2	6.5	54
	4-6 days	1.9	0.5	1.1	3.1	21
	Every day	1.5	0.4	0.9	2.7	19
	Total	100.0	0.0	100.0	100.0	1176

88.6% of the children do not drink diet or light drinks (except milk), 4.6% of them less than once a week, 4.2% of them 1-3 times a week and 1.4% of them consumes 4-6 times a week. The percentage of children consuming such beverages per day is 1.2% (Table 4-50).

**Table 4-51. The Distribution of Low Fat/Half Fat Milk Consumption Frequencies of Children by Regions**

NUTS	Consumption Frequency	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	37.0	0.9	35.3	38.7	3768
	Less than once a week	13.5	0.5	12.6	14.6	1410
	1-3 days	21.6	0.5	20.5	22.6	2287
	4-6 days	13.2	0.4	12.5	14.0	1431
	Every day	14.7	0.5	13.8	15.7	1538
	Total	100.0	0.0	100.0	100.0	10434
İstanbul	Never	39.7	2.5	34.9	44.7	410
	Less than once a week	10.5	1.1	8.5	12.9	112
	1-3 days	20.4	1.4	17.9	23.2	216
	4-6 days	13.8	1.0	12.0	15.8	155
	Every day	15.6	1.3	13.3	18.3	166
	Total	100.0	0.0	100.0	100.0	1059
West Marmara	Never	37.9	3.1	31.9	44.2	254
	Less than once a week	10.0	1.4	7.5	13.2	70
	1-3 days	21.9	1.8	18.6	25.6	136
	4-6 days	16.1	1.8	12.9	20.0	95
	Every day	14.1	1.5	11.5	17.3	94
	Total	100.0	0.0	100.0	100.0	649
Aegean	Never	38.5	2.8	33.2	44.1	359
	Less than once a week	14.5	2.0	10.9	18.9	127
	1-3 days	20.4	1.7	17.2	23.9	203
	4-6 days	14.0	1.1	11.9	16.4	135
	Every day	12.7	1.1	10.6	15.1	131
	Total	100.0	0.0	100.0	100.0	955
East Marmara	Never	30.3	2.4	25.7	35.3	264
	Less than once a week	15.1	1.7	12.0	18.8	113
	1-3 days	24.8	2.0	21.1	28.9	199
	4-6 days	13.3	1.6	10.5	16.8	120
	Every day	16.5	1.3	14.1	19.3	146
	Total	100.0	0.0	100.0	100.0	842
West Anatolia	Never	34.4	2.6	29.5	39.8	269
	Less than once a week	12.8	1.2	10.6	15.3	99
	1-3 days	20.8	1.5	18.1	23.8	175
	4-6 days	11.7	1.2	9.6	14.3	98
	Every day	20.2	1.9	16.8	24.1	173
	Total	100.0	0.0	100.0	100.0	814
Mediterranean	Never	37.9	2.8	32.6	43.6	390
	Less than once a week	12.2	1.5	9.6	15.4	146
	1-3 days	22.0	1.7	18.8	25.5	240
	4-6 days	12.0	1.1	10.0	14.4	147
	Every day	15.9	1.6	13.0	19.2	170
	Total	100.0	0.0	100.0	100.0	1093

Continuation of Table 4-51				95% Confidence Interval		
NUTS	Consumption Frequency	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	37.3	2.7	32.1	42.7	291
	Less than once a week	11.1	1.1	9.1	13.5	90
	1-3 days	21.3	1.6	18.3	24.7	166
	4-6 days	14.1	1.5	11.4	17.3	118
	Every day	16.2	1.6	13.2	19.7	129
	Total	100.0	0.0	100.0	100.0	794
West Black Sea	Never	29.6	2.4	25.1	34.4	260
	Less than once a week	15.6	2.2	11.7	20.4	107
	1-3 days	24.4	1.8	21.1	28.1	191
	4-6 days	15.7	1.5	12.9	18.9	123
	Every day	14.7	1.7	11.7	18.4	127
	Total	100.0	0.0	100.0	100.0	808
East Black Sea	Never	41.0	2.6	36.0	46.1	259
	Less than once a week	12.8	1.3	10.4	15.6	78
	1-3 days	20.7	2.0	17.0	25.0	134
	4-6 days	13.9	1.4	11.4	16.9	82
	Every day	11.6	1.4	9.1	14.6	73
	Total	100.0	0.0	100.0	100.0	626
Northeast Anatolia	Never	38.3	2.6	33.2	43.6	305
	Less than once a week	14.8	1.6	12.0	18.2	120
	1-3 days	21.7	1.8	18.3	25.5	174
	4-6 days	12.3	1.4	9.8	15.4	101
	Every day	12.9	1.2	10.6	15.5	101
	Total	100.0	0.0	100.0	100.0	801
Middle East Anatolia	Never	35.6	3.2	29.6	42.1	285
	Less than once a week	16.5	1.5	13.7	19.7	136
	1-3 days	24.2	1.9	20.6	28.1	188
	4-6 days	12.6	1.6	9.8	16.0	105
	Every day	11.2	1.5	8.6	14.5	93
	Total	100.0	0.0	100.0	100.0	807
Southeast Anatolia	Never	39.5	2.5	34.6	44.6	422
	Less than once a week	16.7	1.4	14.1	19.6	212
	1-3 days	19.7	1.5	16.9	22.9	265
	4-6 days	12.6	1.2	10.4	15.1	152
	Every day	11.6	1.4	9.1	14.6	135
	Total	100.0	0.0	100.0	100.0	1186

37.0% of children do not consume low-fat / half-fat milk at all, 13.5% of them consume less than once a week, 21.6% of them consume 1-3 times a week and 13.2% of them consume 4-6 times a week. Percentage of children who consume such beverages every day is 14.7% (Table 4-51).

**Table 4-52. The Distribution of Full Fat Milk Consumption Frequencies of Children by Regions**

NUTS	Consumption Frequency	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	23.0	0.7	21.7	24.4	2384
	Less than once a week	12.8	0.5	11.8	13.8	1335
	1-3 days	23.5	0.6	22.4	24.6	2426
	4-6 days	17.8	0.5	16.9	18.8	1861
	Every day	22.9	0.7	21.5	24.3	2361
	Total	100.0	0.0	100.0	100.0	10367
İstanbul	Never	17.9	1.8	14.7	21.8	188
	Less than once a week	10.4	1.1	8.3	12.8	112
	1-3 days	23.5	1.6	20.5	26.7	238
	4-6 days	19.8	1.3	17.3	22.6	217
	Every day	28.5	2.0	24.6	32.6	298
	Total	100.0	0.0	100.0	100.0	1053
West Marmara	Never	19.6	2.0	16.0	23.9	130
	Less than once a week	10.4	1.3	8.0	13.4	78
	1-3 days	25.7	1.5	22.8	28.8	160
	4-6 days	21.0	2.3	16.8	25.9	126
	Every day	23.3	2.5	18.8	28.5	158
	Total	100.0	0.0	100.0	100.0	652
Aegean	Never	19.3	1.7	16.2	22.8	199
	Less than once a week	14.0	2.1	10.4	18.6	120
	1-3 days	24.3	1.8	21.0	27.9	229
	4-6 days	19.9	1.3	17.4	22.6	190
	Every day	22.6	2.2	18.6	27.2	217
	Total	100.0	0.0	100.0	100.0	955
East Marmara	Never	22.5	1.7	19.4	26.0	186
	Less than once a week	14.2	2.0	10.8	18.6	109
	1-3 days	22.2	1.7	19.0	25.8	192
	4-6 days	17.9	1.8	14.6	21.6	150
	Every day	23.2	1.7	20.0	26.7	200
	Total	100.0	0.0	100.0	100.0	837
West Anatolia	Never	20.7	2.5	16.3	25.9	163
	Less than once a week	10.6	1.1	8.6	13.0	81
	1-3 days	21.6	1.5	18.8	24.6	176
	4-6 days	17.8	1.7	14.7	21.3	141
	Every day	29.3	2.2	25.3	33.7	234
	Total	100.0	0.0	100.0	100.0	795
Mediterranean	Never	27.6	2.1	23.7	31.9	285
	Less than once a week	12.6	1.2	10.4	15.1	151
	1-3 days	24.4	1.4	21.8	27.1	269
	4-6 days	16.3	1.0	14.4	18.5	186
	Every day	19.1	2.0	15.5	23.4	209
	Total	100.0	0.0	100.0	100.0	1100

Continuation of Table 4-52			95 % Confidence Interval			
NUTS	Consumption Frequency	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	19.5	1.7	16.3	23.1	153
	Less than once a week	12.4	1.2	10.2	15.0	93
	1-3 days	23.7	1.8	20.4	27.3	189
	4-6 days	18.0	1.9	14.6	22.1	152
	Every day	26.4	1.9	22.7	30.3	211
	Total	100.0	0.0	100.0	100.0	798
West Black Sea	Never	27.2	2.0	23.5	31.2	211
	Less than once a week	13.7	1.4	11.2	16.6	99
	1-3 days	22.3	1.2	20.0	24.8	175
	4-6 days	17.2	1.3	14.8	19.9	147
	Every day	19.5	1.4	17.0	22.4	166
	Total	100.0	0.0	100.0	100.0	798
East Black Sea	Never	22.5	2.5	17.9	27.8	139
	Less than once a week	14.0	2.1	10.4	18.6	75
	1-3 days	25.0	1.7	21.8	28.5	154
	4-6 days	18.1	1.4	15.5	21.0	110
	Every day	20.5	2.2	16.5	25.1	136
	Total	100.0	0.0	100.0	100.0	614
Northeast Anatolia	Never	21.5	1.8	18.1	25.2	167
	Less than once a week	14.5	1.5	11.7	17.8	116
	1-3 days	20.6	1.6	17.6	24.0	164
	4-6 days	17.2	1.8	13.9	21.1	134
	Every day	26.3	2.0	22.5	30.4	207
	Total	100.0	0.0	100.0	100.0	788
Middle East Anatolia	Never	24.2	2.0	20.4	28.3	198
	Less than once a week	17.0	2.2	13.2	21.7	132
	1-3 days	27.2	1.9	23.6	31.1	214
	4-6 days	16.2	1.8	13.0	20.1	140
	Every day	15.4	1.6	12.5	18.7	132
	Total	100.0	0.0	100.0	100.0	816
Southeast Anatolia	Never	29.7	2.4	25.3	34.5	365
	Less than once a week	13.0	1.3	10.6	15.9	169
	1-3 days	22.8	2.0	19.2	26.9	266
	4-6 days	15.7	1.6	12.8	19.2	168
	Every day	18.8	2.4	14.6	23.9	193
	Total	100.0	0.0	100.0	100.0	1161

22.7% of children consume whole milk, 17.8% of them consume 4-6 days a week, 23.5% of them consume 1-3 days a week and 12.8% of them consume less than once a week. 23.0% of the children do not consume whole milk (Table 4-52).



**Table 4-53. The Distribution of Cheese Consumption Frequencies of Children by Regions**

NUTS	Consumption Frequency	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	13.4	0.4	12.6	14.2	1394
	Less than once a week	7.6	0.3	7.0	8.3	822
	1-3 days	20.1	0.5	19.1	21.1	2157
	4-6 days	19.1	0.5	18.1	20.2	2061
	Every day	39.8	0.7	38.4	41.1	4215
	Total	100.0	0.0	100.0	100.0	10649
İstanbul	Never	19.1	1.3	16.8	21.7	197
	Less than once a week	8.1	0.9	6.5	10.0	90
	1-3 days	20.0	1.3	17.5	22.7	217
	4-6 days	18.3	1.3	15.8	21.1	203
	Every day	34.5	1.6	31.4	37.7	368
	Total	100.0	0.0	100.0	100.0	1075
West Marmara	Never	12.3	1.4	9.9	15.2	77
	Less than once a week	8.6	1.3	6.3	11.5	66
	1-3 days	21.2	1.9	17.6	25.3	143
	4-6 days	19.0	2.2	15.1	23.7	120
	Every day	38.9	2.4	34.3	43.7	255
	Total	100.0	0.0	100.0	100.0	661
Aegean	Never	13.4	1.2	11.2	15.9	135
	Less than once a week	7.5	1.0	5.8	9.6	73
	1-3 days	20.8	1.4	18.3	23.6	198
	4-6 days	16.4	1.3	14.0	19.2	162
	Every day	41.8	1.7	38.5	45.2	406
	Total	100.0	0.0	100.0	100.0	974
East Marmara	Never	13.0	1.3	10.7	15.8	116
	Less than once a week	8.9	1.2	6.8	11.5	76
	1-3 days	21.2	2.0	17.6	25.2	184
	4-6 days	19.9	1.6	17.0	23.1	171
	Every day	37.0	2.3	32.6	41.7	309
	Total	100.0	0.0	100.0	100.0	856
West Anatolia	Never	13.3	1.4	10.9	16.3	103
	Less than once a week	8.8	1.0	7.0	11.0	72
	1-3 days	20.1	1.7	17.1	23.6	170
	4-6 days	19.5	1.4	16.8	22.5	166
	Every day	38.3	2.1	34.3	42.4	324
	Total	100.0	0.0	100.0	100.0	835
Mediterranean	Never	11.8	1.2	9.7	14.3	139
	Less than once a week	7.3	1.0	5.5	9.6	78
	1-3 days	20.9	1.4	18.2	23.9	235
	4-6 days	17.8	1.4	15.2	20.7	208
	Every day	42.3	2.1	38.1	46.5	457
	Total	100.0	0.0	100.0	100.0	1117

Continuation of Table 4-53				95% Confidence Interval		
NUTS	Consumption Frequency	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	13.4	1.7	10.3	17.2	103
	Less than once a week	9.9	1.1	7.9	12.4	79
	1-3 days	20.4	1.7	17.3	23.8	168
	4-6 days	19.8	1.4	17.2	22.6	161
	Every day	36.5	2.8	31.3	42.1	295
	Total	100.0	0.0	100.0	100.0	806
West Black Sea	Never	12.6	1.4	10.1	15.5	103
	Less than once a week	8.3	1.0	6.4	10.5	68
	1-3 days	21.7	1.6	18.8	24.9	182
	4-6 days	20.7	1.5	17.8	23.9	178
	Every day	36.8	1.9	33.1	40.6	297
	Total	100.0	0.0	100.0	100.0	828
East Black Sea	Never	12.5	1.4	10.0	15.5	79
	Less than once a week	5.8	1.0	4.2	8.0	36
	1-3 days	19.9	2.2	16.0	24.4	126
	4-6 days	22.5	2.0	18.8	26.7	136
	Every day	39.3	2.4	34.8	44.0	260
	Total	100.0	0.0	100.0	100.0	637
Northeast Anatolia	Never	14.1	1.3	11.7	17.0	121
	Less than once a week	6.8	0.9	5.1	8.8	50
	1-3 days	16.7	1.4	14.0	19.7	145
	4-6 days	19.6	1.7	16.5	23.2	163
	Every day	42.8	2.6	37.8	48.1	327
	Total	100.0	0.0	100.0	100.0	806
Middle East Anatolia	Never	10.3	1.1	8.3	12.7	88
	Less than once a week	8.5	1.3	6.3	11.5	68
	1-3 days	21.3	2.5	16.8	26.5	170
	4-6 days	14.5	1.3	12.2	17.3	125
	Every day	45.4	3.0	39.7	51.2	384
	Total	100.0	0.0	100.0	100.0	835
Southeast Anatolia	Never	10.5	1.1	8.6	12.8	133
	Less than once a week	5.1	0.7	3.9	6.8	66
	1-3 days	17.4	1.4	14.8	20.3	219
	4-6 days	23.3	2.1	19.3	27.7	268
	Every day	43.7	2.5	38.9	48.6	533
	Total	100.0	0.0	100.0	100.0	1219

39.8% of children consume cheese every day, 19.1% of them consume 4-6 days a week, 20.1% of them 1-3 days a week and 7.6% of them less than one a week. 13.4% of the children do not consume cheese (Table 4-53).

**Table 4-54. The Distribution of Yoghurt, Cacik, Ayran Consumption Frequencies of Children by Regions.**

NUTS	Consumption Frequency	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	4.9	0.3	4.4	5.4	522
	Less than once a week	5.7	0.3	5.2	6.2	616
	1-3 days	22.1	0.5	21.1	23.1	2354
	4-6 days	30.0	0.6	28.8	31.2	3293
	Every day	37.3	0.7	35.9	38.8	3851
	Total	100.0	0.0	100.0	100.0	10636
İstanbul	Never	6.2	0.9	4.7	8.3	68
	Less than once a week	6.3	0.9	4.8	8.2	66
	1-3 days	24.9	1.4	22.2	27.8	263
	4-6 days	30.6	2.0	26.9	34.6	346
	Every day	32.0	1.5	29.0	35.1	334
	Total	100.0	0.0	100.0	100.0	1077
West Marmara	Never	4.6	1.4	2.6	8.2	27
	Less than once a week	6.1	1.2	4.1	9.0	35
	1-3 days	20.2	2.4	15.8	25.3	140
	4-6 days	32.3	2.5	27.6	37.4	226
	Every day	36.8	2.7	31.6	42.3	234
	Total	100.0	0.0	100.0	100.0	662
Aegean	Never	4.2	0.7	3.0	5.8	40
	Less than once a week	3.8	0.7	2.6	5.6	36
	1-3 days	20.2	1.4	17.6	23.0	200
	4-6 days	32.3	1.7	29.0	35.8	323
	Every day	39.5	2.2	35.3	43.8	375
	Total	100.0	0.0	100.0	100.0	974
East Marmara	Never	4.6	0.9	3.2	6.7	35
	Less than once a week	6.2	0.9	4.7	8.3	54
	1-3 days	23.7	1.7	20.5	27.3	204
	4-6 days	31.9	1.8	28.5	35.5	276
	Every day	33.6	2.0	29.8	37.6	287
	Total	100.0	0.0	100.0	100.0	856
West Anatolia	Never	4.3	0.9	2.9	6.5	34
	Less than once a week	6.4	1.0	4.7	8.7	48
	1-3 days	25.9	1.6	23.0	29.1	211
	4-6 days	33.2	1.7	29.9	36.6	282
	Every day	30.2	2.0	26.4	34.3	255
	Total	100.0	0.0	100.0	100.0	830
Mediterranean	Never	3.7	0.6	2.7	4.9	42
	Less than once a week	4.1	0.6	3.0	5.5	48
	1-3 days	19.4	1.6	16.5	22.8	213
	4-6 days	28.3	1.6	25.2	31.6	329
	Every day	44.5	2.4	39.9	49.2	483
	Total	100.0	0.0	100.0	100.0	1115

Continuation of Table 4-54			95% Confidence Interval			
NUTS	Consumption Frequency	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	5.1	0.8	3.7	7.0	42
	Less than once a week	7.7	0.9	6.1	9.8	64
	1-3 days	26.1	1.8	22.7	29.8	212
	4-6 days	31.8	2.2	27.7	36.2	260
	Every day	29.3	2.3	24.9	34.0	237
	Total	100.0	0.0	100.0	100.0	815
West Black Sea	Never	5.5	0.9	4.0	7.4	45
	Less than once a week	6.9	1.2	4.9	9.7	48
	1-3 days	24.1	1.7	21.0	27.6	203
	4-6 days	25.3	1.8	21.9	29.1	221
	Every day	38.2	2.3	33.8	42.7	310
	Total	100.0	0.0	100.0	100.0	827
East Black Sea	Never	5.1	0.9	3.5	7.2	31
	Less than once a week	7.0	1.0	5.2	9.2	42
	1-3 days	20.6	2.0	16.9	24.8	131
	4-6 days	32.2	2.5	27.6	37.2	208
	Every day	35.2	2.5	30.5	40.2	226
	Total	100.0	0.0	100.0	100.0	638
Northeast Anatolia	Never	5.0	0.7	3.9	6.5	46
	Less than once a week	6.5	0.9	4.9	8.6	53
	1-3 days	21.8	1.6	18.8	25.1	178
	4-6 days	30.6	1.7	27.3	34.1	247
	Every day	36.1	2.2	31.8	40.6	286
	Total	100.0	0.0	100.0	100.0	810
Middle East Anatolia	Never	5.1	0.8	3.8	6.9	45
	Less than once a week	6.8	1.0	5.0	9.1	62
	1-3 days	20.2	2.4	15.9	25.3	162
	4-6 days	29.7	1.8	26.3	33.3	245
	Every day	38.2	2.9	32.6	44.1	311
	Total	100.0	0.0	100.0	100.0	825
Southeast Anatolia	Never	5.1	0.8	3.7	7.0	67
	Less than once a week	5.1	0.7	3.9	6.6	60
	1-3 days	19.0	1.6	16.0	22.4	237
	4-6 days	26.2	2.0	22.5	30.3	330
	Every day	44.5	2.8	39.1	50.1	513
	Total	100.0	0.0	100.0	100.0	1207

37.2% of the children consume yoghurt, cacik, ayran every day; 30.0% of them are 4-6 days a week, 22.1% of them 1-3 days a week and 4.9% of the consume less than once a week. 4.9% of the children do not consume yoghurt, cacik, ayran (Table 4-54).

**Table 4-55. The Distribution of Kefir Consumption Frequencies of Children by Regions**

NUTS	Consumption Frequency	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	85.3	0.5	84.2	86.3	8432
	Less than once a week	5.7	0.3	5.1	6.3	585
	1-3 days	5.3	0.3	4.8	5.8	551
	4-6 days	2.1	0.2	1.8	2.5	216
	Every day	1.7	0.2	1.4	2.0	168
	Total	100.0	0.0	100.0	100.0	9952
İstanbul	Never	82.5	1.6	79.2	85.3	822
	Less than once a week	6.3	0.8	4.8	8.2	68
	1-3 days	6.9	0.8	5.5	8.6	72
	4-6 days	2.8	0.6	1.8	4.4	30
	Every day	1.6	0.4	0.9	2.6	14
	Total	100.0	0.0	100.0	100.0	1006
West Marmara	Never	84.0	1.9	79.8	87.5	528
	Less than once a week	7.6	1.2	5.6	10.3	53
	1-3 days	6.3	1.3	4.1	9.5	42
	4-6 days	1.1	0.5	0.5	2.5	7
	Every day	0.9	0.4	0.4	2.2	6
	Total	100.0	0.0	100.0	100.0	636
Aegean	Never	86.3	1.4	83.3	88.9	781
	Less than once a week	5.0	0.7	3.8	6.6	51
	1-3 days	5.1	0.9	3.7	7.1	50
	4-6 days	1.8	0.5	1.1	3.2	17
	Every day	1.7	0.4	1.0	2.8	18
	Total	100.0	0.0	100.0	100.0	917
East Marmara	Never	83.8	2.0	79.5	87.3	686
	Less than once a week	8.2	1.4	5.8	11.5	58
	1-3 days	4.7	0.9	3.2	6.8	40
	4-6 days	2.2	0.6	1.3	3.6	20
	Every day	1.2	0.4	0.6	2.2	11
	Total	100.0	0.0	100.0	100.0	815
West Anatolia	Never	84.8	1.4	81.8	87.4	668
	Less than once a week	7.2	1.2	5.1	10.0	55
	1-3 days	5.6	0.9	4.1	7.7	44
	4-6 days	1.2	0.4	0.6	2.2	10
	Every day	1.2	0.5	0.5	2.8	9
	Total	100.0	0.0	100.0	100.0	786
Mediterranean	Never	87.4	1.4	84.4	89.9	889
	Less than once a week	4.8	0.8	3.5	6.6	55
	1-3 days	4.3	0.7	3.1	5.9	45
	4-6 days	1.8	0.4	1.1	2.8	18
	Every day	1.7	0.5	1.0	2.9	20
	Total	100.0	0.0	100.0	100.0	1027

Continuation of Table 4-55			95% Confidence Interval			
NUTS	Consumption Frequency	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	85.3	1.7	81.6	88.4	636
	Less than once a week	5.3	0.8	4.0	7.1	44
	1-3 days	4.1	1.1	2.4	6.9	33
	4-6 days	2.9	0.7	1.9	4.5	20
	Every day	2.3	0.6	1.4	3.8	19
	Total	100.0	0.0	100.0	100.0	752
West Black Sea	Never	85.0	1.4	82.0	87.5	654
	Less than once a week	4.9	0.9	3.4	6.8	40
	1-3 days	5.3	0.7	4.0	7.0	37
	4-6 days	2.7	0.8	1.5	4.7	21
	Every day	2.2	0.6	1.2	3.8	14
	Total	100.0	0.0	100.0	100.0	766
East Black Sea	Never	86.3	1.7	82.5	89.3	514
	Less than once a week	3.7	0.8	2.4	5.7	22
	1-3 days	5.9	1.3	3.8	8.9	39
	4-6 days	3.3	0.8	2.0	5.4	18
	Every day	0.8	0.4	0.3	1.9	6
	Total	100.0	0.0	100.0	100.0	599
Northeast Anatolia	Never	85.5	1.6	82.0	88.4	655
	Less than once a week	5.2	0.8	3.9	6.9	43
	1-3 days	5.6	1.1	3.7	8.2	41
	4-6 days	1.8	0.6	0.9	3.4	12
	Every day	2.0	0.7	1.0	3.9	12
	Total	100.0	0.0	100.0	100.0	763
Middle East Anatolia	Never	83.1	2.8	77.0	87.9	634
	Less than once a week	6.5	1.2	4.6	9.3	54
	1-3 days	5.9	1.3	3.8	9.1	50
	4-6 days	2.7	0.8	1.5	4.8	18
	Every day	1.8	0.6	1.0	3.3	14
	Total	100.0	0.0	100.0	100.0	770
Southeast Anatolia	Never	87.8	1.3	85.0	90.2	965
	Less than once a week	3.8	0.7	2.6	5.4	42
	1-3 days	4.4	0.6	3.4	5.8	58
	4-6 days	1.9	0.4	1.2	2.9	25
	Every day	2.1	0.5	1.3	3.4	25
	Total	100.0	0.0	100.0	100.0	1115

85.3% of the children never consume kefir; 5.7% of them less than once a week, 5.3% of them 1-3 times a week and 2.1% of them 4-6 times a week. The percentage of children consuming such beverages every day is 1.7% (Table 4-55).

**Table - 4-56. The Distribution of Milk Pudding/Ready Milk Products Consumption Frequencies of Children by Regions**

NUTS	Consumption Frequency	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	20.5	0.7	19.2	21.8	2047
	Less than once a week	32.6	0.6	31.5	33.8	3404
	1-3 days	31.0	0.6	29.8	32.3	3355
	4-6 days	11.1	0.4	10.3	11.9	1263
	Every day	4.7	0.3	4.2	5.3	491
	Total	100.0	0.0	100.0	100.0	10560
İstanbul	Never	19.9	1.7	16.7	23.6	208
	Less than once a week	36.6	1.7	33.3	40.1	392
	1-3 days	29.3	1.8	25.9	33.0	331
	4-6 days	8.9	0.9	7.3	10.8	97
	Every day	5.3	0.8	4.0	6.9	57
	Total	100.0	0.0	100.0	100.0	1085
West Marmara	Never	13.2	1.8	10.1	17.1	82
	Less than once a week	34.1	2.8	28.8	39.9	229
	1-3 days	33.7	2.2	29.5	38.2	224
	4-6 days	14.5	1.6	11.6	18.0	101
	Every day	4.5	0.8	3.2	6.2	29
	Total	100.0	0.0	100.0	100.0	665
Aegean	Never	15.5	1.5	12.7	18.7	139
	Less than once a week	37.1	1.7	33.7	40.5	348
	1-3 days	32.0	2.1	28.0	36.2	319
	4-6 days	11.3	1.3	9.1	14.1	126
	Every day	4.2	0.7	2.9	5.9	41
	Total	100.0	0.0	100.0	100.0	973
East Marmara	Never	15.2	1.6	12.3	18.6	129
	Less than once a week	33.1	2.0	29.3	37.3	274
	1-3 days	33.7	1.9	30.2	37.5	299
	4-6 days	14.0	1.6	11.1	17.5	121
	Every day	3.9	0.7	2.8	5.6	34
	Total	100.0	0.0	100.0	100.0	857
West Anatolia	Never	15.5	1.6	12.7	18.8	126
	Less than once a week	32.1	2.2	27.8	36.6	270
	1-3 days	32.7	1.8	29.3	36.4	274
	4-6 days	13.8	1.7	10.7	17.6	108
	Every day	5.9	0.9	4.4	7.9	47
	Total	100.0	0.0	100.0	100.0	825
Mediterranean	Never	17.1	1.4	14.6	20.0	190
	Less than once a week	32.6	1.7	29.3	36.1	367
	1-3 days	34.2	2.0	30.4	38.3	371
	4-6 days	10.6	1.2	8.5	13.2	127
	Every day	5.5	0.9	3.9	7.6	58
	Total	100.0	0.0	100.0	100.0	1113

Continuation of Table 4-56			95% Confidence Interval			
NUTS	Consumption Frequency	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	14.9	1.8	11.7	18.9	119
	Less than once a week	31.2	2.2	27.0	35.7	254
	1-3 days	34.6	2.0	30.8	38.7	272
	4-6 days	13.7	1.4	11.2	16.6	107
	Every day	5.6	1.1	3.8	8.0	47
	Total	100.0	0.0	100.0	100.0	799
West Black Sea	Never	14.5	1.7	11.4	18.2	118
	Less than once a week	32.1	2.2	27.9	36.7	253
	1-3 days	34.3	1.6	31.3	37.4	284
	4-6 days	14.8	1.5	12.1	17.9	126
	Every day	4.4	0.8	3.1	6.2	37
	Total	100.0	0.0	100.0	100.0	818
East Black Sea	Never	23.7	1.8	20.3	27.5	146
	Less than once a week	29.3	2.6	24.4	34.6	192
	1-3 days	30.9	2.5	26.2	36.0	190
	4-6 days	12.8	1.7	9.8	16.5	80
	Every day	3.3	0.7	2.1	5.1	22
	Total	100.0	0.0	100.0	100.0	630
Northeast Anatolia	Never	20.8	1.8	17.4	24.6	170
	Less than once a week	32.6	2.0	28.9	36.6	253
	1-3 days	29.8	1.8	26.4	33.4	240
	4-6 days	12.1	1.3	9.7	14.8	97
	Every day	4.7	0.8	3.4	6.6	36
	Total	100.0	0.0	100.0	100.0	796
Middle East Anatolia	Never	26.9	2.2	22.7	31.4	218
	Less than once a week	29.9	1.9	26.4	33.8	249
	1-3 days	30.7	2.5	26.0	35.8	251
	4-6 days	9.2	1.2	7.0	11.9	76
	Every day	3.4	0.8	2.1	5.4	28
	Total	100.0	0.0	100.0	100.0	822
Southeast Anatolia	Never	37.5	3.0	31.9	43.5	402
	Less than once a week	26.5	1.5	23.6	29.5	323
	1-3 days	23.8	1.7	20.6	27.3	300
	4-6 days	7.9	1.1	6.1	10.3	97
	Every day	4.3	0.7	3.1	6.0	55
	Total	100.0	0.0	100.0	100.0	1177

4.7% of children consume milk pudding / ready milk products every day; 11.1% of them consume 4-6 days a week; 31.0% of them consume 1-3 days a week and 32.6% of them consume less than once a week. 20.5% of the children do not consume milk pudding / ready milk products (Table 4-56).



**Table 4-57. The Distribution of Meat Consumption Frequencies of Children by Regions**

NUTS	Consumption Frequency	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	6.1	0.3	5.5	6.7	658
	Less than once a week	18.9	0.6	17.8	20.0	2005
	1-3 days	41.8	0.6	40.6	43.1	4419
	4-6 days	26.3	0.6	25.0	27.5	2856
	Every day	7.0	0.3	6.3	7.7	777
	Total	100.0	0.0	100.0	100.0	10715
İstanbul	Never	6.6	0.9	5.1	8.6	75
	Less than once a week	16.7	1.4	14.1	19.6	188
	1-3 days	42.9	1.6	39.8	46.0	472
	4-6 days	27.4	1.4	24.7	30.2	291
	Every day	6.5	0.9	5.0	8.4	72
	Total	100.0	0.0	100.0	100.0	1098
West Marmara	Never	5.4	1.0	3.8	7.7	33
	Less than once a week	15.7	1.8	12.4	19.7	104
	1-3 days	45.4	2.1	41.4	49.6	301
	4-6 days	29.3	2.9	23.9	35.3	199
	Every day	4.2	0.7	2.9	5.9	29
	Total	100.0	0.0	100.0	100.0	666
Aegean	Never	5.1	0.9	3.6	7.1	55
	Less than once a week	18.4	1.8	15.2	22.1	188
	1-3 days	43.6	2.0	39.6	47.6	422
	4-6 days	25.9	1.9	22.3	29.9	259
	Every day	7.1	1.2	5.0	9.9	60
	Total	100.0	0.0	100.0	100.0	984
East Marmara	Never	5.1	0.7	3.8	6.8	45
	Less than once a week	19.7	1.7	16.5	23.3	172
	1-3 days	42.7	2.2	38.5	47.0	366
	4-6 days	26.8	1.9	23.3	30.7	236
	Every day	5.7	1.1	3.9	8.2	49
	Total	100.0	0.0	100.0	100.0	868
West Anatolia	Never	6.1	1.2	4.1	9.0	51
	Less than once a week	20.3	1.9	16.8	24.3	173
	1-3 days	41.0	2.0	37.2	44.9	339
	4-6 days	25.6	2.0	21.9	29.7	213
	Every day	7.0	1.1	5.1	9.4	54
	Total	100.0	0.0	100.0	100.0	830
Mediterranean	Never	5.0	0.7	3.9	6.5	56
	Less than once a week	20.5	1.7	17.3	24.1	223
	1-3 days	43.7	1.5	40.9	46.6	489
	4-6 days	24.7	1.8	21.3	28.5	290
	Every day	6.0	0.9	4.5	8.0	68
	Total	100.0	0.0	100.0	100.0	1126

Continuation of Table 4-57				95% Confidence Interval		
NUTS	Consumption Frequency	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	8.1	1.0	6.3	10.4	67
	Less than once a week	20.9	2.2	16.9	25.5	167
	1-3 days	39.4	1.9	35.8	43.1	318
	4-6 days	24.3	2.2	20.3	28.8	204
	Every day	7.4	1.4	5.1	10.5	57
	Total	100.0	0.0	100.0	100.0	813
West Black Sea	Never	5.3	1.0	3.7	7.5	43
	Less than once a week	20.8	1.8	17.5	24.7	171
	1-3 days	43.9	1.6	40.8	47.1	358
	4-6 days	23.4	2.1	19.6	27.7	208
	Every day	6.6	1.2	4.6	9.4	48
	Total	100.0	0.0	100.0	100.0	828
East Black Sea	Never	9.0	1.4	6.5	12.2	49
	Less than once a week	19.2	2.1	15.5	23.6	116
	1-3 days	43.1	2.3	38.6	47.7	282
	4-6 days	23.2	2.3	19.0	28.1	155
	Every day	5.5	0.8	4.1	7.3	39
	Total	100.0	0.0	100.0	100.0	641
Northeast Anatolia	Never	4.0	0.8	2.7	5.8	30
	Less than once a week	13.8	1.5	11.0	17.1	106
	1-3 days	30.8	2.0	27.0	34.8	259
	4-6 days	33.4	2.0	29.6	37.3	278
	Every day	18.1	2.3	14.1	23.0	145
	Total	100.0	0.0	100.0	100.0	818
Middle East Anatolia	Never	7.1	1.1	5.3	9.5	61
	Less than once a week	18.7	1.9	15.3	22.6	157
	1-3 days	40.9	2.2	36.7	45.2	342
	4-6 days	26.5	2.1	22.6	30.7	211
	Every day	6.8	1.0	5.0	9.1	59
	Total	100.0	0.0	100.0	100.0	830
Southeast Anatolia	Never	7.2	1.0	5.4	9.5	93
	Less than once a week	19.4	1.7	16.2	23.0	240
	1-3 days	39.4	2.2	35.1	43.9	471
	4-6 days	26.5	2.3	22.2	31.2	312
	Every day	7.6	0.9	6.0	9.5	97
	Total	100.0	0.0	100.0	100.0	1213

7.0% of the children consume meat every day; 26.3% of them consume 4-6 days a week; 41.8% of them consume 1-3 days a week and 18.9% of them consumes less than once a week. 6.1% of children do not consume any meat (Table 4-57).

**Table 4-58. The Distribution of Fish Consumption Frequencies of Children by Regions**

NUTS	Consumption Frequency	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	14.6	0.6	13.4	15.9	1464
	Less than once a week	40.3	0.7	38.9	41.6	4255
	1-3 days	33.4	0.6	32.3	34.7	3603
	4-6 days	9.5	0.4	8.8	10.3	1080
	Every day	2.2	0.2	1.9	2.6	235
	Total	100.0	0.0	100.0	100.0	10637
İstanbul	Never	10.8	1.1	8.7	13.2	120
	Less than once a week	38.0	1.6	35.0	41.1	424
	1-3 days	38.0	1.4	35.2	40.8	406
	4-6 days	10.8	1.0	8.9	13.0	125
	Every day	2.5	0.6	1.6	3.9	26
	Total	100.0	0.0	100.0	100.0	1101
West Marmara	Never	9.3	1.8	6.3	13.5	54
	Less than once a week	33.4	2.9	27.9	39.4	241
	1-3 days	42.9	2.0	39.0	46.9	279
	4-6 days	12.2	2.2	8.6	17.2	75
	Every day	2.2	0.7	1.1	4.1	11
	Total	100.0	0.0	100.0	100.0	660
Aegean	Never	9.1	1.2	6.9	11.8	89
	Less than once a week	41.5	1.9	37.7	45.3	390
	1-3 days	38.5	2.0	34.7	42.4	380
	4-6 days	9.5	1.0	7.7	11.7	101
	Every day	1.5	0.4	0.9	2.4	15
	Total	100.0	0.0	100.0	100.0	975
East Marmara	Never	9.8	1.2	7.6	12.5	90
	Less than once a week	39.5	1.9	35.8	43.2	333
	1-3 days	37.4	2.2	33.2	41.7	324
	4-6 days	11.7	1.3	9.4	14.4	100
	Every day	1.7	0.6	0.9	3.2	16
	Total	100.0	0.0	100.0	100.0	863
West Anatolia	Never	11.1	1.3	8.8	13.8	91
	Less than once a week	42.5	2.0	38.8	46.4	358
	1-3 days	35.9	2.1	32.0	40	292
	4-6 days	8.4	0.9	6.8	10.4	70
	Every day	2.1	0.7	1.0	4.1	16
	Total	100.0	0.0	100.0	100.0	827
Mediterranean	Never	14.6	1.4	12.1	17.6	159
	Less than once a week	44.4	2.0	40.6	48.3	489
	1-3 days	30.1	1.9	26.5	34.0	341
	4-6 days	8.3	1.1	6.4	10.7	91
	Every day	2.5	0.6	1.6	3.9	29
	Total	100.0	0.0	100.0	100.0	1109

Continuation of Table 4-58			95% Confidence Interval			
NUTS	Consumption Frequency	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	16.1	1.7	13.0	19.7	125
	Less than once a week	41.3	2.2	37.0	45.8	338
	1-3 days	32.1	2.0	28.3	36.1	260
	4-6 days	8.2	1.1	6.3	10.5	64
	Every day	2.4	0.7	1.4	4.1	18
	Total	100.0	0.0	100.0	100.0	805
West Black Sea	Never	10.0	1.4	7.6	13.1	80
	Less than once a week	35.4	3.1	29.5	41.8	298
	1-3 days	41.1	2.9	35.6	46.8	329
	4-6 days	11.8	1.3	9.4	14.7	108
	Every day	1.8	0.5	1.0	3.2	14
	Total	100.0	0.0	100.0	100.0	829
East Black Sea	Never	9.1	1.5	6.5	12.6	54
	Less than once a week	29.5	2.9	24.2	35.5	176
	1-3 days	41.2	3.1	35.3	47.4	267
	4-6 days	17.4	2.2	13.4	22.2	117
	Every day	2.7	0.8	1.6	4.7	19
	Total	100.0	0.0	100.0	100.0	633
Northeast Anatolia	Never	16.2	1.7	13.1	19.9	125
	Less than once a week	42.2	1.8	38.7	45.9	343
	1-3 days	30.1	2.1	26.0	34.4	235
	4-6 days	9.1	1.1	7.2	11.6	80
	Every day	2.3	0.6	1.4	3.8	18
	Total	100.0	0.0	100.0	100.0	801
Middle East Anatolia	Never	13.4	1.5	10.7	16.7	111
	Less than once a week	45.8	2.2	41.6	50.1	376
	1-3 days	30.3	2.1	26.4	34.6	245
	4-6 days	8.9	1.2	6.9	11.6	80
	Every day	1.5	0.5	0.8	2.9	14
	Total	100.0	0.0	100.0	100.0	826
Southeast Anatolia	Never	31.9	3.5	25.4	39.2	366
	Less than once a week	38.9	2.7	33.8	44.4	489
	1-3 days	19.8	1.5	17.1	22.8	245
	4-6 days	6.5	1.5	4.2	10.0	69
	Every day	2.8	0.6	1.8	4.2	39
	Total	100.0	0.0	100.0	100.0	1208

14.6% of the children do not consume any fish; 40.3% of them consume less than once a week; 33.4% of them consume 1-3 times a week and 9.5% of them consume 4-6 times a week. The percentage of children consuming fish every day is 2.2% (Table 4-58).

**Table 4-59. The Distribution of Salty Snacks (Potato Chips, Corn Chips, Snack Food) Consumption Frequencies of Children by Regions**

NUTS	Consumption Frequency	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	14.5	0.5	13.5	15.5	1503
	Less than once a week	34.6	0.7	33.2	36.0	3686
	1-3 days	29.6	0.6	28.5	30.8	3181
	4-6 days	13.7	0.5	12.8	14.6	1494
	Every day	7.6	0.4	6.8	8.5	815
	Total	100.0	0.0	100.0	100.0	10679
Istanbul	Never	17.7	1.5	14.9	20.9	184
	Less than once a week	38.3	2.0	34.5	42.3	400
	1-3 days	26.4	1.5	23.5	29.5	306
	4-6 days	11.7	1.1	9.8	14.0	134
	Every day	5.9	0.9	4.4	7.8	67
	Total	100.0	0.0	100.0	100.0	1091
West Marmara	Never	12.2	1.8	9.0	16.2	86
	Less than once a week	34.0	3.1	28.3	40.2	242
	1-3 days	29.2	2.2	25.0	33.7	192
	4-6 days	16.0	2.1	12.3	20.4	100
	Every day	8.7	1.6	6.0	12.4	49
	Total	100.0	0.0	100.0	100.0	669
Aegean	Never	16.0	1.4	13.3	19.0	157
	Less than once per week	36.0	2.5	31.3	40.9	362
	1-3 days	31.0	1.9	27.3	34.9	292
	4-6 days	11.0	1.3	8.7	13.8	109
	Every day	6.1	1.0	4.3	8.4	59
	Total	100.0	0.0	100.0	100.0	979
East Marmara	Never	14.4	1.5	11.7	17.6	122
	Less than once a week	40.3	2.3	35.8	45.0	337
	1-3 days	27.0	1.3	24.5	29.6	240
	4-6 days	13.1	1.5	10.4	16.3	117
	Every day	5.3	0.9	3.8	7.3	47
	Total	100.0	0.0	100.0	100.0	863
West Anatolia	Never	17.2	2.4	13.0	22.3	135
	Less than once per week	37.1	2.5	32.4	42.0	311
	1-3 days	27.3	2.1	23.3	31.7	240
	4-6 days	10.8	1.2	8.7	13.4	90
	Every day	7.7	2.2	4.4	13.1	55
	Total	100.0	0.0	100.0	100.0	831
Mediterranean	Never	13.5	1.5	10.7	16.8	143
	Less than once a week	33.7	1.9	30.0	37.6	388
	1-3 days	31.1	1.7	27.9	34.5	342
	4-6 days	14.7	1.4	12.1	17.7	169
	Every day	7.0	1.1	5.2	9.5	84
	Total	100.0	0.0	100.0	100.0	1126

Continuation of Table 4-59				95% Confidence		
NUTS	Consumption Frequency	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	12.1	1.2	10.0	14.5	97
	Less than once a week	35.6	2.2	31.3	40	299
	1-3 days	31.6	2.0	27.7	35.6	244
	4-6 days	12.7	1.3	10.3	15.5	99
	Every day	8.2	1.7	5.4	12.3	61
	Total	100.0	0.0	100.0	100.0	800
West Black Sea	Never	11.7	1.3	9.4	14.6	103
	Less than once a week	36.9	2.9	31.3	42.8	309
	1-3 days	31.8	2.1	27.8	36.0	256
	4-6 days	14.5	1.4	11.9	17.6	122
	Every day	5.1	0.8	3.8	7.0	45
	Total	100.0	0.0	100.0	100.0	835
East Black Sea	Never	19.5	2.4	15.2	24.6	117
	Less than once a week	31.1	2.0	27.3	35.1	207
	1-3 days	32.7	1.9	29.1	36.5	207
	4-6 days	12.0	1.9	8.7	16.2	77
	Every day	4.7	0.9	3.3	6.9	31
	Total	100.0	0.0	100.0	100.0	639
Northeast Anatolia	Never	12.3	1.4	9.7	15.3	100
	Less than once a week	28.8	1.9	25.2	32.8	246
	1-3 days	31.8	2.1	27.7	36.1	243
	4-6 days	16.8	1.8	13.6	20.5	137
	Every day	10.3	1.4	7.8	13.5	82
	Total	100.0	0.0	100.0	100.0	808
Middle East Anatolia	Never	13.9	1.9	10.5	18.1	111
	Less than once a week	31.7	2.3	27.3	36.5	255
	1-3 days	30.1	2.0	26.3	34.2	246
	4-6 days	14.9	1.6	11.9	18.4	129
	Every day	9.5	1.7	6.6	13.5	86
	Total	100.0	0.0	100.0	100.0	827
Southeast Anatolia	Never	11.1	1.1	9.2	13.5	148
	Less than once a week	27.0	1.9	23.5	30.9	330
	1-3 days	31.6	1.9	28.1	35.4	373
	4-6 days	17.6	1.6	14.7	21.0	211
	Every day	12.6	1.5	9.8	15.9	149
	Total	100.0	0.0	100.0	100.0	1211

7.6% of children consume salty snacks every day; 13.7% of them are 4-6 days per week; 29.6% of them are 1-3 days and 34.6% of them consume less than once a week. 14.5% of children never consume such snacks (Table 4-59).

**Table 4-60. The Distribution of Sugar Containing Bars and Chocolate Consumption Frequencies of Children by Regions**

NUTS	Consumption Frequency	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	6.1	0.4	5.4	6.8	617
	Less than once a week	24.9	0.6	23.8	26.1	2623
	1-3 days	36.3	0.6	35.1	37.5	3833
	4-6 days	20.2	0.6	19.2	21.4	2196
	Every day	12.5	0.4	11.6	13.4	1318
	Total	100.0	0.0	100.0	100.0	10587
İstanbul	Never	5.7	0.9	4.2	7.6	65
	Less than once a week	25.7	1.6	22.7	29.0	276
	1-3 days	36.3	1.5	33.4	39.3	383
	4-6 days	19.2	1.6	16.3	22.5	217
	Every day	13.0	1.2	10.9	15.4	139
	Total	100.0	0.0	100.0	100.0	1080
West Marmara	Never	3.5	0.7	2.4	5.2	25
	Less than once a week	20.2	2.7	15.5	25.9	145
	1-3 days	37.7	2.7	32.6	43.1	252
	4-6 days	23.1	1.7	19.9	26.6	145
	Every day	15.5	2.0	12.0	19.8	98
	Total	100.0	0.0	100.0	100.0	665
Aegean	Never	6.3	1.2	4.3	9.2	50
	Less than once a week	26.3	1.6	23.2	29.6	257
	1-3 days	36.9	1.5	34.0	39.9	352
	4-6 days	18.4	1.5	15.6	21.5	189
	Every day	12.2	1.2	10.0	14.7	120
	Total	100.0	0.0	100.0	100.0	968
East Marmara	Never	3.6	0.6	2.6	5.1	34
	Less than once a week	23.2	1.6	20.3	26.4	201
	1-3 days	38.7	1.8	35.3	42.2	333
	4-6 days	23.0	1.6	20.0	26.2	191
	Every day	11.5	1.0	9.6	13.7	98
	Total	100.0	0.0	100.0	100.0	857
West Anatolia	Never	5.2	1.7	2.7	9.6	42
	Less than once a week	23.8	1.5	20.9	26.8	197
	1-3 days	36.7	2.2	32.4	41.2	315
	4-6 days	21.3	1.5	18.5	24.4	170
	Every day	13.0	1.8	9.9	16.9	103
	Total	100.0	0.0	100.0	100.0	827
Mediterranean	Never	7.4	1.5	5.0	10.8	69
	Less than once a week	24.3	1.7	21.1	27.8	274
	1-3 days	38.1	2.0	34.4	42.0	426
	4-6 days	19.4	1.6	16.5	22.6	213
	Every day	10.8	1.1	8.8	13.1	128
	Total	100.0	0.0	100.0	100.0	1110

Continuation of Table 4-60				95% Confidence Interval		
NUTS	Consumption Frequency	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	5.9	1.0	4.2	8.2	44
	Less than once a week	24.2	1.7	20.9	27.8	196
	1-3 days	35.4	1.9	31.7	39.3	285
	4-6 days	20.8	2.0	17.3	24.9	172
	Every day	13.7	2.0	10.1	18.2	105
	Total	100.0	0.0	100.0	100.0	802
West Black Sea	Never	4.0	0.7	2.9	5.6	36
	Less than once a week	26.1	2.1	22.1	30.5	208
	1-3 days	35.8	2.4	31.3	40.6	285
	4-6 days	22.0	2.0	18.4	26.1	187
	Every day	12.1	1.5	9.5	15.2	107
	Total	100.0	0.0	100.0	100.0	823
East Black Sea	Never	6.7	1.4	4.5	10.0	39
	Less than once a week	26.0	2.3	21.7	30.7	152
	1-3 days	37.3	2.0	33.5	41.3	235
	4-6 days	20.2	1.8	16.9	23.9	136
	Every day	9.9	1.5	7.3	13.1	60
	Total	100.0	0.0	100.0	100.0	622
Northeast Anatolia	Never	6.0	0.9	4.5	8.0	52
	Less than once a week	22.9	1.4	20.3	25.8	185
	1-3 days	35.5	1.8	32.0	39.2	292
	4-6 days	22.4	1.9	18.9	26.3	176
	Every day	13.1	1.4	10.6	16.1	104
	Total	100.0	0.0	100.0	100.0	809
Middle East Anatolia	Never	8.1	1.3	5.9	10.9	67
	Less than once a week	29.2	2.2	25.0	33.8	238
	1-3 days	32.1	1.7	28.8	35.5	263
	4-6 days	20.0	2.5	15.6	25.3	171
	Every day	10.7	1.2	8.5	13.3	93
	Total	100.0	0.0	100.0	100.0	832
Southeast Anatolia	Never	7.5	1.0	5.8	9.6	94
	Less than once a week	25.0	2.0	21.3	29.1	294
	1-3 days	33.8	2.0	30.0	37.9	412
	4-6 days	19.4	1.8	16.0	23.3	229
	Every day	14.3	1.7	11.4	17.9	163
	Total	100.0	0.0	100.0	100.0	1192

12.5% of the children consume sugar bars and chocolate; 20.2% of them consume 4-6 days a week; 36.3% of them consume 1-3 days a week and 24.9% of them consume less than once a week. 6.1% of children do not consume sugar bars and chocolates (Table 4-60).



**Table 4-61. The Distribution of Biscuits, Cakes, Cookies Consumption Frequencies of Children by Regions**

NUTS	Consumption Frequency	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Never	3.5	0.2	3.1	4.0	356
	Less than once a week	20.0	0.5	19.0	21.1	2025
	1-3 days	39.2	0.6	38.0	40.5	4059
	4-6 days	25.3	0.6	24.2	26.5	2699
	Every day	11.9	0.4	11.1	12.8	1286
	Total	100.0	0.0	100.0	100.0	10425
İstanbul	Never	3.4	0.7	2.2	5.2	35
	Less than once a week	24.0	1.8	20.7	27.7	249
	1-3 days	39.7	2.0	35.9	43.8	434
	4-6 days	22.0	1.7	18.8	25.6	235
	Every day	10.8	1.1	8.8	13.2	119
	Total	100.0	0.0	100.0	100.0	1072
West Marmara	Never	2.7	0.8	1.5	4.7	16
	Less than once a week	17.6	1.7	14.5	21.2	121
	1-3 days	42.4	2.1	38.3	46.7	282
	4-6 days	26.8	1.9	23.2	30.7	171
	Every day	10.5	1.6	7.7	14.2	64
	Total	100.0	0.0	100.0	100.0	654
Aegean	Never	1.6	0.4	1.0	2.6	17
	Less than once a week	21.0	1.4	18.3	24.0	193
	1-3 days	42.5	2.2	38.3	46.9	399
	4-6 days	24.1	1.6	21.1	27.4	235
	Every day	10.7	1.2	8.6	13.3	102
	Total	100.0	0.0	100.0	100.0	946
East Marmara	Never	2.8	0.6	1.9	4.1	23
	Less than once a week	18.1	1.6	15.2	21.4	152
	1-3 days	40	2.0	36.3	43.9	351
	4-6 days	29.4	1.6	26.4	32.7	242
	Every day	9.6	1.3	7.4	12.4	84
	Total	100.0	0.0	100.0	100.0	852
West Anatolia	Never	3.8	1.2	2.0	7.1	28
	Less than once a week	21.2	1.4	18.6	24.0	177
	1-3 days	40.3	1.3	37.7	43.0	333
	4-6 days	24.2	1.4	21.6	27.1	200
	Every day	10.5	1.4	8.0	13.6	86
	Total	100.0	0.0	100.0	100.0	824
Mediterranean	Never	3.9	0.7	2.7	5.6	36
	Less than once a week	17.0	1.4	14.5	19.9	188
	1-3 days	38.9	1.6	35.8	42.1	422
	4-6 days	27.3	1.5	24.4	30.3	312
	Every day	13.0	1.2	10.8	15.6	148
	Total	100.0	0.0	100.0	100.0	1106

Continuation of Table 4-61				95% Confidence Interval		
NUTS	Consumption Frequency	%	Standard Error	Lower Value	Upper Value	Unweighted
Central Anatolia	Never	3.0	0.8	1.7	5.2	25
	Less than once a week	19.1	1.9	15.7	23.2	146
	1-3 days	41.6	2.2	37.3	46.0	334
	4-6 days	25.5	1.5	22.7	28.5	200
	Every day	10.8	1.9	7.6	15.2	82
	Total	100.0	0.0	100.0	100.0	787
West Black Sea	Never	2.2	0.5	1.4	3.5	19
	Less than once a week	20.7	2.2	16.8	25.3	161
	1-3 days	36.0	2.5	31.3	41.0	277
	4-6 days	28.3	2.6	23.6	33.7	236
	Every day	12.7	1.5	10.0	16.0	108
	Total	100.0	0.0	100.0	100.0	801
East Black Sea	Never	4.6	0.9	3.1	6.8	26
	Less than once a week	18.5	2.2	14.5	23.3	110
	1-3 days	41.5	2.6	36.5	46.7	248
	4-6 days	23.5	1.7	20.3	27.1	143
	Every day	11.9	1.7	9.0	15.5	80
	Total	100.0	0.0	100.0	100.0	607
Northeast Anatolia	Never	3.2	0.6	2.2	4.7	27
	Less than once a week	17.8	1.8	14.6	21.5	138
	1-3 days	34.2	2.0	30.4	38.2	276
	4-6 days	29.2	2.2	25.1	33.8	230
	Every day	15.5	1.8	12.4	19.4	122
	Total	100.0	0.0	100.0	100.0	793
Middle East Anatolia	Never	4.7	0.9	3.2	6.8	40
	Less than once a week	21.4	2.2	17.4	26.1	171
	1-3 days	36.7	1.8	33.2	40.4	290
	4-6 days	24.3	2.0	20.6	28.4	198
	Every day	12.9	1.4	10.5	15.8	110
	Total	100.0	0.0	100.0	100.0	809
Southeast Anatolia	Never	5.2	0.8	3.8	7.0	64
	Less than once a week	18.8	1.4	16.1	21.8	219
	1-3 days	36.5	2.1	32.5	40.8	413
	4-6 days	24.7	1.9	21.0	28.7	297
	Every day	14.8	1.5	12.1	18.0	181
	Total	100.0	0.0	100.0	100.0	1174

11.9% of the children consume biscuits, cakes and cookies every day; 25.3% of them consume 4-6 days a week; 39.2% of them 1-3 days a week and 20.0% of them consume less than once a week. 3.5% of children do not consume biscuits, cakes, cookies (Table 4-61).

**Table 4-62. The Distribution of Pizza, Lahmacun (Turkish Pizza with Meat Filling), French Fries, Hamburger, Hot Dog / Sausage Sandwich Consumption Frequencies of Children by Regions**

NUTS	Consumption Frequency	%	95% Confidence interval			Unweighted Number
			Standard Error	Lower Value	Upper Value	
Turkey	Never	12.7	0.6	11.5	14.0	1388
	Less than once a week	38.7	0.8	37.1	40.3	4051
	1-3 days	33.0	0.6	31.7	34.2	3601
	4-6 days	11.8	0.4	11.1	12.6	1316
	Every day	3.8	0.2	3.4	4.4	429
	Total	100.0	0.0	100.0	100.0	10785
İstanbul	Never	9.6	1.1	7.7	11.9	107
	Less than once a week	45.1	3.0	39.2	51.0	481
	1-3 days	31.8	2.0	27.9	35.9	371
	4-6 days	10.0	1.0	8.2	12.1	113
	Every day	3.5	0.6	2.5	5.0	41
	Total	100.0	0.0	100.0	100.0	1113
West Marmara	Never	10.5	2.6	6.4	16.6	64
	Less than once a week	37.1	2.6	32.1	42.4	269
	1-3 days	36.0	2.4	31.5	40.8	237
	4-6 days	13.2	2.0	9.7	17.7	80
	Every day	3.3	0.9	1.9	5.6	18
	Total	100.0	0.0	100.0	100.0	668
Aegean	Never	9.0	1.3	6.8	11.9	86
	Less than once a week	42.7	2.2	38.5	47.1	421
	1-3 days	33.5	2.0	29.6	37.5	336
	4-6 days	11.7	1.3	9.5	14.5	118
	Every day	3.1	0.6	2.1	4.6	30
	Total	100.0	0.0	100.0	100.0	991
East Marmara	Never	12.1	1.9	8.7	16.4	98
	Less than once a week	40.6	2.2	36.3	45.0	354
	1-3 days	32.0	1.8	28.5	35.6	281
	4-6 days	11.6	1.3	9.3	14.5	99
	Every day	3.7	0.7	2.5	5.5	35
	Total	100.0	0.0	100.0	100.0	867
West Anatolia	Never	11.4	1.7	8.6	15.1	92
	Less than once a week	41.5	2.1	37.4	45.7	348
	1-3 days	30.0	1.7	26.7	33.6	260
	4-6 days	12.9	1.4	10.5	15.8	104
	Every day	4.1	0.8	2.8	6.1	35
	Total	100.0	0.0	100.0	100.0	839
Mediterranean	Never	9.2	1.6	6.6	12.7	91
	Less than once a week	37.4	1.9	33.8	41.2	433
	1-3 days	36.2	1.7	32.9	39.6	409
	4-6 days	13.2	1.1	11.2	15.4	154
	Every day	4.0	0.8	2.8	5.8	47
	Total	100.0	0.0	100.0	100.0	1134

Continuation of Table 4-62			95% Confidence Interval			
NUTS	Consumption Frequency	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Never	13.7	2.5	9.5	19.3	108
	Less than once a week	32.8	2.1	28.9	37.0	275
	1-3 days	33.1	1.7	29.9	36.4	270
	4-6 days	14.5	1.5	11.7	17.8	118
	Every day	5.9	1.7	3.4	10.2	46
	Total	100.0	0.0	100.0	100.0	817
West Black Sea	Never	11.3	1.6	8.5	14.9	85
	Less than once a week	36.5	2.2	32.3	40.9	305
	1-3 days	35.8	2.0	31.9	39.9	298
	4-6 days	11.0	1.4	8.6	14.0	98
	Every day	5.5	0.8	4.0	7.4	46
	Total	100.0	0.0	100.0	100.0	832
East Black Sea	Never	17.2	2.4	12.9	22.5	102
	Less than once a week	33.9	3.0	28.3	39.9	214
	1-3 days	34.8	2.5	30.1	39.9	225
	4-6 days	10.9	1.5	8.2	14.3	77
	Every day	3.3	0.8	2.0	5.2	21
	Total	100.0	0.0	100.0	100.0	639
Northeast Anatolia	Never	21.3	2.5	16.7	26.7	173
	Less than once a week	35.4	2.2	31.2	39.8	293
	1-3 days	28.9	2.1	24.9	33.2	236
	4-6 days	10.7	1.3	8.5	13.4	94
	Every day	3.7	0.7	2.6	5.3	32
	Total	100.0	0.0	100.0	100.0	828
Middle East Anatolia	Never	18.4	2.1	14.7	22.9	161
	Less than once a week	32.4	1.8	28.9	36.1	268
	1-3 days	33.4	2.1	29.3	37.7	277
	4-6 days	13.2	1.4	10.6	16.2	109
	Every day	2.6	0.7	1.6	4.4	25
	Total	100.0	0.0	100.0	100.0	840
Southeast Anatolia	Never	19.3	2.9	14.2	25.7	221
	Less than once a week	33.4	2.4	28.8	38.3	390
	1-3 days	32.1	1.9	28.4	36.0	401
	4-6 days	11.1	1.1	9.0	13.6	152
	Every day	4.1	0.8	2.8	5.9	53
	Total	100.0	0.0	100.0	100.0	1217

12.7% of the children do not consume pizza, lahmacun, fries, hamburger, hot dogs/sausages; 38.7% of them consume less than once a week; 33.0% of them consume 1-3 times a week and 11.8% of them consume 4-6 times a week. The percentage of the children who consume the foods such as lahmacun, French fries, hamburgers, hot dogs and sausages every day is 3.8% (Table 4-62).

**Table 4-63. The Distribution of the Perceptions of Families Regarding the Body Structure of Their Children by Regions**

NUTS	Parental Perception	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Underweight	24.4	0.6	23.2	25.6	2729
	Normal weight	68.6	0.7	67.3	69.9	7850
	Little overweight	6.4	0.3	5.7	7.1	727
	Extremely overweight	0.6	0.1	0.5	0.8	71
	Total	100.0	0.0	100.0	100.0	11377
İstanbul	Underweight	22.7	1.6	19.8	25.8	272
	Normal weight	68.8	1.7	65.4	72.0	807
	Little overweight	8.1	0.8	6.7	9.7	92
	Extremely overweight	0.5	0.2	0.2	1.2	7
	Total	100.0	0.0	100.0	100.0	1178
West Marmara	Underweight	21.3	2.5	16.8	26.6	147
	Normal weight	70.7	2.7	65.0	75.7	496
	Little overweight	6.3	1.1	4.5	8.8	45
	Extremely overweight	1.7	0.7	0.7	4.0	6
	Total	100.0	0.0	100.0	100.0	694
Aegean	Underweight	20.6	2.2	16.6	25.2	215
	Normal weight	69.5	2.6	64.3	74.3	721
	Little overweight	8.9	1.8	6.0	13.0	86
	Extremely overweight	1.0	0.3	0.5	2.0	10
	Total	100.0	0.0	100.0	100.0	1032
East Marmara	Underweight	21.4	2.0	17.6	25.6	198
	Normal weight	72.5	2.2	68.1	76.6	652
	Little overweight	5.7	0.9	4.2	7.8	56
	Extremely overweight	0.4	0.2	0.1	1.0	4
	Total	100.0	0.0	100.0	100.0	910
West Anatolia	Underweight	22.0	1.7	18.8	25.4	188
	Normal weight	70.0	1.9	66.1	73.6	597
	Little overweight	7.7	1.0	6.1	9.8	71
	Extremely overweight	0.4	0.2	0.1	1.2	3
	Total	100.0	0.0	100.0	100.0	859
Mediterranean	Underweight	25.5	1.6	22.5	28.8	312
	Normal weight	68.5	1.6	65.2	71.6	813
	Little overweight	5.5	0.7	4.2	7.1	70
	Extremely overweight	0.6	0.2	0.3	1.3	6
	Total	100.0	0.0	100.0	100.0	1.201
Central Anatolia	Underweight	24.3	2.6	19.7	29.7	206
	Normal weight	70.0	2.8	64.2	75.2	629
	Little overweight	5.3	1.1	3.5	8.0	50
	Extremely overweight	0.4	0.2	0.1	1.1	3
	Total	100.0	0.0	100.0	100.0	888

Continuation of Table 4-63			95% Confidence Interval			
NUTS	Parental Perception	%	Standard Error	Lower Value	Upper Value	Unweighted Number
West Black Sea	Underweight	17.9	1.8	14.7	21.7	158
	Normal weight	72.4	1.8	68.8	75.8	639
	Little overweight	8.5	1.4	6.1	11.5	78
	Extremely overweight	1.2	0.7	0.4	3.7	14
	Total	100.0	0.0	100.0	100.0	889
East Black Sea	Underweight	17.8	1.8	14.6	21.6	121
	Normal weight	74.3	2.3	69.6	78.5	497
	Little overweight	7.3	1.1	5.4	9.7	53
	Extremely overweight	0.6	0.4	0.2	2.0	3
	Total	100.0	0.0	100.0	100.0	674
Northeast Anatolia	Underweight	27.4	1.6	24.4	30.6	235
	Normal weight	68.4	1.5	65.4	71.3	586
	Little overweight	3.7	0.8	2.4	5.7	36
	Extremely overweight	0.5	0.2	0.2	1.2	4
	Total	100.0	0.0	100.0	100.0	861
Middle East	Underweight	27.1	1.6	24.0	30.4	235
	Normal weight	67.5	1.8	63.9	70.9	597
	Little overweight	4.8	0.9	3.4	6.9	40
	Extremely overweight	0.5	0.3	0.2	1.5	5
	Total	100.0	0.0	100.0	100.0	877
Southeast Anatolia	Underweight	33.7	2.0	29.9	37.6	442
	Normal weight	62.1	2.0	58.0	66.1	816
	Little overweight	3.8	0.9	2.3	6.1	50
	Extremely overweight	0.4	0.2	0.2	0.9	6
	Total	100.0	0.0	100.0	100.0	1.314

24.4% of the families think that their children are underweight, 68.6% are normal weight, 6.4% are little overweight and 0.6% are extremely overweight (Table 4-63).

#### 4.2.5. Characteristics Regarding Family Health

In this section, the parents give statements about nutrition-related health problems, the body weights and height sizes declared by their parents, and the calculated body mass index values.

**Table 4-64. The Distribution of Diagnosed Hypertension in Families by Regions**

NUTS	Hypertension frequency	Standard Error	95% Confidence interval		Unweighted Number
	%		Lower Value	Upper Value	
Turkey (n = 11402)	17.6	.5	16.6	18.7	2014
İstanbul	18.3	1.2	16.1	20.8	207
West Marmara	16.0	1.7	12.9	19.8	121
Aegean	15.0	2.0	11.4	19.4	149
East Marmara	19.6	1.7	16.5	23.1	171
West Anatolia	16.6	1.1	14.6	18.8	139
Mediterranean	18.6	1.8	15.2	22.4	226
Central Anatolia	16.0	2.9	11.0	22.6	131
West Black Sea	19.3	2.6	14.7	25.0	169
East Black Sea	20.0	1.6	17.0	23.4	134
Northeast Anatolia	19.6	2.0	15.9	23.9	172
Middle East Anatolia	20.1	1.4	17.6	23.0	174
Southeast Anatolia	15.7	1.4	13.3	18.6	221

**Table 4-65. The Distribution of Diagnosed Diabetes in Families by Regions**

NUTS	Diabetes frequency	Standard Error	95% Confidence Interval		Unweighted Number
	%		Lower Value	Upper Value	
Turkey (n = 11363)	14.9	.6	13.7	16.1	1651
İstanbul	15.9	1.5	13.2	19.0	188
West Marmara	10.5	1.3	8.3	13.2	74
Aegean	14.5	2.4	10.3	19.9	137
East Marmara	16.6	1.8	13.3	20.6	137
West Anatolia	13.5	1.1	11.4	15.8	118
Mediterranean	16.2	2.1	12.5	20.8	204
Central Anatolia	16.7	2.6	12.3	22.4	141
West Black Sea	15.7	2.2	11.9	20.4	129
East Black Sea	14.0	1.1	12.0	16.4	91
Northeast Anatolia	14.8	1.8	11.6	18.8	131
Middle East Anatolia	13.2	1.3	10.8	15.9	120
Southeast Anatolia	13.4	1.6	10.5	17.0	181

**Table 4-66. The Distribution of Diagnosed Hypercholesterolemia in Families by Regions**

NUTS	High Cholesterol Frequency	95% Confidence interval			Unweighted Number
	%	Standard Error	Lower Value	Upper Value	
Turkey (n = 11373)	16.6	0.6	15.5	17.7	1810
İstanbul	16.7	1.1	14.6	19.1	189
West Marmara	12.1	1.6	9.4	15.6	88
Aegean	18.4	2.7	13.6	24.4	178
East Marmara	18.0	1.9	14.6	22.0	147
West Anatolia	17.8	1.2	15.6	20.3	150
Mediterranean	17.1	1.5	14.4	20.2	205
Central Anatolia	14.1	2.6	9.7	20.0	115
West Black Sea	16.5	2.5	12.1	22.1	141
East Black Sea	18.9	2.5	14.5	24.3	115
Northeast Anatolia	17.3	1.9	13.8	21.4	158
Middle East Anatolia	14.9	1.5	12.3	18.1	128
Southeast Anatolia	15.0	1.4	12.4	18.0	196

According to the statements of the families, the percentage of families with any of the disease and risk factors of hypertension, diabetes mellitus and hypercholesterolemia was 17.6%, 14.9% and 16.6% respectively (Table 4-64, Table 4-65 and Table 4-66).

**Table 4-67. The Distribution of the Body Weight of Mothers Based on Declarations by Regions**

NUTS	Weight (kg)	95% Confidence Interval			Percentage		
	Average	Standard Error	Lower Value	Upper Value	25 %	50 %	75 %
Turkey (n = 9789)	68.2	0.2	67.8	68.6	60.0	66.0	75.0
İstanbul	67.9	0.4	67.1	68.7	60.0	65.0	75.0
West Marmara	67.4	0.5	66.5	68.4	59.0	65.0	75.0
Aegean	68.0	0.8	66.5	69.4	58.0	66.0	75.0
East Marmara	68.1	0.6	67.0	69.3	60.0	67.0	75.0
West Anatolia	68.4	0.6	67.3	69.5	60.0	66.0	75.0
Mediterranean	68.0	0.5	67.1	69.0	60.0	67.0	75.0
Central Anatolia	68.3	0.7	66.9	69.7	60.0	67.0	75.0
West Black Sea	68.0	0.6	66.8	69.3	60.0	67.0	75.0
East Black Sea	68.8	0.6	67.6	70.0	60.0	67.0	75.0
Northeast Anatolia	68.4	0.6	67.1	69.7	60.0	67.0	75.0
Middle East Anatolia	68.0	0.6	66.8	69.2	60.0	67.0	75.0
Southeast Anatolia	68.9	0.6	67.7	70.1	60.0	68.0	75.0



**Table 4-68. The Distribution of the Body Weight of Fathers Based on Declarations by Regions**

NUTS	Weight (Kg)		95% Confidence Interval		Percentage		
	Average	Standard Error	Lower Value	Upper Value	25 %	50 %	75 %
Turkey (n = 9789)	81.8	0.2	81.4	82.3	74.0	80.0	90.0
İstanbul	83.2	0.6	81.9	84.4	75.0	82.0	90.0
West Marmara	83.2	0.8	81.6	84.8	74.0	82.0	90.0
Aegean	82.7	0.8	81.1	84.2	73.0	80.0	90.0
East Marmara	82.3	0.8	80.7	83.9	74.0	81	90.0
West Anatolia	82.4	0.6	81.2	83.7	75.0	80.0	89.0
Mediterranean	82.3	0.6	81.2	83.4	75.0	80.0	90.0
Central Anatolia	82.1	0.9	80.3	83.9	75.0	80.0	90.0
West Black Sea	80.4	0.8	78.7	82.0	71.0	79	87.0
East Black Sea	81.4	0.7	80.1	82.7	74.0	80.0	90.0
Northeast Anatolia	80.3	0.7	79	81.6	72.0	80.0	87.0
Middle East Anatolia	79.7	0.6	78.4	81	70.0	80.0	87.0
Southeast Anatolia	79.8	0.7	78.4	81.2	70.0	80.0	86.0

**Table 4-69. The Distribution of the Height of Mothers Based on Declarations by Regions**

NUTS	Height (cm)	Standard Error	95 %Confidence Interval		Percentage		
	Average		Lower Value	Upper Value	25 %	50 %	75 %
Turkey (n = 9789)	162.4	0.1	162.2	162.6	159.0	162.0	167.0
İstanbul	162.1	0.3	161.6	162.6	158.0	162.0	165.0
West Marmara	162.4	0.3	161.8	163.0	158.0	163.0	167.0
Aegean	162.7	0.4	161.8	163.5	160.0	163.0	167.0
East Marmara	162.5	0.3	162.0	163.1	158.0	162.0	167.0
West Anatolia	162.7	0.3	162.1	163.2	158.0	163.0	167.0
Mediterranean	162.5	0.3	162.0	163.1	159.0	162.0	167.0
Central Anatolia	162.0	0.5	161.1	162.9	158.0	163.0	166.0
West Black Sea	162.1	0.3	161.5	162.6	158.0	160.0	166.0
East Black Sea	161.7	0.3	161.2	162.2	158.0	160.0	165.0
Northeast Anatolia	162.6	0.3	162.0	163.2	160.0	163.0	167.0
Middle East Anatolia	162.9	0.3	162.4	163.5	160.0	163.0	167.0
Southeast Anatolia	162.6	0.3	162.0	163.1	159.0	162.0	168

**Table 4-70. The Distribution of the Height of Fathers Based on Declarations by Regions**

NUTS	Height (cm)		95% Confidence Interval		Percentage		
	Average	Standard Error	Lower Value	Upper Value	25%	50 %	75 %
Turkey (n = 9789)	174.2	0.1	174.0	174.5	170.0	175.0	180.0
İstanbul	174.9	0.3	174.3	175.5	170.0	175.0	180.0
West Marmara	174.9	0.5	174.0	175.8	170.0	175.0	180.0
Aegean	174.4	0.5	173.4	175.4	170.0	174.0	180.0
East Marmara	174.4	0.5	173.5	175.3	170.0	175.0	180.0
West Anatolia	174.8	0.3	174.1	175.4	170.0	175.0	180.0
Mediterranean	174.2	0.3	173.5	174.8	170.0	175.0	180.0
Central Anatolia	174.1	0.5	173.2	175.0	170.0	174.0	179.0
West Black Sea	173.7	0.4	172.9	174.5	170.0	173.0	179.0
East Black Sea	173.8	0.3	173.2	174.5	170.0	174.0	179.0
Northeast Anatolia	174.2	0.3	173.5	174.8	170.0	175.0	180.0
Middle East Anatolia	174.0	0.4	173.3	174.7	170.0	175.0	178.0
Southeast Anatolia	173.2	0.3	172.7	173.8	170.0	174.0	178.0

**Table 4-71. The Distribution of the Body Mass Index Groups of Mothers Calculated Based on Declarations by Regions**

NUTS	BMI Groups	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Underweight	2.1	0.2	1.8	2.5	210
	Normal	46.5	0.7	45.0	48.0	4818
	Overweight	35.2	0.7	33.9	36.5	3643
	Obese	16.2	0.5	15.2	17.2	1734
	Total	100.0	0.0	100.0	100.0	10405
İstanbul	Underweight	2.2	0.5	1.3	3.5	23
	Normal	44.9	1.7	41.6	48.2	478
	Overweight	37.7	1.6	34.6	40.9	389
	Obese	15.2	1.3	12.8	17.9	166
	Total	100.0	0.0	100.0	100.0	1056
West Marmara	Underweight	3.4	0.8	2.2	5.4	22
	Normal	49.9	1.8	46.5	53.4	331
	Overweight	30.0	1.5	27.1	33.2	194
	Obese	16.6	1.6	13.6	20.0	113
	Total	100.0	0.0	100.0	100.0	660
Aegean	Underweight	2.1	0.5	1.3	3.4	20
	Normal	49.9	3.1	43.9	55.8	491
	Overweight	33.8	3.0	28.2	39.9	332
	Obese	14.2	1.7	11.2	17.9	146
	Total	100.0	0.0	100.0	100.0	989
East Marmara	Underweight	2.9	0.6	2.0	4.2	25
	Normal	46.3	2.3	41.7	50.9	399
	Overweight	33.1	2.5	28.4	38.3	272
	Obese	17.7	1.6	14.7	21.1	146
	Total	100.0	0.0	100.0	100.0	842
West Anatolia	Underweight	2.3	0.5	1.5	3.3	19
	Normal	46.8	2.3	42.4	51.4	351
	Overweight	34.5	1.7	31.2	38.0	283
	Obese	16.4	1.6	13.5	19.7	134
	Total	100.0	0.0	100.0	100.0	787
Mediterranean	Underweight	2.0	0.5	1.1	3.4	20
	Normal	47.1	1.9	43.5	50.8	536
	Overweight	35.3	1.4	32.6	38.1	390
	Obese	15.6	1.3	13.2	18.4	174
	Total	100.0	0.0	100.0	100.0	1120
Central Anatolia	Underweight	0.8	0.3	0.4	1.7	8
	Normal	46.8	3.6	39.8	54.0	386
	Overweight	37.1	3.5	30.5	44.2	310
	Obese	15.2	2.3	11.2	20.3	121
	Total	100.0	0.0	100.0	100.0	825

Continuation of Table 4-71			95% Confidence Interval			Unweighted Number
NUTS	BMI Groups	%	Standard Error	Lower Value	Upper Value	
West Black Sea	Underweight	2.6	1.3	1.0	6.8	21
	Normal	44.9	3.1	38.8	51.1	380
	Overweight	34.9	3.0	29.3	40.9	283
	Obese	17.6	1.6	14.7	21.0	145
	Total	100.0	0.0	100.0	100.0	829
East Black Sea	Underweight	0.9	0.4	0.3	2.2	5
	Normal	42.8	2.1	38.6	47.0	265
	Overweight	36.7	1.9	33.1	40.4	233
	Obese	19.6	1.6	16.7	23.0	127
	Total	100.0	0.0	100.0	100.0	630
Northeast Anatolia	Underweight	2.0	0.7	1.1	3.9	11
	Normal	47.3	2.1	43.2	51.4	342
	Overweight	35.9	2.2	31.7	40.4	278
	Obese	14.7	1.6	11.9	18.1	118
	Total	100.0	0.0	100.0	100.0	749
Middle East Anatolia	Underweight	1.6	0.5	0.9	2.8	12
	Normal	48.6	2.8	43.2	54.1	366
	Overweight	34.6	2.5	29.9	39.7	271
	Obese	15.2	1.8	11.9	19.2	117
	Total	100.0	0.0	100.0	100.0	766
Southeast Anatolia	Underweight	2.2	0.4	1.4	3.2	24
	Normal	44.1	2.1	40	48.2	493
	Overweight	35.7	1.4	33.0	38.5	408
	Obese	18.1	1.9	14.7	22.1	227
	Total	100.0	0.0	100.0	100.0	1152

**Table 4-72. The Distribution of the Body Mass Index Groups of Fathers Calculated Based on Declarations by Regions**

NUTS	BMI Groups	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Underweight	0.6	0.1	0.5	0.8	69
	Normal	32.1	0.8	30.5	33.7	3208
	Overweight	48.9	0.7	47.5	50.4	5009
	Obese	18.4	0.6	17.2	19.6	1876
	Total	100.0	0.0	100.0	100.0	10162
İstanbul	Underweight	0.2	0.1	0.1	0.6	3
	Normal	29.5	2.1	25.5	33.9	316
	Overweight	51.8	2.2	47.4	56.1	510
	Obese	18.6	1.7	15.5	22.1	186
	Total	100.0	0.0	100.0	100.0	1015
West Marmara	Underweight	1.0	0.5	0.4	2.5	5
	Normal	27.2	2.1	23.3	31.6	184
	Overweight	50.6	2.2	46.2	55.0	321
	Obese	21.2	2.0	17.6	25.3	132
	Total	100.0	0.0	100.0	100.0	642
Aegean	Underweight	0.2	0.2	0.1	1.1	3
	Normal	32.7	3.4	26.3	39.7	289
	Overweight	48.7	2.8	43.1	54.3	476
	Obese	18.4	2.3	14.3	23.3	175
	Total	100.0	0.0	100.0	100.0	943
East Marmara	Underweight	0.7	0.3	0.3	1.5	6
	Normal	33.2	2.3	28.9	37.8	267
	Overweight	45.9	2.0	42.0	49.8	393
	Obese	20.2	1.5	17.5	23.3	164
	Total	100.0	0.0	100.0	100.0	830
West Anatolia	Underweight	1.1	0.5	0.4	2.8	6
	Normal	31.8	1.9	28.2	35.5	237
	Overweight	49.3	2.1	45.3	53.4	382
	Obese	17.9	1.4	15.3	20.7	137
	Total	100.0	0.0	100.0	100.0	762
Mediterranean	Underweight	0.4	0.2	0.2	1.2	6
	Normal	30.2	2.0	26.4	34.3	314
	Overweight	46.1	1.6	42.9	49.2	493
	Obese	23.3	1.9	19.8	27.3	267
	Total	100.0	0.0	100.0	100.0	1080
Central Anatolia	Underweight	0.6	0.3	0.2	1.4	5
	Normal	29.1	3.3	23.0	36.0	235
	Overweight	50.6	3.3	44.1	57.1	423
	Obese	19.7	2.9	14.7	25.9	174
	Total	100.0	0.0	100.0	100.0	837

Continuation of Table 4-72				95% Confidence Interval		
NUTS	BMI Groups	%	Standard Error	Lower Value	Upper Value	Unweighted Number
West Black Sea	Underweight	0.8	0.3	0.4	1.7	8
	Normal	33.7	2.8	28.5	39.3	270
	Overweight	48.6	2.4	44.0	53.3	387
	Obese	16.8	1.9	13.4	20.8	147
	Total	100.0	0.0	100.0	100.0	812
East Black Sea	Underweight	0.1	0.1	0.0	0.8	1
	Normal	30.3	2.4	25.8	35.3	186
	Overweight	51.8	2.9	46.1	57.4	304
	Obese	17.8	2.1	14.1	22.3	117
	Total	100.0	0.0	100.0	100.0	608
Northeast Anatolia	Underweight	0.4	0.2	0.2	1.2	4
	Normal	33.9	2.3	29.6	38.5	248
	Overweight	52.5	2.0	48.6	56.4	396
	Obese	13.2	1.5	10.5	16.3	103
	Total	100.0	0.0	100.0	100.0	751
Middle East Anatolia	Underweight	0.6	0.3	0.3	1.4	5
	Normal	38.9	2.3	34.6	43.4	280
	Overweight	47.8	2.4	43.1	52.5	369
	Obese	12.7	1.7	9.7	16.4	95
	Total	100.0	0.0	100.0	100.0	749
Southeast Anatolia	Underweight	1.3	0.3	0.7	2.2	17
	Normal	34.6	2.3	30.3	39.2	382
	Overweight	48.8	2.1	44.8	52.9	555
	Obese	15.3	1.7	12.2	19.0	179
	Total	100.0	0.0	100.0	100.0	1133

The average height of the children is 162.4 cm and their average weight is 68.2 kg according to the statements of their mothers. According to the Body Mass Index (BMI) values calculated according to the statements, 35.2% of the mothers are categorized as overweight and 16.2% are categorized as obese. The average body weight of the father is 81.8 kg and height is 174.2 cm according to the statements. The frequency of overweight individuals is 48.9% and the percentage for the obese ones is 18.4% according to the statements of fathers (Tables 4-67 - 4-72)

### 4.3. ANTHROPOMETRIC MEASUREMENT RESULTS

In this section, the anthropometric measurement results of the children and the evaluations of the measurement results are presented.

**Table 4-73. The Distribution by Gender of Students who were Anthropometrically Measured in the Regions**

NUTS	Gender	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Boys	50.7	0.5	49.6	51.7	5871
	Girls	49.3	0.5	48.3	50.4	5652
	Total	100.0	0.0	100.0	100.0	11523
İstanbul	Boys	50.2	1.4	47.5	53.0	556
	Girls	49.8	1.4	47.0	52.5	553
	Total	100.0	0.0	100.0	100.0	1109
West Marmara	Boys	48.9	1.9	45.1	52.7	345
	Girls	51.1	1.9	47.3	54.9	343
	Total	100.0	0.0	100.0	100.0	688
Aegean	Boys	53.5	1.7	50.2	56.7	528
	Girls	46.5	1.7	43.3	49.8	469
	Total	100.0	0.0	100.0	100.0	997
East Marmara	Boys	45.3	1.8	41.8	48.8	411
	Girls	54.7	1.8	51.2	58.2	463
	Total	100.0	0.0	100.0	100.0	874
West Anatolia	Boys	49.6	1.6	46.4	52.9	429
	Girls	50.4	1.6	47.1	53.6	427
	Total	100.0	0.0	100.0	100.0	856
Mediterranean	Boys	48.3	1.6	45.2	51.3	597
	Girls	51.7	1.6	48.7	54.8	616
	Total	100.0	0.0	100.0	100.0	1213
Central Anatolia	Boys	52.6	1.4	49.9	55.4	471
	Girls	47.4	1.4	44.6	50.1	427
	Total	100.0	0.0	100.0	100.0	898
West Black Sea	Boys	49.6	1.8	46.0	53.2	447
	Girls	50.4	1.8	46.8	54.0	432
	Total	100.0	0.0	100.0	100.0	879
East Black Sea	Boys	51.5	2.0	47.4	55.5	371
	Girls	48.5	2.0	44.5	52.6	347
	Total	100.0	0.0	100.0	100.0	718
Northeast Anatolia	Boys	50.2	1.9	46.4	53.9	454
	Girls	49.8	1.9	46.1	53.6	444
	Total	100.0	0.0	100.0	100.0	898
Middle East Anatolia	Boys	50.9	2.0	46.9	54.9	475
	Girls	49.1	2.0	45.1	53.1	434
	Total	100.0	0.0	100.0	100.0	909
Southeast Anatolia	Boys	54.7	1.5	51.8	57.5	787
	Girls	45.3	1.5	42.5	48.2	697
	Total	100.0	0.0	100.0	100.0	1484

50.7% of the total 11,523 students who are made valid anthropometrical measurements are boys. The percentage of boys regarding the anthropometric measurements is the lowest with 45.3% in the East Marmara Region and the highest in the Southeast Anatolia Region (54.7%) (Table 4-73)





**Table 4-74. The Distribution by Age Group of Students who were Anthropometrically Measured in the Regions**

NUTS	Age Groups	%	95% Confidence interval			Unweighted Number
			Standard Error	Lower Value	Upper Value	
Turkey	6 years-old	13.9	0.6	12.8	15.1	1517
	7 years-old	79.7	0.6	78.4	80.9	9275
	8 years-old	5.9	0.3	5.3	6.5	683
	9 years-old	0.5	0.1	0.4	0.7	48
	Total	100.0	0.0	100.0	100.0	11523
Istanbul	6 years-old	10.9	1.0	9.0	13.0	128
	7 years-old	83.9	1.1	81.7	85.9	926
	8 years-old	4.6	0.7	3.3	6.2	47
	9 years-old	0.7	0.2	0.3	1.4	8
	Total	100.0	0.0	100.0	100.0	1109
West Marmara	6 years-old	9.0	2.6	5.1	15.5	40
	7 years-old	83.5	2.7	77.6	88.2	595
	8 years-old	7.3	1.3	5.1	10.4	52
	9 years-old	0.1	0.1	0.0	0.8	1
	Total	100.0	0.0	100.0	100.0	688
Aegean	6 years-old	8.6	1.8	5.8	12.8	74
	7 years-old	82.4	2.4	77.2	86.6	840
	8 years-old	8.7	1.4	6.3	12.0	81
	9 years-old	0.2	0.2	0.1	1.1	2
	Total	100.0	0.0	100.0	100.0	997
East Marmara	6 years-old	11.7	1.6	8.9	15.2	97
	7 years-old	82.5	1.8	78.8	85.7	722
	8 years-old	5.6	0.9	4.1	7.6	53
	9 years-old	0.2	0.1	0.1	0.8	2
	Total	100.0	0.0	100.0	100.0	874
West Anatolia	6 years-old	9.2	1.4	6.8	12.4	72
	7 years-old	87.2	1.5	83.9	90.0	753
	8 years-old	3.3	0.7	2.2	4.9	29
	9 years-old	0.3	0.2	0.1	1.0	2
	Total	100.0	0.0	100.0	100.0	856
Mediterranean	6 years-old	11.2	2.0	7.8	15.8	115
	7 years-old	80.6	2.0	76.3	84.3	998
	8 years-old	7.8	1.0	6.0	10.1	95
	9 years-old	0.4	0.2	0.2	1.0	5
	Total	100.0	0.0	100.0	100.0	1213

Continuation of Table 4-74				95% Confidence Interval		
NUTS	Age Groups	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	6 years-old	12.1	2.2	8.4	17.2	95
	7 years-old	81.7	2.1	77.3	85.4	745
	8 years-old	6.0	0.8	4.6	7.9	57
	9 years-old	0.1	0.1	0.0	1.0	1
	Total	100.0	0.0	100.0	100.0	898
West Black Sea	6 years-old	10.6	1.9	7.4	14.9	89
	7 years-old	84.3	2.0	79.8	87.9	745
	8 years-old	4.9	0.8	3.5	6.8	42
	9 years-old	0.3	0.2	0.1	0.8	3
	Total	100.0	0.0	100.0	100.0	879
East Black Sea	6 years-old	13.0	3.0	8.1	20.2	78
	7 years-old	82.6	2.9	76.1	87.7	603
	8 years-old	4.1	0.8	2.9	6.0	35
	9 years-old	0.3	0.3	0.0	1.9	2
	Total	100.0	0.0	100.0	100.0	718
Northeast Anatolia	6 years-old	20.4	2.4	16.1	25.5	180
	7 years-old	73.2	2.4	68.3	77.7	666
	8 years-old	5.9	1.1	4.1	8.4	50
	9 years-old	0.5	0.4	0.1	2.4	2
	Total	100.0	0.0	100.0	100.0	898
Middle East Anatolia	6 years-old	24.1	2.2	20.0	28.8	209
	7 years-old	70.2	2.2	65.8	74.3	641
	8 years-old	5.4	0.9	3.8	7.5	56
	9 years-old	0.3	0.1	0.1	0.8	3
	Total	100.0	0.0	100.0	100.0	909
Southeast Anatolia	6 years-old	23.4	2.0	19.7	27.6	340
	7 years-old	69.6	2.2	65.2	73.7	1041
	8 years-old	5.7	0.8	4.3	7.6	86
	9 years-old	1.2	0.3	0.7	2.0	17
	Total	100.0	0.0	100.0	100.0	1484

Children aged 7 constitute 79.7% of total children, while the 6-years-old group constitutes 13.9% and the 8-years-old group constitutes 5.9%. The six age groups are mostly in the Middle East and Southeast Anatolia Regions (23.4%) (Table 4-74).

**Table 4-75. The Distribution of Average and Percentage Values of Body Weight of Boys by Regions**

NUTS	Body weight (kg)		95% Confidence Interval		Percentage		
	Average*	Standard Error	Lower Value	Upper Value	25 %	50 %	75 %
Turkey	25.5	0.1	25.3	25.7	22.1	24.4	27.7
İstanbul	26.3	0.3	25.7	26.9	22.9	25.0	28.2
West Marmara	26.9	0.5	26.0	27.8	22.9	25.2	29.7
Aegean	26.2	0.3	25.5	26.8	22.5	25.1	28.7
East Marmara	25.9	0.3	25.2	26.5	22.5	24.7	28.2
West Anatolia	26.0	0.3	25.5	26.5	22.9	25.0	28.2
Mediterranean	25.6	0.3	25.1	26.2	22.0	24.7	27.9
Central Anatolia	26.0	0.4	25.2	26.8	22.3	24.6	28.1
West Black Sea	26.7	0.4	25.9	27.5	22.7	24.8	29.2
East Black Sea	26.2	0.3	25.6	26.8	22.8	25.2	27.9
Northeast Anatolia	24.9	0.3	24.3	25.4	21.9	23.9	26.7
Middle East Anatolia	24.2	0.3	23.5	24.8	21.3	23.2	25.9
Southeast Anatolia	23.8	0.3	23.1	24.4	21.0	22.9	25.3

**Table 4-76. The Distribution of Average and Percentage Values of Body Weight of Girls by Regions**

NUTS	Body weight (kg)		95% Confidence Interval		Percentage		
	Average*	Standard Error	Lower Value	Upper Value	25 %	50 %	75 %
Turkey	24.8	0.1	24.6	25.0	21.2	23.6	27.1
İstanbul	25.7	0.3	25.0	26.3	21.6	24.1	28.8
West Marmara	25.3	0.4	24.5	26.0	21.5	23.5	27.7
Aegean	26.3	0.4	25.6	27.0	22.0	24.9	29.6
East Marmara	25.1	0.3	24.4	25.7	21.6	24.4	27.1
West Anatolia	25.1	0.3	24.4	25.8	21.3	24.1	27.4
Mediterranean	24.7	0.3	24.2	25.2	21.3	23.4	27.1
Central Anatolia	24.9	0.3	24.2	25.6	21.3	23.8	27.1
West Black Sea	25.5	0.3	24.9	26.2	21.7	24.5	27.8
East Black Sea	25.4	0.4	24.6	26.1	21.5	24.0	27.9
Northeast Anatolia	23.4	0.3	22.8	24.0	20.6	22.6	24.8
Middle East Anatolia	23.3	0.3	22.7	23.8	20.7	22.6	24.7
Southeast Anatolia	22.9	0.2	22.5	23.4	20.0	22.1	24.8

**Table 4-77. The Distribution of Average and Percentage Values of Height of Boys by Regions**

NUTS	Height (cm)		95% Confidence Interval		Percentage		
	Average	* Standard Error	Lower Value	Upper Value	25 %	50 %	75 %
Turkey	124.2	0.1	123.9	124.5	120.4	124.1	128.0
İstanbul	125.2	0.3	124.6	125.8	121.4	124.8	128.8
West Marmara	126.0	0.5	125.1	127.0	122.3	125.9	129.9
Aegean	125.0	0.3	124.4	125.7	121.6	125.0	128.5
East Marmara	124.6	0.4	123.9	125.4	120.9	124.4	128.6
West Anatolia	125.1	0.4	124.3	125.9	121.6	124.9	128.8
Mediterranean	124.7	0.3	124.1	125.3	120.9	125.0	128.5
Central Anatolia	124.4	0.5	123.5	125.4	120.5	124.3	128.0
West Black Sea	125.1	0.4	124.4	125.9	121.1	124.8	129.4
East Black Sea	124.1	0.4	123.4	124.9	119.9	124.2	127.5
Northeast Anatolia	123.3	0.5	122.4	124.2	119.5	122.6	127.0
Middle East Anatolia	122.9	0.5	121.9	123.8	119.0	122.5	126.4
Southeast Anatolia	121.9	0.5	120.9	122.8	117.9	121.6	125.5

**Table 4-78. The Distribution of Average and Percentage Values of Height of Girls by Regions**

NUTS	Body weight(kg)		95% Confidence Interval		Percentage		
	Average *	Standard Error	Lower Value	Upper Value	25 %	50 %	75 %
Turkey	122.7	0.1	122.5	123	119.0	122.6	126.5
İstanbul	123.4	0.3	122.7	124.1	119.7	123.2	127.0
West Marmara	123.7	0.4	122.9	124.5	119.5	123.5	127.3
Aegean	124.3	0.4	123.5	125.0	120.5	124.0	128.1
East Marmara	123.1	0.4	122.3	124.0	119.6	122.6	127.0
West Anatolia	123.2	0.4	122.4	123.9	119.2	122.9	127.0
Mediterranean	123	0.4	122.4	123.7	119.3	123	126.8
Central Anatolia	123	0.4	122.3	123.8	119.1	123.3	126.4
West Black Sea	123.6	0.4	122.8	124.4	119.8	123.3	127.4
East Black Sea	122.3	0.5	121.3	123.2	117.9	122.0	126.5
Northeast Anatolia	121.1	0.4	120.3	121.9	117.4	121.1	124.7
Middle East Anatolia	121.7	0.4	120.9	122.5	118.2	121.3	125.3
Southeast Anatolia	120.7	0.4	120.0	121.3	117.0	120.4	124.4

The average body weight of the boys who were anthropometrically measured was 25.5 kg and for the girls, it was 24.8 kg (Table 4-75 and Table 4-76). The average heights are 124.2 cm for boys and 122.7 cm for girls (Table 4-77 and Table 4-78).

**Table 4-79. The Distribution of Average and Percentage Values of Body Mass Index (BMI) Z-Scores (BAZ) of Boys by Regions**

NUTS	95% Confidence Interval				Percentage		
	Average (BAZ)	Standard Error	Lower Value	Upper Value	25 %	50 %	75 %
Turkey	0.34	0.02	0.29	0.38	-0.47	0.19	1.00
İstanbul	0.47	0.07	0.33	0.61	-0.38	0.29	1.23
West Marmara	0.50	0.10	0.31	0.69	-0.51	0.37	1.20
Aegean	0.43	0.07	0.28	0.58	-0.49	0.24	1.18
East Marmara	0.43	0.08	0.27	0.59	-0.33	0.26	1.15
West Anatolia	0.41	0.07	0.27	0.55	-0.40	0.31	1.06
Mediterranean	0.29	0.08	0.14	0.44	-0.57	0.18	1.02
Central Anatolia	0.46	0.08	0.30	0.61	-0.36	0.32	1.13
West Black Sea	0.57	0.08	0.41	0.73	-0.39	0.41	1.31
East Black Sea	0.65	0.07	0.50	0.80	-0.17	0.50	1.25
Northeast Anatolia	0.30	0.06	0.19	0.41	-0.41	0.22	0.90
Middle East Anatolia	0.07	0.07	-0.06	0.21	-0.60	-0.10	0.62
Southeast Anatolia	0.06	0.06	-0.05	0.17	-0.60	0.01	0.60

**Table 4-80. The Distribution of Average and Percentage Values of Body Mass Index (BMI) Z-Scores (BAZ) of Girls by Regions**

NUTS	Average (BAZ)	Standard Error	95% Confidence Interval		Percentage		
			Lower Value	Upper Value	25 %	50 %	75 %
Turkey	0.25	0.02	0.21	0.29	-0.55	0.11	0.97
İstanbul	0.43	0.07	0.29	0.57	-0.42	0.30	1.35
West Marmara	0.24	0.07	0.10	0.38	-0.57	0.08	0.85
Aegean	0.49	0.07	0.35	0.63	-0.45	0.32	1.35
East Marmara	0.32	0.06	0.21	0.44	-0.42	0.23	1.12
West Anatolia	0.30	0.06	0.18	0.43	-0.52	0.12	1.10
Mediterranean	0.20	0.05	0.09	0.30	-0.60	0.04	0.91
Central Anatolia	0.26	0.07	0.13	0.38	-0.49	0.15	0.94
West Black Sea	0.39	0.06	0.26	0.51	-0.37	0.22	1.09
East Black Sea	0.53	0.06	0.41	0.65	-0.20	0.39	1.27
Northeast Anatolia	0.05	0.06	-0.07	0.16	-0.65	-0.05	0.67
Middle East Anatolia	-0.04	0.05	-0.13	0.06	-0.62	-0.18	0.53
Southeast Anatolia	-0.04	0.05	-0.14	0.06	-0.68	-0.12	0.53

Table 4-79 and Table 4-80 show the central tendency and the Distribution measures of the BMI Z-Scores calculated according to the WHO Standards 2007 for boys and girls. The BMI Z-Score groups obtained by grouping these scores are given in Table 4-81, Table 4-82 and Table 4-83 for all children, boys and girls on a separate and regional basis.



**Table 4-81. The Distribution by BMI Z-Score Groups of Students who were Anthropometrically Measured in the Regions**

NUTS	BMI Z Score Groups	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Underweight	1.5	0.1	1.2	1.8	170
	Normal	74.0	0.6	72.7	75.2	8445
	Overweight	14.6	0.4	13.8	15.5	1751
	Obese	9.9	0.4	9.2	10.7	1157
	Total	100.0	0.0	100.0	100.0	11523
Istanbul	Underweight	1.7	0.5	1.0	3.1	18
	Normal	67.9	1.8	64.2	71.4	761
	Overweight	17.0	1.4	14.4	19.9	190
	Obese	13.4	1.1	11.3	15.8	140
	Total	100.0	0.0	100.0	100.0	1109
West Marmara	Underweight	1.2	0.4	0.6	2.4	10
	Normal	73.0	2.3	68.4	77.2	489
	Overweight	13.0	1.6	10.2	16.5	105
	Obese	12.8	1.8	9.7	16.6	84
	Total	100.0	0.0	100.0	100.0	688
Aegean	Underweight	1.4	0.4	0.8	2.3	14
	Normal	69.6	2.1	65.3	73.6	684
	Overweight	13.2	1.1	11.2	15.4	137
	Obese	15.9	1.6	12.9	19.4	162
	Total	100.0	0.0	100.0	100.0	997
East Marmara	Underweight	1.4	0.4	0.8	2.4	13
	Normal	69.9	2.0	66.0	73.6	621
	Overweight	19.4	1.7	16.2	23.1	156
	Obese	9.2	1.2	7.1	11.8	84
	Total	100.0	0.0	100.0	100.0	874
West Anatolia	Underweight	1.5	0.4	0.9	2.7	16
	Normal	71.3	1.8	67.7	74.6	603
	Overweight	16.8	1.2	14.6	19.2	143
	Obese	10.5	1.1	8.4	12.9	94
	Total	100.0	0.0	100.0	100.0	856
Mediterranean	Underweight	1.8	0.4	1.1	2.9	21
	Normal	74.2	1.9	70.2	77.8	883
	Overweight	14.9	1.3	12.4	17.7	195
	Obese	9.2	0.8	7.6	11.0	114
	Total	100.0	0.0	100.0	100.0	1213

Continuation of Table 4-81			95% Confidence Interval			
NUTS	BMI Z Score Groups	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Underweigh	1.2	0.4	0.7	2.1	11
	Normal	73.3	2.0	69.2	77.1	643
	Overweight	15.6	1.5	13.0	18.7	149
	Obese	9.9	1.2	7.7	12.6	95
	Total	100.0	0.0	100.0	100.0	898
West Black Sea	Underweigh	0.8	0.3	0.4	1.8	7
	Normal	70.4	2.2	65.9	74.4	607
	Overweight	16.0	1.3	13.7	18.6	149
	Obese	12.8	1.4	10.3	15.8	116
	Total	100.0	0.0	100.0	100.0	879
East Black Sea	Underweigh	1.0	0.4	0.5	2.1	7
	Normal	66.9	2.2	62.5	71.0	474
	Overweight	20.2	1.8	16.9	23.8	146
	Obese	12.0	1.8	8.8	16.0	91
	Total	100.0	0.0	100.0	100.0	718
Northeast Anatolia	Underweigh	1.8	0.4	1.1	2.8	16
	Normal	79.2	1.7	75.8	82.3	700
	Overweight	13.5	1.2	11.3	16.1	127
	Obese	5.5	1.0	3.9	7.7	55
	Total	100.0	0.0	100.0	100.0	898
Middle East Anatolia	Underweigh	1.4	0.4	0.7	2.5	14
	Normal	83.8	1.7	80.2	86.9	754
	Overweight	9.4	1.1	7.5	11.7	90
	Obese	5.4	0.9	3.8	7.5	51
	Total	100.0	0.0	100.0	100.0	909
Southeast Anatolia	Underweigh	1.6	0.4	1.0	2.6	23
	Normal	83.5	1.5	80.2	86.2	1226
	Overweight	10.5	0.9	8.9	12.4	164
	Obese	4.5	0.8	3.2	6.3	71
	Total	100.0	0.0	100.0	100.0	1484

For the children of 2<sup>nd</sup> grade in Turkey, 1.5% of these are thinner than normal, 14.6% of them are overweight and 9.9% of them are obese NUTS-1

On the other hand, the Aegean Region has the highest percentage of obesity, whereas in Southeast Anatolia this percentage is the lowest (4.5% against 15.9%) (Table 4-81).

**Table 4-82. The Distribution of Boys who were Anthropometrically Measured by BMI Z-Score Groups in the Regions**

NUTS	BMI Z Score Groups	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Underweight	1.7	0.2	1.3	2.1	93
	Normal	73.5	0.8	71.9	75.0	4239
	Overweight	13.6	0.5	12.6	14.6	860
	Obese	11.3	0.5	10.3	12.4	679
	Total	100.0	0.0	100.0	100.0	5871
Istanbul	Underweight	2.1	0.6	1.2	3.9	11
	Normal	69.1	2.2	64.6	73.3	380
	Overweight	13.7	1.7	10.6	17.5	83
	Obese	15.0	1.7	12.0	18.6	82
	Total	100.0	0.0	100.0	100.0	556
West Marmara	Underweight	0.9	0.4	0.3	2.2	4
	Normal	69.6	3.3	62.8	75.6	235
	Overweight	14.5	2.3	10.5	19.6	58
	Obese	15.1	2.6	10.6	20.9	48
	Total	100.0	0.0	100.0	100.0	345
Aegean	Underweight	1.7	0.6	0.9	3.3	9
	Normal	70.7	2.8	65.0	75.9	365
	Overweight	11.0	1.4	8.5	14.1	61
	Obese	16.6	2.1	12.9	21.1	93
	Total	100.0	0.0	100.0	100.0	528
East Marmara	Underweight	1.5	0.6	0.7	3.2	6
	Normal	70.8	2.9	64.8	76.2	295
	Overweight	15.7	1.9	12.3	19.9	63
	Obese	12.0	2.0	8.6	16.5	47
	Total	100.0	0.0	100.0	100.0	411
West Anatolia	Underweight	1.9	0.6	1.0	3.5	10
	Normal	70.8	2.7	65.2	75.8	298
	Overweight	15.6	1.5	12.9	18.8	68
	Obese	11.7	1.9	8.5	15.8	53
	Total	100.0	0.0	100.0	100.0	429
Mediterranean	Underweight	2.2	0.6	1.3	3.9	12
	Normal	72.3	2.3	67.5	76.6	426
	Overweight	15.0	1.7	12.1	18.6	96
	Obese	10.5	1.3	8.2	13.3	63
	Total	100.0	0.0	100.0	100.0	597

Continuation of Table 4-82				95% Confidence Interval		
NUTS	BMI Z Score Groups	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Underweight	1.0	0.4	0.4	2.4	5
	Normal	71.9	2.3	67.2	76.1	331
	Overweight	15.3	1.5	12.6	18.5	76
	Obese	11.8	1.8	8.8	15.8	59
	Total	100.0	0.0	100.0	100.0	471
West Black Sea	Underweight	0.8	0.4	0.3	2.2	4
	Normal	67.7	2.7	62.2	72.8	299
	Overweight	16.0	1.6	13.0	19.5	75
	Obese	15.5	2.2	11.6	20.4	69
	Total	100.0	0.0	100.0	100.0	447
East Black Sea	Underweight	1.1	0.5	0.4	2.8	4
	Normal	67.5	3.4	60.5	73.9	245
	Overweight	18.1	2.7	13.4	24.1	71
	Obese	13.3	2.3	9.4	18.4	51
	Total	100.0	0.0	100.0	100.0	371
Northeast Anatolia	Underweight	1.4	0.6	0.7	3.1	7
	Normal	76.3	2.2	71.7	80.3	341
	Overweight	14.9	1.7	11.8	18.7	69
	Obese	7.4	1.5	5.0	10.9	37
	Total	100.0	0.0	100.0	100.0	454
Middle East Anatolia	Underweight	1.5	0.6	0.7	3.5	9
	Normal	81.5	2.4	76.2	85.8	383
	Overweight	10.0	1.8	7.0	14.0	47
	Obese	7.0	1.4	4.8	10.2	36
	Total	100.0	0.0	100.0	100.0	475
Southeast Anatolia	Underweight	1.5	0.4	0.9	2.6	12
	Normal	82.5	1.9	78.4	86.0	641
	Overweight	11.1	1.2	9.0	13.6	93
	Obese	4.9	1.1	3.2	7.5	41
	Total	100.0	0.0	100.0	100.0	787

11.3% of boys are obese and 13.6% are overweight. Overweight and obesity are assessed according to WHO criteria; accordingly, 24.9% of the boys who are at the 2<sup>nd</sup> grade in Turkey are overweight and obese. (Table 4-82).

**Table 4-83. The Distribution by BMI Z-Score Groups of Boys who were Anthropometrically Measured in the Regions**

NUTS-1	BMI Z Score Groups	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Underweight	1.3	0.2	1.0	1.8	77
	Normal	74.5	0.8	72.8	76.0	4206
	Overweight	15.7	0.6	14.6	16.9	891
	Obese	8.5	0.5	7.6	9.4	478
	Total	100.0	0.0	100.0	100.0	5652
Istanbul	Underweight	1.3	0.6	0.5	3.3	7
	Normal	66.7	3.1	60.3	72.5	381
	Overweight	20.2	2.1	16.4	24.7	107
	Obese	11.8	1.7	8.9	15.5	58
	Total	100.0	0.0	100.0	100.0	553
West Marmara	Underweight	1.5	0.6	0.6	3.5	6
	Normal	76.4	2.7	70.7	81.2	254
	Overweight	11.6	2.1	8.0	16.5	47
	Obese	10.6	1.8	7.6	14.6	36
	Total	100.0	0.0	100.0	100.0	343
Aegean	Underweight	1.0	0.5	0.4	2.7	5
	Normal	68.3	2.7	62.8	73.3	319
	Overweight	15.7	1.7	12.7	19.2	76
	Obese	15.0	2.0	11.5	19.5	69
	Total	100.0	0.0	100.0	100.0	469
East Marmara	Underweight	1.4	0.5	0.7	2.8	7
	Normal	69.2	2.5	64.1	73.9	326
	Overweight	22.5	2.5	18.0	27.8	93
	Obese	6.9	1.4	4.6	10.1	37
	Total	100.0	0.0	100.0	100.0	463
West Anatolia	Underweight	1.1	0.4	0.5	2.4	6
	Normal	71.7	2.1	67.4	75.7	305
	Overweight	17.9	1.6	14.9	21.4	75
	Obese	9.3	1.4	6.9	12.3	41
	Total	100.0	0.0	100.0	100.0	427
Mediterranean	Underweight	1.4	0.5	0.7	2.7	9
	Normal	76.0	2.3	71.3	80.2	457
	Overweight	14.7	1.6	11.8	18.2	99
	Obese	7.9	1.1	6.0	10.3	51
	Total	100.0	0.0	100.0	100.0	616

Continuation of Table 4-83				95% Confidence Interval		
NUTS-1	BMI Z Score Groups	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Underweight	1.4	0.5	0.7	3.0	6
	Normal	74.9	2.4	69.9	79.2	312
	Overweight	16.0	2.2	12.2	20.7	73
	Obese	7.7	1.5	5.2	11.2	36
	Total	100.0	0.0	100.0	100.0	427
West Black Sea	Underweight	0.8	0.5	0.2	2.9	3
	Normal	73.0	2.5	67.9	77.5	308
	Overweight	16.0	1.8	12.8	19.9	74
	Obese	10.2	1.6	7.5	13.7	47
	Total	100.0	0.0	100.0	100.0	432
East Black Sea	Underweight	0.9	0.6	0.3	3.0	3
	Normal	66.2	2.7	60.8	71.2	229
	Overweight	22.3	2.6	17.6	27.8	75
	Obese	10.6	2.1	7.2	15.3	40
	Total	100.0	0.0	100.0	100.0	347
Northeast Anatolia	Underweight	2.1	0.7	1.1	3.9	9
	Normal	82.2	2.2	77.5	86.1	359
	Overweight	12.1	1.7	9.1	15.9	58
	Obese	3.6	0.8	2.3	5.7	18
	Total	100.0	0.0	100.0	100.0	444
Middle East Anatolia	Underweight	1.2	0.5	0.5	2.8	5
	Normal	86.3	1.9	82.2	89.6	371
	Overweight	8.8	1.3	6.5	11.8	43
	Obese	3.7	1.2	1.9	7.0	15
	Total	100.0	0.0	100.0	100.0	434
Southeast Anatolia	Underweight	1.7	0.7	0.8	3.7	11
	Normal	84.6	1.7	80.9	87.7	585
	Overweight	9.8	1.2	7.7	12.3	71
	Obese	3.9	0.8	2.6	5.8	30
	Total	100.0	0.0	100.0	100.0	697

8.5% of girls are obese and 15.7% are overweight. Overweight and obesity are assessed together according to WHO criteria; accordingly, 24.2% of the girls who are at 2<sup>nd</sup> grade in Turkey are overweight and obese. (Table 4-83).

For boys, the percentage of the overweight students is lower than the girls, however the percentage of the obese students is higher than girls.

(15.7% against 13.6% and for the obese individuals 8.5% against 11.3%) (Table 4-82 and Table 4-83).

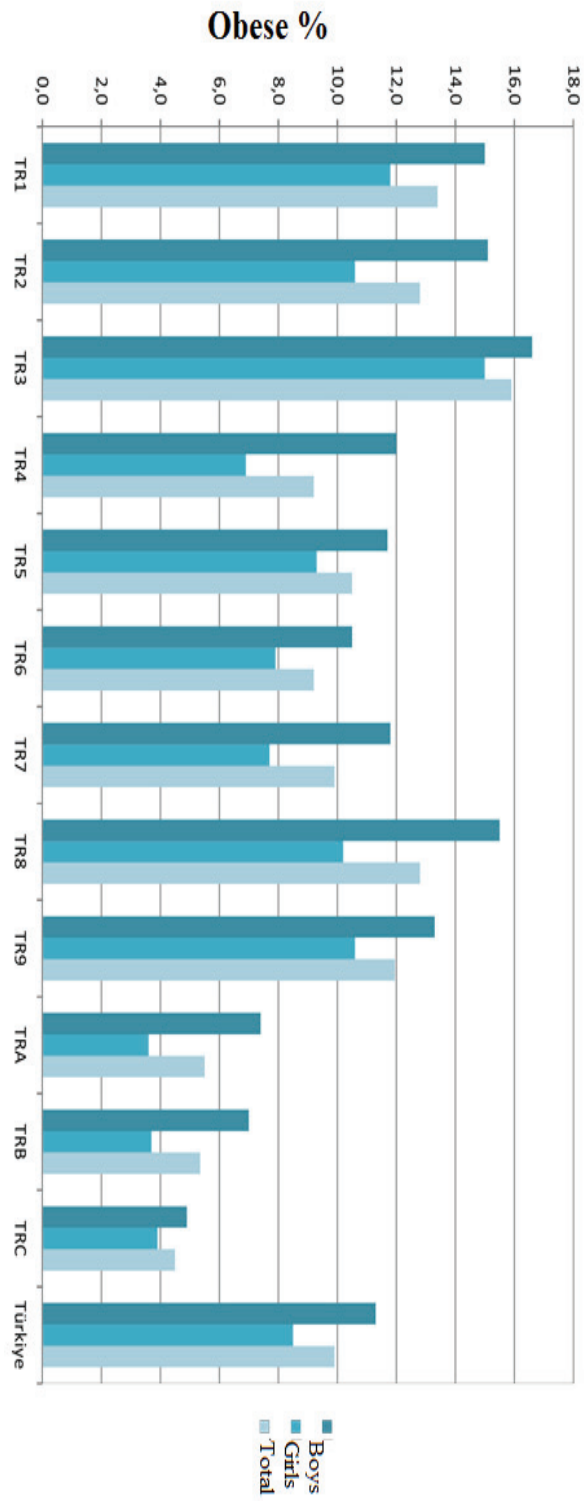


Diagram 4-1. Obesity Frequency According to NUTS-1 Regions and Gender

**Table 4-84. The Distribution by Age Group of BMI Z-Score Groups of Students who were Anthropometrically Measured in the Regions**

NUTS	BMI Z Score Groups	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Underweight	1.5	0.1	1.2	1.8	170
	Normal	74.0	0.6	72.7	75.2	8445
	Overweight	14.6	0.4	13.8	15.5	1751
	Obese	9.9	0.4	9.2	10.7	1157
	Total	100.0	0.0	100.0	100.0	11523
6 years old	Underweight	0.7	0.2	0.3	1.3	12
	Normal	79.3	1.2	76.8	81.5	1178
	Overweight	12.3	0.9	10.6	14.2	206
	Obese	7.8	0.8	6.4	9.5	121
	Total	100.0	0.0	100.0	100.0	1517
7 years old	Underweight	1.6	0.2	1.3	2.0	147
	Normal	72.8	0.7	71.5	74.1	6720
	Overweight	15.2	0.5	14.3	16.1	1444
	Obese	10.4	0.4	9.6	11.2	964
	Total	100.0	0.0	100.0	100.0	9275
8 years old	Underweight	1.6	0.6	0.8	3.3	11
	Normal	75.9	2.0	71.7	79.7	508
	Overweight	13.5	1.5	10.8	16.8	96
	Obese	8.9	1.3	6.7	11.8	68
	Total	100.0	0.0	100.0	100.0	683
9 years old	Underweight	-	-	-	-	-
	Normal	86.3	4.7	74.2	93.3	39
	Overweight	7.0	3.3	2.7	16.9	5
	Obese	6.7	3.5	2.3	17.7	4
	Total	100.0	0.0	100.0	100.0	48

14.9% of school-aged children in the 6-9 years old group in Turkey are overweight, 9.9% obese and 24.8% of children aged 6-9 are overweight-obese than normal weight. (Table 4 84).



**Table 4-85. The Distribution by Age Groups of BMI Z-Score Groups of Boys who were Anthropometrically Measured in the Regions**

NUTS	BMI Z Score Groups *	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Underweight	1.7	0.2	1.3	2.1	93
	Normal	73.5	0.8	71.9	75.0	4239
	Overweight	13.6	0.5	12.6	14.6	860
	Obese	11.3	0.5	10.3	12.4	679
	Total	100.0	0.0	100.0	100.0	5871
6 years-old	Underweight	0.7	0.3	0.3	1.7	6
	Normal	80.1	1.7	76.7	83.2	530
	Overweight	11.1	1.3	8.8	13.9	90
	Obese	8.1	1.2	6.0	10.7	56
	Total	100.0	0.0	100.0	100.0	682
7 years-old	Underweight	1.8	0.2	1.4	2.3	80
	Normal	72.3	0.8	70.6	74.0	3417
	Overweight	14.1	0.6	13.0	15.2	712
	Obese	11.8	0.6	10.6	13.0	569
	Total	100.0	0.0	100.0	100.0	4778
8 years-old	Underweight	1.8	0.8	0.7	4.1	7
	Normal	74.1	2.8	68.2	79.3	266
	Overweight	12.6	2.0	9.1	17.1	55
	Obese	11.5	1.9	8.3	15.8	52
	Total	100.0	0.0	100.0	100.0	380
9 years-old	Underweight	-	-	-	-	-
	Normal	87.8	5.8	71.4	95.4	26
	Overweight	5.1	3.1	1.5	16.1	3
	Obese	7.2	4.9	1.8	24.8	2
	Total	100.0	0.0	100.0	100.0	31

**Table 4-86. The Distribution by Age Groups of BMI Z-Score Groups of Girls who were Anthropometrically Measured in the Regions**

NUTS	BMI Z Score Groups *	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Underweight	1.3	0.2	1.0	1.8	77
	Normal	74.5	0.8	72.8	76.0	4206
	Overweight	15.7	0.6	14.6	16.9	891
	Obese	8.5	0.5	7.6	9.4	478
	Total	100.0	0.0	100.0	100.0	5652
6 years-old	Underweight	0.6	0.3	0.2	1.6	6
	Normal	78.5	1.7	75.1	81.6	648
	Overweight	13.3	1.3	10.8	16.1	116
	Obese	7.6	1.1	5.8	9.9	65
	Total	100.0	0.0	100.0	100.0	835
7 years-old	Underweight	1.5	0.2	1.1	2.0	67
	Normal	73.4	0.9	71.5	75.2	3303
	Overweight	16.3	0.7	15.0	17.7	732
	Obese	8.9	0.5	7.9	9.9	395
	Total	100.0	0.0	100.0	100.0	4497
8 years-old	Underweight	1.5	0.9	0.4	4.8	4
	Normal	78.3	2.9	72.0	83.5	242
	Overweight	14.7	2.4	10.6	20.1	41
	Obese	5.5	1.8	2.9	10.2	16
	Total	100.0	0.0	100.0	100.0	303
9 years-old	Underweight	-	-	-	-	-
	Normal	83.8	8.0	61.9	94.3	13
	Overweight	10.4	7.1	2.5	34.0	2
	Obese	5.8	4.2	1.4	21.9	2
	Total	100.0	0.0	100.0	100.0	17

The prevalence of obesity is highest in the 7-years-old group with 10.4%. This applies to both sexes. In boys, obesity is 11.8% in 7-years-old group and 8.9% in girls (Table 4-85 and Table 4-86).

For the 7-years-old group, which constitutes approximately 80% of primary school-grade 2 children, the BMI Z-Score groups are also specified in the following tables. (Table 4-87, Table 4-88 and Table 4-89)

**Table 4-87. The Distribution of BMI Z-Scores of Children in 7 years-old Group Children by Regions**

95% Confidence interval						
NUTS	BMI Z Score Groups	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Turkey	Underweight	1.6	0.2	1.3	2.0	147
	Normal	72.8	0.7	71.5	74.1	6720
	Overweight	15.2	0.5	14.3	16.1	1444
	Obese	10.4	0.4	9.6	11.2	964
	Total	100.0	0.0	100.0	100.0	9275
İstanbul	Underweight	1.8	0.6	1.0	3.5	16
	Normal	67.2	2.1	62.9	71.3	633
	Overweight	17.0	1.6	14.1	20.4	158
	Obese	13.9	1.3	11.6	16.6	119
	Total	100.0	0.0	100.0	100.0	926
West Marmara	Underweight	1.4	0.5	0.7	2.9	10
	Normal	71.3	2.4	66.4	75.7	416
	Overweight	14.0	1.7	11.0	17.6	93
	Obese	13.3	1.9	10.0	17.4	76
	Total	100.0	0.0	100.0	100.0	595
Aegean	Underweight	1.6	0.4	0.9	2.7	13
	Normal	68.0	2.1	63.8	71.9	569
	Overweight	13.6	1.2	11.5	16.2	116
	Obese	16.8	1.8	13.6	20.6	142
	Total	100.0	0.0	100.0	100.0	840
East Marmara	Underweight	1.5	0.4	0.9	2.6	11
	Normal	68.9	2.2	64.4	73.1	510
	Overweight	20.0	2.0	16.4	24.3	130
	Obese	9.5	1.3	7.3	12.3	71
	Total	100.0	0.0	100.0	100.0	722
West Anatolia	Underweight	1.7	0.5	1.0	3.0	16
	Normal	71.6	2.0	67.5	75.4	533
	Overweight	15.8	1.3	13.4	18.6	119
	Obese	10.8	1.3	8.5	13.6	85
	Total	100.0	0.0	100.0	100.0	753
Mediterranean	Underweight	1.8	0.5	1.0	3.2	17
	Normal	74.7	1.9	70.8	78.2	732
	Overweight	15.0	1.3	12.6	17.8	162
	Obese	8.4	1.0	6.7	10.6	87
	Total	100.0	0.0	100.0	100.0	998

Continuation of Table 4-87				95% Confidence Interval		
NUTS	BMI Z Score Groups	%	Standard Error	Lower Value	Upper Value	Unweighted Number
Central Anatolia	Underweight	1.3	0.4	0.8	2.3	10
	Normal	73.4	2.0	69.3	77.2	534
	Overweight	16.1	1.6	13.2	19.4	126
	Obese	9.2	1.3	7.0	12.0	75
	Total	100.0	0.0	100.0	100.0	745
West Black Sea	Underweight	0.8	0.4	0.3	2.0	5
	Normal	69.8	2.4	64.9	74.3	510
	Overweight	16.6	1.4	14.0	19.6	134
	Obese	12.8	1.6	10.0	16.3	96
	Total	100.0	0.0	100.0	100.0	745
East Black Sea	Underweight	1.2	0.5	0.6	2.5	7
	Normal	67.7	2.3	63.1	72.1	402
	Overweight	19.3	1.8	16.0	23.0	118
	Obese	11.8	2.0	8.3	16.4	76
	Total	100.0	0.0	100.0	100.0	603
Northeast Anatolia	Underweight	2.0	0.5	1.2	3.3	12
	Normal	78.4	1.7	74.8	81.6	514
	Overweight	13.2	1.2	11.0	15.7	93
	Obese	6.4	1.2	4.4	9.2	47
	Total	100.0	0.0	100.0	100.0	666
Middle East Anatolia	Underweight	1.7	0.6	0.9	3.3	12
	Normal	82.8	2.0	78.4	86.4	525
	Overweight	10.0	1.4	7.6	13.0	67
	Obese	5.5	1.0	3.8	8.0	37
	Total	100.0	0.0	100.0	100.0	641
Southeast Anatolia	Underweight	1.8	0.4	1.1	2.9	18
	Normal	81.3	1.8	77.6	84.5	842
	Overweight	12.0	1.1	9.9	14.5	128
	Obese	4.9	0.8	3.5	6.8	53
	Total	100.0	0.0	100.0	100.0	1041

For the 7 years old group of Children in Turkey, 15.2% of them are overweight and 10.4% of them are obese. When the overweight and obesity groups are evaluated together, this percentage is 25.6% (Table 4-87).

**Table 4-88. The Distribution of BMI Z-Scores of Boys in 7 years-old Group Children by Regions**

NUTS	BMI Z Score Groups	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Underweight	1.8	0.2	1.4	2.3	80
	Normal	72.3	0.8	70.6	74.0	3417
	Overweight	14.1	0.6	13.0	15.2	712
	Obese	11.8	0.6	10.6	13.0	569
	Total	100.0	0.0	100.0	100.0	4778
İstanbul	Underweight	2.5	0.8	1.4	4.5	11
	Normal	67.1	2.3	62.4	71.6	317
	Overweight	14.5	1.9	11.2	18.6	76
	Obese	15.9	1.9	12.5	19.9	73
	Total	100.0	0.0	100.0	100.0	477
West Marmara	Underweight	1.0	0.5	0.4	2.5	4
	Normal	68.2	3.2	61.6	74.2	205
	Overweight	15.9	2.4	11.7	21.3	54
	Obese	14.9	2.6	10.4	20.7	42
	Total	100.0	0.0	100.0	100.0	305
Aegean	Underweight	1.9	0.7	0.9	3.9	8
	Normal	68.2	2.7	62.6	73.3	296
	Overweight	12.0	1.6	9.3	15.4	53
	Obese	17.9	2.5	13.5	23.3	81
	Total	100.0	0.0	100.0	100.0	438
East Marmara	Underweight	1.3	0.6	0.5	3.4	4
	Normal	70.8	3.2	64.1	76.6	249
	Overweight	15.3	2.2	11.5	20.0	50
	Obese	12.7	2.2	9.0	17.6	42
	Total	100.0	0.0	100.0	100.0	345
West Anatolia	Underweight	2.2	0.7	1.2	3.9	10
	Normal	71.5	3.0	65.2	77.0	269
	Overweight	14.1	1.6	11.3	17.5	56
	Obese	12.3	2.0	8.9	16.8	50
	Total	100.0	0.0	100.0	100.0	385
Mediterranean	Underweight	2.1	0.7	1.0	4.1	9
	Normal	73.3	2.5	68.2	77.9	356
	Overweight	15.5	1.6	12.5	19.0	81
	Obese	9.1	1.5	6.6	12.5	47
	Total	100.0	0.0	100.0	100.0	493
Central Anatolia	Underweight	1.2	0.6	0.5	2.9	5
	Normal	72.3	2.3	67.5	76.7	277
	Overweight	15.3	1.8	12.1	19.2	63
	Obese	11.1	1.7	8.1	15.0	47
	Total	100.0	0.0	100.0	100.0	392

Continuation of Table 4-88				95% Confidence Interval		
NUTS	BMI Z Score Groups	%	Standard Error	Lower Value	Upper Value	Unweighted Number
West Black Sea	Underweight	0.8	0.5	0.2	2.6	3
	Normal	66.8	3.0	60.6	72.5	256
	Overweight	16.6	2.0	13.0	20.9	67
	Obese	15.8	2.4	11.7	21.0	58
	Total	100.0	0.0	100.0	100.0	384
East Black Sea	Underweight	1.2	0.6	0.5	3.3	4
	Normal	68.7	3.7	61.1	75.4	209
	Overweight	17.2	2.6	12.6	23.1	57
	Obese	12.8	2.5	8.6	18.6	42
	Total	100.0	0.0	100.0	100.0	312
Northeast Anatolia	Underweight	1.4	0.7	0.6	3.6	5
	Normal	77.6	2.2	72.9	81.6	263
	Overweight	12.6	1.6	9.8	16.0	46
	Obese	8.4	1.8	5.4	12.7	32
	Total	100.0	0.0	100.0	100.0	346
Middle East Anatolia	Underweight	1.8	0.8	0.7	4.4	8
	Normal	80.8	2.6	75.2	85.4	281
	Overweight	10.7	2.1	7.1	15.7	36
	Obese	6.7	1.5	4.3	10.5	25
	Total	100.0	0.0	100.0	100.0	350
Southeast Anatolia	Underweight	1.7	0.5	0.9	3.2	9
	Normal	80.3	2.3	75.4	84.4	439
	Overweight	12.7	1.4	10.1	15.8	73
	Obese	5.3	1.2	3.4	8.3	30
	Total	100.0	0.0	100.0	100.0	551

11.8% of the seven years old group boys are obese and 14.1% are the overweight. According to WHO criteria, overweight and obesity are evaluated together; 25.9% of the seven-years-old boys were overweight and obese in Turkey accordingly (Table 4-88).

**Table 4-89. The Distribution of BMI Z-Scores of Girls in 7 years-old Group Children by Regions**

NUTS	BMI Z Score Groups	%	Standard Error	95% Confidence interval		Unweighted Number
				Lower Value	Upper Value	
Turkey	Underweight	1.5	0.2	1.1	2.0	67
	Normal	73.4	0.9	71.5	75.2	3303
	Overweight	16.3	0.7	15.0	17.7	732
	Obese	8.9	0.5	7.9	9.9	395
	Total	100.0	0.0	100.0	100.0	4497
İstanbul	Underweight	1.1	0.7	0.4	3.7	5
	Normal	67.4	3.5	60.1	73.9	316
	Overweight	19.6	2.4	15.2	24.8	82
	Obese	11.9	1.8	8.8	15.9	46
	Total	100.0	0.0	100.0	100.0	449
West Marmara	Underweight	1.8	0.8	0.8	4.3	6
	Normal	74.4	3.0	68.2	79.9	211
	Overweight	12.1	2.3	8.2	17.4	39
	Obese	11.7	2.1	8.2	16.3	34
	Total	100.0	0.0	100.0	100.0	290
Aegean	Underweight	1.2	0.6	0.4	3.2	5
	Normal	67.8	2.8	62.0	73.1	273
	Overweight	15.4	1.8	12.2	19.4	63
	Obese	15.6	2.2	11.7	20.5	61
	Total	100.0	0.0	100.0	100.0	402
East Marmara	Underweight	1.7	0.6	0.8	3.5	7
	Normal	67.4	2.8	61.7	72.6	261
	Overweight	24.1	2.8	19.0	30.1	80
	Obese	6.8	1.3	4.6	9.9	29
	Total	100.0	0.0	100.0	100.0	377
West Anatolia	Underweight	1.3	0.5	0.6	2.8	6
	Normal	71.8	2.3	67.0	76.2	264
	Overweight	17.6	2.0	14.1	21.8	63
	Obese	9.3	1.5	6.8	12.6	35
	Total	100.0	0.0	100.0	100.0	368
Mediterranean	Underweight	1.6	0.6	0.8	3.2	8
	Normal	76.0	2.2	71.3	80.1	376
	Overweight	14.6	1.7	11.6	18.3	81
	Obese	7.8	1.1	5.9	10.2	40
	Total	100.0	0.0	100.0	100.0	505
Central Anatolia	Underweight	1.5	0.6	0.6	3.4	5
	Normal	74.6	2.5	69.4	79.2	257
	Overweight	16.9	2.2	12.9	21.8	63
	Obese	7.1	1.5	4.6	10.8	28
	Total	100.0	0.0	100.0	100.0	353

Continuation of Table 4-89				95% Confidence interval		
NUTS	BMI Z Score Groups	%	Standard Error	Lower Value	Upper Value	Unweighted Number
West Black Sea	Underweight	0.8	0.6	0.2	3.5	2
	Normal	72.9	3.0	66.7	78.4	254
	Overweight	16.6	1.9	13.3	20.6	67
	Obese	9.7	1.8	6.6	14.0	38
	Total	100.0	0.0	100.0	100.0	361
East Black Sea	Underweight	1.1	0.7	0.3	3.7	3
	Normal	66.7	2.8	61.1	71.9	193
	Overweight	21.6	2.7	16.7	27.4	61
	Obese	10.6	2.3	6.8	16.1	34
	Total	100.0	0.0	100.0	100.0	291
Northeast Anatolia	Underweight	2.6	0.9	1.3	5.2	7
	Normal	79.3	2.4	74.3	83.6	251
	Overweight	13.8	1.9	10.4	18.1	47
	Obese	4.3	1.0	2.7	6.8	15
	Total	100.0	0.0	100.0	100.0	320
Middle East Anatolia	Underweight	1.6	0.8	0.6	4.0	4
	Normal	85.0	2.3	79.9	89.0	244
	Overweight	9.2	1.7	6.4	13.1	31
	Obese	4.1	1.4	2.1	7.9	12
	Total	100.0	0.0	100.0	100.0	291
Southeast Anatolia	Underweight	1.9	0.8	0.8	4.4	9
	Normal	82.5	2.2	77.8	86.3	403
	Overweight	11.2	1.6	8.4	14.6	55
	Obese	4.4	1.0	2.9	6.8	23
	Total	100.0	0.0	100.0	100.0	490

8.9% of the seven years old girls are obese and 16.3% are overweight. According to WHO criteria, overweight and obesity are evaluated together; 25.2% of the seven-years-old boys were overweight and obese in Turkey accordingly (Table 4-89).



Table 4-90 and Table 4-91 show the average and percentage values of the height for age Z-scores (HAZ) of boys and girls by age.

**Table 4-90. The Distribution of Average and Percentage Values of Height for Age Z-Scores (HAZ) of Boys who were Anthropometrically Measured in the Regions**

NUTS	Average (HAZ)	Standard Error	95% Confidence Interval		Percentage		
			Lower Value	Upper Value	25 %	50 %	75 %
Turkey	-0.01	0.02	-0.06	0.03	-0.70	-0.04	0.67
İstanbul	0.16	0.05	0.06	0.26	-0.51	0.09	0.84
West Marmara	0.26	0.08	0.10	0.42	-0.46	0.29	0.99
Aegean	0.05	0.06	-0.06	0.16	-0.63	0.04	0.67
East Marmara	0.06	0.07	-0.07	0.19	-0.57	0.02	0.70
West Anatolia	0.14	0.06	0.02	0.26	-0.50	0.09	0.72
Mediterranean	0.02	0.05	-0.08	0.12	-0.63	0.06	0.69
Central Anatolia	0.04	0.07	-0.10	0.17	-0.65	-0.02	68
West Black Sea	0.15	0.07	0.01	0.28	-0.59	0.13	0.82
East Black Sea	-0.02	0.05	-0.12	0.07	-0.72	0.00	0.63
Northeast Anatolia	-0.10	0.07	-0.24	0.05	-0.82	-0.16	0.53
Middle East Anatolia	-0.15	0.08	-0.30	0.00	-0.86	-0.20	0.54
Southeast Anatolia	-0.37	0.08	-0.53	-0.22	-1.07	-0.37	0.29

**Table 4-91. The Distribution of Average and Percentage Values of Height for Age Z-Scores (HAZ) of Girls who were Anthropometrically Measured in the Regions**

NUTS	Average (HAZ)	Standard Error	95% Confidence Interval		Percentage		
			Lower Value	Upper Value	25 %	50 %	75 %
Turkey	-0.06	0.02	-0.10	-0.02	-0.73	-0.08	0.61
İstanbul	0.07	0.06	-0.06	0.20	-0.56	0.08	0.73
West Marmara	0.03	0.07	-0.10	0.17	-0.68	-0.05	0.61
Aegean	0.10	0.06	-0.01	0.22	-0.54	0.03	0.73
East Marmara	0.00	0.07	-0.15	0.14	-0.75	-0.07	0.64
West Anatolia	-0.03	0.07	-0.16	0.11	-0.72	-0.04	0.63
Mediterranean	-0.06	0.05	-0.16	0.05	-0.67	-0.09	0.60
Central Anatolia	-0.02	0.05	-0.13	0.08	-0.66	-0.06	0.60
West Black Sea	0.07	0.06	-0.06	0.19	-0.62	0.03	0.77
East Black Sea	-0.14	0.07	-0.28	0.00	-0.82	-0.12	0.47
Northeast Anatolia	-0.31	0.06	-0.43	-0.19	-0.91	-0.30	0.33
Middle East Anatolia	-0.12	0.07	-0.26	0.02	-0.76	-0.10	0.50
Southeast Anatolia	-0.34	0.07	-0.47	-0.20	-1.04	-0.35	0.31

**Table 4-92. The Distribution of Stunting Frequency of Students who were Anthropometrically Measured by Height for Age Indicator Z-Score (HAZ) in the Regions.**

NUTS	Percentage of Stunting HAZ -2		95% Confidence interval		Unweighted Number
	%	Standard Error	Lower Value	Upper Value	
<b>Turkey (n=11,523)</b>	2.3	0.2	2.0	2.8	257
Istanbul	1.3	0.4	0.7	2.4	15
West Marmara	1.6	0.5	0.9	2.9	12
Aegean	1.1	0.4	0.6	2.1	12
East Marmara	1.5	0.4	0.9	2.3	14
West Anatolia	1.5	0.4	0.9	2.6	12
Mediterranean	1.6	0.4	1.0	2.5	20
Central Anatolia	2.2	0.5	1.4	3.4	18
West Black Sea	2.3	0.5	1.5	3.5	18
East Black Sea	0.3	0.2	0.1	1.0	3
Northeast Anatolia	3.5	0.9	2.1	5.7	26
Middle East Anatolia	3.5	0.6	2.4	5.0	35
Southeast Anatolia	5.4	0.9	3.8	7.5	72

The frequency of stunting in children was found to be 2.3%. Frequency of stunting in North, Central and Southeast Anatolia Regions is higher in comparison to other regions (3.5%, 3.5% and 5.4% respectively). (3.5%, 3.5% and 5.4% respectively) (Table 4-92).

**Table 4-93. The Distribution of Stunting Frequency of Boys who were Anthropometrically Measured by Height for Age Indicator Z-Score (HAZ) in the Regions**

NUTS	Percentage of Stunting HAZ -2		95% Confidence interval		Unweighted Number
	%	Standard Error	Lower Value	Upper Value	
<b>Turkey (n=11,523)</b>	2.3	0.3	1.8	2.9	131
Istanbul	0.6	0.3	0.2	1.5	4
West Marmara	1.5	0.6	0.6	3.3	6
Aegean	0.9	0.5	0.3	2.6	5
East Marmara	1.3	0.6	0.5	3.0	6
West Anatolia	0.8	0.4	0.3	2.2	4
Mediterranean	2.0	0.5	1.1	3.4	13
Central Anatolia	2.2	0.6	1.2	3.9	10
West Black Sea	2.9	0.8	1.7	4.9	12
East Black Sea	0.4	0.3	0.1	1.7	2
Northeast Anatolia	2.1	0.9	1.0	4.7	9
Middle East Anatolia	3.9	0.9	2.4	6.2	21
Southeast Anatolia	5.8	1.3	3.7	8.9	39

The frequency of stunting in boys was found to be 2.3%. Frequency of stunting was found to be higher than Northern, Middle and South East Anatolia compared to other regions (2.9%, 3.9% and 5.8% respectively). (Table 4-93).

**Table 4-94. The Distribution of Stunting Frequency of Girls who were Anthropometrically Measured by Height for Age Indicator Z-Score (HAZ) in the Regions**

NUTS	Percentage of Stunting HAZ -2	95% Confidence interval			Unweighted Number
	%	Standard Error	Lower Value	Upper Value	
<b>Turkey (n=11,523)</b>	2.4	0.3	1.9	3	126
Istanbul	2.1	0.8	1.0	4	11
West Marmara	1.7	0.8	0.7	4	6
Aegean	1.4	0.6	0.6	3	7
East Marmara	1.6	0.5	0.8	3	8
West Anatolia	2.2	0.7	1.1	4	8
Mediterranean	1.2	0.6	0.5	2	7
Central Anatolia	2.1	0.9	0.9	5	8
West Black Sea	1.7	0.7	0.7	3	6
East Black Sea	0.2	0.2	0.0	1	1
Northeast Anatolia	4.8	1.4	2.6	8	17
Middle East Anatolia	3.0	1.0	1.6	5	14
Southeast Anatolia	2.4	0.3	1.9	3	126

The frequency of stunting in girls was found to be 2.4%. Frequency of Stunting was found to be higher than Northern, Middle and South East Anatolia compared to other regions (4.8%, 3.0% and 5.0% respectively). (Table 4-94 ).

Table 4-95 and Table 4-96 show the average and percentage values of body weight Z-scores (WAZ) for boys and girls by age.

**Table 4-95. The Distribution of Average and Percentage Values of Weight for Age Z-Scores (WAZ) of Boys by Regions**

NUTS	Average (WAZ)	Standard Error	95% Confidence Interval		Percentage		
			Lower Value	Upper Value	25 %	50 %	75 %
Turkey	0.24	0.03	0.19	0.29	-0.57	0.09	0.96
İstanbul	0.45	0.07	0.32	0.59	-0.31	0.26	1.16
West Marmara	0.53	0.11	0.31	0.74	-0.45	0.24	1.38
Aegean	0.35	0.08	0.20	0.51	-0.58	0.20	1.15
East Marmara	0.36	0.08	0.20	0.51	-0.46	0.19	1.06
West Anatolia	0.39	0.06	0.28	0.51	-0.36	0.31	1.11
Mediterranean	0.24	0.07	0.11	0.37	-0.63	0.15	0.97
Central Anatolia	0.35	0.08	0.19	0.52	-0.51	0.13	1.08
West Black Sea	0.51	0.09	0.33	68	-0.40	0.21	1.30
East Black Sea	0.45	0.06	0.32	0.58	-0.33	0.33	0.99
Northeast Anatolia	0.15	0.07	0.02	0.29	-0.62	0.05	0.91
Middle East Anatolia	-0.03	0.08	-0.18	0.12	-0.76	-0.16	0.54
Southeast Anatolia	-0.18	0.08	-0.34	-0.02	-0.92	-0.28	0.40

**Table 4-96. The Distribution of Average and Percentage Values of Weight for Age Z-Scores (WAZ) of Girls by Regions**

NUTS	Average (WAZ)	Standard Error	95% Confidence Interval		Percentage		
			Lower Value	Upper Value	25 %	50 %	75 %
Turkey	0.17	0.02	0.13	0.22	-0.65	0.06	0.87
İstanbul	0.38	0.08	0.23	0.53	-0.52	0.23	1.20
West Marmara	0.22	0.08	0.07	0.37	-0.68	0.03	0.87
Aegean	0.44	0.07	0.30	0.59	-0.41	0.37	1.22
East Marmara	0.26	0.07	0.11	0.40	-0.56	0.16	0.89
West Anatolia	0.23	0.07	0.08	0.37	-0.64	0.13	0.98
Mediterranean	0.14	0.06	0.03	0.25	-0.66	-0.05	0.85
Central Anatolia	0.19	0.07	0.06	0.33	-0.57	0.04	0.84
West Black Sea	0.34	0.06	0.21	0.47	-0.46	0.24	1.04
East Black Sea	0.33	0.07	0.18	0.47	-0.44	0.23	0.99
Northeast Anatolia	-0.12	0.07	-0.26	0.02	-0.80	-0.23	0.43
Middle East Anatolia	-0.08	0.07	-0.21	0.06	-0.74	-0.15	0.48
Southeast Anatolia	-0.21	0.06	-0.33	-0.08	-0.92	-0.27	0.43

**Table 4-97. The Distribution of Underweight Frequency of Children Evaluated According to Weight-for-Age Indicator Z-Scores (WAZ) by Regions**

NUTS	Underweight Percentage WAZ <-2		95% Confidence interval		Unweighted Number
	%	Standard Error	Lower Value	Upper Value	
<b>Turkey (n=11,523)</b>	2.0	0.2	1.6	2.3	213
Istanbul	1.4	0.4	0.8	2.3	16
West Marmara	0.8	0.4	0.3	2.3	8
Aegean	1.2	0.4	0.6	2.1	13
East Marmara	1.4	0.4	0.7	2.6	13
West Anatolia	1.2	0.5	0.6	2.7	13
Mediterranean	2.0	0.4	1.4	2.9	27
Central Anatolia	1.8	0.5	1.0	3.2	15
West Black Sea	1.2	0.3	0.6	2.1	11
East Black Sea	0.6	0.3	0.2	1.6	4
Northeast Anatolia	2.3	0.6	1.4	3.9	19
Middle East Anatolia	2.2	0.4	1.4	3.2	21
Southeast Anatolia	4.2	0.7	3.0	5.9	53

**Table 4-98. The Distribution of Underweight Frequency of Boys Evaluated According to Weight-for-Age Indicator Z-Scores (WAZ) by Regions**

NUTS	Underweight Percentage WAZ <-2		95% Confidence interval		Unweighted Number
	%	Standard Error	Lower Value	Upper Value	
<b>Turkey (n=11,523)</b>	2.0	0.3	1.5	2.5	107
Istanbul	1.3	0.5	0.6	2.7	8
West Marmara	1.0	0.5	0.4	2.6	5
Aegean	1.0	0.4	0.4	2.2	6
East Marmara	1.5	0.6	0.7	3.2	6
West Anatolia	1.1	0.6	0.4	3.4	6
Mediterranean	2.0	0.5	1.2	3.4	13
Central Anatolia	1.5	0.6	0.6	3.4	8
West Black Sea	1.4	0.5	0.7	2.9	7
East Black Sea	0.5	0.3	0.1	1.9	2
Northeast Anatolia	1.9	0.6	1.0	3.6	9
Middle East Anatolia	2.2	0.6	1.3	3.7	12
Southeast Anatolia	4.3	1.1	2.6	7.2	25

**Table 4-99. The Distribution of Underweight Frequency of Girls Evaluated According to Weight-for-Age Indicator Z-Scores (WAZ) by Regions**

NUTS	Underweight Percentage WAZ <-2		95% Confidence interval		
	%	Standard Error	Lower Value	Upper Value	Unweighted Number
<b>Turkey (n=11,523)</b>	2.0	0.3	1.5	2.5	107
Istanbul	1.3	0.5	0.6	2.7	8
West Marmara	1.0	0.5	0.4	2.6	5
Aegean	1.0	0.4	0.4	2.2	6
East Marmara	1.5	0.6	0.7	3.2	6
West Anatolia	1.1	0.6	0.4	3.4	6
Mediterranean	2.0	0.5	1.2	3.4	13
Central Anatolia	1.5	0.6	0.6	3.4	8
West Black Sea	1.4	0.5	0.7	2.9	7
East Black Sea	0.5	0.3	0.1	1.9	2
Northeast Anatolia	1.9	0.6	1.0	3.6	9
Middle East Anatolia	2.2	0.6	1.3	3.7	12
Southeast Anatolia	4.3	1.1	2.6	7.2	25

When weight by age Z-scores (WAZ) were grouped, the underweight frequency was found to be 2.0% (Table 4-97). Underweight status was found to be significantly higher in both boys and girls compared to other regions in the Southeast Anatolia Region (Table 4-98 and Table 4-99).

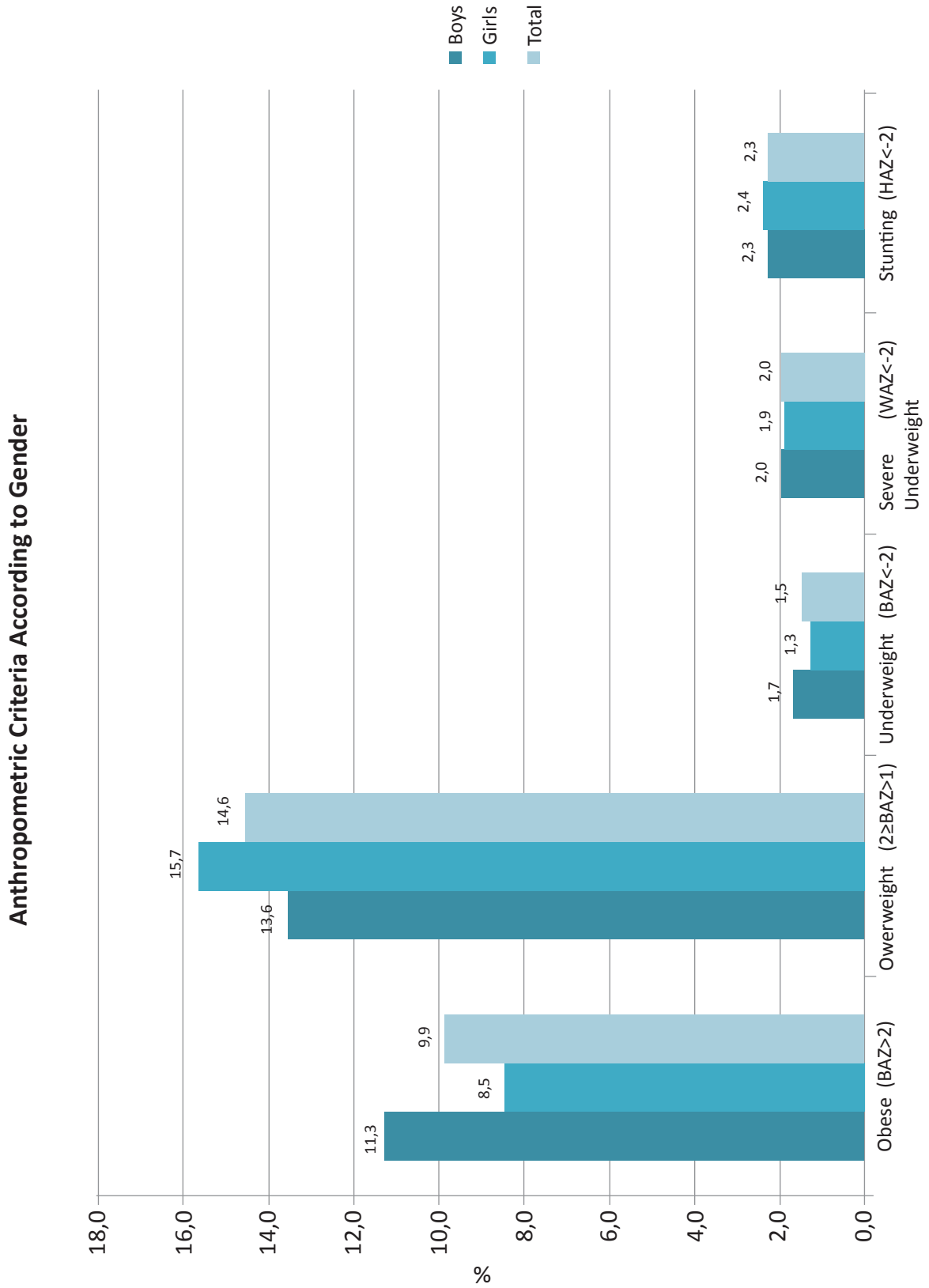
Table 4-100 presents a summary of sex-based calculated anthropometric measures. Figure 4-2 shows the distribution of obesity prevalence on a regional basis.

**Table 4-100. Anthropometric Criteria Summary Table (COSI TUR 2016 - Primary School 2<sup>nd</sup> Grade Students)**

Anthropometric Criteria	Boys		Girls		Total	
	%	(95% CI)	%	(95% CI)	%	(95% CI)
<b>Obesity (BAZ &gt; 2)</b>	11.3	(10.3 - 12.4)	8.5	(7.6 - 9.4)	9.9	(9.2 - 10.7)
<b>Overweight (2 ≥ BAZ &gt; 1)</b>	13.6	(12.6 - 14.6)	15.7	(14.6 - 16.9)	14.6	(13.8 - 15.5)
<b>Underweight (BAZ &lt; -2)</b>	1.7	(1.3 - 2.1)	1.3	(1.0 - 1.8)	1.5	(1.2 - 1.8)
<b>Severe Underweight (WAZ &lt; -2)</b>	2.0	(1.5 - 2.5)	1.9	(1.6 - 2.4)	2.0	(1.6 - 2.3)
<b>Stunting (HAZ -2)</b>	2.3	(1.8 - 2.9)	2.4	(1.9 - 3.0)	2.3	(2.0 - 2.8)

BAZ: Body Mass Index Z-Score; WAZ: Weight by Age Z-Score; HAZ: Height by Age Z-Score ; 95% GA: 95% Confidence Interval

Diagram 4-1. Anthropometric Criteria According to Gender



## 5. CONCLUSIONS AND RECOMMENDATIONS

### 5.1. Conclusions Concerning Schools

- 99% of schools have open outdoor playground areas for students. In 79.8% of the schools, it is seen that students are not allowed to play outside in extreme weather conditions. 10.7% of schools do not allow to use outdoor playground areas outside of school hours.
- 83.4% of the schools do not have an indoor gym. Only 7.8% of the schools allow Children to Use the Indoor Gyms Outside School Hours.
- To the question; whether the schools organize a sports/physical activity outside school hours at least once a week; 60% of them said no. In 42.3% of the schools in which a sports/ physical activity is organized at least once a week, less than half of the students participate in these activities.
- 34.3% of the schools do not have a shuttle and 23.3% of all students come to the school by shuttles. In the distribution of Providing school shuttles for the transportation of students, 34% of the schools stated that they don't have a shuttle and 23.3% of them stated that they have shuttle which is available for all students.
- Safety score of routes for walking or riding a bicycle to and from school for children was calculated by the relevant official with whom an interview was made at the school. Safety score ranges between 1 and 10. The higher score means less safety, while the lower the score, the higher the safety. The average safety score set by school administrators was found to be "5.8".
- Foods and beverages availability for the students in schools: When the opinions of the school administrators were evaluated with regards to the provision of paid or free foods and drinks for the students in schools, it was seen that in 38% of the schools, water is provided for the students on a free-of-charge basis. Fresh fruits are not found in 64% of schools and fruit is provided in 32% of the schools. Vegetables are not found in 90% of the schools, and vegetables are provided in 7.6% of schools. 50.5% of the schools do not have chocolate and confectionery, and in 49.3% of those, such goods are provided in return for a certain fee. Toast is not available in 34.7% of schools and in 65.2% of the schools it is provided in return for a certain fee.
- 70.2% of the schools have a canteen and 10.0% have a buffet / cafeteria. Only three out of the sampled schools have an automatic vending machine.

### 5.2. Conclusions Concerning the Characteristics of Families and Their Attitudes Regarding Their Children's Lifestyles

- The average household population is 5.1 individuals and the average number of the individuals who are smaller than age of 18 is 2.6.
- 9.4% of the mothers are illiterate; 3.6% of the mothers are illiterate. 21.9% of the mothers in the East Anatolia Region and 27.1% in the Southeast Anatolia Region are not literate.
- 78% of the mothers are housewives, 5.7% are Government employed and 7.7% are Non-government employed employees.
- Education levels of fathers are higher than mothers. Among fathers, the percentage of illiteracy is 2.0% and only literacy is 2.0%.
- 25.5% of the families state that they easily pass the month with their earnings, 32.3% state that they pass the month without serious problems with their earnings, 29.3% state that they have trouble meeting the ends the month with their earnings, 12.8% state that they barely meet the ends in the month with their earnings.



### 5.3. Children's Birth Stories and Breastfeeding

- Birth weight average of the students is 3,179.5 gr.
- The percentage of the children breastfeeding is 95.5%, the average duration of mother's breastfeeding is 15.6 months, average duration of the children who are exclusively breastfed is 4.5 months.

### 5.4. Children's Physical Activity Levels

- According to the statements of families, 53.2% of the children go to schools at a distance not more than one kilometer away from their homes and 25.3% go to schools at a distance around 1-2 km away from their homes.
- The percentage of children who travel on foot or by bicycle is 59.3%.
- The parents rated the level of safety of school route by walking or cycling on the basis of 10 points as "1 very safe" and "10 very unsafe". The nationwide average score is 6.6.
- Only 17.0% of the families in Turkey have declared that their children have attended to any dance or sports course.
- The average sleep time of children is 10.3 hours.
- According to the statements of families, nearly half of the children (47.9%) are spending 2 hours or more a day on weekdays during the school period. This percentage is 52.6% on weekends.
- 36.2% of the children spend more than 2 hours a day watching TV/using electronic devices on weekdays. This percentage is 69.9% at the weekend.

### 5.5. Nutritional Behavior of Children According to Statements of Their Families

- 3.7% of the children never have breakfast; 12.1% some days, and 76.5% have breakfast every day
- 77.0% of the children consume meat every day, 26.3% consume 4-6 days a week, 41.8% consume 1-3 days a week and 18.9% consume less than once a week. 6.1% of children do not consume any meat.
- 2.2% of children consume fish every day, 9.5% consume 4-6 days a week, 33.4% 1-3 days a week and 40.3% less than once a week. 14.6% of the children do not consume any fish.
- 39.8% of the children consume cheese every day, 19.1% 4-6 days a week; 20.1% some days (1-3 days) 13.4% of children do not consume any cheese.
- Low-fat/semi-fat milk consumption of children: 14.7% every day and 13.2% 4-6 times a week; 21.6% some days (1-3 days a week) %13.5% less than once a week and 37% never consume.
- Whole-fat milk consumption of children: 23% every day and 17.8% 4-6 a week, some days (1-3 times a week) rate is 23.5%, less than 12.8% per week and 23% never. The percentages are specified respectively.

- Yoghurt, cacik, ayran consumption frequency among children: 37.3%, 30% most days (4-6 days per week), 22.1% some days (2-3 days per week), 5.7% less than once a week 4.9% do not consume at all.
- 85.5% of children do not consume kefir at all. 1.7% consumes every day.
- 50.4% of the children consume fresh fruit, 24.5% (4-6 days a week), 18.5% some days (1-3 days a week) and 4.6% a week consumes less than once a week. 1.9% of children do not consume any fruit.
- 13.4% of children consume vegetables (excluding potatoes) every day, 25.3% consume 4-6 days a week, 41.8% consume 1-3 days a week and 13.2% a week. 6.7% of children do not consume any fruit.
- Freshly squeezed juice 6.8% everyday; 10.7% most days (4-6 days a week), 29.9% some days (1-3 days a week), 27.7% less than once a week and 29.9% never consumed.
- %100 fresh fruit juice (ready) consumption: 14.4% of the children every day and 14% consume frequently (4-6 times a week).
- 33% of the children rarely consume pizza, lahmacun, fried potatoes, hamburger, hot dogs and sausages at a rate of 38.7% a week (1-3 days a week). 3.8% consumes every day, 11.8% consume (4-6 days a week).
- 7.6% of children consume salty snacks (potato chips, corn chips, cookies), 13.7% of them consume most days (4-6 times a week), 29.6% of them consume some days (1-3 days a week) and 34.6% of them consume less than once a week. 14.5% of the children don't consume at all.
- 7.7% of children consume beverages containing sugar every day and 10.7% consume beverages containing sugar for 4-6 days a week.
- 12.5% of the children consume sugar bars and chocolate, 20.2% consume most days (4-6 days a week), 36.3% consume some days (1-3 days a week) and 24.9% less than once a week. 6.1% of the children do not consume at all.
- 11.9% of the children consume biscuits, cakes and cookies every day and 25.3% of them consume 4-6 days a week.
- 88.6% of the children never consume diet and light beverages.

## 5.6. Characteristics Concerning Family Health

- According to the opinions of their parents, when the weight status of children is examined; 68.6% of the families thought that their child is normal weight; 24.4% of the families thought that their child is underweight, 0.6% of the families thought that their child is extremely overweight; 6.4% see the child as little overweight.
- For the families, 17.6% of them are diagnosed with 14.9% with diabetes, 16.6% are diagnosed with high cholesterol.
- The average height of the mothers is 162.4 cm and the weight average is 68.2 kg. According to the Body Mass Index (BMI) classification, 16.2% of them are obese and 35.2% are overweight.
- The average height of the fathers is 174.2 cm, average weight is 81.8 kg. According to the BMI classification, 18.4% of the fathers are obese and 48.9% of them are overweight.

## 5.7. Anthropometric Measurement Results

- According to the BMI-Z score of primary school 2<sup>nd</sup> grade students; 9.9% were obese, 14.6% were overweight, 74% were normal and 1.5% is underweight. In the COSI 2013 survey, obesity was found as 8.3% and overweight as 14.2%.
- According to the BMI-Z score of primary school 2<sup>nd</sup> grade students; 11.3% were obese, 13.6% were overweight, 73.5% were normal and 1.7% were underweight.
- For the 2<sup>nd</sup> grade girls, 8.5% of them are obese, 15.7% are overweight, 74.5% are normal and 1.3% are underweight.
- The frequency of obesity was found as 2.3% for the children. This percentage is 2.3% for boys and 2.4% for girls. The frequency of obesity is higher in Northern, Middle and Southeast Anatolia Regions compared to other regions. (3.5%, 3.5% and 5.4% respectively)

## Suggestions

- When a comparison is made with the COSI 2013 survey, we can see an increase in the rate of obesity and overweight. Healthy Nutrition and Active Life Program which is being implemented should be implemented continuously in the future.
- In addition, stunting status which was considered depending on the height indication by age is assessed and it was found that it is 2.3% for Turkey, 3.5% for Northern Anatolia Region; 3.5% for Middle East Anatolia Region and 5.4% for Southeast Anatolia Region. The School Meal Program must be initiated, with priority for the relevant regions.
- Children's consumption frequency of fresh fruit, vegetable, milk-yoghurt-cheese and meat-chicken-fish-egg is found to be lower than the portions recommended in the Turkey Dietary Guidelines. There is a need for interventions to increase the frequency of consumption of these foods. Community educations should be done, awareness should be increased, programs should be organized in the media, and correct information should be provided to the society.
- Total portion amount recommended for meat-chicken-fish-egg is 1.5 servings daily in Turkey Dietary Guidelines. While 6.1% of the children do not consume meat at all, 18.9% consume meat less than once a week. When the frequency of fish consumption is examined, it was stated that 14.6% of them don't consume fish at all, 40.3% consume less than once a week and it was understood that meat and fish consumption habits should be increased.
- Consumption frequency of the sugar bars, chocolates, biscuits, cakes and cookies are at the desired level of consumption. Interventions to reduce the consumption of such foods need to be strengthened. The interventions to reduce the consumption of HFSS (YYST) foods that are not in a classification of a healthy nutrient need to be strengthened.
- The level of education of the mothers were considered to be quite low in some regions. In healthy societies, literacy has an important place among the determinants of health for women. Increasing female literacy is important in gaining healthy nutrition behaviors.
- Improving the income situation, which is an important determinant of health, is important for the prevention of unhealthy eating and related diseases.

## **6. ANNEX**

1. Ministry of National Education Approval
2. Survey Ethics Committee Approval
3. The Distribution of Class Numbers from Which Sampling Has Been Taken in Provinces Included in the Samplings
4. COSI-TUR 2016 Field Examiners and Team Codes
5. Design Effects Calculated for Some Variables of Students and Their Families

ANNEX-1: Approval of Ministry of National Education



T.C.  
MİLLÎ EĞİTİM BAKANLIĞI  
Yenilik ve Eğitim Teknolojileri Genel Müdürlüğü

Sayı : 81576613/605/12709647  
Konu: Araştırma uygulama izni

10.11.2016

T.C.  
SAĞLIK BAKANLIĞINA  
(Türkiye Halk Sağlığı Kurumu)

- İlgi: a) Sağlık Bakanlığı Türkiye Halk Sağlığı Kurumunun 02/11/2016 tarih ve 92148377-322-E.1137 sayılı yazısı  
b) 07/03/2012 tarih ve B.08.0.YET.00.20.00.0/3616 sayılı genelge

İlgi (a) yazı ile Sağlık Bakanlığı Türkiye Halk Sağlığı Kurumu tarafından yürütülen "Çocukluk Çağı Obezite Surveyansı Girişimi Araştırması (COSI)" kapsamında hazırlanan veri toplama araçlarının 2016-2017 eğitim öğretim yılında 81 ilde mevcut ilkokullarda uygulanmasına yönelik izin talebi Genel Müdürlüğümüz tarafından incelenmiştir.

Denetimi il, ilçe millî eğitim müdürlükleri ve okul/kurum idaresinde olmak üzere, eğitim öğretim faaliyetlerini aksatmadan, gönüllülük esasına göre; onaylı bir örneği Bakanlığımızda muhafaza edilen ve uygulama sırasında da mühürlü ve imzalı örnekten çoğaltılmış veri toplama araçlarının öğrenci velilerinin yazılı izinleri alınmak kaydıyla ilkokullarda ilgi (b) genelge doğrultusunda uygulanması hususunda;

Gereğini ve bilgilerinizi arz ederim.



Mehmet RÜŞEN  
Bakan a.  
Genel Müdür V.

Ek: Veri toplama aracı (yirmi dört sayfa)

Erdogan ÇALLER  
Bilgisayar Uzmanı

Güvenli Elektronik İmza ile  
Aşlı İle Aynıdır  
14 Kasım 2016

Konya Yolu No:21/ANKARA  
Elektronik Ağ: www.meb.gov.tr  
atilladenirbas@meb.gov.tr

Ayrıntılı bilgi için: Atilla DEMİRBAŞ  
Seyda KARABULUT  
Telefon: 0312-2969400/9582

Bu evrak güvenli elektronik imza ile imzalanmıştır. <http://evraksorgu.meb.gov.tr> adresinden 1b10-bdb7-3572-8621-e44e kodu ile teyit edilebilir.

**ANNEX-2: Approval of Survey Ethics Committee**



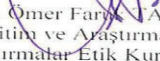
**T.C.  
SAĞLIK BAKANLIĞI  
TÜRKİYE KAMU HASTANELERİ KURUMU  
Ankara İli Kamu Hastaneleri Birliği 2 Nolu Genel Sekreterliği  
Keçiören Eğitim ve Araştırma Hastanesi Baştabipliği  
Klinik Araştırma Etik Kurulu**

Sayı : 2012-KAEK-15/1229  
Konu: Keçiören Eğitim ve Araştırma Hastanesi  
Etik Kurul Kararı

26.10.2016

**KEÇİÖREN EĞİTİM VE ARAŞTIRMA HASTANESİ KLİNİK ARAŞTIRMA  
ETİK KURULU**

"Dünya Sağlık Örgütü Çocukluk Çağı Obezitesi Sürveyansı Girişimi: COSI-TUR 2016" adlı klinik araştırma başvuru dosyası ve ilgili belgeler araştırmanın gerekçe, amaç, yaklaşım ve yöntemleri dikkate alınarak incelenmiş, çalışmanın başvuru dosyasında belirtilen merkezlerde gerçekleştirilmesinde etik ve bilimsel sakınca bulunmadığına ve kurulumuz kararının başvuru sahibi tarafından sağlık bakanlığına arzına gerek olmadığına toplantıya katılan Etik Kurul üye tam sayısının salt çoğunluğu ile karar verilmiştir.

  
Op.Dr. Ömer Faruk TANER  
Keçiören Eğitim ve Araştırma Hastanesi  
Klinik Araştırmalar Etik Kurul Başkanı

---

Keçiören Eğitim ve Araştırma Hastanesi  
Klinik Araştırmalar Etik Kurul  
Pınarbaşı Mahallesi Sanatoryum Cad.  
Ardahan Sokak No:25 Keçiören / ANKARA  
Web: [www.akeuh.gov.tr](http://www.akeuh.gov.tr)

KLİNİK ARAŞTIRMALAR ETİK KURULU KARAR FORMU

ARAŞTIRMANIN AÇIK ADI	Dünya Sağlık Örgütü Çocukluk Çağı Obezitesi Sürveyansı Girişimi: COSI-TUR 2016
VARSA ARAŞTIRMANIN PROTOKOL KODU	COSI-TUR 2016

ETİK KURUL BİLGİLERİ	ETİK KURULUN ADI	Keçiören Eğitim ve Araştırma Hastanesi Klinik Araştırmalar Etik Kurulu 2012-KAEK-15
	AÇIK ADRESİ:	Pınarbaşı Mah. Sanatoryum Cad. Ardahan Sok. No:25 06380 Keçiören / Ankara
	TELEFON	0312 356 90 00-1117
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BAŞVURU BİLGİLERİ	KOORDİNATÖR/SORUMLU ARAŞTIRMACI UNVANI/ADI/SOYADI	Doç Dr. Nazan YARDIM			
	KOORDİNATÖR/SORUMLU ARAŞTIRMACININ UZMANLIK ALANI	Halk Sağlığı			
	KOORDİNATÖR/SORUMLU ARAŞTIRMACININ BULUNDUĞU MERKEZ	T.C. Sağlık Bakanlığı Türkiye Halk Sağlığı Kurumu			
	VARSA İDARI SORUMLU UNVANI/ADI/SOYADI	T.C. Sağlık Bakanlığı, Türkiye Halk Sağlığı Kurumu ve T.C. Milli Eğitim Bakanlığı			
	DESTEKLEYİCİ				
	PROJE YÜRÜTÜCÜSÜ UNVANI/ADI/SOYADI (TUBİTAK vb. gibi kaynaklardan destek almıyorsa)				
	DESTEKLEYİCİNİN YASAL TEMSİLCİSİ				
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		FAZ 2	<input type="checkbox"/>		
		FAZ 3	<input type="checkbox"/>		
FAZ 4		<input type="checkbox"/>			
Gözlemsel ilaç çalışması		<input type="checkbox"/>			
Tıbbi cihaz klinik araştırması		<input type="checkbox"/>			
In vitro tıbbi tanı cihazları ile yapılan performans değerlendirme çalışmaları		<input type="checkbox"/>			
İlaç dışı klinik araştırma	<input checked="" type="checkbox"/>				
Diger ise belirtiniz	Epidemiyolojik çalışma				
ARAŞTIRMAYA KATILAN MERKEZLER	TEK MERKEZ <input type="checkbox"/>	ÇOK MERKEZLİ <input checked="" type="checkbox"/>	ULUSAL <input checked="" type="checkbox"/>	ULUSLARARASI <input type="checkbox"/>	

Etik Kurul Başkanı  
Unvanı/Adı/Soyadı: Op.Dr.Ömer Faruk TANER  
İmza:



**ULUSAL BİLDİR**  
Zehra ÖZBİLGE  
Keçiören Eğitim ve Araştırma Hastanesi  
Etik Kurulu Başkanı

Not: Etik kurul başkanı, imzasını yer almadığı her sayfaya imza atmalıdır.

KLİNİK ARAŞTIRMALAR ETİK KURULU KARAR FORMU

ARAŞTIRMANIN AÇIK ADI		Dünya Sağlık Örgütü Çocukluk Çağı Obezitesi Sürveyansı Girişimi: COSI-TUR 2016	
VARSA ARAŞTIRMANIN PROTOKOL KODU		COSI-TUR 2016	
DEĞERLENDİRİLEN BELGELER	Belge Adı	Tarihi	Versiyon Numarası
	ARAŞTIRMA PROTOKOLÜ		
	BİLGİLENDİRİLMİŞ GÖNÜLLÜ OLUR FORMU		
	OLGU RAPOR FORMU		
DEĞERLENDİRİLEN DİĞER BELGELER	Belge Adı	Açıklama	
	SİGORTA		
	ARAŞTIRMA BÜTÇESİ		
	BİYOLOJİK MATERYEL TRANSFER FORMU		
KARAR BİLGİLERİ	Yukarıda bilgileri verilen başvuru dosyası ile ilgili belgeler araştırmanın/çalışmanın gerekeceği amaç, yaklaşım ve yöntemleri dikkate alınarak incelenmiş ve uygun bulunmuş olup araştırmanın/çalışmanın başvuru dosyasında belirtilen merkezlerde gerçekleştirilmesinde etik ve bilimsel sakınca bulunmadığına toplantıya katılan etik kurul üye tam sayısına sâlih çoğunluğu ile karar verilmiştir. İlaç ve Biyolojik Ürünlerin Klinik Araştırmaları Hakkında Yönetmelik kapsamında yer alan araştırmalar/çalışmalar için Türkiye İlaç ve Tıbbi Cihaz Kurumu'ndan izin alınması gerekmektedir.	Tarih: 26.10.2016	EKİM 2015 TARİHLİ TUR16

ETİK KURULUN ÇALIŞMA ESASI		İlaç ve Biyolojik Ürünlerin Klinik Araştırmaları Hakkında Yönetmelik, İyi Klinik Uygulamaları Kılavuzu
BAŞKANIN UNVANI / ADI / SOYADI:		Op.Dr.Ömer Faruk TANER

Unvanı/Adı/Soyadı	Uzmanlık Alanı	Kurumu	Cinsiyet	Araştırma ile İlişki	Katılım *	İmza
Op.Dr.Ömer Faruk TANER Bşk.	Plastik Ve Rekonstrüktif Cerrahi	Keçiören Eğitim ve Araştırma Hastanesi	E <input checked="" type="checkbox"/> K <input type="checkbox"/>	E <input type="checkbox"/> H <input checked="" type="checkbox"/>	E <input type="checkbox"/> H <input type="checkbox"/>	
Op. Dr. Selim Şakir Erken GÜLHAN Bşk.Yrd.	Göğüs Cerrahisi	Atatürk Göğüs Hst.Ve Göğüs Cer.E.A.H.	E <input checked="" type="checkbox"/> K <input type="checkbox"/>	E <input type="checkbox"/> H <input checked="" type="checkbox"/>	E <input type="checkbox"/> H <input type="checkbox"/>	
Doç.Dr. Handan GÜLEÇ Blg.Görevli üye	Anesteziyoloji ve Reanimasyon	Keçiören Eğitim ve Araştırma Hastanesi	E <input type="checkbox"/> K <input checked="" type="checkbox"/>	E <input type="checkbox"/> H <input checked="" type="checkbox"/>	E <input type="checkbox"/> H <input type="checkbox"/>	
Prof. Dr Ahmet ERGÜN	Fizyoloji	Ankara Ün.v. Tıp Fakültesi	E <input checked="" type="checkbox"/> K <input type="checkbox"/>	E <input type="checkbox"/> H <input checked="" type="checkbox"/>	E <input type="checkbox"/> H <input type="checkbox"/>	
Prof. Dr. Mehmet Ali ERGÜN	Tıbbi Genetik	Gazi Ün.v. Tıp Fakültesi	E <input checked="" type="checkbox"/> K <input type="checkbox"/>	E <input type="checkbox"/> H <input checked="" type="checkbox"/>	E <input type="checkbox"/> H <input type="checkbox"/>	

Etik Kurul Başkanı  
Unvanı/Adı/Soyadı: Op.Dr.Ömer Faruk TANER  
İmza:

ASLINDIR  
ZELİNE ZEBİLGE  
Etik Kurul Başkanı  
Klinik Araştırma Kurulu Başkanı

Not: Etik kurul başkanı, imzasının yer almadığı her sayfaya imza atmalıdır.

KLİNİK ARAŞTIRMALAR ETİK KURULU KARAR FORMU

ARAŞTIRMANIN AÇIK ADI		Dünya Sağlık Örgütü Çocukluk Çağı Obezitesi Sürveyansı Girişimi: COSI-TUR 2016				
VARSA ARAŞTIRMANIN PROTOKOL KODU		COSI-TUR 2016				
Unvanı/Adı/Soyadı	Uzmanlık Alanı	Kurumu	Cinsiyet	Araştırma ile İlişki	Katılım *	İmza
Prof. Dr. Mustafa N. İLHAN	Halk Sağlığı,İş Ve Meslek Hst.	Gazi Ün.v. Tıp Fakültesi	E <input checked="" type="checkbox"/> K <input type="checkbox"/>	E <input type="checkbox"/> H <input checked="" type="checkbox"/>	E <input type="checkbox"/> H <input type="checkbox"/>	
Doç. Dr. İsmet Faruk ÖZGÜNER	Çocuk Cerrahisi	Dr.Sami Ulus Kadın Doğum, Çocuk Sağlığı Ve Hastalıkları E. A. H	E <input checked="" type="checkbox"/> K <input type="checkbox"/>	E <input type="checkbox"/> H <input checked="" type="checkbox"/>	E <input type="checkbox"/> H <input type="checkbox"/>	
Yr.Doç. Dr. İşıl ÖZAKCA	Farmakoloji (PhD)	Ankara Ün.v.Ecz.Fakültesi	E <input type="checkbox"/> K <input checked="" type="checkbox"/>	E <input type="checkbox"/> H <input checked="" type="checkbox"/>	E <input type="checkbox"/> H <input type="checkbox"/>	
Doç. Dr. Selma UYSAL RAMADAN	Radyodiagnostik	Keçiören Eğitim ve Araştırma Hastanesi	E <input type="checkbox"/> K <input checked="" type="checkbox"/>	E <input type="checkbox"/> H <input checked="" type="checkbox"/>	E <input type="checkbox"/> H <input type="checkbox"/>	
Doç. Dr. Mustafa ALTAY	Endokrinoloji ve Metabolizma Hst.	Keçiören Eğitim ve Araştırma Hastanesi	E <input checked="" type="checkbox"/> K <input type="checkbox"/>	E <input type="checkbox"/> H <input checked="" type="checkbox"/>	E <input type="checkbox"/> H <input type="checkbox"/>	
Uzm. Dr. Osman KORUCU	Nöroloji	Keçiören Eğitim ve Araştırma Hastanesi	E <input checked="" type="checkbox"/> K <input type="checkbox"/>	E <input type="checkbox"/> H <input checked="" type="checkbox"/>	E <input type="checkbox"/> H <input type="checkbox"/>	
Av. Abdullah Emin TEKİN	Avukat	Serbest	E <input checked="" type="checkbox"/> K <input type="checkbox"/>	E <input type="checkbox"/> H <input checked="" type="checkbox"/>	E <input type="checkbox"/> H <input type="checkbox"/>	
Necmettin TEKİN	Din Görevlisi	Keçiören Eğitim ve Araştırma Hastanesi	E <input checked="" type="checkbox"/> K <input type="checkbox"/>	E <input type="checkbox"/> H <input checked="" type="checkbox"/>	E <input type="checkbox"/> H <input type="checkbox"/>	

\*:Toplantıda Bulunma

ASLINDIR  
ZELİNE ZEBİLGE  
Etik Kurul Başkanı  
Klinik Araştırma Kurulu Başkanı

Etik Kurul Başkanı  
Unvanı/Adı/Soyadı: Op.Dr.Ömer Faruk TANER  
İmza:

Not: Etik kurul başkanı, imzasının yer almadığı her sayfaya imza atmalıdır.



ANNEX-3. The Distribution of Number of Classes Included in the Sampling in Provinces Included in the Samplings

	TUIK sampling	Included in the analysis
ADANA	13	13
ADIYAMAN	5	5
AFYONKARAHİSAR	4	4
AĞRI	11	11
AKSARAY	5	5
AMASYA	4	4
ANKARA	29	29
ANTALYA	12	12
ARDAHAN	2	2
ARTVİN	2	2
AYDIN	6	6
BALIKESİR	12	12
BARTIN	1	1
BATMAN	5	5
BAYBURT	4	4
BILECIK	1	1
BİNGÖL	3	3
BITLIS	7	7
BOLU	2	2
BURDUR	1	1
BURSA	17	17
ÇANAKKALE	5	5
ÇANKIRI	2	2
ÇORUM	6	6
DENİZLİ	5	5
DİYARBAKIR	12	12
DÜZCE	2	2
EDİRNE	4	4
ELAZIĞ	10	10
ERZİNCAN	6	6
ERZURUM	14	13
ESKİŞEHİR	3	3
GAZİANTEP	15	15
GİRESUN	6	6
GÜMÜŞHANE	2	2
HATAY	10	10
IĞDIR	7	7
ISPARTA	2	2
İSTANBUL	51	50
İZMİR	23	23

	TUIK sampling	Included in the analysis
KAHRAMANMARAŞ	6	6
KARABÜK	2	2
KARAMAN	2	2
KARS	9	9
KASTAMONU	4	4
KAYSERİ	17	17
KIRIKKALE	2	2
KIRKLARELİ	4	4
KİRSEHIR	2	2
KİLİS	1	1
KOCAELİ	12	12
KONYA	13	12
KÜTAHYA	2	2
MALATYA	10	10
MANİSA	8	8
MARDIN	3	3
MERSİN	11	11
MUĞLA	4	4
MUŞ	4	4
NEVŞEHİR	3	3
NİĞDE	5	5
ORDU	12	12
OSMANIYE	3	3
RIZE	5	5
SAKARYA	5	5
SAMSUN	14	14
SİİRT	1	1
SINOP, TURKEY	2	2
SİVAS	6	6
ŞANLIURFA	23	23
TEKİRDAĞ	12	12
TOKAT	7	6
TRABZON	13	13
TUNCELİ	1	1
UŞAK	2	2
VAN	13	12
YALOVA	1	1
YOZGAT	4	4
ZONGULDAK	6	6
<b>TOTAL</b>	<b>585</b>	<b>580</b>

ANNEX-4 COSI-TUR 2016 Field Examiners and Team Codes

Province	Name Surname	Team Code
ADANA	CEMILE ÖZDOĞRU NURAY ÇAKI	0101 0102
ADIYAMAN	MERYEM CEMILE KABAKÇI	0201
AFYONKARAHİSAR	MELEK TURGUT	0301
AĞRI	GAMZE İNCE NURAN ÇELİK	0401 0402
AKSARAY	AŞYE NUR ACAR	6801
AMASYA	FEVZİYE MERVE CEYLAN	0501
ANKARA	ÖZNUR ERCAN HÜMEYRA ARSLAN	0601 0602
	MURATCAN ATEŞ KEMAL CEM YILDIZ	0603 0604
ANTALYA	ÜMMÜ HOCAOĞLU GAMZE KARAKAYA	0701 0702
ARDAHAN	HAZAL TOPÇUOĞLU	7501
ARTVİN	SİNAN ÇORBACI	0801
AYDIN	ESRA GÜZEL ASFUROĞLU	0901
BALIKESİR	ASLI KANBUR SAADET KURT	1001 1002
BARTIN	MÜZEYYEN ELMAS KARA	7401
BATMAN	NECMETTİN ALTUNDAĞ	7201
BAYBURT	DOĞAN CAN ŞARA	6901
BİLECİK	ÖZNUR GÜNGÖR	1101
BİNGÖL	SEMRA ALPAY	1201
BİTLİS	BİLGE ALIŞ	1301
BOLU	SONGÜL ÖZDEMİR	1401
BURDUR	ÖNER ÖZDEMİR	1501
BURSA	CANAN TANRIÖVER	1601
ÇANAKKALE	SELİN SARIBUDAK TÜYSÜZ	1701
ÇANKIRI	ESRA KOCAMIŞ BAŞ	1801
ÇORUM	RABİA DEMİRALAY	1901

Province	Name Surname	Team Code
DENİZLİ	CEREN AKKUŞ KABUKÇU	2001
DİYARBAKIR	HAVVA ÖZGE TEKİN SABRI ATEŞMAN	2101 2102
DÜZCE	HANDE KÜNDEŞ	8101
EDİRNE	EYÜP İPEK	2201
ELAZIĞ	HATİCE YILDIZ MERAL KİRİZ	2301 2302
ERZİNCAN	HABİBE HAVVA RUHLUCAN	2401
ERZURUM	FİLİZ EKİNCİ UGAN ŞEYMA AKTAŞ	2501 2502
ESKİŞEHİR	MERVE AYDOĞAN	2601
GAZİANTEP	ZUHAL BULUT EZGİ YILDIZ	2701 2702
GİRESUN	DERYA YAŞIYAN	2801
GÜMÜŞHANE	AYŞE AKAYDIN	2901
HATAY	ELVAN AK MELTEM SÖĞÜT	3101 3102
İĞDIR	VELİ KAŞ YUSUF SABAH	7601 7602
ISPARTA	YASEMİN DEMİRBİLEK	3201
İSTANBUL	GÜLŞAH YİĞİT KÜBRA ADA MERYEM SÜMEYE KARDAŞLAR SEDA TURHAN HİLAL YILMAZ BÜŞRA ÖDEMİŞ ÖZGE YILMAZ BEYZANUR YILDIRIM	3401 3402 3406 3404 3405 3406 3407 3408
İZMİR	SENER ŞEVVAL KASIMOĞULLARI UĞUR GÜLTEKİN SERCAN ÜNAL	3501 3502 3503
KAHRAMANMARAŞ	FATMA ERSOY	4601
KARABÜK	FADİME AYDIN KÜÇÜK	7801
KARAMAN	BERAT ÜNÜVAR	7001
KARS	CEREN ÖZKAN TOPALOĞLU GÖZDE KOYUHİSAR	3601 3602

Province	Name Surname	Team Code
KASTAMONU	TUNA ERASLAN	3701
KAYSERİ	MERVE BAŞER	3801
	SÜMEYRA GÜMÜŞ	3802
KIRIKKALE	ÖZLEM ÜRPEK ÇİFCİ	7101
KIRKLARELİ	ESRA GÜMÜŞ	3901
KIRŞEHİR	OKAN TÜRKOĞLU	4001
KİLİS	ESRA KOYUNCU	7901
KOCAELİ	FATMA YILDIRIM	4101
	MÜGE ÇINAR	4102
KONYA	KÜBRA SARIÇİCEK	4201
	AYSU İLHAN	4202
KÜTAHYA	ZAFER KARADAĞ	4301
MALATYA	BÜŞRA CARTI	4401
	MERYEM SARIBIYIK	4402
MANİSA	PELİN BÜLBÜL	4501
MARDİN	PINAR KAYA	4701
MERSİN	ZÜLEYHA KAPLAN	3301
	MÜZEYYEN BERAT	3302
MUĞLA	ESRA BULUT	4801
MUŞ	EDİP TAŞ	4901
NEVŞEHİR	BEYZA ÖZKAN	5101
NİĞDE	NESLİHAN ÖZGEN	5101
ORDU	AYFER TURAN	5201
	GÜNDOĞDU	5202
	FUNDA AYHAN	5202
OSMANİYE	GÜLHANIM İNÇ	8001
RİZE	BURCU ÖZGÜRLER	5301
SAKARYA	TAMER EZEN	5401
SAMSUN	GÖKÇE GÜLER	5501
	MERVE SÖZEN	5502
SIİRT	MEHMET EMİN ŞİRİN	5601
SINOP	AYŞE KAPLAN	5701
SİVAS	SAADET ÜNVER	5801

Province	Name Surname	Team Code
ŞANLIURFA	HAMZA KURÇ	6301
	ABDULKADİR	6302
	PALALI	6303
	MERVE YALÇIN	6303
TEKİRDAĞ	ATİYE AYDIN	5901
	MERVE AKBULUT	5902
TOKAT	ALAATTIN TERZİ	6001
TRABZON	ARZU MELEK	6101
	HİSOĞLU	6102
	NUR GÖREN	6102
UŞAK	NAZAN KÖKER	6401
VAN	ÖMER TEKİN	6501
	NURDAN	6502
	GÜLERKUL	6502
YALOVA	MERVE YÜCEL	7701
YOZGAT	MERYEM BETÜL	6601
	BAŞER	6601

**ANNEX - 5 Design Effects Calculated for Some Variables of Students and Their Families**

<b>Variables</b>	<b>Turkey</b>	<b>TR1</b>	<b>TR2</b>	<b>TR3</b>	<b>TR4</b>	<b>TR5</b>	<b>TR6</b>	<b>TR7</b>	<b>TR8</b>	<b>TR9</b>	<b>TRA</b>	<b>TRB</b>	<b>TRC</b>
<b>Some variables belonging to students</b>													
Gender	1.2	1.2	0.6	1.4	0.8	0.9	1.6	0.5	0.6	0.6	0.6	0.8	1.7
Birth weight	1.6	2.7	1.0	1.3	1.1	1.2	1.6	0.8	0.8	0.8	1.0	1.5	2.3
Body weight (kg)	3.0	2.9	1.2	3.3	2.9	2.4	3.1	2.0	1.7	0.9	1.2	3.0	6.3
Height (cm)	4.2	4.1	1.7	4.0	4.2	3.8	4.5	2.4	1.9	1.3	1.7	3.6	7.1
WAZ	3.0	3.0	1.2	3.2	2.8	2.2	2.7	1.6	1.6	0.6	1.1	2.6	6.5
HAZ	3.8	4.1	1.4	3.2	3.4	3.5	3.3	1.6	1.5	0.7	1.3	3.0	7.2
BAZ	2.3	2.7	1.0	2.5	2.3	1.6	2.9	1.4	1.3	0.6	0.7	1.6	3.8
Obese	1.8	2.0	1.0	2.5	1.7	1.4	1.4	1.0	1.0	0.9	0.7	1.3	2.8
Overweight	2.3	2.9	1.0	2.8	2.0	1.4	3.2	1.2	1.2	0.6	0.7	1.5	3.1
Underweight	1.6	2.8	0.6	1.2	1.1	1.3	1.8	0.6	0.7	0.4	0.4	1.0	1.9
Severe Underweight	1.8	1.9	0.9	1.4	1.4	2.1	1.2	0.9	0.6	0.5	0.7	0.7	2.5
Stunting	2.1	2.2	0.5	1.6	0.9	1.1	1.6	0.7	0.6	0.3	1.0	0.9	3.3
Average sleep duration	6.7	10.7	3.4	7.0	7.9	6.3	7.7	3.2	3.5	1.9	1.4	3.6	7.6
<b>Some variables belonging to families</b>													
Body weight of Mother	2.3	1.5	0.5	4.6	2.3	1.8	2.5	2.0	1.2	0.7	0.9	1.8	3.3
Height of Mother	2.8	3.3	0.9	6.7	1.9	2.2	3.5	3.0	1.0	0.5	0.8	1.1	2.4
Body weight of Father	3.1	3.8	1.2	4.8	3.4	1.7	2.7	2.9	1.8	0.7	1.0	1.6	4.0
Height of Father	3.1	3.7	1.3	6.0	4.0	2.2	3.7	2.6	1.4	0.6	0.8	1.7	2.4
<b>Education level of Mother</b>													
Illiterate	8.0	3.9	1.4	8.4	4.2	2.5	7.6	2.8	2.3	0.5	1.6	4.1	14.4
Literate	3.1	1.9	1.4	2.4	3.9	1.1	3.3	0.9	0.9	0.7	1.0	1.2	4.7
Primary School	5.0	8.3	1.7	5.5	5.2	3.6	4.5	3.7	2.5	1.4	0.7	2.2	7.2
Secondary School	3.1	3.4	0.9	5.6	2.1	2.0	4.3	2.0	1.9	0.7	0.6	1.3	4.0
High School	3.6	4.2	1.5	4.4	3.1	3.4	3.9	3.2	1.3	1.1	0.9	3.4	5.2
Higher Education	8.2	11.5	3.3	8.6	5.9	9.1	8.0	4.1	3.4	1.4	1.6	7.9	13.2
<b>Employment Status of Father</b>													
Government employed	3.8	3.5	2.1	4.4	2.5	2.6	4.3	3.2	2.7	0.9	1.3	3.0	8.2
Non-government employed	3.5	2.9	2.1	4.9	3.3	2.9	4.3	5.1	1.4	1.5	1.2	1.8	6.5
Self-employed	3.6	4.1	0.7	4.8	3.2	2.9	3.9	4.3	1.1	0.7	0.8	2.2	4.7
Student	1.2	-	-	-	1.0	2.0	-	0.4	0.4	0.5	0.5	0.7	1.2
Household Works	2.3	1.3	0.9	1.5	1.2	1.2	2.0	1.5	1.4	0.8	0.7	1.7	4.2
Unemployed, able to work	4.1	2.1	1.7	7.1	3.8	2.3	4.8	3.2	1.9	2.4	1.8	2.7	6.5
Unemployed, unable to work	2.5	1.4	1.3	4.1	1.5	1.1	5.3	0.9	0.7	0.6	0.7	2.0	2.2
Retired	1.3	1.9	0.6	1.2	1.1	1.7	1.7	1.1	0.7	0.4	0.4	0.9	1.4

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**Republic of Turkey Ministry of Health**  
**General Directorate of Public Health**  
Adnan Saygun Caddesi No:55  
Sıhhiye, Çankaya ANKARA / TÜRKİYE  
Ministry of Health Publication No:1125  
ISBN: 978-975-590-713-0