Turkey

Demographic and Health Survey

2008

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2008

Hacettepe University Institute of Population Studies
Ankara, Turkey

With the contributions of

General Directorate of
Mother and Child Health / Family Planning,
Ministry of Health,
Ankara, Turkey

and

T.R. Prime Ministry
State Planning Organization
Ankara, Turkey

Funded by

The Scientific and Technological Research Council of Turkey
(TÜBİTAK)
"Support Programme for Research and Development Projects of Public Institutions"
(KAMAG)

October 2009

Hacettepe University
Institute of Population Studies

T.R. Ministry of Health
General Directorate of Mother and Child Health
and Family Planning

T.R. Prime Ministry
State Planning Organization

The Scientific and Technological
Research Council of Turkey

Publication No: IPS-HU.09.01

ISBN 978-975-491-275-3

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The Turkey Demographic and Health Survey, 2008 (TDHS-2008) has been conducted by the Hacettepe University Institute of Population Studies. The beneficiary institutions under this project are T.R. Ministry of Health and T.R. Prime Ministry Undersecretary of State Planning Organization.

The financial support of the TDHS-2008 has been provided by the Scientific and Technological Research Council of Turkey (TÜBİTAK) within the scope of the Support Programme for Research and Development Projects of Public Institutions.

TDHS-2008 is fully comparable with the models and standards developed by the worldwide Demographic and Health Surveys (MEASURE/DHS+) project. ICF Macro International Inc. provided technical assistance on tabulation, the review and formatting of the final report.

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Suggested citation:
Hacettepe University Institute of Population Studies (2009) *Turkey Demographic and Health Survey, 2008*. Hacettepe University Institute of Population Studies, Ministry of Health General Directorate of Mother and Child Health and Family Planning, T.R. Prime Ministry Undersecretary of State Planning Organization and TÜBİTAK, Ankara, Turkey.

Printed by Hacettepe University Hospitals Printing House

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FOREWORD

Hacettepe University Institute of Population Studies was established in 1967 and is the principal institution for carrying out nationwide scientific studies on fertility, mortality, migration and maternal and child health issues in Turkey. Through a series of national household surveys conducted every five years, the Institute has collected reliable nationwide data on population characteristics and maternal and child health since 1968. These data have allowed the demographic structure in Turkey to be assessed regularly for four-decade period. The results of these studies served as the basis on which population and health policies have been formed, maternal and child health service plans prepared, and the coverage and impact of these plans evaluated.

The Turkey Demographic and Health Survey, 2008 (TDHS-2008) is the ninth national demographic survey series carried out by the Institute of Population Studies since 1968, for every five years. It is an honor for the Institute to gain the general approval and confidence of all scholars and institutions of national and international level for yielding high quality information on a national level and providing comprehensive reports.

The seven demographic surveys conducted in Turkey between 1968 and 1998 were financially supported by various international sources. The TDHS-2003 was realized by the combination of national budget and European Union sources. However, for the first time, the TDHS-2008 was financed entirely from the national budget of Republic of Turkey. The financial support of the TDHS-2008 has been provided by The Scientific and Technological Research Council of Turkey (TÜBİTAK) within the scope of the Support Programme for Research and Development Projects of Public Institutions (KAMAG). The survey is an indicator of the institutionalization and the importance of this survey, which is one of the best example of the collaboration of universities and public institutions in Turkey. In addition, these surveys have been included into the formal statistics program prepared by Turkey Statistical Institute.

Preparatory activities of the TDHS-2008 began in March 2007. In this context, activities relating to sampling and questionnaire design were accomplished in this period. Following the completion of the preparatory activities, listing and fieldwork took place between June and December of 2008. The TDHS-2008 was conducted in 81 provinces and 634 clusters which were selected in such fashion as to represent the country, the urban-rural and regional levels. Interviews were completed with 7,405 ever-married women in reproductive ages in 10,525 households. In March 2009, the preliminary report that included some key indicators obtained from the TDHS-2008 was published and disseminated to public and academic organizations concerned with population and maternal and child health issues.

The results of the TDHS-2008 present considerable changes in population and health indicators towards the positive direction. The findings point out significant improvements particularly in the use of modern contraception, receiving antenatal care and in child health.

The declines in total fertility rate, and especially infant mortality rate are also noteworthy. A careful assessment of the survey results that reflect the changes in population and health indicators will help to re-determine the planning of services, resources, personnel, target groups and priorities in the population and health sectors.

The contributions of Hacettepe University administrators the general directors and experts of the public institutions and staff of the Institute of Population Studies were instrumental in the realization of various stages of the TDHS-2008. I would like to express my gratitude to them for their much appreciated efforts.

First of all, I would like to thank The Scientific and Technological Research Council of Turkey who have supported the TDHS-2008 project as a Research and Development (R&D) project under the Support Programme for Research and Development Projects of Public Institutions.

The Ministry of Health provided extensive support to the TDHS-2008 in every stage as in the previous Demographic and Health Surveys conducted by the Institute. I deeply appreciate first Prof. Dr. Recep Akdağ, the Minister of Health, and especially Dr. Mehmet Rifat Köse, General Director of the Mother and Child Health and Family Planning for their productive, supportive, analytical and enriching contributions. Moreover, I also would like to acknowledge the efforts of directors of the General Directorate of Primary Health Services, and personnel in the General Directorate as well as the provincial health directors and other health personnel in the provinces where the survey was carried out.

I would like to thank to Mr. Kemal Madenoğlu, the undersecretary of the State Planning Organization, and his staff for their efforts in various stages of the project.

I would like to thank Mr. Ömer Toprak, the President of the State Institute of Statistics, and Ms. Hasibe Dedeş, the director of the Survey, Analysis and Statistics Division, and other staff for their efforts and contributions in selecting the sample of the TDHS-2008 with scientific sensitivity.

I am grateful to the high level officials of Ministry of Interior that provided necessary permissions for field survey as well as province governors and sub-governors and district governers who administratively supported the implementation of the field survey.

I would like to express my special appreciation to Prof. Dr. Uğur Erdener, the Rector of the Hacettepe University and staff in the Scientific Research Unit of the University as they shared all the difficulties with us and gave valuable support in every stage of the TDHS-2008.

My thanks are also to the Steering Committee Members of TDHS-2008 for their valuable contributions. I deeply appreciate all respondents who accepted to be involved in the survey and answered the questionnaires and all staff of the field teams, without them we would have been unable to conduct this survey.

I would like to thank Dr. Ann A. Way, the vice president of the ICF Macro and her colleagues for their important inputs in data entry, data analysis and in finalization of english report.

Finally, I extend my gratitude to the technical director of the TDHS-2008 Assoc. Prof. Dr. Ismet Koç, the field director Dr. Elif Kurtuluş Yiğit, and Assist. Prof. Dr. A. Sinan Türkyılmaz, Assoc. Prof. Dr. Banu Akadlı Ergöçmen, Mehmet Ali Eryurt and Dr. Yadigar Coşkun, who are responsible for sampling, questionnaire design, data entry and data analysis, as well as all research assistants. I would like to thank, Hülya Çulpan as an executive secretary of the Institute and other administrative staff for carrying out all administrative procedures of the project.

Moreover, I present my appreciation and respect to all our family members for their endless support and patience during the laborious times in and out of work days.

I wish the results of this study would provide positive contributions to the health of our country's women and children.

Prof. Dr. Sabahat Tezcan
Director
Institute of Population Studies
Hacettepe University

SUMMARY OF FINDINGS

The Turkey Demographic and Health Survey, 2008 (TDHS-2008) is a nationally representative sample survey designed to provide information on levels and trends on fertility, infant and child mortality, family planning and maternal and child health. Survey results are presented at the national level, by urban and rural residence, for each of the five regions in the country, and for the 12 geographical regions (NUTS1) for some of the survey topics

The entire funding for the TDHS-2008 was provided by the Government of Turkey through the Scientific and Technological Research Council of Turkey (TÜBİTAK) within the scope of the Support Programme for Research and Development Projects of Public Institutions (KAMAG).

Hacettepe University Institute of Population Studies (HUIPS) carried out the TDHS-2008 in collaboration with the General Directorate of Mother and Child Health and Family Planning, Ministry of Health and the Undersecretary of State Planning Organization. TDHS-2008 is the most recent in the series of demographic surveys carried out in Turkey by HUIPS and it is the fourth survey conducted as part of the worldwide Demographic and Health Surveys program.

The survey was fielded between October 2008 and December 2008. Interviews were completed with 10,525 households and with 8,003 ever-married women at reproductive ages (15-49). Ever-married women at ages 15-49 who were present in the household on the night before the interview or who usually live in that household were eligible for the survey.

CHARACTERISTICS OF HOUSEHOLD POPULATION

Turkey has a young population structure; 27 percent of the population is under age 15. The population age 65 and over accounts for 7 percent of the total population in Turkey. The mean household size in Turkey is 4 persons, varying from an average of 3.8 persons in the urban areas to 4.2 persons in rural areas.

The majority of the population in Turkey has attended school. Among the population with schooling, about one-third of both males and females have completed at least second level primary school. The proportion of population with at least high school education is 26 percent for males and 18 percent for females. However, the indicators for successive cohorts show a substantial increase over time in the educational attainment of both men and women.

The results show that 94 percent of births in the past five years in Turkey were registered. The percentage of unregistered children decreased from 16 percent in TDHS-2003 to 6 percent in TDHS-2008.

CHARACTERISTICS OF RESPONDENTS

A third of women interviewed in the TDHS-2008 were less than 30 years of age; ninety-five percent were married at the time of interview. Eighty-two percent of women in

Turkey graduated at least from secondary school, and the percentage of literate women is 89 percent. A significant proportion of women (21 percent) had completed at least high school. Survey results show considerable improvement in the educational levels of women in reproductive ages. While 38 percent of women had been in employment during the 12 month period preceding the survey. About half of employed women work in the service sector, 40 percent work in the agriculture, and remaining 8 percent work in the industry. Sixty-nine percent of employed women are not under the coverage of social security. However, 84 percent of women are under the coverage of health insurance.

Among all ever-married women age 15-49, 22 percent reported that they smoke regularly or rarely. According to maternity status, 11 percent of pregnant women and 17 percent of breastfeeding women report that they smoke. The mean number of cigarettes is around 11 per day among women age 15-49.

FERTILITY BEHAVIOR

Levels and Trends

The findings of the TDHS-2008 indicate that if a woman was to maintain the current fertility rates throughout her reproductive years, she would be expected to have 2.16 children on the average by the end of her reproductive years. Although, women in Turkey still experience their prime reproductive years during their twenties, the TDHS-2008 points out an important change in the age pattern of fertility that is observed for the first time in Turkey. The highest age-specific fertility rates were observed in the 20-24 age group in all surveys conducted before TDHS-2008, the 25-29 age group is the one for which highest age-specific fertility rate is attained in TDHS-2008. This shows that not only fertility levels are changing in Turkey, but also age patterns of fertility are, due to postponements in childbearing towards later ages.

Socioeconomic and Demographic Differentials

The urban-rural gap in fertility levels appears to be closing. However, some regional differences remain. Except for South and East Anatolia, fertility is below replacement level. Despite a pronounced decline in fertility in recent decades, period fertility in the East is still well above three children. Fertility decreases rapidly with increasing educational level. Women with no education have on average one more children than that of women who have high school and more education. Another important trend is the steady rise in the age at first birth among women in Turkey. Younger women are much less likely than older women to have given birth to their first child while they were in their teens.

Age at Marriage

In Turkey, marriage is very important from a demographic perspective, because, besides being prevalent throughout the country, almost all births occur within marriage. Therefore, age at first marriage is a significant demographic indicator since it represents the onset of a woman's exposure to the risk of pregnancy.

The TDHS-2008 results document an increase in the median age at first marriage across age cohorts, from 19.5 years for the 45-49 age group to 22.1 years for the 25-29 age group. The results also show pronounced differences in the age at first marriage by educational level of women. Among women age 25-49 there is a difference of almost 5 years in the timing of entry into marriage between those with no

education and those who has at least high school education.

FAMILY PLANNING USE

Family Planning Knowledge

Knowledge of family planning methods is almost universal among women in Turkey. Almost all women interviewed in the survey had heard of at least one modern method. The IUD and pill are the most widely known modern contraceptive methods among women followed by the male condom, female sterilization and injectables.

Levels and Trends

Ninety-one percent of both ever-married and currently married women have used a family planning method at some time in their life. Overall, 73 percent of currently married women are using contraception, with 46 percent depending on modern methods and 27 percent using traditional methods. The IUD is the most widely used modern method (17 percent) followed by male condom (14 percent). Withdrawal continues to be the most widely used traditional method. Twenty six percent of currently married women report current use of withdrawal.

Differentials in Use

The use of contraceptive methods varies by age. Current use of any method is the highest among currently married women (84 percent) in the 35-39 age group. The use of withdrawal peaks among women in the 40-44 age group (32 percent) while the highest level of IUD use (23 percent) is found among women age 35-39. Current use of contraceptive methods also varies according to urban rural residence, region, level of education, and number of living children.

Discontinuation of Use

Discontinuation of contraceptive use can highlight program areas that require improvement as well as groups of users who have particular concerns that need to be addressed. The TDHS-2008 results indicate that 35 percent of contraceptive users in Turkey stop using a contraceptive method within 12 months of starting use. The IUD, which is not generally intended as a short-term method, has the lowest discontinuation rate (13 percent). Coitus-related methods are more easily discontinued. For example, 37 percent of condom users discontinue within one year of use. Regarding future use, almost half of currently married non-users intend to use family planning at some time in the future.

Provision of Services

The public sector is the major source of contraceptive methods in Turkey. Sixty-one percent of current users obtain their contraceptives from the public sector. In the public sector more than half of the users obtain modern contraceptive methods from health centers or MCH/FP centers. Pharmacies are the second most commonly used source, providing contraceptive methods to one-fourth of all users of modern methods.

INDUCED ABORTION

Overall, 22 percent of pregnancies during the five-year period before the survey terminated in other than a live birth. Induced and spontaneous abortions comprised the greatest share among non-live terminations, with relatively few women having had a stillbirth. There were 21 abortions per 100 pregnancies, of which 10 were induced. The total abortion rate (TAR) per woman is 0.29 for the five years preceding the TDHS-2008. The age-specific rates increase to a peak among women age 35-39, and decline among older women. Women living in the East region and in rural settlements are the least likely to have ever had an induced abortion.

Overall, a substantial proportion of abortions (67 percent) took place in the first month of pregnancy. Private sector providers are preferred for having had an abortion (70 percent). The need for family planning counselling after an abortion is highlighted by the finding that, in the month following an induced abortion, 32 percent of women did not use any method and 22 percent used withdrawal.

NEED FOR FAMILY PLANNING

Fertility Preferences

Sixty-seven percent of currently married women do not want to have more births in the future or are already sterilized for contraceptive purposes. An additional 14 percent of the women want to wait at least two years for another birth. Thus, four out of every five currently married women can be regarded as in need of using family planning services either to avoid or to postpone childbearing. Among the currently married women, the mean ideal number of children is 2.5 for women indicating that most women want small families. Results from the survey suggest that, if all unwanted births were prevented, the total fertility rate at the national level would be 1.6 children per woman, or 0.6 children less than the actual total fertility rate.

Unmet Need for Family Planning

The total demand for family planning is 79 percent, and 92 percent of this demand is satisfied. The demand for limiting purposes is three times as high as the demand for spacing purposes (55 and 18 percent, respectively). The total unmet need among currently married women is 6 percent, almost the same with the findings of TDHS-2003.

CHILD MORTALITY

Levels and Trends

For the five years preceding the TDHS-2008, the infant mortality rate is estimated at 17 per thousand, the child mortality rate at 6 per thousand, and the under five mortality rate at 24 per thousand. For the same period, daths in neonatal period account for 76 percent of all infant deaths. All the indicators of infant and child mortality have declined rapidly in recent years.

Socioeconomic and Demographic Differentials

The TDHS-2008 findings point out to significant differences in infant and child mortality between regions and by urban-rural residence. They also show that the educational level of mother is an important correlate of infant and child mortality. In addition to the differentials observed between socio-economic groups, infant and child mortality rates also correlate strongly with the young age of the mother at birth, high-birth order and short birth intervals, with children in these categories facing an elevated risk of dying compared to children in other subgroups. In addition, low weight at birth affects children's chances of survival.

MATERNAL HEALTH

Care during Pregnancy

Ninety-two percent of mothers received antenatal care during the pregnancy preceding their most recent birth in the five years preceding the survey, with 90 percent receiving care from a doctor. Overall, 87 percent of women made an antenatal care visit before the sixth month of pregnancy, and 74 percent of the woman made more than four visits. Younger, low parity women, women living in urban areas and in the regions other

than the East, and women with at least first primary level education are more likely to have received antenatal care compared to other women.

Delivery Care and Postnatal Care

In Turkey, 90 percent of all births in the five years preceding the survey were delivered at a health facility. Public sector health facilities were used to a much greater extent for delivery (70 percent) than private facilities. The proportion of all births delivered with the assistance of a doctor or trained health personnel is 91 percent.

Eighty-three percent of women reported that they had a postnatal checkup and the majority of postnatal care was provided by a doctor (82 percent). Among the ones receiving postnatal care, 63 percent received care within less than four hours. On the other hand, 16 percent did not receive any care after the delivery of their last live birth. In Turkey, younger, high parity women (four births or more), women living in rural areas and in the East region and the women with no education were more likely to receive no postnatal care.

Postnatal checkups for the baby are important in reducing infant deaths. Approximately 90 percent of infants receive postnatal care from health personnel and most of these babies—67 percent of all last births—are seen for care within four hours following delivery in Turkey. The variations across subgroups in the likelihood of an infant receiving postnatal care from a health provider and in the timing when postnatal care is first received are similar to the patterns observed with respect to the mother's receipt of postnatal care.

CHILD HEALTH

Childhood Vaccination Coverage

Universal immunization of children against the six vaccine-preventable diseases (tuberculosis, diphtheria, pertussis, tetanus, poliomyelitis, and measles) is one of the most cost-effective programs in reducing infant and child morbidity and mortality. Among children age 15-26 months, 81 percent of them had received all of the recommended eight vaccines. The percentage of children who are fully vaccinated is lowest in the rural areas (71 percent) and in the Eastern region (64 percent). The vaccination coverage percentages are also related to mother's education and the children's sex, birth order and household welfare.

Prevalence and Treatment of Diarrhea

Dehydratation is a serious result of diarrhea that is one of the most important causes of childhood mortality. Overall, 23 percent of children had experienced diarrhea while only 1 percent of those children had bloody stools in the last two weeks preceding THDS-2008. Approximately half of children with diarrhea are taken to a health provider. Eighty-five percent of them received some kind of treatment from a health facility or a health provider for this illness.

NUTRITION INDICATORS FOR CHILDREN AND WOMEN

Breastfeeding and supplemental feeding

Breastfeeding is almost universal in Turkey; 97 percent of all children are breastfed for some period of time. Complementary feeding is on the way of decreasing in Turkey among very young children in Turkey. In the first two months of life, 69 percent are exclusively breastfed. This percentage was only 44 percent in the TDHS-2003. The median duration of breastfeeding for all children is 16

months. Among children who are breast-feeding and younger than six months, 25 percent received infant formula.

Iodization of Salt

Iodine deficiency contributes to higher rates of childhood morbidity and mortality. According to tests conducted during the survey, the table salt in 85 percent of the households did include neither iodide nor iodate. Iodized salt is not used in one-third of rural households. Approximately half of the households in Central and Southeast Anatolia use iodized salt.

Nutritional Status of Children

By age five, 10 percent of children are stunted (short for their age), compared to an international reference population. Stunting is more prevalent in rural areas, in the East, among children of mothers with little or no education, among children who are of higher birth order, and among those born less than 24 months after a prior birth. Wasting is a less serious problem. Three percent of children are underweight for their age.

Obesity is a problem among mothers. According to BMI calculations, 58 percent of mothers are overweight, of which 24 percent are obese. Mean BMI increases rapidly with age, exceeding 25.0 for the majority of women age 25 and older.

WOMEN'S STATUS

Interspousal difference in age and education

Currently married women are, on average, 4.2 years younger than their husband. Only five percent women are two or more years older than their husband. Regarding the education difference, women are most likely to be married to men who have more education than they have.

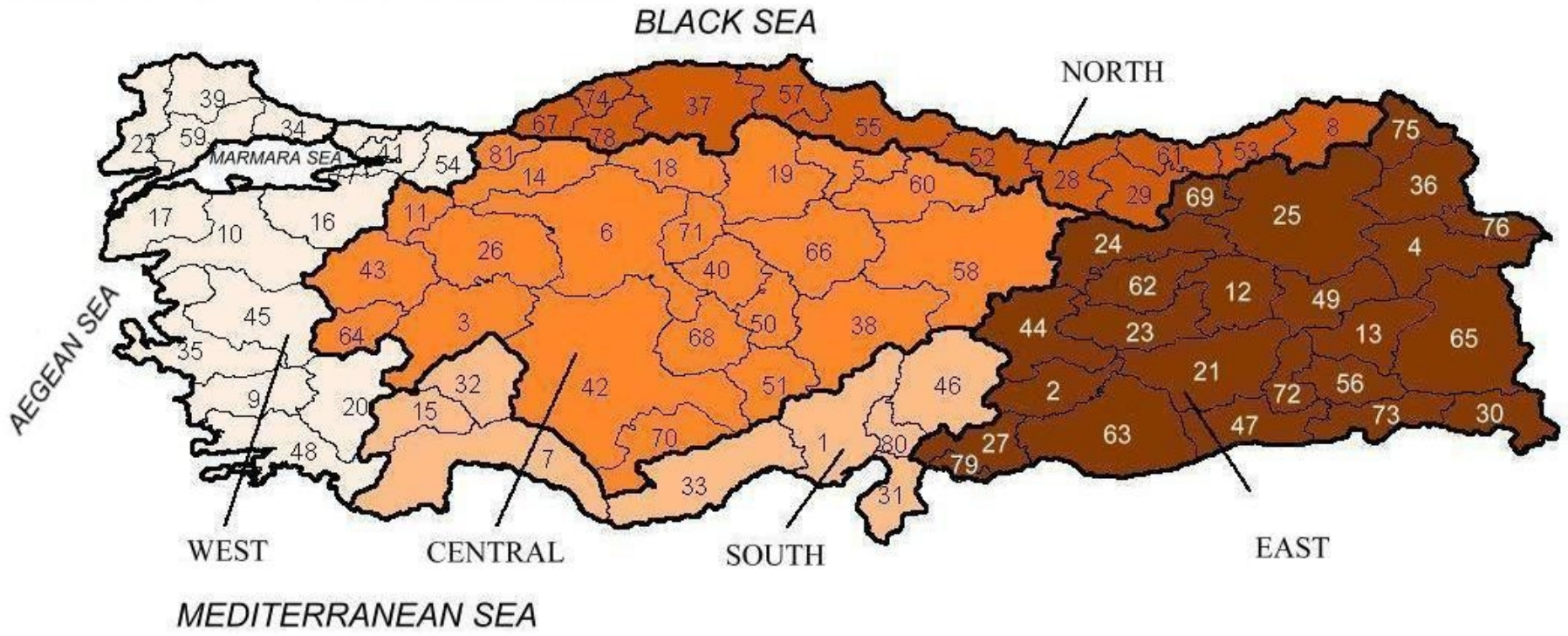
The reasons for not working and child care

Thirty-one percent of women reported child-care as the reason for not working; followed by being a housewife (22 percent) and no permission for working by family or husband (20 percent). Eight person of women reported that they did not need working. Of women who worked in the 12 months prior to the survey, 67 percent had no children under 6 years of age. Overall, in Turkey the main source of child care is either the mother or the relatives. The proportion of institutional care is very small with approximately 7 percent.

Domestic Violence

In TDHS-2008, women were asked whether a husband would be justified in perpetrating physical violence to his wife for different reasons. The percentage of women who accept one reason as a justification for physical violence was found to be 25 percent.

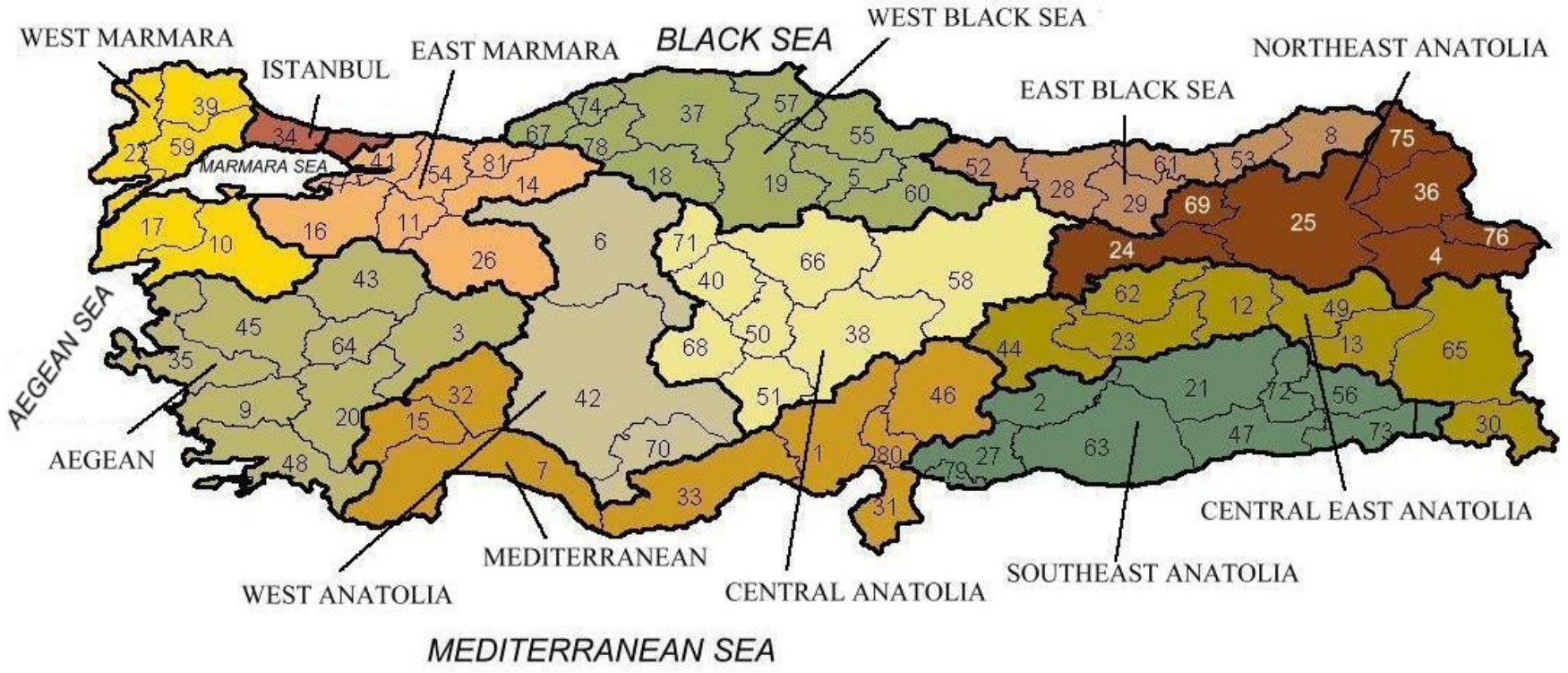
TURKEY - 5 REGIONS



REGIONS AND PROVINCES

01 WEST	*02 SOUTH*	*03 CENTRAL*		*04 NORTH*	*05 EAST*	
09 Aydın	01 Adana	03 Afyon	60 Tokat	08 Artvin	02 Adıyaman	62 Tunceli
10 Balıkesir	07 Antalya	05 Amasya	64 Uşak	28 Giresun	04 Ağrı	63 Şanlıurfa
16 Bursa	15 Burdur	06 Ankara	66 Yozgat	29 Gümüşhane	12 Bingöl	65 Van
17 Çanakkale	31 Hatay	11 Bilecik	68 Aksaray	37 Kastamonu	13 Bitlis	69 Bayburt
20 Denizli	32 Isparta	14 Bolu	70 Karaman	52 Ordu	21 Diyarbakır	72 Batman
22 Edirne	33 İçel	18 Çankırı	71 Kırıkkale	53 Rize	23 Elazığ	73 Şırnak
34 İstanbul	46 K.Maraş	19 Çorum	81 Düzce	55 Samsun	24 Erzincan	75 Ardahan
35 İzmir	80 Osmaniye	26 Eskişehir		57 Sinop	25 Erzurum	76 Iğdır
39 Kırklareli		38 Kayseri		61 Trabzon	27 Gaziantep	79 Kilis
41 Kocaeli		40 Kırşehir		67 Zonguldak	30 Hakkari	
45 Manisa		42 Konya		74 Bartın	36 Kars	
48 Muğla		43 Kütahya		78 Karabük	44 Malatya	
54 Sakarya		50 Nevşehir			47 Mardin	
59 Tekirdağ		51 Niğde			49 Muş	
77 Yalova		58 Sivas			56 Siirt	

TURKEY - 12 REGIONS



REGIONS AND PROVINCES

01 İSTANBUL
34 İstanbul

02 WEST MARMARA
10 Balıkesir
17 Çanakkale
22 Edirne
39 Kırklareli
59 Tekirdağ

03 AEGEAN
03 Afyon
09 Aydın
20 Denizli
35 İzmir
43 Kütahya
45 Manisa
48 Muğla
64 Uşak

04 EAST MARMARA
11 Bilecik
14 Bolu
16 Bursa
26 Eskişehir
41 Kocaeli
54 Sakarya
77 Yalova
81 Düzce

05 WEST ANATOLIA
06 Ankara
42 Konya
70 Karaman

06 MEDITERRANEAN
01 Adana
07 Antalya
15 Burdur
31 Hatay
32 Isparta
33 İçel
46 K.Maraş
80 Osmaniye

07 CENTRAL ANATOLIA
38 Kayseri
40 Kırşehir
50 Nevşehir
51 Niğde
58 Sivas
66 Yozgat
68 Aksaray
71 Kırıkkale

08 WEST BLACK SEA
05 Amasya
18 Çankırı
19 Çorum
37 Kastamonu
55 Samsun
57 Sinop
60 Tokat
67 Zonguldak
74 Bartın
78 Karabük

09 EAST BLACK SEA
08 Artvin
28 Giresun
29 Gümüşhane
52 Ordu
53 Rize
61 Trabzon

10 NORTHEAST ANATOLIA
04 Ağrı
24 Erzincan
25 Erzurum
36 Kars
69 Bayburt
75 Ardahan
76 Iğdır

11 CENTRAL EAST ANATOLIA
12 Bingöl
13 Bitlis
23 Elazığ
30 Hakkari
44 Malatya
49 Muş
62 Tunceli
65 Van

12 SOUTHEAST ANATOLIA
02 Adıyaman
21 Diyarbakır
27 Gaziantep
47 Mardin
56 Siirt
63 Şanlıurfa
72 Batman
73 Şırnak
79 Kilis

INTRODUCTION 1

Sabahat Tezcan

1.1 Geography

Turkey occupies a surface area of 774,815 square kilometers. About three percent of the total area lies in Southeastern Europe (Thrace) and the remainder in Southwestern Asia (Anatolia or Asia Minor). Turkey has borders with Greece, Bulgaria in the Thrace and Syria, Iraq, Iran, Georgia, Armenia, and Nahcivan (Azerbaijan) in the south and east Anatolia that is also called Asia Minor. The shape of the country resembles a rectangle, stretching in the east-west direction for approximately 1,565 kilometers and in the north-south direction for nearly 650 kilometers. The three sides of Turkey are surrounded by seas: in the north, the Black Sea; in the northwest, the Sea of Marmara; in the west, the Aegean Sea; and in the south, the Mediterranean Sea. The total coastline of Turkey is around 8,333 kilometers.

The Anatolian peninsula lies on an elevated steppe-like and semi-arid central plateau surrounded by mountains on all sides, except the west. The Taurus Mountains in the south and the Northern Anatolia Mountains in the north stretch parallel to the coastline, meeting in the eastern part of the country. The average altitude of the country is around 1,130 meters above sea level. However, there are vast differences in altitude among the regions, ranging from an average of 500 meters in the west to 2,000 meters in the east Anatolia.

The climate is characterized by variations of temperature and rainfall, depending on topography of the country. The average rainfall is 500 millimeters; however, it ranges from 2,000 millimeters in Rize, a province on the Eastern Black Sea coast, to less than 300 millimeters in some parts of Central Anatolia. The typical climatic conditions of Turkey include dry, hot summers and cold, rainy, snowy winters especially in the central and eastern regions. In summer, temperatures do not display large variations across the country, whereas in winter, the temperature ranges from an average of –10°C in the east to +10°C in the south.

1.2 History

Anatolia was dominated by the Seljuqs for almost two centuries (1055-1243) and afterwards she became the core of the Ottoman Empire, which ruled also in the Europe, Middle East and Africa for almost six centuries. At the end of The First World War, the Ottoman Empire collapsed and immediately an effort to create a new state from the ruins of an Empire began throughout the country. The Turkish resistance movements were transformed into a complete war of independence when Mustafa Kemal landed at Samsun on 19 May 1919. The Turkish forces achieved success under very difficult conditions. The Lausanne Treaty, signed on 24 July 1923, recognized the creation of a new Turkish State with

virtually the same borders as those of the National Pact of 1920 and guaranteed her complete independence. The Republic was proclaimed on 29 October 1923 in order to give the state a democratic form in the contemporary sense. Subsequently, the country's present borders were established following the annexing of Hatay, a province on the southern border, in 1939.

The founding of the Republic signified radical shifts from the previous social order as a succession of social and economic reforms. The wearing of the turban and fez that were symbols of the former order were banned and the "hat" became the official headgear (25 November 1925); the international hour and calendar systems were adopted (26 November 1925); the dervish lodges and tombs and the titles of tariqahs (sects) were abolished (25 November 1925); a modern Turkish Civil Code was introduced (17 February 1926) to replace the old civil code and the Shariah Laws which were the foundation stones of Ottoman law; the Latin alphabet was adopted instead of Arabic script and unity of basic education was adopted (1 November 1928). The schools where mostly religion-related instruction was given were closed, and a program of compulsory education was set up which aimed at applying contemporary teaching methods. An amendment made to the Constitution in 1928 removed the clause which had stated that "the religion of the state is Islam". A new clause was put in the Constitution in 1937 stating that Turkey is a secular state. The Surname Law was adopted on 21 June 1934 and also the same year women in Turkey enjoyed voting and election rights. Mustafa Kemal, the founder of the new Turkish State and Republic, was given the surname of "Atatürk" (Father of the Turks). In short, the direction of change, led by Atatürk, was one away from a religious, oriental Empire to a modern, contemporary and secular Republic.

Turkey did not become involved to the Second World War at the beginning but when the war was about to end, Turkey sided with the USA, Britain and the Soviet Union and declared war against Germany and Japan. However, Turkey did not take part actively in the war. Turkey signed the United Nations Treaty dated 24 January 1945. Turkey, which was officially invited to the San Francisco Conference on 5 March 1945, was among the founding members of the United Nations.

From the foundation of the Turkish Republic to 1946, the country was governed by one party system. In the mid and late 1940s, new political parties formed. The first multiparty election held in 1946 and the second was in 1950 when the Democrat Party won, putting the Republican People's Party into the opposition. With the introduction of multi-party period, Turkey achieved a more liberal and democratic environment. Although Turkish political history included three military interventions (1960, 1971, and 1980), Turkey has succeeded in preserving a parliamentary, multi-party democratic system until today, and this makes it unique among other countries where Islam has prominence.

With the foundation of the Republic, Turkey turned her face to the 'Western world', as establishing close relations with European countries and the United States of America. Turkey is a member of the United Nations, the Council of Europe and the North Atlantic Treaty Organization (NATO) and an associate member of the European Union. Since 2000, Turkey has achieved a noteworthy achievement in introducing new social, economic and political reforms within the context of the harmonization process with EU that was initiated with the

Helsinki Summit of 1999 (State Planning Organization 2003). Turkey also maintains close relations with the countries of the Middle East, stemming from deep-rooted cultural and historical links.

1.3 Administrative Divisions and Political Organization

Since the foundation of the Republic, the Turkish administrative structure has been shaped by three Constitutions (1924, 1961, and 1982). These three constitutions proclaimed Turkey to be a Republic with a parliamentary system and specified that the will of the people is vested in the Turkish Grand National Assembly (TGNA). All three constitutions adopted basic individual, social and political rights, and accepted the principle of separation of powers, namely legislative, administrative and judicial.

The legislative body of the Republic is the TGNA. The TGNA is composed of 550 deputies, who are elected for four-year terms. The President of the Republic is elected by the TGNA for a five-year term. The Prime Minister and other Cabinet Ministers compose the Council of Ministers, the executive branch of the Republic. The judiciary consists of the Court of Appeals, the Court of Jurisdictional Disputes, the Military Court of Appeals, the Constitutional Court, and the civil and military Courts.

Turkey is administratively divided into 81 provinces. These are further subdivided into districts *(ilçe),* subdivisions *(bucak),* and villages *(köy)*. The head of the province is the governor, who is appointed by the council of ministers and approved by the president of the republic and responsible to the central government. The governor, as the chief administrative officer in the province, carries out the policies of the central government, supervises the overall administration of the province, coordinates the activities of the various ministry representatives appointed by the central authority in the capital Ankara, and maintains law and order within his/her jurisdiction.

A mayor and a municipal council, elected by the municipal electoral body for a term of five years, administer local government at the municipality level. Every locality with a population of more than 2,000 is entitled to form a municipal administration. Municipalities are expected to provide basic services such as; electricity, water, gas, building and maintenance of roads, and sewage and garbage disposal facilities within the boundaries of the municipality. Educational and health services are mainly provided by the central government, but municipalities of metropols also provide limited health services for those who are at lower economic and social strata.

1.4 Social and Cultural Features

Turkey varies in social and cultural structure, with ‘modern’ and ‘traditional’ life styles co-existing simultaneously within the society. For the inhabitants of metropolitan areas daily life is similar to the Western countries. On the other hand, people living in outskirts of urban areas and rural settlements are relatively conservative and traditional. Family ties are still strong and influential in the formation of values, attitudes, aspirations, and goals.

Although laws are considered to be quite liberal on gender equality, patriarchal ideology characterizes the social life in many ways.

The citizens of Turkey are predominantly Muslim. About 98 percent of the population belongs to Muslim religion. The rich and complex culture of the Turkish society pertains to its ethnic structure.

One of the most striking achievements since the founding of the Republic has been the increase in both literacy and education. In 1935, only 10 percent of females and 29 percent of males were literate in Turkey. In 2006, the female and male literacy rates for population age 15 and over were 80 and 96 percent, respectively (TURKSTAT 2006). Educational attainment has also increased dramatically. The net primary education enrolment ratio is 97 percent; 98 percent for males and 96 for females. Five years compulsory education has been enhanced to eight years in 1997. Moderate advances have also been made in increasing the proportions of males and females with higher than primary-level education. Besides the net secondary education enrolment ratio is 59 percent; 61 percent for males and 56 percent for females (TURKSTAT 2008).

1.5 Economy

After the foundation of the Turkish Republic, various economic development strategies were adopted. In the early years of the Republic, the Turkish economy was very weak since a bankrupt country was inherited from the Ottoman Empire. The economy was almost exclusively based on the agriculture, and it was totally undeveloped and poor. The creation and development of industry was clearly the first step that had to be taken to achieve a healthy and balanced economy. Throughout the 1920s liberal policies were implemented; the government promoted the development of industry through private enterprise, encouraged and assisted by favorable legislation and the introduction of credit facilities. These liberal policies continued until 1929, and moderate improvements were realized in the mechanization of agriculture. In the following decade, the state, under the so-called *étatiste* system, assumed the role of entrepreneur, owning and developing large sectors of agriculture, industry, mining, commerce and public works. The origins of modern industrialization in Turkey can be traced to the era of the 1930s. Although the beginnings of the industrialization drive were evident in the immediate aftermath of the formation of the republic in 1923, the real breakthrough occurred in the context of the 1930s.

Although Turkey did not actually participate in the Second World War, the country was faced with heavy restraints on the economy, which slowed down the industrialization process. A "mixed economy" regime followed the war, with the transition to democracy in 1950 signifying a shift towards a more liberal economic order; private enterprise gained recognition side by side with the state economic enterprises. Also, more emphasis was placed on trade liberalization, agricultural and infrastructural development, and the encouragement of privatization and foreign capital.

A series of Five-Year Development Plans were prepared beginning in the 1960s. The first of these plans became operative in 1963. A basic objective was to replace the era of

unplanned and uncontrolled expansion during the 1950s. Before 1980, Turkey followed an economic policy based on the substitution of imports, and instead of importing it was aimed to manufacture those goods in the country to meet domestic demand. Newly established industrial branches were protected for long periods of time by customs tariffs and other taxes.

In the 1980s, governments followed a strategy of renewing economic growth based on an export-oriented strategy. In this way, substantial economic reforms were prepared and applied beginning in January 1980. Privatization implementations were started in the country in 1984. Following the stagnation of the late 1970s, growth recovered in response to a combination of an increased flow of exports and inputs of foreign capital. The liberal economic strategy followed in the 1980s was not unique to that period. The differences between the liberal and *étatiste* phases are not only the nature of the trade regime and the attitude toward foreign direct investment, but also the mode of state intervention in the economy.

Industrialization during the 1990s has been shaped by three dynamics. First, the state's direct influence on the distribution of the resources was lessened. Second, competition gained importance, with increased emphasis on industrial performance and reconstruction of the industry. Third, general globalization and integration into the European Union gained speed. During the 1990s, privatization also gained importance as a solution to economic capital problems. An autonomous committee was founded in order to regulate privatization. Some of the state enterprises have been privatized within the frame of this program, and further privatization is to continue.

Turkey is nearly self-sufficient country in terms of its agricultural production. Wheat, barley, sugar beets, potatoes, leguminous plants and rice are grown, principally for domestic consumption, and cotton, tobacco, citrus, grapes, fig, hazelnuts, and pistachios are also grown for export, But recently, some agricultural products are rather imported. Turkey is not rich in mineral resources. One of the country's main problems is the inadequacy of primary energy resources. Copper, chromium, borax, coal, and bauxite are among the mineral resources in the country. The main industries are textiles, steel, cement, fertilizers, automotive and electrical household goods. Machinery, chemicals and some metals are imported mainly from the OECD countries.

Turkey is classified as a middle-income country. Since 2001, key structural reforms have been adopted within the context of the harmonization process with EU. Despite some recent progress, reducing inflation pressure, increasing export revenues, reducing unemployment problem and addressing insufficient capital for new investments remain key issues (State Planning Organization 2003; Ministry of Foreign Affairs 2004). In early 2008's, the global financial crises emerged in the world economy and hit almost all economies in the world. Inevitably, Turkey has also been affected from this crisis. The most important effect is the cut in public investments especially in social sector provisioning. In addition to that private sector has serious financial problems. Thus the unemployment has been increasing since late 2007.

1.6 Regional Divisions

The diverse geographical, climatic, cultural, social, and economic characteristics of different parts of the country are the basis for the conventional regional breakdown within Turkey. Five regions (West, South, Central, North, and East) are distinguished, reflecting, to some extent, differences in socioeconomic development levels and demographic conditions within the country. This regional breakdown is frequently used for sampling and analysis purposes in social surveys. Additionally from 2002 onwards, within the framework of the EU harmonization process, a new statistical region definition has been adopted which compromised NUTS I (12 regions), NUTS II (26 regions) and NUTS III (81 provinces).

The West region is the most densely settled, the most industrialized, and the most socio-economically advanced region of the country. The region includes both İstanbul, (until 1923 the capital of the Ottoman Empire), which is Turkey's largest city, and the country's manufacturing, commercial and cultural centre, and İzmir, the country's third largest city. The coastal provinces within the West region form a relatively urbanized, fast-growing area. The Aegean coast is also a major agricultural area, where cotton, and fruits mostly grapes and fig are cultivated on the fertile plains. With dry summers and mild, rainy winters, agricultural yields from the fertile soils are good. Most of the industrial establishments are situated in the West region and the region contributes most of the gross domestic product of the country.

The South includes highly fertile plains and some rapidly growing industrial centers. Adana, Mersin, and Antalya are the new metropolises located in this region. Steep mountains cut off the semitropical coastal plains from the Anatolian highlands to the north. Hot, dry summers and mild, wet winters describe the climatic conditions of the region. Cultivation of cotton, sugar beets and citrus provide high incomes and export earnings. Tourism centers in the region is another important source of revenue. The South region has witnessed an industrial boom and an inflow of migrants, especially from the East and Southeastern provinces in the recent decades.

The Central region is a dry grazing area and includes Ankara, the capital and second populous city. Industrial production in the region is rising modestly, as minor city centers rapidly develop, and Kayseri is the best example of this . Industrial production in the region specializes in cereal and related processed foods, furniture and marble. Given the dry, temperate climate, fruit tree cultivation and sheep and cattle rising are also common.

The North region has a fertile coastal strip, but in most places it is only a few kilometers wide; the coastal region is relatively isolated from the inner parts of the region and the rest of the country by mountainous terrain. The region specializes in growing small-scale, labor-intensive crops like hazelnuts, tobacco and tea. The region receives large quantities of rainfall throughout the year. Zonguldak, a western province, has extensive coal mine reserves and is a centre for coal mining and the steel industry. The region has a great deal of tourism potential that has been improving recently.

The East region is considered as the least developed part of the country. Rugged mountainous terrain, short summers, and the severe climate are suited to animal husbandry

rather than settled farming. However, with the "Southeast Anatolia Project", the economy in the Southeast has improved in the recent years. Atatürk Dam was built (1983–1992) and Urfa irrigation channels were constructed and water was provided to arid and semi-arid lands, leading to agricultural development in the Southeast Anatolia. In addition to economic benefits, the project is also expected to reverse the migration flow from the region to the rest of the country. Although the capacity of agriculture has increased, the region is still poor in terms of industrial production.

A substantial number of villages and adjacent arable lands have been abandoned because of terrorist movements in last 20 years especially in East and Southeast Anatolia. In addition to this, large-scale development projects in the frame of Southeast Anatolia Project, natural disasters, or improved settlement policies have also led to significant migration both within and outside of the region in the last two decades. In response to these trends, the government initiated "Return to Villages and Rehabilitation Project" (RVRP) directed at this population. The main purposes of the RVRP, which covers the 14 provinces in the East and Southeast Anatolia, are to settle those who want to return to their villages on or around the lands of their former villages or on other suitable places, establish the necessary social and economic infrastructure, provide sustainable living conditions in these settlements, re-establish and vitalize the interrupted rural life, form a more balanced settlement design in the rural areas, and achieve a more rational distribution of public investments and services (State Planning Organization 2003).

1.7 Population

In 1927, Turkey's population was 13.6 million according to the first national census, which was conducted four years after the establishment of the Republic. Beginning with the 1935 census, subsequent population censuses were undertaken regularly at 5-year intervals until 1990. After 1990, population censuses were carried out in years ending with 0. The latest, fourteenth, Population Census which was carried out on 22nd October 2000, put the population of Turkey at 67.4 million (TURKSTAT 2003). Turkey is among the 20 most populous countries of the world, and it is the second most populous country of the Middle East after Iran and the second populous country of the Europe after Germany. According to projections, her population currently is around 71.5 million (TURKSTAT 2008).

The population of Turkey continuously increased in 1927–2008 period. The annual population growth rate reached its highest value (29 per thousand) in the 1955–1960 period. The latest intercensal estimate of the population growth rate was 18 per thousand for the 1990–2000 period. According to the projections of the Turkish Statistic Institute (TURKSTAT), the population of Turkey is expected to reach 76 million in the year 2010 and 84 million in 2025. The total population is expected to be stabilized around mid 21st century between 88-90 million (Population Reference Bureau 2008).

Turkey has a young population structure as a result of the high fertility and growth rates of the recent past. One-third of the population is under 15 years of age, whilst the proportion 65+ comprises only 6 percent according to 2000 national census results. However, today's prevailing demographic forces of the population are altering the age structure in new

ways. First of all, recent decades have witnessed dramatic declines especially in fertility rates. In the early 1970s, the total fertility rate was around 5 children per woman, whereas the estimates in the late 1990s indicate it has nearly halved to 2.6 children and it is estimated as 2,2 in 2006 (TURKSTAT 2006) The crude birth rate was estimated at 18 per thousand in second half of 2000's. Also in 2000's, fertility has shown a reduction above expected. As a result, the median age of the population, which averaged around 20 years between 1940 and 1960 in Turkey, has increased continuously since 1970, reaching 25 years for male and 26 years for female population in 2008. There have been significant changes in the growth rates by age groups. The growth rates for young age groups have decreased whereas the population of older age groups has increased faster than the average for Turkey. The share of elderly population has increased to 7 percent in 2008 implying nearly 5 million population over 65 (TURKSTAT 2008). It is expected that increase in the population size of 15–64 and 65+ will continue also in the next years (15-16 percent of total population will be 65+ in 2050) while population size of youth will nearly stabilize (TURKSTAT 2003).

There is lack of accurate, complete and continuous information on mortality in Turkey, particularly child mortality. The information is available mainly for deaths in town and city centers and these data are also incomplete. According to reported causes of deaths, the main causes of death in order of importance are cardio–vascular diseases (46 percent), all malignancies (15 percent) and all accidents (4 percent). In contrast to adult mortality, data on the level of child mortality have been available for a relatively long period from a series of fertility surveys. The infant mortality rate in the late 1950s was around 200 per thousand live births. It declined to about 130 during the mid-1970s and to an estimated 17 in 2006. Likewise, crude death rates have also declined from around 30 per thousand in the 1940s to 6 per thousand in second half of 2000's. The latest estimates put life expectancy in Turkey at 71 years for males and 75 for females (TURKSTAT 2006).

Marriage, predominantly civil, is widely practiced in Turkey. Religious marriages also account for a significant proportion of the marriages; however, the widespread custom is to have a civil as well as a religious ceremony. The universality of marriage in Turkey is observed in the low proportions never married. According to demographic surveys, in the age group 45-49 which marks the end of the reproductive ages, only two percent of females had never married, whereas the corresponding figure for males in the same age group was three percent. Although in recent decade divorces are slightly increasing. Marriages in Turkey are also known to be still very stable due to the close family ties.

The population of Turkey has undergone an intensive process of urbanization, especially from the 1950s onwards. The share of the population living in cities, which was 25 percent in 1950, climbed to 70 percent in 2007. The rate of urbanization has been approximately 33 per thousand during the 1990-2000 period. The rapid urbanization has inevitably caused environmental and administrative problems in the provision of services and the emergence of large areas of squatter housing in unplanned settlements around metropolitan cities. Social problems related to the adaptation to city life and culture also are evident, for example violence and delinquencies in metropolitan areas are increasing in recent years.

Turkey has had a long history of external migration. Throughout the 1960s and 1970s, the migrant flow was mainly directed to Western European countries, principally Germany. During the 1980s, however, it became more oriented towards the oil-producing countries of the Middle East. In the past two decades, the political turmoil in that region and changes in policies and practices governing the labor force in the European Union have continued to influence emigration patterns. At the same time, due to political conditions in neighboring countries, Turkey has found herself subjected to waves of asylum seekers from the Balkans, Middle East countries, and also from distant Asian and African countries (International Organization for Migration 1996). After the collapse of USSR, the migratory movement to CIS (Commonwealth of Independent States) countries and middle-east countries turned out to be the new route for Turkish investors and workers.

1.8 Population and Family Planning Policies and Programs

In Turkey, policies related to population have been formulated since the establishment of the Republic in 1923. During the early years of the Republic, there was a perceived need to increase fertility, since the country had suffered from heavy human losses during the First World War and the War of Independence. The defense needs of the country and the shortage of manpower, as well as high infant and child mortality rates, led Turkey to continue to follow a pronatalist population policy until the late 1950s. A number of laws directly or indirectly encouraging population growth were passed during the period. These laws included monetary awards to women with more than 5 children, tax reduction incentives, prohibitions on the advertisement, import and sale of contraceptives (except for health reasons), and prohibition of abortions on social grounds.

The high population growth rates prevailing in the 1950s which led to increased numbers of illegal abortions and, as a consequence, to high maternal mortality, brought the population debate into the political agenda. High urban population growth and employment problems were also factors contributing to the new antinatalist environment in government circles. The State Planning Organization and the Ministry of Health pioneered the policy change, and the first Population Planning Law was enacted in 1965. The law mandated the Ministry of Health to have responsibility for implementing the new family planning policy. The policy allowed the importation of modern contraceptives methods, provided services at state health institutions free of charge and supported health education for couples. In addition, the State Planning Organization incorporated the notion of population planning in the First Five-Year Development Plan.

In 1983, a more liberal and comprehensive Population Planning Law was passed. The new law legalized induced abortions (up to the tenth week of pregnancy) on social and economical grounds and voluntary surgical contraception. It also permitted the trained auxiliary health personnel to insert IUDs and included other measures to improve family planning services and mother and child health. The latest Seven Year Development Plan of the State Planning Organization states that population policy seeks to reach a population structure which is in harmony with the balanced and sustainable development targets of the society. Thus, the strengthening of qualitative aspects of population including increased education and improved health levels and a reduction in unbalanced development and

inequalities among regions are primary objectives of population policy (State Planning Organization 2007).

1.9 Health Priorities and Programs

Mother and child health and family planning services have been given a priority status in the policies of the government in recent decades. These services gained importance due to the large proportion of women of reproductive ages and children in the Turkish population, high infant, child and maternal mortality rates, the demand for family planning services, and the limited prenatal and postnatal care. A number of child survival programs to improve services have been implemented since 1985, with special emphasis on provinces which have been designated as priority development areas as well as on squatter housing districts in metropolitan cities, rural areas, and special risk groups. The initiatives include programs (GOBIFF) in growth monitoring, healthy and balanced nutrition, early diagnosis and prompt treatment of childhood diarrheal diseases, acute respiratory infections, promotion of breastfeeding, immunization, reproductive health, family planning, and antenatal and delivery care, safe motherhood and female education. IEC (Information, Education, and Communication) programs to promote the mother and child health and family planning activities are also being widely implemented. Additionally, The General Health Insurance Law was enacted by the Grand National Assembly of Turkey in 2006 and application was started in October 2007. With this law, all people under 18 included into General Health Insurance, regardless of their parents have social security status.

1.10 Health Care System in Turkey

The Ministry of Health is officially responsible for designing and implementing health policies and delivering health-care services nationwide. Besides the Ministry of Health, other public sector institutions and non-governmental and private organizations contribute to providing mostly curative health services.

At the central level, the Ministry of Health is responsible for the implementation of curative and preventive health-care services throughout the country, within the principles of primary health care. The responsibility for delivering the services and implementing specific Primary Health Care programs is shared by various General Directorates (Primary Health Care, Maternal and Child Health and Family Planning, Therapeutic Services, Health Education) and by various Departments (Departments of Tuberculosis Control, Cancer Control).

At the provincial level, the health-care system is the responsibility of Health Directorates, under the supervision of the Governor. The provincial Health Director is responsible for delivering all primary health-care services as well as curative services. The existing network of Health Centers and Health Houses was formed on the basis of "Legislation for the Socialization of Health Services" so that services and facilities were extended down to the village level. A substantial proportion of villages have health centers or health houses, and sites were located so as to provide easy access to other villages.

The simplest element of the socialized health services is the Health House, which serves a population of 2,500-3,000 and is staffed by a midwife. The Health Center serves a population of 5,000-10,000 and is staffed by a team consisting of a physician(s), a nurse(s), a health officer, midwives, an environmental health technician, medical secretary and a driver. Health Centers mainly offer integrated, polyvalent primary health-care services. Mother and Child Health and Family Planning Centers and Tuberculosis Dispensaries also offer primary preventive health services.

This network of health facilities is responsible for delivering primary health care services, maternal and child health, family planning, and public health education services. These health facilities are also the main sources of the health information system.

In 2003, Health Transformation Programme was launched in Turkey, and the major goal of this programme is to organize, finance and deliver the health care services in an effective and efficient way in conformity with equity. Moreover, in December of 2004 the Turkish family medicine legislation has been passed from National Assembly. Accordingly each family medicine practitioner is expected to serve approximately 3000-4000 individuals and is responsible to give preventive and curative health services to all registered persons. Until July 2009 family medicine has been started in 33 provinces and covers 17 million population.

1.11 Objectives and Organization of the Survey

1.11.1 Objectives

The 2008 Turkey Demographic and Health Survey (TDHS–2008) is the ninth in a series of national-level population and health surveys that have been conducted by the Hacettepe University Institute of Population Studies (HUIPS), in the last four decades. The primary objective of the TDHS-2008 is to provide data on socioeconomic characteristics of households and ever married women between ages 15-49 year, fertility, childhood mortality, marriage patterns, family planning, maternal and child health, nutritional status of women and children, and reproductive health. The survey obtained detailed information on these issues from a sample of ever-married women in the reproductive ages (15-49). The TDHS-2008 was designed to produce information in the field of demography and health that to a large extent cannot be obtained from other sources.

Specifically, the objectives of the TDHS-2008 included:

- Collecting data at the national level that allows the calculation of some demographic and health indicators, particularly fertility and childhood mortality rates;
- Obtaining information on direct and indirect factors that determine levels and trends in fertility and childhood mortality;
- Measuring the level of contraceptive knowledge and practice by method and some background characteristics i.e. region, and urban-rural residence;
- Collecting data relative to mother and child health, including immunizations, diarrhea , antenatal care and postnatal care, assistance at delivery, and breastfeeding;
- Measuring the nutritional status of children under five and their mothers; and
- Collecting data at the national level on elderly welfare and usage of iodide salt.

The TDHS-2008 information is intended to contribute data to assist policy makers and administrators to evaluate existing programs and to design new strategies for improving demographic, social and health policies in Turkey. Another important purpose of the TDHS-2008 is to sustain the flow of information for the interested organizations in Turkey and abroad on the Turkish population structure in the absence of reliable and sufficient vital registration system. Additionally, demographic health surveys in Turkey starting with TDHS-2008 were accepted as a part of the *Official Statistic Programme*.

1.11.2 Administration and Funding of the Survey

The Turkey Demographic and Health Survey, 2008 (TDHS-2008) has been conducted by the Hacettepe University Institute of Population Studies in collaboration with the Ministry of Health General Directorate of Mother and Child Health and Family Planning Undersecretary of State Planning Organization. The TDHS-2008 has been financed by The Scientific and Technological Research Council of Turkey (TÜBİTAK) under the Support Programme for Research Projects of Public Institutions, as a 42 months project. The TDHS-2008, unlike the previous surveys of this series was for the first time funded entirely from the national budget.

A steering committee consisting of the academic staff of HUIPS and representatives of the General Directorate of Mother and Child Health and Family Planning of the Ministry of Health, the State Planning Organization and the Turkish Statistical Institute participated in all phases of the project.

The staff of the Institute and other persons involved in the various activities of the TDHS–2008 is listed in Appendix A.

1.11.3 Questionnaires

Two types of questionnaires were used in the TDHS-2008: the Household Questionnaire and the Individual Questionnaire for ever-married women of reproductive ages. The contents of the questionnaires were based on the International MEASURE/DHS+ survey project model questionnaires and on the questionnaires that had been employed in previous Turkish population and health surveys. In developing the questionnaire, close attention was paid to obtaining the data needed for program planning in Turkey as specified during consultations with general directorate of MCH/FP and representatives of other related public institutions. Additionally input was obtained from other institutions studying on demographic and health issues. Ensuring the comparability of the TDHS–2008 findings with previous demographic surveys, particularly with TDHS–1993, TDHS–1998 and TDHS-2003 was an important goal during questionnaire development. A pretest of questionnaire was conducted in April 2008 and based on the pretest results, some minor modifications were made to the questionnaires.

The Household Questionnaire was used to enumerate all members of and visitors[1] to the selected households and to collect information relating to the socio-economic level of the households. In the first part of the household questionnaire, basic information was collected on the age, sex, educational attainment, marital status and relationship to the head of household of each person listed as a household member or visitor. The objective of the first part of the Household Questionnaire was to identify women who were eligible for the Individual Questionnaire. Some additional information on never-married women in 15–49 ages listed in the household schedule was provided at the second part. The third part of the household questionnaire was devoted to collecting data on welfare of the elderly, if any, in the households. In this part, there are questions on the income, health insurance and physical capabilities (i.e. ability to carry on daily activities for all persons age 60 and over living in the household and/or were present in the household on the night before the interview. In the fourth part, questions were included on the dwelling unit and on the ownership of a variety of consumer goods. Also in this part; questions were included about the storage of the salt used for cooking at home. Salt-related questions were asked in the half of the sampled clusters, and salt iodization tests were applied in the interviewed households in these clusters.

The Women's Questionnaire was designed for women listed in the household schedule, aged 15-49 and have been married at least once. This questionnaire covers the major topics listed below:

- Background characteristics
- Migration history
- Marriage history and information on marriage
- Pregnancy, birth history and fertility preferences
- Assisted reproductive techniques

[1] Persons who were not usual household members but who were present in that household on the night before the interview were identified as "visitors" and included in the household roster in order to obtain *de facto* survey population.

- Knowledge and use of contraceptive methods
- Antenatal and postnatal care
- Breastfeeding,nutrition, diarrhea and immunization of children under age five
- Women's work history and status
- Husband's background characteristics
- Anthropometric measurements of women and their children under five

The calendar module in the Individual Questionnaire was used to record on a monthly basis fertility, contraceptive use and marriage events for six and a half years beginning from January 2003 up to the survey month.

English versions of the two questionnaires can be seen in Appendix E.

1.11.4 Sample

The sample design and sample size of the TDHS-2008 makes it possible to perform analyses for Turkey as a whole, for urban and rural areas and for the five demographic regions of the country (West, South, Central, North and East). The TDHS-2008 sample is of sufficient size to allow for analysis on some of the survey topics at the level of the 12 geographical regions (NUTS 1) which were adopted at the second half of the year 2002 within the context of Turkey's move to join the European Union. Among these 12 regions, İstanbul and the Southeastern Anatolian Project regions (GAP in Turkish initials).

In the selection of the TDHS-2008 sample, a weighted, multi-stage, stratified cluster sampling approach was used. Sample selection for the TDHS-2008 was undertaken in three stages. In the first stage, settlements were selected for the sample. The frame for the settlement selection was prepared using information on the population sizes of settlements obtained from the 2007 Address Based Population Registration System. Settlements with population of 10,000 and more were defined as "urban", while settlements with populations less than 10,000 were considered as "rural" for purposes of the TDHS-2008 sample design. The selection of the settlements in each stratum was done with probability proportional to their population size.

The second stage of the sample selection involved the selection of a pre-determined number of small areal units, i.e., clusters, out of the settlements selected in the first stage. The total number of clusters in TDHS-2008 was set at 634. For 502 clusters, household lists, each including approximately 100 households, were provided by TURKSTAT, using the National Address Database (UAVT in Turkish initials) prepared for municipalities. For the remaining 132 clusters, TURKSTAT was unable to provide data. Therefore, for these clusters, household lists were prepared during a separate household listing operation conducted by HIPS before the main survey. The cluster lists provided by TURKSTAT were also updated during the listing activities.

In the third stage, a fixed number of households were selected from each cluster by systematic random sampling method using the updated household lists. Twenty-five households were selected from the clusters selected from urban settlements and 15 households from the

clusters drawn from rural settlements. The total number of households selected in TDHS-2008 is 13,251.

All ever-married women at ages 15-49 who usually live in the selected households and/or were present in the household the night before the interview were regarded as eligible for Ever-Married Women Questionnaire.

A more technical and detailed description of the TDHS-2008 sample design, selection and implementation is presented in Appendix B.

1.11.5 Fieldwork and Data Processing

The TDHS-2008 data collection was carried out by 19 teams. Each team consisted of 8 people; 5 female interviewers, one male measurer, one field editor and a team supervisor. The Institute's research assistants and project assistants also worked in the field as team supervisors. An instructor of the Institute served as the field director. Other academic staff of the Institute visited teams as regional coordinators during the survey and coordinated communications between the teams and field director. All were responsible to the director of the Institute who was in overall charge of the project.

A three-week training was given to the field staff in September 2008. The fieldwork began in the first week of October 2008 and was completed in the first week of December 2008. The questionnaires completed in the field were returned to the Institute of Populations Studies for data entry. Once the questionnaires arrived at the Institute, data entry and editing were done using CSPro package. During the data entry process, full verification between the field data and the data entered was achieved by have each questionnaire keyed by two different data editors and comparing the results and resolving any differences. The office editing and processing activities in the Institute began in the first week of November 2008 and were completed in the second week of January 2009.

The results of the household and individual questionnaires are summarized in Table 1.1. Information is provided on the overall coverage of the sample, including household and individual response rates. In all, 13,521 households were selected for the TDHS-2008. At the time of listing phase of the survey, 11,911 households were considered occupied and, thus, available for interview. Of the 11,911 occupied households, 88 percent (10,525 households) were successfully interviewed. The main reasons the field teams were unable to interview some households were because some dwelling units that had been listed were found to be vacant at the time of the interview or the household was away for an extended period.

Table 1.1 Results of the household and individual interviews

Number of households, number of interviews, and response rates by residence, Turkey 2008

Result	Urban	Rural	Total
Household interviews			
Households selected	10,017	3,504	13,521
Households occupied	8,909	3,002	11,911
Households interviewed	7,672	2,853	10,525
Household response rate	86.1	95.0	88.4
Individual interviews			
Eligible women	5,891	2,112	8,003
Eligible women interviewed	5,429	1,976	7,405
Eligible women response rate	92.2	93.6	92.5

In the interviewed 10,525 households, 8,003 women were identified as eligible for the individual interview, i.e. they were ever-married, in reproductive ages (15-49) and present in the household on the night before the interview. Interviews were successfully completed with 7,405 of these women (92.5 percent). Among the eligible women not interviewed in the survey, the principal reason for non-response was the failure to find the women at home after repeated visits to the household.

A more complete description of the fieldwork, coverage of the sample, and data processing is presented in Appendix B.

HOUSEHOLD POPULATION AND HOUSING CHARACTERISTICS 2

Mehmet Ali Eryurt, A. Sinan Türkyılmaz and İsmet Koç

This chapter provides a summary of demographic and socioeconomic profile of the TDHS-2008 sample and a descriptive assessment of the environment in which women and children live. It presents information on the general characteristics of the household population such as age-sex composition, literacy and education, household arrangements (headship, household size) and housing facilities (sources of water supply, sanitation facilities and dwelling characteristics), and household possessions. A distinction is made between urban and rural settings where many of these indicators usually differ. Besides providing the background for better understanding of many social and demographic phenomena discussed in the following chapters, this general description is useful for assessing the level of economic and social development of the population of Turkey. In addition, it may provide useful input for the assessment of the representativeness of the survey sample.

2.1 Characteristics of the Household Population

In the TDHS-2008, a household was defined as a person or group of persons living together and sharing a common source of food. The TDHS-2008 collected information about all persons who usually live in selected household (the *de jure* population) and persons who spent the night before the interview in the households (the *de facto* population). Because the differences between these populations are very small, the sampling probabilities were based on *de facto* population information, and to maintain comparability with past surveys and censuses all tables in this report are based on *de facto* populations, unless otherwise stated.

2.1.1 Age and Sex Composition

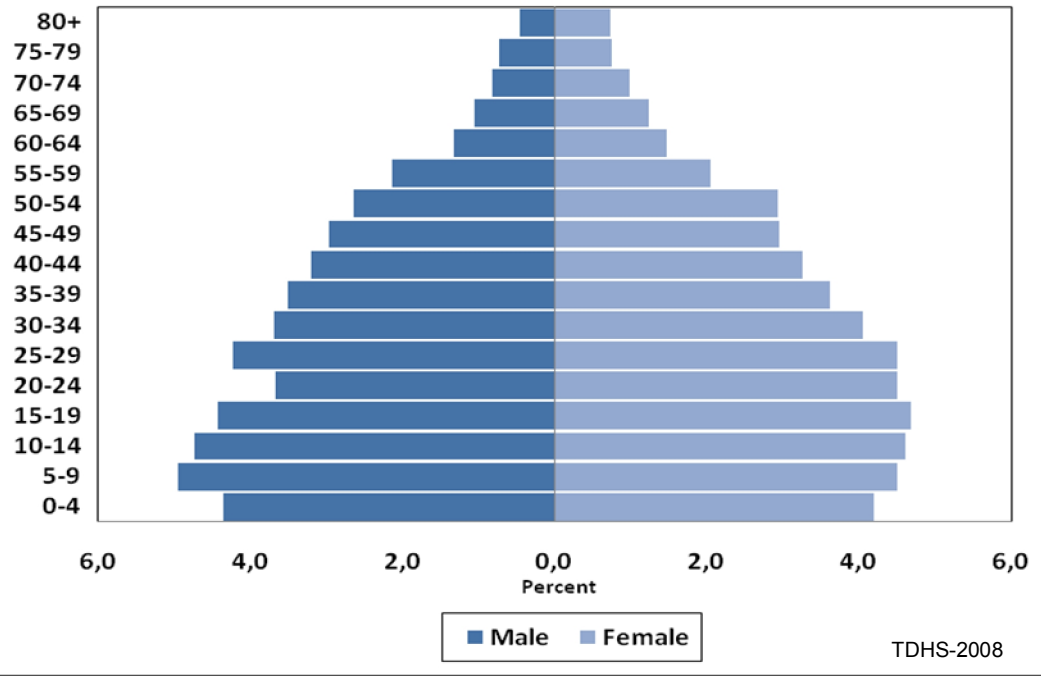
Age and sex are important demographic variables in the study of a variety of demographic processes such as fertility, nuptiality and mortality. Table 2.1 gives the percent distribution of the TDHS-2008 population by five-year age groups, according to urban-rural residence and sex. The population age structure is a reflection of the past history of demographic events in the population, especially fertility and mortality. It is also a useful device to test the quality of the data collected in regard to age reporting. The population spending the night before the survey (*de facto* population) in the selected TDHS-2008 households included 40,054 persons, of which 49 percent were males and 51 percent were females. The proportion of females is slightly higher in rural areas than in urba areas (52 and 51 percent respectively). Seventy-three percent of the population reside in urban areas.

Table 2.1 Household population by age, sex, and residence

Percent distribution of the *de facto* household population by five-year age groups, according to sex and residence, Turkey 2008

	Urban			Rural			Total		
Age	Male	Female	Total	Male	Female	Total	Male	Female	Total
<5	8.7	8.0	8.3	9.6	8.8	9.2	8.9	8.2	8.6
5-9	9.8	8.4	9.1	10.8	9.9	10.3	10.1	8.8	9.4
10-14	9.5	8.8	9.1	10.3	9.6	9.9	9.7	9.0	9.4
15-19	9.1	9.6	9.3	8.9	8.1	8.5	9.0	9.2	9.1
20-24	7.9	9.3	8.6	6.5	7.6	7.0	7.5	8.8	8.2
25-29	9.4	9.4	9.4	6.4	7.1	6.8	8.6	8.8	8.7
30-34	8.1	8.6	8.3	6.2	6.3	6.2	7.6	7.9	7.8
35-39	7.5	7.5	7.5	6.2	6.0	6.1	7.2	7.1	7.1
40-44	6.7	6.6	6.7	6.0	5.6	5.8	6.5	6.4	6.4
45-49	6.2	5.9	6.0	5.8	5.4	5.6	6.1	5.8	5.9
50-54	5.4	5.7	5.6	5.3	6.0	5.7	5.4	5.8	5.6
55-59	4.1	3.7	3.9	5.1	4.9	5.0	4.4	4.0	4.2
60-64	2.6	2.5	2.5	3.1	3.9	3.5	2.7	2.9	2.8
65-69	1.8	2.0	1.9	3.0	3.5	3.3	2.1	2.4	2.3
70-74	1.3	1.6	1.4	2.8	2.8	2.8	1.7	1.9	1.8
75-79	1.1	1.2	1.2	2.4	2.1	2.3	1.5	1.5	1.5
80 +	0.8	1.2	1.0	1.3	2.2	1.8	0.9	1.4	1.2
Don't know/missing	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	14,402	14,874	29,276	5,202	5,576	10,778	19,604	20,450	40,054

Figure 2.1. Population Pyramid



The population pyramid based on the total *de facto* household population in the interviewed households of the TDHS-2008 (Figure 2.1) provides valuable information about the current age and sex composition of Turkey's population as well as changes in the age and sex composition over time. The population pyramid shows the effects of the transition from a high fertility and high mortality regime to a declining fertility and mortality regime within Turkey. The recent rapid fertility decline is reflected in the constricted base of the pyramid, with the population age 0-4 years smaller than the 5-14 age groups which are numerically the largest cohorts. At age 20-24, the sex ratio and the relative size of the male age group are low compared with the adjacent age cohorts This may be explained by the fact that a greater proportion of males are in the military service in this age group than in the other cohorts and, accordingly, were not present on the night before the interview in the selected household and, thus, not accounted as "*de facto*" household members.

According to the survey results, 27 percent of the population in Turkey is below age 15 (Table 2.2.1). The proportion of elderly (aged 65 and over) accounts for 7 percent of the total population, the highest level in the history of Turkey. This trend is the result of the convergence of three demographic changes experienced recently in Turkey: rapidly declining fertility which has reduced the numbers in the youngest age groups, increasing life expectancy at all ages, and the growth in size of the cohorts reaching age 65 years of age, due to high fertility in earlier decades.

Looking at urban-rural differences, the proportion under age 15 is greater in the rural population than in the urban population (30 and 27 percent, respectively). Similarly, the rural population has a greater proportion elderly than the urban population (10 percent and 6 percent, respectively). Another important urban-rural difference is that the proportion in the working ages, namely those aged 15-64 years, is significantly higher in the urban population than the rural population. This finding may reflect the effects of rural-to-urban migration of the economically active population.

Table 2.2.1 Age distribution of household population

Percent distribution of household population by age group and residence, Turkey 2008

Age Group	Urban	Rural	Total
0-14	26.6	29.5	27.4
15-64	67.9	60.4	65.8
65+	5.5	10.1	6.8
Total	100.0	100.0	100.0
Number	29,276	10,778	40,054

Table 2.2.2 compares the distribution of the household population by broad age groups for the last four demographic surveys, the last two censuses carried out in 1990 and 2000 and population information derived from address based population registration system for the year 2008. The table reveals that the share of population under age 15 decreased from 35 percent to 27 percent and the share of elderly population increased from 4 percent to 7 percent between 1990 and 2008. The dependency ratio, defined as the ratio of the non-productive population (persons under age 15 and age 65 and over) to the population age 15-64, is calculated based on these figures. The dependency ratio, which was around 65 percent at the time of the 1990 Population Census, had declined to 52 percent at the time of the TDHS-2008. The decline reflects a significant decrease in the burden placed on persons in the productive ages to support older and younger household members. In line with this finding the median age of household population increased 4.3 years from 22.2 years in 1990 to 26.5 years in 2008. Both changes in dependency ratio and in the median age of population are consistent with the gradual aging of the population that occurs as fertility declines.

Table 2.2.2 Population by age from selected sources

Percent distribution of the population by age group, selected sources, Turkey 1990-2008

Age group	PC 1990	TDHS 1993	TDHS 1998	PC 2000	TDHS 2003	ABPRS 2008	TDHS 2008
Less than 15	35.0	33.0	31.5	29.8	29.1	26.3	27.4
15-64	60.7	61.4	62.6	64.5	64.0	66.9	65.8
65 and +	4.3	5.5	5.9	5.7	6.9	6.8	6.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Median age	22.2	23.1	24.3	24.8	24.7	26.3	26.5
Dependency ratio	64.7	62.7	59.7	55.1	56.3	49.5	51.9

Sources: 1990 and 2000 Population Census (PC), TDHS-1993, TDHS-1998, TDHS-2003, TDHS-2008 and Adress Based Population Registration System (ABPRS)

2.1.2 Household Composition

Table 2.3 presents the distribution of households in the TDHS-2008 sample by sex of the head of the household and by the number of household members. These characteristics are important because they are often associated with socioeconomic differences between households. Unlike previous tables in this chapter, it should be noted that Table 2.3 is based on *de jure* members, i.e., usual residents.

The household composition usually affects the allocation of financial and other resources available to household members. In cases where women are heads of households, it is usually found that financial resources are more limited compared with male-headed households. Similarly, the size of the household affects the overall well being of its members. Household size is also associated with crowding in the dwelling, which can lead to unfavorable health conditions. As expected, given the cultural patterns in Turkey, male-headed households are predominant in the TDHS-2008 sample; 87 percent of households are headed by a male and the remaining 13 percent of households are headed by female. The

proportion of female-headed households is about the same level in rural (13 percent) and urban areas (12 percent). There are on average 3.9 persons per household. Slightly less than half of the households have three or fewer members, one quarter have four members, and 29 percent has five or more members. There are marked differences in size between urban and rural households. In urban areas, 27 percent of households have five or more members compared with 37 percent in rural areas. The mean household size is 3.8 persons in the urban areas and 4.2 persons in the rural areas.

Table 2.3 Household composition

Percent distribution of households by sex of head of household and by household size and mean size of household according to residence, Turkey 2008

Characteristic	Urban	Rural	Total
Sex of head of household			
Male	87.0	87.6	87.2
Female	13.0	12.4	12.8
Total	100.0	100.0	100.0
Number of usual members			
0	0.2	0.6	0.3
1	6.0	7.6	6.4
2	16.8	20.8	17.8
3	23.1	15.6	21.2
4	27.3	18.7	25.1
5	13.4	12.8	13.2
6	6.6	8.5	7.1
7	3.1	6.0	3.8
8	1.4	2.8	1.8
9+	2.1	6.6	3.2
Total	100.0	100.0	100.0
Number of households	7,866	2,659	10,525
Mean size of households	3.8	4.2	3.9

Note: The table is based on *de jure* members, i.e., usual residents.

2.2 Fosterhood and Orphanhood

Foster children are children under 18 years of age who are not living with either of their biological parents. Orphaned children are children under 18 years of age who have lost one or both of their biological parents. To measure the prevalence of child fostering and orphanhood, four questions were asked in the Household Questionnaire on the survival and residence of the parents of children under 18 years of age. Table 2.4. presents detailed information relevant to children's living arrangements and orphanhood for children under 18 years of age.

Table 2.4 Children's living arrangements and orphanhood

Percent distribution of *de jure* children under age 18 by living arrangements and survival status of parents, the percentage of children not living with a biological parent, and the percentage of children with one or both parents dead, according to background characteristics, Turkey 2008

Background characteristic	Living with both parents	Living with mother but not with father		Living with father but not with mother		Not living with either parent				Missing	Total	Percentage not living with a biological parent	Percentage with one or both parents dead	Number of children
		Father alive	Father dead	Mother alive	Mother dead	Both alive	Only father alive	Only mother alive	Both dead					
Age														
<2	98.0	1.3	0.1	0.1	0.0	0.3	0.0	0.0	0.0	0.2	100.0	0.3	0.1	1,401
2-4	96.8	1.7	0.4	0.5	0.0	0.5	0.0	0.0	0.0	0.0	100.0	0.5	0.5	2,001
5-9	94.4	2.6	0.8	0.8	0.2	0.9	0.0	0.1	0.0	0.1	100.0	1.1	1.2	3,768
10-14	91.3	3.1	2.1	0.9	0.9	1.4	0.0	0.1	0.0	0.1	100.0	1.5	3.1	3,798
15-17	86.2	2.2	3.7	0.6	1.0	5.4	0.1	0.5	0.1	0.2	100.0	6.1	5.4	2,352
Sex														
Male	93.0	2.5	1.6	0.8	0.5	1.4	0.1	0.1	0.0	0.1	100.0	1.5	2.3	6,806
Female	92.7	2.3	1.4	0.6	0.5	2.1	0.0	0.2	0.0	0.1	100.0	2.4	2.2	6,515
Residence														
Urban	92.6	2.7	1.5	0.8	0.4	1.7	0.1	0.1	0.0	0.1	100.0	1.9	2.1	9,461
Rural	93.3	1.6	1.6	0.5	0.9	1.8	0.0	0.1	0.0	0.1	100.0	2.0	2.7	3,860
Region														
West	92.7	2.6	1.4	0.7	0.2	2.1	0.0	0.1	0.0	0.2	100.0	2.2	1.7	4,744
South	93.7	2.0	2.0	0.5	0.4	1.1	0.0	0.1	0.0	0.1	100.0	1.3	2.6	1,696
Central	91.6	3.6	0.9	1.2	0.4	2.2	0.0	0.1	0.0	0.0	100.0	2.3	1.4	2,640
North	93.4	2.6	0.8	0.6	0.8	1.4	0.1	0.2	0.0	0.0	100.0	1.8	1.9	764
East	93.4	1.3	2.2	0.3	0.9	1.2	0.1	0.3	0.1	0.1	100.0	1.7	3.6	3,477
Region (NUTS 1)														
İstanbul	93.0	2.5	1.5	0.9	0.1	1.4	0.0	0.1	0.0	0.5	100.0	1.5	1.8	2,268
West Marmara	90.0	4.4	2.0	0.2	0.3	3.1	0.0	0.0	0.0	0.0	100.0	3.1	2.3	396
Aegean	92.0	2.3	1.3	1.0	0.6	2.6	0.0	0.0	0.1	0.0	100.0	2.7	2.0	1,606
East Marmara	93.2	2.5	0.5	1.0	0.0	2.9	0.0	0.0	0.0	0.0	100.0	2.9	0.5	1,058
West Anatolia	92.3	5.2	0.2	0.7	0.3	1.4	0.0	0.0	0.0	0.0	100.0	1.4	0.5	1,140
Mediterranean	93.7	2.0	2.0	0.5	0.4	1.1	0.0	0.1	0.0	0.1	100.0	1.3	2.6	1,696
Central Anatolia	91.2	3.1	1.4	1.1	0.4	2.3	0.1	0.4	0.0	0.0	100.0	2.7	2.3	664
West Black Sea	93.0	1.8	1.8	0.9	0.5	2.0	0.0	0.0	0.0	0.0	100.0	2.0	2.3	706
East Black Sea	91.5	3.0	0.8	0.4	1.4	1.8	0.2	0.6	0.1	0.1	100.0	2.7	3.2	318
Northeast Anatolia	94.9	1.2	1.3	0.4	0.4	1.3	0.1	0.1	0.3	0.0	100.0	1.8	2.1	533
Central East Anatolia	92.7	1.6	2.4	0.0	1.2	1.1	0.0	0.8	0.0	0.2	100.0	1.9	4.4	959
Southeast Anatolia	93.3	1.3	2.3	0.4	1.0	1.3	0.2	0.1	0.0	0.1	100.0	1.5	3.6	1,977
Wealth quintile														
Lowest	91.9	1.8	2.4	0.8	0.7	1.8	0.0	0.2	0.1	0.4	100.0	2.0	3.3	3,341
Second	93.2	1.9	1.5	0.7	0.6	1.9	0.0	0.2	0.0	0.0	100.0	2.1	2.3	2,969
Middle	92.4	2.4	1.1	0.6	0.6	2.4	0.1	0.3	0.0	0.0	100.0	2.8	2.1	2,533
Fourth	93.1	2.7	1.4	1.0	0.2	1.5	0.1	0.1	0.1	0.0	100.0	1.7	1.8	2,286
Highest	93.9	3.8	0.9	0.1	0.4	0.8	0.0	0.0	0.0	0.2	100.0	0.8	1.3	2,191
Total <15	94.2	2.5	1.1	0.7	0.4	0.9	0.0	0.1	0.0	0.1	100.0	1.0	1.6	10,969
Total <18	92.8	2.4	1.5	0.7	0.5	1.7	0.0	0.1	0.0	0.1	100.0	1.9	2.3	13,321

In Turkey, the majority of children under age 18 (93 percent) live with both parents. Differences in children's living arrangement by background characteristics are quite small, except for age. As expected, the proportion of children living with both parents decreases with increasing age.

Five percent of children live with only one parent, 4 percent with their mothers and 1 percent with their fathers. Three percent of children live with only one parent because the other parent is dead. Foster children – children not living with either parent – account for only 2 percent of children under 18, and orphaned children–children who have lost one or both parents–account for 2 percent.

2.3 Education of the Household Population

Educational attainment is an important characteristic of household members. Many phenomena such as reproductive behavior, use of contraception and the health of children are affected by the education of household members. Primary education in Turkey starts at age 6 and continues for 8 years. The eight years of primary education (5 years for primary level; 3 years for secondary level) are considered as basic education and have been compulsory since 1997. High school, which includes additional four years of schooling, is not compulsory in Turkey. Results from household interviews can be used to look at both educational attainment among household members and school attendance among children and young adults.

2.3.1 Educational Attainment of Household Members

Tables 2.5.1 and 2.5.2 show the distribution of the *de facto* male and female household population age six and over by the highest level of education attended, according to background characteristics. The results reveal that gender differentials in educational attainment still continue. Overall, females are less educated than males. Thirty-three percent of females in TDHS-2008 households have no education or have not completed at least the first primary level, compared to 20 percent of males. One-fourth of males and about one-fifth of females have high school and higher education. The median number of years of schooling for men is 5.1 years, which is 0.6 year higher than the median for women (4.5 years). An examination of the changes in educational attainment by successive age groups indicates that there has been a marked improvement in the educational attainment of both men and women. For example, the median number of years of schooling among males age 20-24 years (10.4 years) is double that among the 40-44 age group (5.0 years). Although not quite as large, a similar differential is noticeable among females. Although the differentials in educational attainment between males and females still persists, the gap has also narrowed among younger cohorts. As expected, urban residents are both more likely to have attended school and to have remained in school for a longer period than rural residents. However, gender differences in educational attainment are more visible in urban than in rural areas. The median number of years of schooling is 6.6 years among urban men, almost two years higher than the median among urban women (4.7 years). The difference is much smaller in rural areas, where the median years of schooling are 4.6 and 4.1, respectively for men and women.

Table 2.5.1 Educational attainment of household population: Males

Percent distribution of the *de facto* male household populations age six and over by highest level of schooling attended or completed and number of years of schooling, according to background characteristics, Turkey 2008

Background characteristic	No education/ Primary incomplete	First level primary[1]	Second level primary[2]	High school and higher[3]	Missing	Total	Number	Median number of years
Age								
6-9	99.3	0.1	0.0	0.0	0.6	100.	1,615	0.7
10-14	31.1	54.7	14.0	0.1	0.1	100.	1,899	5.0
15-19	3.5	7.6	68.4	20.4	0.1	100.	1,773	8.7
20-24	3.9	16.4	20.3	59.2	0.2	100.	1,471	10.4
25-29	4.0	32.0	15.7	47.8	0.5	100.	1,691	8.8
30-34	2.5	41.4	12.3	43.7	0.1	100.	1,481	7.7
35-39	4.4	51.1	13.2	30.8	0.5	100.	1,407	5.0
40-44	5.4	51.6	14.4	28.3	0.3	100.	1,279	5.0
45-49	5.8	54.5	10.0	29.1	0.6	100.	1,189	4.9
50-54	7.6	52.6	10.3	28.8	0.7	100.	1,061	4.9
55-59	13.5	58.3	7.5	20.2	0.5	100.	853	4.7
60-64	21.4	51.2	9.6	17.5	0.3	100.	529	4.6
65+	43.8	39.6	4.8	10.7	1.1	100.	1,226	4.1
Residence								
Urban	17.6	33.5	17.8	30.6	0.4	100.	12,892	6.6
Rural	26.1	45.5	15.3	12.7	0.5	100.	4,598	4.6
Region								
West	15.8	37.7	16.9	29.3	0.3	100.	7,452	5.8
South	20.9	39.9	17.5	21.2	0.4	100.	2,109	4.9
Central	16.7	35.1	17.5	30.3	0.4	100.	3,669	6.3
North	20.0	38.4	15.9	25.2	0.5	100.	1,145	4.9
East	32.4	33.1	17.5	16.1	0.9	100.	3,116	4.7
Region (NUTS 1)								
İstanbul	16.0	35.9	16.4	31.5	0.3	100.	3,530	6.4
West Marmara	15.5	43.6	16.2	24.5	0.2	100.	768	4.9
Aegean	16.7	40.5	16.6	26.0	0.2	100.	2,392	5.0
East Marmara	14.3	35.4	19.0	30.9	0.5	100.	1,637	7.0
West Anatolia	14.0	32.0	16.9	36.8	0.3	100.	1,590	7.4
Mediterranean	20.9	39.9	17.5	21.2	0.4	100.	2,109	4.9
Central Anatolia	19.4	39.0	16.7	24.7	0.3	100.	852	5.0
West Black Sea	21.4	38.0	18.0	22.0	0.7	100.	1,036	4.9
East Black Sea	20.7	35.2	15.6	27.9	0.5	100.	474	5.0
Northeast Anatolia	30.5	31.4	16.6	20.8	0.6	100.	523	4.8
Central East	32.3	32.5	17.0	17.6	0.6	100.	850	4.7
Southeast Anatolia	32.9	33.7	18.1	14.1	1.2	100.	1,729	4.6
Wealth quintile								
Lowest	35.0	45.1	13.8	5.5	0.7	100.	3,275	4.4
Second	24.6	45.3	17.4	12.2	0.5	100.	3,405	4.7
Middle	16.9	40.7	20.0	21.7	0.7	100.	3,502	5.0
Fourth	13.1	34.8	18.5	33.3	0.3	100.	3,617	7.2
Highest	11.3	19.3	15.7	53.6	0.1	100.	3,692	10.2
Total	19.8	36.7	17.1	25.9	0.5	100.	17,491	5.1

[1]Completed 5 years at the first level primary [2]Completed 3 years at the second level primary [3]Completed at least 3 years at the high school

Table 2.5.2 Educational attainment of household population:Females

Percent distribution of the *de facto* female household populations age six and over by highest level of schooling attended or completed and median number of years of schooling, according to background characteristics, Turkey 2008

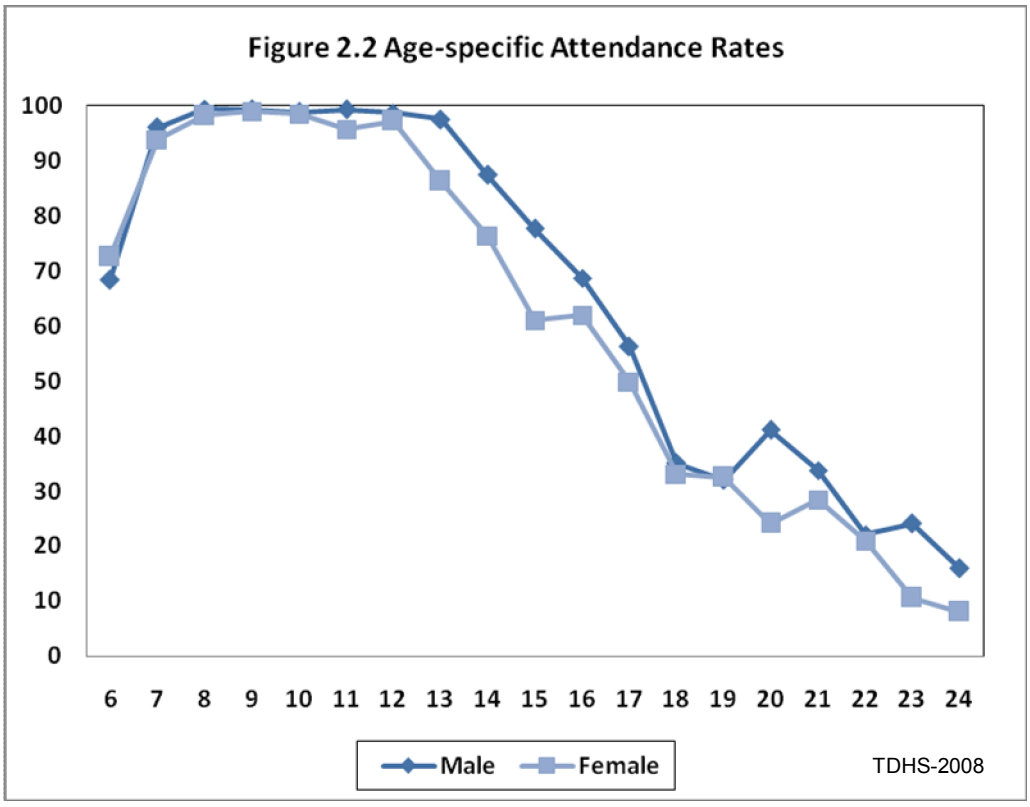
Background characteristic	No education/ Primary incomplete	First level primary[1]	Second level primary[2]	High school and higher[3]	Missing	Total	Number	Median number of years
Age								
6-9	99.5	0.1	0.0	0.0	0.4	100.0	1,504	0.8
10-14	29.0	55.3	15.1	0.4	0.2	100.0	1,847	5.1
15-19	8.7	10.5	59.7	21.1	0.0	100.0	1,877	8.3
20-24	13.7	28.7	15.2	42.4	0.0	100.0	1,806	7.6
25-29	12.7	43.9	8.0	35.3	0.2	100.0	1,800	4.9
30-34	11.8	49.1	6.5	32.4	0.2	100.0	1,626	4.8
35-39	19.8	55.7	5.8	18.5	0.2	100.0	1,448	4.6
40-44	23.3	51.9	5.4	18.8	0.5	100.0	1,304	4.5
45-49	28.0	50.7	4.7	16.3	0.3	100.0	1,178	4.4
50-54	38.3	43.3	5.7	12.2	0.6	100.0	1,178	4.3
55-59	52.8	33.7	4.2	9.2	0.1	100.0	821	2.7
60-64	62.5	27.0	1.9	8.6	0.0	100.0	587	0.0
65+	76.4	16.9	2.4	3.4	0.9	100.0	1,480	0.0
Residence								
Urban	28.1	35.2	13.7	22.7	0.3	100.0	13,476	4.7
Rural	47.6	37.4	8.8	5.9	0.3	100.0	4,992	4.1
Region								
West	25.3	38.7	12.9	22.7	0.4	100.0	7,643	4.7
South	35.6	35.7	13.8	14.6	0.2	100.0	2,286	4.5
Central	26.8	39.0	12.6	21.3	0.3	100.0	3,968	4.7
North	38.1	34.6	11.4	15.6	0.2	100.0	1,272	4.4
East	56.6	25.7	10.0	7.5	0.3	100.0	3,299	2.6
Region (NUTS 1)								
İstanbul	23.6	35.0	14.9	25.7	0.7	100.0	3,520	4.9
West Marmara	25.2	47.2	11.8	15.6	0.2	100.0	801	4.6
Aegean	28.6	41.1	10.5	19.7	0.1	100.0	2,592	4.6
East Marmara	25.6	42.3	11.0	21.0	0.1	100.0	1,669	4.7
West Anatolia	19.6	37.2	13.7	29.3	0.3	100.0	1,729	4.9
Mediterranean	35.6	35.7	13.8	14.6	0.2	100.0	2,286	4.5
Central Anatolia	35.0	37.8	13.4	13.8	0.1	100.0	914	4.5
West Black Sea	35.7	36.6	11.9	15.3	0.4	100.0	1,164	4.4
East Black Sea	42.7	30.3	12.4	14.5	0.1	100.0	515	4.3
Northeast Anatolia	51.8	25.7	11.5	10.8	0.2	100.0	541	3.5
Central East	58.6	23.2	10.3	7.7	0.2	100.0	921	2.1
Southeast Anatolia	57.0	26.7	9.4	6.4	0.4	100.0	1,814	2.6
Wealth quintile								
Lowest	59.7	30.4	8.0	1.6	0.3	100.0	3,544	2.0
Second	44.6	38.7	11.5	4.8	0.4	100.0	3,660	4.2
Middle	30.4	43.6	13.7	11.9	0.3	100.0	3,691	4.5
Fourth	21.2	39.6	15.3	23.7	0.2	100.0	3,796	4.8
Highest	13.0	26.4	12.9	47.2	0.4	100.0	3,776	9.1
Total	33.4	35.8	12.3	18.2	0.3	100.0	18,468	4.5

[1]Completed 5 years at the first level primary [2]Completed 3 years at the second level primary [3]Completed at least 3 years at the high school

The East is the most disadvantaged region with respect to educational attainment. Gender differences in the likelihood of attending school are greatest in the East and Central, and smallest in the South and North. In the East, the difference between median numbers of years for males and females is 2.1 years, while in the South the gap is 0.4 years. Among NUTS-1 regions Southeast Anatolia and Central East Anatolia stand out as having the lowest educational attainment. Educational attainment is strongly associated with wealth status of the household. In the lowest wealth quintile, for example, 35 percent of men and 60 percent of women have no education or have not completed first level primary, and just 6 percent of men and 2 percent of women have high school and higher education. In the highest wealth quintile, around half of both women and men have a high school or higher education and only 11 percent of men and 13 percent of women have not attended school or have completed less than the first primary level. The median number of years of schooling in the highest wealth quintile is more than twice that of lowest quintile for males and more than four times that in the lowest quintile for females.

2.3.2 School Attendance Ratios

The TDHS-2008 collected information on current school attendance for the population age 6-24 years. The age-specific attendance rates for the population in this age range by sex are shown in Figure 2.2.



The comparatively low age-specific attendance rate for children age 6 reflects that some of these children turned six after the start of the school year and thus were not eligible to attend school in that year. Overall, the majority of children of both sexes age 15 and under were attending school. However, school attendance rates are generally higher among boys than among girls. The gender gap in school attendance increases somewhat with age, particularly among the post-first level primary ages (i.e., 13 and over).

Data on net attendance ratios (NAR) and gross attendance ratios (GAR) by residence, region and wealth quintiles according to sex and school level are shown in Table 2.6.1 and Table 2.6.2. The NAR for primary school is the percentage of the primary school-age (6-13 years) population that is attending primary school. The NAR for high school is the percentage of the high school age (14-16 years) population that is attending high school. By definition, the NAR cannot exceed 100 percent. The GAR for primary school is the total number of primary school students of any age, expressed as the percentage of the official primary school age population (6-13 years). The GAR for high school is the total number of high school students up to age 24, expressed as the percentage of the official high school age population (14-16 years). If there are significant numbers of over-age and under-age students at a given level of schooling, the GAR can exceed 100 percent.The GAR is generally higher than the NAR for the same level because the GAR includes participation by those who may be older or younger than the official age range for that level. Children are considered to be attending school currently if they were in school at any point during the current school year.

Tables 2.6.1 and Table 2.6.2 show that, among children 6 to 13 years, 93 percent attended primary school, and 61 percent of children age 14 to 16 years attended high school. For primary education, males and females were almost equally likely to be in school because primary school is compulsory; nine in ten males and females were enrolled in school. For high school, males were more likely to be in school (65 percent for males and 57 percent for females). At the primary school level, the NAR and the GAR do not differ much by urban-rural residence, with attendance in the urban areas is only slightly higher than rural areas. At the high school level, the urban NAR is 68 percent compared to 41 in rural areas and the urban GAR is 102 compared to 57 in the rural areas. The disparity in educational attainment between the East and other regions is significant both at the primary and particularly at the high school level. NUTS 1 regional disparities are also especially pronounced than at the high school level: the NAR, for example, ranges from a low of 41 percent in Northeast Anatolia, to a high of 73 percent in West Anatolia. Although attendance is higher among wealthy households at both primary and high school levels, wealth has a greater impact on attendance at the high school level. The high school NAR is only 28 percent in the lowest wealth quintile compared with 88 percent in the highest wealth quintile.

The Gender Parity Index (GPI), which represents the ratio of the NAR (GAR) for females to the NAR (GAR) for males is also presented at both the primary and high school levels in Tables 2.6.1 and 2.6.2. The GPI indicates the magnitude of the gender gap in attendance. If there is no gender difference, the GPI will be equal to one, whereas the wider the disparity in favor of males, the closer the GPI will be to 0. If the gender gap favors females, the GPI will exceed one. The GPI for primary and high school are 0.98 and 0.83, respectively. These values were 0.92 and 0.78 in TDHS-2003. Thus, although a gender gap

still persists, the situation has improved during between the TDHS-2003 and TDHS-2008. Urban-rural differentials in the GPI are small at the primary school level; however, there are marked differences at the high school level. As expected, there are significant regional differentials; girls residing in the eastern part of Turkey are particularly disadvantaged. Looking at wealth status of the households, the gender gap for high school is the widest (0.58) in the lowest wealth quintile and lowest in the fourth and highest wealth quintiles (0.92).

Table 2.6.1 School attendance ratios: Primary School

Net attendance ratios (NAR) and gross attendance ratios (GAR) for the *de facto* household population by sex and level of schooling; and the gender parity index (GPI), according to background characteristics, Turkey 2008

	Net attendance ratio				Gross attendance ratio			
Background characteristic	Male	Female	Total	Gender Parity Index	Male	Female	Total	Gender Parity Index
Residence								
Urban	94.2	92.8	93.5	0.98	98.2	96.6	97.5	0.98
Rural	91.8	89.8	90.8	0.98	97.7	93.3	95.4	0.95
Region								
West	95.2	93.8	94.5	0.98	98.3	96.7	97.5	0.98
South	93.4	93.3	93.4	1.00	99.7	97.1	98.5	0.97
Central	96.0	94.6	95.3	0.99	98.8	97.9	98.3	0.99
North	96.5	97.2	96.9	1.01	98.3	100.6	99.5	1.02
East	88.9	85.2	87.1	0.96	96.4	90.4	93.5	0.94
Region (NUTS 1)								
İstanbul	94.6	91.0	93.0	0.96	96.8	93.8	95.5	0.97
West Marmara	94.7	98.0	96.4	1.03	101.2	99.3	100.3	0.98
Aegean	95.9	94.8	95.3	0.99	97.9	97.4	97.7	0.99
East Marmara	97.1	97.0	97.0	1.00	100.4	102.6	101.5	1.02
West Anatolia	94.9	95.5	95.2	1.01	99.0	97.5	98.2	0.98
Mediterranean	93.4	93.3	93.4	1.00	99.7	97.1	98.5	0.97
Central Anatolia	96.5	95.6	96.1	0.99	99.3	98.6	99.0	0.99
West Black Sea	96.4	94.0	95.2	0.98	99.1	97.9	98.5	0.99
East Black Sea	97.0	95.8	96.4	0.99	97.9	100.4	99.2	1.03
Northeast Anatolia	89.0	85.2	87.1	0.96	97.5	90.1	93.9	0.92
Central East Anatolia	87.4	82.6	85.1	0.95	93.3	87.1	90.3	0.93
Southeast Anatolia	89.6	86.4	88.1	0.96	97.5	92.1	95.0	0.94
Wealth quintile								
Lowest	89.0	84.2	86.6	0.94	97.0	88.8	92.9	0.91
Second	92.8	92.9	92.8	1.00	97.7	96.6	97.2	0.98
Middle	94.7	95.2	95.0	1.02	98.4	98.4	98.4	1.00
Fourth	96.8	94.3	95.7	0.97	98.5	98.3	98.4	1.00
Highest	96.3	96.7	96.5	1.01	99.2	99.3	99.2	1.00
Total	93.5	91.9	92.7	0.98	98.1	95.6	96.9	0.98

Table 2.6.2 School attendance ratios: High School

Net attendance ratios (NAR) and gross attendance ratios (GAR) for the *de facto* household population by sex and level of schooling; and the gender parity index (GPI), according to background characteristics, Turkey 2008

Background characteristic	Net attendance ratio				Gross attendance ratio			
	Male	Female	Total	Gender Parity Index	Male	Female	Total	Gender Parity Index
Residence								
Urban	70.9	65.7	68.1	0.93	108.3	95.4	101.6	0.88
Rural	49.9	32.2	41.1	0.65	72.1	40.9	56.5	0.57
Region								
West	71.5	67.2	69.3	0.94	107.4	96.5	101.8	0.90
South	58.4	61.7	60.2	1.06	87.3	81.7	84.2	0.94
Central	74.5	57.6	65.9	0.77	113.4	84.2	98.5	0.74
North	74.5	69.9	71.9	0.94	106.5	92.2	98.6	0.87
East	51.4	35.4	43.5	0.69	79.6	53.9	67.0	0.68
Region (NUTS 1)								
İstanbul	74.5	64.6	69.0	0.87	117.5	94.8	104.8	0.81
West Marmara	76.4	64.3	70.9	0.84	101.5	90.8	96.6	0.89
Aegean	68.9	65.0	67.0	0.94	108.8	93.7	101.5	0.86
East Marmara	72.9	64.9	69.5	0.89	97.4	87.0	92.9	0.89
West Anatolia	74.0	71.2	72.6	0.96	107.7	106.0	106.8	0.98
Mediterranean	58.4	61.7	60.2	1.06	87.3	81.7	84.2	0.94
Central Anatolia	68.8	56.4	61.4	0.82	105.1	79.5	89.8	0.76
West Black Sea	70.7	63.7	66.9	0.90	108.6	87.0	96.7	0.80
East Black Sea	78.2	61.5	68.0	0.79	125.7	83.6	99.9	0.66
Northeast Anatolia	43.6	38.4	41.2	0.88	62.5	68.7	65.4	1.10
Central East Anatolia	51.4	35.9	43.2	0.70	87.5	51.7	68.4	0.59
Southeast Anatolia	53.5	34.3	44.4	0.64	81.2	51.0	66.8	0.63
Wealth quintile								
Lowest	33.0	22.1	27.5	0.67	54.8	31.8	43.2	058
Second	58.6	43.6	51.2	0.75	87.9	68.1	78.1	0.77
Middle	71.5	60.9	65.8	0.85	104.6	87.3	95.2	0.83
Fourth	88.5	80.4	84.0	0.90	130.1	112.7	120.5	0.86
Highest	86.3	88.7	87.5	1.03	131.7	121.1	126.5	0.92
Total	65.2	57.1	61.0	0.88	98.5	81.5	89.7	0.83

2.3.3 Repetition and Dropout Rates

Repetition and dropout rates describe the flow of students through the school system. The repetition rate is the percentage of students in a given grade of the previous school year who are repeating that grade in the current school year. The dropout rate is the percentage of students who were enrolled in school in the previous school year but were not attending school during the current school year. By asking about the grade children attended during the previous school year, it is possible to calculate dropout rates and repetition rates. Repetition and dropout rates approach zero where students almost always progress to the next grade at the end of the school year. Repetition and dropout rates often vary across grades, indicating points in the school system where students are not regularly promoted to the next grade or decide to drop out of school.

Table 2.7.1 Grade repetition rates

Repetition rates for the *de facto* household population age 6-24 who attended primary school in the previous school year by school grade, according to background characteristics, Turkey 2008

	School grade							
Background characteristic	1	2	3	4	5	6	7	8
Sex								
Male	2.2	1.2	1.3	1.2	0.9	0.1	0.3	0.1
Female	1.5	0.7	0.2	0.7	0.0	0.0	0.7	0.0
Residence								
Urban	1.8	1.0	0.9	1.0	0.5	0.1	0.6	0.0
Rural	2.2	1.0	0.5	0.8	0.4	0.0	0.2	0.0
Region								
West	2.7	0.6	0.9	1.1	0.9	0.0	1.0	0.0
South	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
Central	1.5	0.3	0.4	0.0	0.0	0.0	0.0	0.0
North	3.1	0.0	0.0	0.0	2.4	0.0	0.0	0.0
East	1.4	2.5	1.6	2.2	0.0	0.1	0.6	0.2
Region (NUTS 1)								
İstanbul	4.1	0.0	1.8	2.5	0.0	0.0	2.2	0.0
West Marmara	2.1	5.8	0.0	0.0	0.0	0.0	0.0	0.0
Aegean	0.0	0.0	0.0	0.0	2.9	0.0	0.0	0.0
East Marmara	1.7	2.1	0.0	0.0	0.0	0.0	0.0	0.0
West Anatolia	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.0
Mediterranean	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0
Central Anatolia	3.9	0.0	1.4	0.0	0.0	0.0	0.0	0.0
West Black Sea	3.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
East Black Sea	4.6	0.0	0.0	0.0	4.8	0.0	0.0	0.0
Northeast Anatolia	0.7	1.5	0.0	1.0	0.0	0.9	2.0	1.0
Central East Anatolia	1.8	3.8	1.9	3.8	0.0	0.0	0.0	0.0
Southeast Anatolia	1.3	1.2	1.8	1.7	0.0	0.0	0.5	0.0
Wealth quintile								
Lowest	4.8	0.8	0.5	0.9	1.8	0.0	0.3	0.0
Second	0.4	2.2	2.0	0.8	0.0	0.2	0.3	0.2
Middle	1.2	1.1	0.0	0.4	0.0	0.0	1.7	0.0
Fourth	0.5	0.0	0.5	2.9	0.0	0.0	0.0	0.0
Highest	1.8	0.5	0.6	0.0	0.0	0.0	0.0	0.0
Total	1.9	1.0	0.8	1.0	0.5	0.0	0.5	0.0

Note: The repetition rate is the percentage of students in a given grade in the previous school year who are repeating that grade in the current school year.

Although an automatic promotion policy does not operate officially in Turkey, very few primary school students repeat grades. Table 2.7.1 indicates that apart from first grade, when 2 percent repeated, the rates for grades 2 to 8 are all less than 1 percent.

Table 2.7.2 Grade dropout rates

Dropout rates for the *de facto* household population age 6-24 who attended primary school in the previous school year by school grade, according to background characteristics, Turkey 2008

	School grade							
Background characteristic	1	2	3	4	5	6	7	8
Sex								
Male	0.2	0.0	0.9	0.2	1.1	1.7	1.2	17.3
Female	0.1	0.7	1.1	1.1	1.9	1.5	1.5	26.9
Residence								
Urban	0.1	0.5	1.1	0.2	0.6	1.6	1.0	17.3
Rural	0.3	0.0	0.6	1.5	3.6	1.5	2.1	35.1
Region								
West	0.0	1.0	1.8	0.0	0.0	2.0	0.3	19.8
South	0.0	0.0	0.6	0.0	1.7	1.3	2.3	21.4
Central	0.0	0.0	0.5	0.0	0.0	0.0	0.0	22.5
North	0.0	0.0	0.0	0.0	0.0	0.0	4.8	10.9
East	0.6	0.0	0.7	2.2	4.9	2.6	2.8	27.4
Region (NUTS 1)								
İstanbul	0.0	2.5	3.6	0.0	0.0	4.1	0.0	20.3
West Marmara	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.5
Aegean	0.0	0.0	0.0	0.0	0.0	0.0	0.0	26.6
East Marmara	0.0	0.0	0.0	0.0	0.0	0.0	1.4	14.6
West Anatolia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.0
Mediterranean	0.0	0.0	0.6	0.0	1.7	1.3	2.3	21.4
Central Anatolia	0.0	0.0	1.9	0.0	0.0	0.0	0.0	26.1
West Black Sea	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.0
East Black Sea	0.0	0.0	0.0	0.0	0.0	0.0	10.6	6.0
Northeast Anatolia	0.7	0.0	0.0	3.9	0.9	0.9	2.0	26.9
Central East Anatolia	1.8	0.0	1.1	2.1	9.3	3.7	1.7	31.2
Southeast Anatolia	0.0	0.0	0.7	1.9	3.9	2.6	3.4	25.9
Wealth quintile								
Lowest	0.4	1.3	1.0	2.3	4.4	5.9	3.4	43.4
Second	0.0	0.0	2.7	0.3	1.4	1.2	1.9	30.0
Middle	0.3	0.0	0.7	0.0	0.3	0.0	0.0	20.4
Fourth	0.0	0.0	0.0	0.0	0.0	0.0	1.0	10.8
Highest	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9
Total	0.2	0.3	1.0	0.6	1.5	1.6	1.3	21.7

Note: The dropout rate is the percentage of students in a given grade in the previous year who are not attending school in the current school year.

As Table 2.7.2 indicates, in general, dropout rates increase only modestly with grade level through grade 7. However, the rate increases to 22 percent for grade 8. The high dropout rate at grade 8 reflects the fact that many of the students who complete the 8-year compulsory primary school are unable for various reasons to move to the next educational level (i.e., high school). In general, dropout rates are higher in rural than urban areas. For example, the rates of rural children at grade 8 is double that of urban children (35 percent and 17 percent

respectively). Regional differentials in the dropout rate are also noteworthy. At grade 8, East Black Sea has the lowest dropout rate (6 percent) and Central East Anatolia has the highest rate (31 percent). Dropout rates are negatively associated with wealth; students in the lowest wealth quintile have the highest dropout rates.

2.4 Housing Characteristics

The physical characteristics and availability and accessibility of basic household facilities are important in assessing the general welfare and socioeconomic condition of the population. The TDHS-2008 gathered information on housing characteristics such as sources of drinking water and time to the nearest water source, type of toilet facilities, main material of the floor, and the number of sleeping rooms in the house. These characteristics are highly correlated with health and are also indicative of socioeconomic status. Tables 2.8-2.10 present this information by urban–rural residence.

2.4.1 Drinking Water

Increasing the proportion of people with sustainable access to improved drinking water is one of the Millennium Development Goals that Turkey, along with other nations worldwide has adopted (United Nations General Assembly, 2001). The source of drinking water is an indicator of whether it is suitable for drinking. Sources that are likely to be of suitable quality are classified under "Improved source", and sources that may not be of suitable quality are grouped under "Non-improved source" (WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation, 2004). In TDHS-2008, piped water in house/garden or public piped water outside house/garden, public well or well in house/garden, piped surface water in house/garden and bottled water were categorized as "improved sources". Although it was not determined in the TDHS-2008 if a well was 'protected', households obtaining water from wells were accepted as having an improved source. "Non-improved source" included spring/public fountain, river/stream/pond/lake/dam, rainwater, tanker truck and other water sources. Households with no access to drinking water within their own premises were also asked about the time required to obtain water. Lack of ready access to a water source may limit the amount of safe drinking water. Moreover the water may be contaminated during transport or storage.

Table 2.8 provides information on the source of drinking water and the time to obtain drinking water by urban-rural residence. Overall, 92 percent of households in Turkey have access to an improved source of drinking water. Urban households are more likely than rural households to have an improved water source (94 percent and 88 percent, respectively). Approximately 35 percent of the households use piped water within their dwelling, 39 percent use bottled water and 16 percent use piped surface water. The source for drinking water differs considerably by residence. The most common source of drinking water in urban settlements is bottled water (49 percent). Forty-one percent get drinking water from pipes in their residence. Among rural households the most common source of drinking water is the piped surface water (53 percent). Nineteen percent of rural households have piped water and 7 percent obtains drinking water from a well in residence.

More than nine in ten households (92 percent) report having water on their premises. Overall, drinking water is available on the premises in 93 percent of households in urban areas and 88 percent in rural areas. Ninety-four percent of households have access to water within 15 minutes. Four percent of the households spent 30 minutes or longer to obtain drinking water. As expected, there is better access to water in urban areas than in rural areas.

Table 2.8 Household drinking water

Percent distribution of households by source, time to collect, according to residence, Turkey 2008

Source of drinking water	Urban	Rural	Total
Improved, not shared	93.7	88.4	92.3
Piped into residence	40.8	18.7	35.2
Public tap	0.1	0.2	0.1
Well in residence	0.4	7.1	2.1
Public well	0.3	1.4	0.6
Piped surface water in house/garden	3.0	53.4	15.7
Bottled water	49.1	7.6	38.6
Non-improved	6.2	11.6	7.8
Spring/public fountain	4.8	7.4	5.5
River/stream/pond/lake/dam	0.2	0.4	0.3
Tanker truck	0.1	0.2	0.2
Other	1.1	3.5	1.7
Missing	0.0	0.1	0.1
Total	100.0	100.0	100.0
Time to obtain drinking water (round trip)[1]			
Water on premises	93.3	87.8	91.9
Less than 30 minutes	2.3	5.4	3.1
30 minutes or longer	3.7	2.7	3.5
Don't know/missing	0.7	4.1	1.5
Total	100.0	100.0	100.0
Time to obtain drinking water (round trip)			
Less than 15 minutes	94.8	91.4	93.9
Number	7,866	2,659	10,525

[1] Includes households that have drinking water on the premises.

2.4.2 Sanitation Facilities

Ensuring adequate sanitation facilities is another Millennium Development Goal. The lack of availability of hygienic sanitary facilities poses a serious health problem. Table 2.9 shows the proportion of households and of the *de jure* population having access to hygienic sanitation facilities. Hygienic status is determined on the basis of type of facility used and whether or not it is a shared facility. A household's toilet/latrine facility is classified as hygienic if it is used only by household members (i.e., not shared) and the type of facility effectively separates human waste from human contact (WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation, 2004). The types of facilites that are most likely to meet this criteria are flush or pour flush into a piped sewer system and pit latrine with a slab.

Table 2.9 Household sanitation facilities

Percent distribution of households and *de jure* population by type of toilet/latrine facilities, according to residence, Turkey 2008

	Households			Population		
Type of toilet/latrine facility	Urban	Rural	Total	Urban	Rural	Total
Toilet inside or outside						
No facility/bush/public toilet	0.1	0.8	0.3	0.1	1.3	0.4
Inside	94.5	61.3	86.1	93.5	57.4	83.6
Outside	5.0	35.1	12.6	6.0	38.3	14.8
Inside and outside	0.4	2.8	1.0	0.4	3.0	1.1
Type of toilet facility						
Flush toilet	94.8	40.8	81.1	94.5	35.6	78.4
Open pit	0.5	15.3	4.2	0.7	18.4	5.5
Closed pit	4.5	41.8	13.9	4.6	43.1	15.2
Other	0.1	1.1	0.4	0.1	1.4	0.4
Missing	0.1	0.2	0.1	0.0	0.3	0.1
Share toilet with other households						
No	99.1	94.7	98.0	99.1	93.9	97.7
Yes	0.9	5.3	2.0	0.9	6.1	2.3
Improved, not shared facility						
Flush/pour flush to piped sewer system	94.1	39.8	80.4	93.8	34.7	77.6
Pit latrine with slab/closed pit	4.4	39.3	13.2	4.5	40.6	14.4
Non-improved facility						
Any facility shared with other households	0.5	3.5	1.2	0.5	3.7	1.4
Pit latrine without slab/open pit	0.5	14.5	4.0	0.7	17.3	5.2
No facility/bush/field	0.1	0.8	0.3	0.1	1.3	0.4
Other	0.1	1.1	0.4	0.1	1.4	0.4
Missing	0.3	0.9	0.5	0.4	1.1	0.6
Number	7,866	2,659	10,525	29,828	11,241	41,069

The majority of households in Turkey have a toilet facility inside of the dwelling (86 percent), and only one percent share their toilet facility with other households. More than nine in ten households have improved toilet facilities that are not shared with other households, of which 80 percent flush to a piped sewer system and 13 percent use pit latrine with slab. Improved sanitation facilities are much more common in urban areas (99 percent) than in rural areas (79 percent). Most urban household have flush toilets (95 percent) while, in rural areas, pit latrines (42 percent closed pit and 15 percent open pit) are more common than flush toilets (41 percent). The percentage of population having modern toilet facilities are somewhat lower compared with households, particularly in rural areas where households are larger.

2.4.3 Other Household Characteristics

The physical characteristics of the household reflect the household's economic status and have an important environmental impact on maternal and child health. Information on household characteristics such as type of flooring material, type of heating, number of rooms used for sleeping, existence of separate kitchen and bathroom are shown in Table 2.10.

With regard to flooring, the most commonly used flooring material is cement (22 percent) followed by parquet (polished wood), wood planks, marley and laminate with 19, 14, 11 and 10 percent respectively. There are substantial differences in the flooring materials in urban and rural dwellings. Among rural households, 40 percent have a cement floor, compared with about 16 percent of urban households. More than one third of the urban households live in dwellings with parquet or laminate floors. Eleven percent of households in rural areas have earth floors, compared to less than 1 percent in urban areas.

The great majority of households in Turkey have a separate kitchen and separate bathroom (95 percent). This characteristic is more common in urban areas than in rural areas (98 percent and 84 percent, respectively). Information on heating systems was also collected in TDHS-2008. Substantial differences in the types of systems used for heating are observed among urban and rural households. Urban households are more likely than rural households to use central and flat heating, while rural households are more likely than urban households to use stoves. Eighty-three percent of rural households burn wood or coal in the stove and 10 percent burn dried cow dung. Thirty-five percent of urban households use natural gas to heat their houses, and 54 percent use wood/coal.

Finally, data on the number of sleeping rooms per household was collected in the TDHS-2008 to help assess the extent of crowding. Table 2.10 shows that 80 percent of households have one or 2 rooms for sleeping and 20 percent have three or four rooms for sleeping. On average, there are 2.0 persons per sleeping room in Turkey. Rural households have more people per sleeping room than urban households (2.3 and 1.9 persons per sleeping room, respectively).

Table 2.10 Household characteristics

Percent distribution of households by housing characteristics, according to residence, Turkey 2008

Housing characteristic	Urban	Rural	Total
Main material of floor			
Earth, sand	0.7	11.0	3.3
Wood planks	10.8	22.5	13.7
Parquet, polished wd	23.5	5.3	18.9
Karo	9.2	4.7	8.1
Cement	15.8	40.0	21.9
Carpet	5.2	4.6	5.0
Marley	13.3	4.5	11.1
Mozaic	2.5	1.0	2.1
Laminate	12.6	2.5	10.0
Other	6.5	4.0	5.9
Heating			
Central heating-natural gas	5.6	0.6	4.4
Central heating-diesel oil/gas oil	0.1	0.0	0.1
Central heating-wood/coal	7.1	0.9	5.5
Central heating-other	0.3	0.0	0.2
Flat heating-natural gas	25.8	0.5	19.4
Flat heating-diesel oil/gas oil	0.4	0.3	0.3
Flat heating-other	0.7	0.8	0.7
Stove-natural gas	3.7	0.0	2.8
Stove-diesel oil/gas oil	0.1	0.0	0.1
Stove-wood/coal	46.8	83.3	56.0
Stove-dried cow dung	0.7	10.1	3.1
Stove-other	0.5	0.3	0.4
Electric heater	4.0	1.2	3.3
Other	4.3	1.6	3.6
Missing	0.1	0.2	0.1
Household has separate room used as kitchen			
No	2.0	15.7	5.5
Yes	98.0	84.3	94.5
Separate bathroom			
No	1.9	15.9	5.4
Yes	98.1	84.1	94.5
Number of sleeping room			
1-2	78.4	83.5	79.7
3-4	21.3	15.8	19.9
5-6	0.2	0.6	0.3
7+	0.0	0.1	0.0
Missing	0.1	0.0	0.0
Total	100.0	100.0	100.0
Mean number of persons per sleeping room	1.9	2.3	2.0
Number of households	7,866	2,659	10,525

2.4.4 Household Durable Goods

Ownership of household effects and other possessions is a useful indicator of household's social and economic well-being. Moreover, particular goods have specific benefits. For example, having access to a radio or a television exposes household members to innovative ideas, a refrigerator prolongs the wholesomeness of foods; and a means of transport allows greater access to many services away from the local area. Table 2.11 presents the availability of selected household possessions by residence.

A great majority of households in Turkey own most basic appliances. Television sets, refrigerators, washing machine and mobile telephone are present in more than nine in ten households. More than eight in ten households have an iron and vacuum cleaner, and 77 percent have an oven. Fifty-six percent of households have satellite television, and 27 percent have an internet connection in their dwellings. With regard to the other household effects shown in Table 2.11, ownership rates vary from less than one percent of households for garbage dispensers and dryers to 50 percent for mixers. Urban households are more likely to own almost all of these items than rural households; the only exception is satellite TV.

Relatively few households have a means of transportation in rural areas. The most common means of transportation owned by households is a car (34 percent in urban areas and 26 percent in rural areas).

Table 2.11 Household durable goods

Percentage of households possessing various household effects and means of transportation by residence, Turkey 2008

Possesion	Urban	Rural	Total
Household effects			
Refrigerator	98.5	95.2	97.6
Oven	83.0	59.3	77.0
Washing Machine	95.4	81.0	91.8
Iron	92.6	73.2	87.7
Vacuum Cleaner	91.3	66.7	85.1
Television	96.3	94.8	95.9
Non-mobile telephone	65.6	58.4	63.8
Mobile telephone	94.8	83.0	91.8
None of the above	0.1	0.8	0.3
Microwave oven	14.9	5.1	12.4
Mixer	58.4	26.2	50.3
Dish washer	43.5	10.8	35.2
Garbage dispenser	0.7	0.3	0.6
Dryer	0.8	0.3	0.7
LCD/Plasma TV	7.7	2.1	6.2
Pay TV	15.4	2.7	12.2
Satellite TV	54.2	61.2	56.0
Video camera	13.2	3.8	10.8
DVD/VCD player	44.7	22.3	39.1
Camera	38.8	17.2	33.4
Laptop	14.0	3.4	11.4
Computer	35.0	10.4	28.8
Internet	32.8	9.0	26.8
Indoor sports equipment	6.4	0.9	5.0
Air conditioner	14.0	4.6	11.7
Means of transport			
Car	34.3	26.2	32.3
Taxi/minibus	4.0	5.5	4.4
Tractor	1.8	22.2	7.0
Motorcycle	4.4	11.2	6.1
Number of households	7,866	2,659	10,525

2.5 Household Wealth

In addition to standard background characteristics, most of the results throughout this report are shown by wealth quintiles, an indicator of the economic status of households. Although TDHS-2008 did not collect data on consumption or income, the survey collected a detailed information on dwelling and household characteristics and access to a variety of consumer goods and services, and assets which are used as a measure of socio-economic status. The wealth index is a recently developed measure that has been tested in a number of countries in relation to inequities in household income, use of health services, and health outcomes (Rutstein et al., 2000). The resulting wealth index is an indicator of the level of wealth that is consistent with expenditure and income measures (Rutstein, 1999). The wealth index was constructed using household asset data including ownership of a number of possesions ranging from a television to a car, as well as dwelling characteristics, such as source of drinking water, sanitation facilities, and type of flooring material.

A single asset index was developed on the basis of data from the survey sample and used in all the tabulations presented in the report. Each asset was assigned a weight (factor score) generated through principal component analysis, and the resulting asset scores were standardized in relation to a standard normal distribution with a mean of zero and standard deviation of one (Gwatkin et al., 2000). Each household was then assigned a score for each asset, and the scores were summed for each household. Individuals were ranked according to the total score of the household in which they reside.

To create wealth quintiles the *de jure* population was classified into five wealth categories, each with the same number of persons, according to an index representing the wealth of the household in which the person resided. At the national level, approximately 20 percent of the population is in each wealth quintile.

Table 2.12 shows the distribution of the *de jure* population by the five wealth quintiles according to urban-rural residence, region and NUTS 1 region. These distributions indicate the degree to which wealth is evenly (or unevenly) distributed by geographic areas. More than half of the households (53 percent) in rural areas are in the lowest quintile in contrast to 8 percent in urban areas. On the other hand more than half of the urban households (52 percent) are in the fourth and highest wealth quintiles as opposed to 9 percent of rural households. As expected, there are huge variations among regions in terms of the wealth quintile distribution. The East region has the largest proportion in the lowest wealth quintile (46 percent) and West region has the largest proportion in the highest quintile (29 percent). In line with this finding, all the NUTS1 regions located in the eastern part of Turkey, namely Northeast Anatolia, Central East Anatolia and Southeast Anatolia regions have the largest proportions in the lowest quintile (52, 49 and 43 percent, respectively) and İstanbul, East Marmara and West Anatolia regions have the smallest proportions in the lowest quintile (2, 5 and 7 percent, respectively).

Table 2.12 Wealth quintiles

Percent distribution of the jure population by wealth quintiles coeeficient according to residence and region, Turkey 2008

	Wealth quintile						
Residence/region	Lowest	Second	Middle	Fourth	Highest	Total	Number of population
Residence							
Urban	7.7	17.9	22.5	25.2	26.6	100.0	29,828
Rural	52.6	25.5	13.3	6.2	2.4	100.0	11,241
Region							
West	8.8	15.0	20.7	26.2	29.3	100.0	16,828
South	28.7	27.3	19.8	15.1	9.2	100.0	5,056
Central	13.9	19.3	22.2	21.9	22.7	100.0	8,636
North	21.3	25.7	24.2	17.9	11.0	100.0	2,771
East	45.8	26.5	14.7	8.6	4.4	100.0	7,777
Region (NUTS 1)							
İstanbul	1.5	11.6	19.7	28.8	38.4	100.0	7,791
West Marmara	19.6	20.9	23.0	26.5	10.0	100.0	1,713
Aegean	18.0	19.3	19.2	21.2	22.3	100.0	5,619
East Marmara	4.6	16.3	26.9	26.3	25.9	100.0	3,752
West Anatolia	7.3	13.6	19.4	23.9	35.8	100.0	3,734
Mediterranean	28.4	27.3	20.0	15.2	9.1	100.0	5,056
Central Anatolia	23.5	20.4	21.7	19.7	14.8	100.0	2,017
West Black Sea	20.8	27.2	24.6	16.6	10.8	100.0	2,510
East Black Sea	27.1	21.3	22.8	18.0	10.7	100.0	1,137
Northeast Anatolia	51.7	15.8	13.1	12.2	7.2	100.0	1,275
Central East Anatolia	48.6	25.0	15.1	8.0	3.3	100.0	2,186
Southeast Anatolia	42.9	30.2	15.1	7.7	4.1	100.0	4,278
Total	20.0	20.0	20.0	20.0	20.0	100.0	41,069

2.6 Birth Registration

The registration of births is the inscription of the facts of each birth into an official log kept at the registrar's office. Birth registration is basic to ensuring a child's legal status and, thus, basic rights and services (UNICEF, 2006; United Nations General Assembly, 2002). In the TDHS-2008, mothers of children were asked if their child's birth had been registered. A child's birth born in 1998 or later was considered to have been registered if the mother reported that the birth was registered. Mothers were not asked whether or not the child actually had a birth certificate since some certificates may have been lost or were never issued. Table 2.13 shows the percentage of children under five years of age whose births were officially registered.

The results show that 94 percent of births in the past five years in Turkey were registered. The percentage of unregistered children decreased from 16 percent in the TDHS-2003 (Koç, 2004) to 6 percent in TDHS-2008.

Table 2.13 shows that here is little variation in birth registration rates by the child`s sex. Urban children are somewhat more likely to be registered than rural children. However, the percentage of unregistered children has decreased both in urban and rural areas since the TDHS-2003 (13 and 21 percent respectively).

In four of the five regions, the percentage of children whose birth was not registered is 5 percent or less, while in the East, 11 percent of children were not registered. The NUTS1 regions located in the Eastern part of the country have a relatively higher percentage of unregistered children. There is a positive relationship between birth registration and the educational level of the mother and welfare of the household; the highest registration rates are found for children in households in the higher wealth quintiles and children of educated mothers.

Table 2.13 Birth registration of children under age five

Percentage of *de jure* children under five years of age whose births are registered with the civil authorities, according to background characteristics, Turkey 2008

Background characteristic	Birth registration		Number of children
	Yes	No	
Age of child			
<1	87.9	12.1	706
1	94.6	5.4	714
2-4	95.5	4.5	2,043
Sex of child			
Male	94.8	5.2	1,770
Female	92.6	7.4	1,693
Residence			
Urban	94.6	5.4	2,475
Rural	91.6	8.4	988
Region			
West	94.7	5.3	1,174
South	96.2	3.8	441
Central	96.0	4.0	741
North	96.6	3.4	197
East	88.9	11.1	911
Region (NUTS 1)			
İstanbul	94.7	5.3	548
West Marmara	98.5	1.5	88
Aegean	93.4	6.6	427
East Marmara	98.0	2.0	275
West Anatolia	95.1	4.9	345
Mediterranean	96.2	3.8	441
Central Anatolia	96.2	3.8	177
West Black Sea	94.8	5.2	172
East Black Sea	97.2	2.8	79
Northeast Anatolia	87.7	12.3	128
Central East Anatolia	87.4	12.6	250
Southeast Anatolia	89.9	10.1	533
Education			
No education/Primary incomplete	86.4	13.6	781
First level primary	95.1	4.9	1,691
Second level primary	95.6	4.4	322
High school and higher	97.9	2.1	669
Wealth quintile			
Lowest	88.8	11.2	852
Second	92.4	7.6	818
Middle	96.3	3.7	709
Fourth	95.6	4.4	579
Highest	98.5	1.5	506
Total	93.7	6.3	3,463

CHARACTERISTICS OF SURVEY RESPONDENTS 3

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The purpose of this chapter is to provide a description of the situation of ever-married women in Turkey by considering how the ever-married women interviewed in the TDHS-2008 are distributed according to age, marital status, region, urban-rural residence, education, and wealth quintiles. This information is useful for understanding the context of reproduction and health status of women. In addition, the information about women's employment and details about the occupation status of employed women are also provided.

3.1 Background Characteristics

Table 3.1 presents a description of the socio-demographic characteristics of the women interviewed in the TDHS-2008 including age, marital status, urban-rural residence, region of residence, education and wealth quintiles.

Women were asked two questions in the individual interview to assess their age: "In what month and year were you born?" and "How old are you?" Interviewers were trained to probe in situations in which respondents knew neither their age nor date of birth. As a last resort, interviewers were instructed to record their best estimate of the respondent's age. The data on age indicate that 32 percent of the ever-married women interviewed were less than 30 years of age, 37 percent were age 30-39, and 31 percent were in the 40-49 age groups. The comparatively small proportions in the 15-19 and 20-24 age groups–are a result of the fact that a significant proportion of Turkish women are not yet married by these ages and, thus, were not eligible for interview. The drop in the proportions at the upper end of the age categories, on the other hand, is an outcome of high fertility in the past, which resulted in successively larger cohorts of women entering the reproductive age groups during the recent decades.

At the time of the interviews, 95 percent of women were married, while the rest were either divorced/separated (3 percent) or widowed (2 percent). Although there appears to have been a small increase in the percentage of divorced or separated, these figures are consistent with the results of the previous surveys and indicate the rarity of marital dissolution in Turkey.

Seventy-six percent of the TDHS-2008 respondents lived in urban areas. Respondents were most likely to live in the West (44 percent) and least likely to live in the North (6 percent). Regarding the NUTS 1 regions, 20 percent of women lived in İstanbul, followed by 14 percent in the Aegean, 12 percent in the Mediterranean, and 10 percent East Marmara regions, which are the most developed regions of the country.

Table 3.1 Background characteristics of respondents

Percent distribution of ever-married women age 15-49 by selected background characteristics, Turkey 2008

Background characteristic	Weighted percentage	Weighted number	Unweighted number
Age			
15-19	2.5	183	208
20-24	11.3	836	898
25-29	18.3	1,353	1,382
30-34	18.6	1,379	1,372
35-39	18.0	1,336	1,337
40-44	16.2	1,202	1,170
45-49	15.1	1,115	1,038
Marital status			
Married	94.5	6,999	7,042
Divorced/separated	3.3	248	217
Widowed	2.1	158	146
Residence			
Urban	75.8	5,615	5,429
Rural	24.2	1,790	1,976
Region			
West	43.9	3,252	1,876
South	12.1	894	1,013
Central	22.0	1,631	1,460
North	6.4	477	868
East	15.5	1,151	2,188
Region (NUTS 1)			
İstanbul	20.1	1,491	532
West Marmara	4.4	327	423
Aegean	14.4	1,065	549
East Marmara	10.2	759	594
West Anatolia	9.7	717	557
Mediterranean	12.1	894	1,013
Central Anatolia	5.0	371	534
West Black Sea	6.1	448	634
East Black Sea	2.5	186	385
Northeast Anatolia	2.6	191	602
Central East Anatolia	4.4	327	630
Southeast Anatolia	8.5	628	952
Education			
No education/Primary incomplete	18.3	1,358	1,748
First level primary	51.9	3,840	3,645
Second level primary	8.7	643	633
High school and higher	21.1	1,564	1,379
Wealth quintile			
Lowest	15.6	1,154	1,529
Second	19.3	1,429	1,542
Middle	21.1	1,559	1,586
Fourth	21.9	1,618	1,485
Highest	22.2	1,645	1,263
Total 15-49	100.0	7,405	7,405

Note: Education categories refer to the highest level of education completed.

Eighteen percent of the TDHS-2008 respondents did not have any education or had not completed first level of primary school. On the other hand, one out of five women (21 percent) had graduated from at least high school. Comparing these figures with the results of previous surveys, one finds that women in reproductive age groups today are far more educated in the past.

3.2 Education and Literacy Level

Table 3.2 shows how women are distributed by educational attainment according to age, residence, region, and wealth quintiles. Due to the spread of education in recent decades in Turkey, younger women are more educated than older women. Twenty-seven percent of women age 45-49 had no education or did not complete the first primary level compared with only 12 percent in the 25-29 age groups. Twenty-nine percent of women age 25-29 completed at least high school compared to 16 percent of women age 45-59. Finally, it should be noted that the educational attainment of the youngest cohort clearly shows the effect of the increase in compulsory education from 5 years to 8 years in 1997; 48 percent of women 15-19 completed the second level primary.

Women who live in the urban areas are much more likely to have higher education than their rural counterparts. Twenty-eight percent of rural women have no educational level completed, compared to only 15 percent of urban women. The percentage of urban women who completed at least high school is 26 while it is only 7 for rural women. The least educated women are in the East, where the median years of schooling is 3.2 years, compared with the national average of 4.6 years. Regarding the NUTS1 regions, women live in Central East Anatolia and Southeast Anatolia regions have the highest percentages having less than primary education (58 and 53 percent respectively). On the other hand, in the seven out of the 12 NUTS 1 regions, the median years of schooling exceeds the national rate (4.6 years).

Educational attainment rises with the wealth quintile. In the lowest wealth quintile, 48 percent of women have no education or have not completed the primary level compared with 2 percent for the highest quintile. The median number of years of schooling is 10.3 years for women in the highest wealth quintile, while it is 4.1 years for the lowest quintile.

Table 3.3 shows the literacy level of women by age, residence, region, and wealth quintile. The level of literacy is based on the women's self-reported ability to read a newspaper or a letter easily, with difficulty or not at all. Since women who have at least 5 years of schooling were assumed to be literate, this question was asked only of the 18 percent of women who had not attended school or did not complete first level primary school. Overall, 89 percent of TDHS-2008 respondents are classified as literate; this includes the 82 percent who had completed at least a first level primary education and the 7 percent with less education who reported they were able to read.

Table 3.2. Educational attainment

Percent distribution of ever-married women age 15-49 by highest level of schooling attended or completed, and median number of years of schooling,, according to background characteristics, Turkey 2008

Background characteristic	Highest level of schooling attended or completed: No education/ Primary incomplete	First level primary[1]	Second level primary[2]	High school and higher[3]	Total	Median number of years of schooling	Number of women
Age							
15-24	17.3	40.2	24.5	18.0	100.0	4.9	1,019
15-19	20.9	18.5	48.2	12.4	100.0	7.3	183
20-24	16.5	45.0	19.3	19.2	100.0	4.8	836
25-29	12.1	50.9	8.6	28.5	100.0	4.8	1,353
30-34	12.6	52.5	6.4	28.5	100.0	4.7	1,379
35-39	19.6	57.7	5.8	16.9	100.0	4.5	1,336
40-44	23.1	55.0	5.0	16.9	100.0	4.5	1,202
45-49	27.3	52.5	4.6	15.6	100.0	4.4	1,115
Residence							
Urban	15.2	50.0	9.2	25.6	100.0	4.7	5,615
Rural	28.1	57.7	7.1	7.1	100.0	4.4	1,790
Region							
West	11.9	54.3	8.3	25.6	100.0	4.7	3,252
South	19.7	55.5	8.4	16.4	100.0	4.6	894
Central	7.2	56.8	12.1	23.9	100.0	4.8	1,631
North	15.6	54.0	8.8	21.7	100.0	4.7	477
East	52.4	34.3	5.2	8.0	100.0	3.2	1,151
Region (NUTS 1)							
Istanbul	12.2	52.5	7.7	27.5	100.0	4.8	1,491
West Marmara	9.2	61.6	8.3	21.0	100.0	4.7	327
Aegean	10.7	57.6	8.9	22.8	100.0	4.7	1,065
East Marmara	9.6	58.1	8.5	23.7	100.0	4.7	759
West Anatolia	3.7	50.1	13.3	32.8	100.0	4.9	717
Mediterranean	19.7	55.5	8.4	16.4	100.0	4.6	894
Central Anatolia	15.1	54.8	12.9	17.2	100.0	4.7	371
West Black Sea	13.4	59.5	9.2	17.9	100.0	4.6	448
East Black Sea	20.1	45.0	11.5	23.4	100.0	4.7	186
Northeast Anatolia	41.4	38.2	7.6	12.8	100.0	4.3	191
Central East Anatolia	58.2	30.0	5.1	6.7	100.0	0.9	327
Southeast Anatolia	52.9	35.2	4.6	7.3	100.0	3.0	628
Wealth quintile							
Lowest	47.7	46.5	4.2	1.6	100.0	4.1	1,154
Second	27.9	61.0	7.5	3.5	100.0	4.4	1,429
Middle	15.3	64.3	10.7	9.7	100.0	4.6	1,559
Fourth	8.5	57.2	10.2	24.1	100.0	4.8	1,618
Highest	2.0	30.6	9.4	58.0	100.0	10.3	1,645
Total	18.3	51.9	8.7	21.1	100.0	4.6	7,405

[1]Completed 5 years at the first level primary [2]Completed 3 years at the second level primary [3]Completed at least 3 years at the high school

As expected, the percentage literate decreases with age, from 94 percent in the 15-19 age group to 83 percent among women age 45-49 years. Urban women are more likely than rural women to be literate (92 percent and 80 percent, respectively). The percentage literate is highest in the Central (96 percent) and lowest in the East (63 percent). Among the NUTS1 regions, Central East Anatolia, and South East Anatolia have the lowest literacy rates and West Anatolia, the highest (59, 62 and 98 percent, respectively). The literacy level increases with the wealth

quintile; 99 percent of women in the highest wealth quintile are literate compared to 65 percent in the lowest quintile.

Table 3.3 Literacy

Percent distribution of ever-married women age 15-49 by level of schooling attended and level of literacy and percentage literate, according to background characteristics, Turkey 2008

Background characteristic	Secondary school or higher	Ability to read of women with no schooling or completed less than first level primary education			Total	Percentage literate[1]	Number
		Not at all	With difficulty	Easily			
Age							
15-19	79.1	5.6	4.8	10.4	100.0	94.4	183
20-24	83.5	7.1	3.6	5.8	100.0	92.9	836
25-29	87.9	6.9	2.7	2.5	100.0	93.1	1,353
30-34	87.4	8.1	2.2	2.3	100.0	91.9	1,379
35-39	80.4	12.6	3.9	3.1	100.0	87.4	1,336
40-44	76.9	14.5	4.9	3.7	100.0	85.5	1,202
45-49	72.7	17.4	6.5	3.5	100.0	82.6	1,115
Residence							
Urban	84.8	8.1	3.7	3.4	100.0	91.9	5,615
Rural	71.9	19.7	4.5	3.8	100.0	80.3	1,790
Region							
West	88.1	5.7	3.1	3.1	100.0	94.3	3,252
South	80.3	10.3	4.9	4.4	100.0	89.7	894
Central	92.8	3.9	1.8	1.5	100.0	96.1	1,631
North	84.4	8.5	3.9	3.2	100.0	91.5	477
East	47.6	37.2	8.2	7.0	100.0	62.8	1,151
Region (NUTS 1)							
İstanbul	87.8	5.7	3.0	3.6	100.0	94.3	1,491
West Marmara	90.8	5.4	1.7	2.1	100.0	94.6	327
Aegean	89.3	5.7	2.7	2.4	100.0	94.3	1,065
East Marmara	90.4	4.0	3.2	2.5	100.0	96.0	759
West Anatolia	96.3	1.6	1.2	0.9	100.0	98.4	717
Mediterranean	80.3	10.3	4.9	4.4	100.0	89.7	894
Central Anatolia	84.9	8.9	3.3	2.9	100.0	91.1	371
West Black Sea	86.6	7.7	3.2	2.5	100.0	92.3	448
East Black Sea	79.9	10.5	6.2	3.5	100.0	89.5	186
Northeast Anatolia	58.6	28.6	5.6	7.2	100.0	71.4	191
Central East Anatolia	41.8	41.4	9.6	7.1	100.0	58.6	327
Southeast Anatolia	47.1	37.7	8.3	6.9	100.0	62.3	628
Wealth quintile							
Lowest	52.3	34.6	7.1	5.9	100.0	65.4	1,154
Second	72.1	17.4	6.0	4.5	100.0	82.6	1,429
Middle	84.7	5.7	4.9	4.7	100.0	94.3	1,559
Fourth	91.5	3.9	2.3	2.3	100.0	96.1	1,618
Highest	98.0	0.7	0.4	1.0	100.0	99.3	1,645
Total	81.7	10.9	3.9	3.5	100.0	89.1	7,405

[1] Refers to women who have at least secondary school education and women with no schooling or completed less than first level primary education but who can read with difficulty or easily.

3.3 Employment and Occupation

3.3.1 Employment status

Table 3.4 presents the employment status of the ever-married women interviewed in the TDHS-2008 by age, marital status, number of children, region, residence, educational level, and wealth quintiles. Employment, like education, can be a source of empowerment for women. In TDHS-2008, information was obtained about current employment, which refers to working in the last seven days, and employment at any time during the 12 months before the survey.

The measurement of employment is difficult due to different perceptions of work. For example, women who work as an unpaid family worker or in the informal sector may not label themselves as working. In TDHS-2008, a number of the questions were asked about employment to ensure that informal or potentially ill-defined activities were captured.

Table 3.4 indicates that 31 percent of women were currently working at the time of the survey, and 4 percent were not currently employed but had worked at some point during the 12 months prior to the survey. Younger women were less likely to be employed than their older counterparts. A strong association exists between employment and marital status; women who were not currently married were more likely to be employed than currently married women, possibly because women who were not married assume the role of breadwinner in the absence of a husband.

As expected, childbearing has an impact on employment; women with no children were more likely to be employed than women who have children. The proportion of currently working women was higher in the rural than urban areas (49 and 25 percent respectively). More than half of the women in the North were currently working compared with 20 percent of women in the East. Regarding the NUTS 1 regions, 62 percent of women in East Black Sea Region were currently working, followed by Aegean and West Black Sea regions with 43 percent and 41 percent, respectively. Women with high school education and women in the lowest and highest wealth quintiles were more likely to be economically active than other women.

Table 3.4. Employment status

Percent distribution of ever-married women age 15-49 by employment status, according to background characteristics, Turkey 2008

Background characteristic	Employment status: Currently employed	Not currently employed	Not employed last 12 months	DK/Missing	Total	Number of women
Age						
15-19	9.8	7.9	80.5	1.8	100.0	183
20-24	17.0	5.0	76.0	2.0	100.0	836
25-29	28.7	4.6	63.6	3.1	100.0	1,353
30-34	34.1	3.2	59.7	2.9	100.0	1,379
35-39	35.6	3.4	57.6	3.4	100.0	1,336
40-44	35.2	2.2	58.3	4.3	100.0	1,202
45-49	32.1	3.1	59.9	4.9	100.0	1,115
Marital status						
Married or living together	30.2	3.4	63.0	3.5	100.0	6,999
Divorced/separated/widowed	39.9	8.4	48.7	2.9	100.0	406
Number of living children						
0	31.2	9.3	57.6	1.9	100.0	698
1-2	32.5	3.4	61.2	2.9	100.0	4,062
3-4	27.9	3.0	64.8	4.4	100.0	2,023
5+	27.7	1.2	65.4	5.7	100.0	621
Residence						
Urban	25.0	4.0	67.3	3.7	100.0	5,615
Rural	48.6	2.5	46.3	2.6	100.0	1,790
Region						
West	32.6	5.0	59.5	2.9	100.0	3,252
South	28.9	3.1	60.5	7.5	100.0	894
Central	29.1	2.8	65.9	2.2	100.0	1,631
North	53.0	2.9	41.7	2.4	100.0	477
East	19.9	1.7	74.4	3.9	100.0	1,151
Region (NUTS 1)						
İstanbul	24.7	5.4	65.2	4.7	100.0	1,491
West Marmara	35.4	4.7	56.6	3.3	100.0	327
Aegean	43.4	3.7	51.8	1.0	100.0	1,065
East Marmara	40.7	5.0	53.5	0.7	100.0	759
West Anatolia	22.1	3.3	70.8	3.8	100.0	717
Mediterranean	28.9	3.1	60.5	7.5	100.0	894
Central Anatolia	20.6	1.7	76.5	1.3	100.0	371
West Black Sea	41.3	2.5	53.7	2.6	100.0	448
East Black Sea	62.2	3.3	33.3	1.2	100.0	186
Northeast Anatolia	26.1	1.4	67.6	4.8	100.0	191
Central East Anatolia	13.5	0.7	81.7	4.0	100.0	327
Southeast Anatolia	21.0	2.4	73.1	3.6	100.0	628
Education						
No education/Primary incomplete	25.6	2.1	67.5	4.7	100.0	1,358
First level primary	30.5	3.3	62.4	3.8	100.0	3,840
Second level primary	21.3	5.4	69.6	3.7	100.0	643
High school and higher	39.6	5.1	54.1	1.3	100.0	1,564
Wealth quintile						
Lowest	39.6	2.7	54.1	3.7	100.0	1,154
Second	31.0	3.0	62.0	3.9	100.0	1,429
Middle	25.8	3.7	66.2	4.3	100.0	1,559
Fourth	24.7	3.9	68.3	3.0	100.0	1,618
Highest	34.9	4.5	58.3	2.4	100.0	1,645
Total	30.7	3.6	62.2	3.4	100.0	7,405

3.3.2 Type of Occupation

In the TDHS-2008, ever-married women who were currently working or worked in the last 12 months before the survey were asked about the type of occupation in which they were employed. Table 3.5 indicates that the 51 percent of women worked in the service sector, while 40 percent worked in agriculture and 8 percent in industry. Women age 15-19 and 45-49 were more likely to work in agriculture and less likely to have service jobs than other women. Married women are more likely to work in the agriculture, while formerly women are more likely to be employed in the service sector.

The percentage working in the agricultural sector increased and the percentage working in the service sector declined with the number of living children increases. This may reflect the fact that higher parity women were from the rural areas where agricultural work is more common, while lower parity women were concentrated in urban areas, where women mainly worked in the service sector.

Regarding the regions, the percentage of women working in agriculture was highest in the North followed closely by the East region. On the other hand, the highest levels of employment in the service sector were among women in the West and Central regions.

In NUTS1 Regions, the highest proportion of women working in agriculture was observed in the East Black Sea, while the highest proportion of women working in the service sector were in West Anatolia and İstanbul. As expected, the percentage employed in agricultural occupations fell and the percentage employed in service occupations rose directly with both the education level and wealth quintile.

3.3.3 Employment by Economic Sector

Table 3.6 presents information on the sector of the economy -public or private- in which women were employed. Nine in ten employed women worked in the private sector while one in ten works in the public sector. Public sector employment was highest for women in the West Anatolia region (25 percent), women with high school of higher education (39 percent), and women in the highest wealth quintile (36 percent).

3.3.4 Type of Employment

Table 3.7 shows the differences type of employment of working women according to the basic characteristics. Around one-third of working women were employed as unpaid family workers while 17 percent were self-employed. Thirty-nine percent were waged workers, either regular or daily, and 10 percent were salaried government employees. Only two percent of women were employers. Regular waged or salaried employment was most common among women with high school and higher education and women in the highest wealth quintile, while working unpaid for a family member was most common among rural women, women in East Black Sea and Norteast Anatolia regions.

Table 3.5 Type of occupation

Percent distribution of ever-married women age 15-49 employed in the 12 months preceding the survey by type of occupation according to background characteristics, Turkey 2008

Background characteristic	Sector			Total	Number of women
	Agriculture	Industry	Service		
Age					
15-19	(62.8)	(8.9)	(28.3)	100.0	32
20-24	45.5	11.4	43.1	100.0	184
25-29	33.1	9.0	57.9	100.0	451
30-34	33.0	10.5	56.5	100.0	515
35-39	37.4	7.7	54.9	100.0	521
40-44	42.9	6.7	50.4	100.0	449
45-49	54.7	6.3	39.0	100.0	392
Marital status					
Married or living together	41.8	8.3	49.9	100.0	2,348
Divorced/separated/widowed	22.7	9.0	68.3	100.0	196
Number of living children					
0	24.4	14.1	61.5	100.0	282
1-2	33.2	8.2	58.5	100.0	1,457
3-4	52.9	7.3	39.8	100.0	624
5+	79.0	4.5	16.5	100.0	180
Residence					
Urban	15.3	11.3	73.4	100.0	1,629
Rural	84.8	3.2	12.0	100.0	915
Region					
West	24.6	14.1	61.3	100.0	1,221
South	54.2	3.0	42.8	100.0	286
Central	46.3	3.7	50.0	100.0	521
North	65.4	1.6	33.0	100.0	267
East	62.1	3.5	34.4	100.0	249
Region (NUTS 1)					
İstanbul	3.5	16.7	79.8	100.0	449
West Marmara	45.1	18.9	36.0	100.0	131
Aegean	47.5	9.5	43.0	100.0	502
East Marmara	37.7	11.3	51.0	100.0	347
West Anatolia	17.9	0.4	81.7	100.0	182
Mediterranean	54.2	3.0	42.8	100.0	286
Central Anatolia	50.5	1.8	47.7	100.0	83
West Black Sea	55.0	2.5	42.5	100.0	196
East Black Sea	75.9	1.8	22.4	100.0	122
Northeast Anatolia	59.3	0.0	40.7	100.0	53
Central East Anatolia	56.2	7.8	36.0	100.0	47
Southeast Anatolia	64.1	3.5	32.4	100.0	147
Education					
No education/Primary incomplete	70.5	4.5	24.9	100.0	377
First level primary	53.7	8.8	37.5	100.0	1,297
Second level primary	25.4	20.4	54.3	100.0	172
High school and higher	2.7	6.8	90.5	100.0	698
Wealth quintile					
Lowest	86.8	2.1	11.1	100.0	487
Second	68.5	6.9	24.6	100.0	487
Middle	38.0	13.6	48.3	100.0	460
Fourth	17.2	14.9	67.9	100.0	464
Highest	2.3	5.8	91.9	100.0	647
Total	40.3	8.4	51.3	100.0	2,544

Table 3.6 Employment in public or private sector

Percent distribution of ever-married women age 15-49 employed in the 12 months preceding the survey by employment in public and private sector according to background characteristics, Turkey 2008

Background characteristic	Public/Private sector		Total	Number of women
	Public	Private		
Age				
15-19	(0.0)	(100.0)	100.0	32
20-24	5.2	94.8	100.0	184
25-29	13.3	86.7	100.0	451
30-34	15.8	84.2	100.0	515
35-39	11.6	88.4	100.0	521
40-44	10.9	89.1	100.0	449
45-49	7.3	92.7	100.0	392
Marital status				
Married or living together	11.9	88.1	100.0	2,348
Divorced/separated/widowed	5.2	94.8	100.0	196
Number of living children				
0	14.8	85.2	100.0	282
1-2	15.5	84.5	100.0	1,457
3-4	3.1	96.9	100.0	624
5+	1.2	98.8	100.0	180
Residence				
Urban	16.5	83.5	100.0	1,629
Rural	2.2	97.8	100.0	915
Region				
West	11.3	88.7	100.0	1,221
South	6.6	93.4	100.0	286
Central	14.6	85.4	100.0	521
North	10.5	89.5	100.0	267
East	11.2	88.8	100.0	249
Region (NUTS 1)				
İstanbul	13.8	86.2	100.0	449
West Marmara	5.4	94.6	100.0	131
Aegean	10.4	89.6	100.0	502
East Marmara	10.1	89.9	100.0	347
West Anatolia	24.7	75.3	100.0	182
Mediterranean	6.6	93.4	100.0	286
Central Anatolia	9.0	91.0	100.0	83
West Black Sea	9.8	90.2	100.0	196
East Black Sea	11.8	88.2	100.0	122
Northeast Anatolia	14.0	86.0	100.0	53
Central East Anatolia	15.0	85.0	100.0	47
Southeast Anatolia	9.3	90.7	100.0	147
Education				
No education/Primary incomplete	0.5	99.5	100.0	377
First level primary	0.9	99.1	100.0	1,297
Second level primary	0.6	99.4	100.0	172
High school and higher	39.4	60.6	100.0	698
Wealth quintile				
Lowest	0.3	99.7	100.0	487
Second	0.6	99.4	100.0	487
Middle	2.0	98.0	100.0	460
Fourth	8.8	91.2	100.0	464
Highest	36.2	63.8	100.0	647
Total	11.4	88.6	100.0	2,544

Table 3.7 Type of employment

Percent distribution of ever-married women age 15-49 employed in the 12 months preceding the survey by type of employment, according to background characteristics, Turkey 2008

	Type of employment										
Background characteristic	Employer	Waged, worker (regular)	Salaried, government official	Daily waged (seasonal/ temporal)	For her own (regular)	For her own (irregular)	Unpaid family worker	Other	Missing	Total	Number of women
Age											
15-19	(0.0)	(31.4)	(0.0)	(19.5)	(0.0)	(0.0)	(49.0)	(0.0)	(0.0)	100.0	32
20-24	0.2	35.5	2.6	10.2	3.7	8.0	39.8	0.0	0.0	100.0	184
25-29	0.7	36.1	10.6	9.6	3.1	12.4	27.1	0.5	0.0	100.0	451
30-34	3.3	28.8	13.6	9.0	4.7	11.8	28.7	0.0	0.1	100.0	515
35-39	1.6	23.0	9.9	15.0	5.6	15.6	28.9	0.3	0.0	100.0	521
40-44	1.7	22.6	9.1	14.8	9.1	11.3	30.9	0.4	0.0	100.0	449
45-49	1.1	20.8	6.9	9.9	6.4	9.5	45.1	0.1	0.0	100.0	392
Marital status											
Married or living together	1.6	25.6	9.9	12.0	5.3	11.4	33.9	0.3	0.0	100.0	2,348
Divorced/separated/widowed	1.3	45.0	5.2	7.9	8.6	16.7	15.4	0.0	0.0	100.0	196
Number of living children											
0	1.9	51.5	12.1	6.0	1.7	6.1	20.8	0.0	0.0	100.0	282
1-2	2.0	29.0	13.4	9.7	6.5	11.8	27.4	0.3	0.0	100.0	1,457
3-4	1.0	16.5	2.1	15.3	5.5	16.1	43.3	0.1	0.1	100.0	624
5+	0.3	10.6	0.0	24.1	3.8	6.5	54.3	0.5	0.0	100.0	180
Residence											
Urban	2.5	38.6	13.9	8.3	6.9	16.2	13.3	0.3	0.0	100.0	1,629
Rural	0.1	6.6	1.8	17.8	3.1	4.0	66.5	0.1	0.0	100.0	915
Region											
West	1.9	37.9	9.2	9.9	7.4	12.9	20.3	0.3	0.0	100.0	1,221
South	2.0	21.6	5.6	25.3	5.2	9.9	29.9	0.5	0.0	100.0	286
Central	1.5	21.9	12.8	7.3	3.1	11.7	41.7	0.0	0.0	100.0	521
North	0.6	11.0	8.5	6.4	4.7	10.2	58.3	0.3	0.0	100.0	267
East	0.8	8.5	10.0	19.8	2.4	10.7	47.6	0.0	0.2	100.0	249
Region (NUTS 1)											
İstanbul	3.2	51.9	11.2	5.2	7.3	14.6	6.6	0.0	0.0	100.0	449
West Marmara	2.8	33.6	4.4	20.1	6.4	6.7	25.5	0.5	0.0	100.0	131
Aegean	0.8	24.3	8.4	12.7	6.7	6.6	40.5	0.0	0.0	100.0	502
East Marmara	0.9	26.5	9.0	7.8	6.5	17.3	31.2	0.9	0.0	100.0	347
West Anatolia	2.1	34.6	21.1	5.3	2.9	16.7	17.4	0.0	0.0	100.0	182
Mediterranean	2.0	21.6	5.6	25.3	5.2	9.9	29.9	0.5	0.0	100.0	286
Central Anatolia	0.8	17.2	9.7	10.1	1.5	18.4	42.2	0.0	0.0	100.0	83
West Black Sea	1.6	14.8	6.9	4.0	4.9	14.5	53.0	0.2	0.0	100.0	196
East Black Sea	0.3	7.9	10.1	9.1	4.9	3.5	64.0	0.3	0.0	100.0	122
Northeast Anatolia	0.5	5.6	13.5	4.1	3.2	13.0	60.1	0.0	0.0	100.0	53
Central East Anatolia	2.0	14.6	13.0	19.2	1.0	10.2	40.0	0.0	0.0	100.0	47
Southeast Anatolia	0.6	7.8	8.0	25.3	2.6	10.3	45.1	0.0	0.3	100.0	147
Education											
No education/Primary incomplete	0.1	10.6	0.0	26.8	6.2	11.0	45.0	0.2	0.0	100.0	377
First level primary	1.2	19.9	0.2	13.6	5.1	14.3	45.4	0.2	0.0	100.0	1,297
Second level primary	1.1	41.8	0.0	8.7	11.3	12.8	23.6	0.6	0.0	100.0	172
High school and higher	3.4	45.7	34.3	0.7	4.5	7.4	3.8	0.2	0.0	100.0	698
Wealth quintile											
Lowest	0.0	5.2	0.2	26.0	2.5	7.5	58.5	0.2	0.0	100.0	487
Second	0.2	12.6	0.0	17.8	5.0	11.7	52.6	0.1	0.0	100.0	487
Middle	0.5	28.4	1.5	11.1	5.2	16.8	36.2	0.1	0.1	100.0	460
Fourth	1.8	40.8	6.5	6.1	6.9	18.4	19.4	0.0	0.0	100.0	464
Highest	4.5	43.8	31.6	0.9	7.4	6.9	4.3	0.6	0.0	100.0	647
Total	1.6	27.1	9.5	11.7	5.5	11.8	32.4	0.2	0.0	100.0	2,544

3.4. Social Security Coverage

In the TDHS-2008, ever-married women who worked at any time in the 12 months prior to the survey were asked whether they had any social security when they were employed. Information on the type of social security coverage that the woman had was also obtained. Before the establishment of Social Security Institution in 2006, there were three different institutions which provided social security services for workers. These institutions- the Social Insurance Institution (SSK), the Retirement Fund (Emekli Sandığı) and the Social Insurance Institution for the Craftsmen and Artisans and Other Self Employers (Bağ-Kur) -had different retirement regimes. These three institutions under a single roof are still continuing. Therefore, during the TDHS-2008, working women were asked to classify themselves according to their institutions under which they were previously covered.

As seen in Table 3.8, 69 percent of women did not have social security while they were working. The SSK had the highest coverage at 20 percent, followed by the Emekli Sandığı with 9 percent.

The variation in social security coverage by basic characteristics is very similar to the patterns observed with respect to women's working and occupation status. Working women who lived in urban areas, in the more developed regions, and women in the higher education group and highest wealth quintiles are more likely to have social security than their counterparts. Considering regional differentials, women were least likely to have social security in the East (84 percent), especially in South East Anatolia (87 percent).

3.5. Health Insurance Coverage

All ever-married women age 15-49 interviewed in the TDHS-2008 were asked whether or not they were covered by any health insurance. Health insurance is provided by the three social security institutions and private insurance companies. "Yeşil Kart" is a national program which insures costs of treatments for people who are not covered by any social security system.

According to Table 3.9, 16 percent of ever-married women are not covered by any health insurance in Turkey. This figure is 31 percent among women age 15-19 and exceeds 20 percent among rural women, women who have no education or have not completed first level primary school, and women in the two lowest wealth quintiles. In the NUTS1 regions, the proportion of who are not covered by health insurance is under 20 percent, except for Southeast and Northeast Anatolia. Among the different health insurance systems, 48 percent of women are covered by SSK, followed by Yeşil Kart (14 percent). It should be noted that Yeşil Kart use has the widest coverage in the East (40 percent) and for women in the lowest education and wealth quintile categories.

Table 3.8 Social security coverage

Percent distribution of ever-married women age 15-49 employed in the 12 months preceding the survey by social security, according to background characteristics, Turkey 2008

Background characteristic	Social security							Total	Number of women
	No	SSK	Emekli Sandığı	Bağ-Kur	Private	Other	Missing		
Age									
15-19	(87.0)	(13.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	100.0	32
20-24	72.1	25.2	2.2	0.0	0.0	0.2	0.2	100.0	184
25-29	58.9	31.8	8.1	1.1	0.1	0.0	0.0	100.0	451
30-34	56.3	25.7	13.2	4.3	0.2	0.2	0.1	100.0	515
35-39	72.6	15.2	9.9	2.2	0.0	0.0	0.0	100.0	521
40-44	74.7	13.1	9.4	2.7	0.0	0.1	0.0	100.0	449
45-49	80.8	10.3	6.9	1.9	0.1	0.0	0.0	100.0	392
Marital status									
Married or living together	69.1	19.0	9.4	2.3	0.1	0.1	0.0	100.0	2,348
Divorced/separated/widowed	64.0	29.8	4.7	1.5	0.0	0.0	0.0	100.0	196
Number of living children									
0	47.1	41.8	9.1	1.9	0.1	0.0	0.0	100.0	282
1-2	61.4	22.8	13.1	2.5	0.1	0.1	0.0	100.0	1,457
3-4	87.5	7.5	2.0	2.7	0.1	0.1	0.1	100.0	624
5+	95.8	4.2	0.0	0.0	0.0	0.0	0.0	100.0	180
Residence									
Urban	54.7	29.0	13.1	2.9	0.1	0.1	0.1	100.0	1,629
Rural	93.5	3.6	1.7	1.2	0.0	0.0	0.0	100.0	915
Region									
West	59.8	29.0	8.8	2.4	0.0	0.0	0.0	100.0	1,221
South	77.8	14.2	5.9	2.1	0.0	0.0	0.0	100.0	286
Central	70.0	14.4	12.1	3.2	0.2	0.2	0.0	100.0	521
North	83.0	7.3	7.9	1.4	0.4	0.0	0.0	100.0	267
East	83.7	6.3	8.4	0.9	0.0	0.4	0.4	100.0	249
Region (NUTS 1)									
İstanbul	46.2	40.7	10.5	2.6	0.0	0.0	0.0	100.0	449
West Marmara	65.3	28.0	3.4	3.4	0.0	0.0	0.0	100.0	131
Aegean	73.0	16.2	8.4	2.4	0.0	0.0	0.0	100.0	502
East Marmara	69.0	20.4	8.7	2.0	0.0	0.0	0.0	100.0	347
West Anatolia	52.5	24.3	19.9	3.2	0.0	0.0	0.0	100.0	182
Mediterranean	77.8	14.2	5.9	2.1	0.0	0.0	0.0	100.0	286
Central Anatolia	81.8	8.5	9.0	0.8	0.0	0.0	0.0	100.0	83
West Black Sea	79.7	9.9	6.3	3.3	0.5	0.5	0.0	100.0	196
East Black Sea	82.7	5.6	9.2	1.7	0.9	0.0	0.0	100.0	122
Northeast Anatolia	81.4	6.1	10.3	2.3	0.0	0.0	0.0	100.0	53
Central East Anatolia	75.2	11.8	10.1	1.0	0.0	1.0	1.0	100.0	47
Southeast Anatolia	86.9	4.7	7.4	0.4	0.0	0.3	0.3	100.0	147
Education									
No education/Primary inc.	94.9	3.9	0.0	1.0	0.0	0.1	0.1	100.0	377
First level primary	86.0	11.5	0.2	2.1	0.0	0.1	0.0	100.0	1,297
Second level primary	64.9	31.2	0.0	3.5	0.4	0.0	0.0	100.0	172
High school and higher	23.3	41.1	32.4	2.9	0.2	0.1	0.0	100.0	698
Wealth quintile									
Lowest	97.3	1.9	0.2	0.5	0.0	0.0	0.1	100.0	487
Second	92.0	7.3	0.0	0.5	0.0	0.3	0.0	100.0	487
Middle	79.3	17.9	1.2	1.4	0.0	0.1	0.1	100.0	460
Fourth	62.4	28.4	5.8	3.1	0.2	0.0	0.0	100.0	464
Highest	26.5	38.0	30.3	5.0	0.2	0.0	0.0	100.0	647
Total	68.7	19.8	9.0	2.3	0.1	0.1	0.0	100.0	2,544

Table 3.9 Health insurance coverage

Percent distribution of ever married women age 15-49 by type of health insurance, according to background characteristics, Turkey 2008

Background characteristic	Type of health insurance									Number of women
	No	SSK	Emekli Sandığı	Bağ-Kur	Private	Yesil Kart	Other	Missing	Total	
Age										
15-19	30.8	38.1	0.9	1.4	0.0	28.4	0.4	0.0	100.0	183
20-24	20.3	51.5	3.0	5.8	0.0	18.9	0.4	0.0	100.0	836
25-29	16.2	51.3	6.4	9.3	0.8	15.5	0.5	0.1	100.0	1,353
30-34	14.3	44.8	11.6	14.1	0.7	14.0	0.4	0.0	100.0	1,379
35-39	17.1	45.6	10.8	12.6	0.4	12.7	0.3	0.5	100.0	1,336
40-44	14.9	45.2	12.8	13.6	0.8	12.2	0.3	0.3	100.0	1,202
45-49	12.7	49.6	14.6	14.5	0.7	7.4	0.3	0.3	100.0	1,115
Residence										
Urban	14.1	53.3	11.4	10.1	0.7	10.0	0.3	0.2	100.0	5,615
Rural	22.5	29.3	5.3	16.8	0.1	25.3	0.5	0.1	100.0	1,790
Region										
West	16.2	57.5	8.4	10.7	0.8	5.8	0.3	0.3	100.0	3,252
South	17.6	41.4	7.6	14.4	0.2	18.1	0.6	0.0	100.0	894
Central	14.3	46.9	13.9	15.6	0.6	8.2	0.4	0.1	100.0	1,631
North	10.0	47.1	15.0	12.2	0.3	14.7	0.5	0.1	100.0	477
East	19.9	24.9	8.2	6.5	0.1	39.9	0.4	0.1	100.0	1,151
Region (NUTS 1)										
İstanbul	16.6	61.3	6.5	8.6	1.6	4.9	0.0	0.6	100.0	1,491
West Marmara	16.6	56.3	6.8	12.1	0.2	8.0	0.0	0.0	100.0	327
Aegean	16.7	50.1	11.8	13.9	0.2	7.1	0.1	0.2	100.0	1,065
East Marmara	13.0	58.3	10.0	14.3	0.1	3.2	1.0	0.0	100.0	759
West Anatolia	13.7	48.7	17.3	12.0	1.1	6.5	0.6	0.1	100.0	717
Mediterranean	17.6	41.4	7.6	14.4	0.2	18.1	0.6	0.0	100.0	894
Central Anatolia	15.5	40.0	11.0	16.7	0.2	15.8	0.5	0.2	100.0	371
West Black Sea	12.3	46.6	12.9	14.0	0.6	12.9	0.5	0.1	100.0	448
East Black Sea	9.1	43.8	15.2	15.5	0.4	16.0	0.0	0.0	100.0	186
Northeast Anatolia	20.7	21.6	11.1	9.3	0.1	36.4	0.5	0.3	100.0	191
Central East Anatolia	15.6	23.8	9.4	4.0	0.1	46.1	0.7	0.3	100.0	327
Southeast Anatolia	22.0	26.6	6.7	6.7	0.2	37.7	0.2	0.0	100.0	628
Education										
No education/Primary inc.	21.1	31.7	3.7	8.3	0.0	34.6	0.1	0.4	100.0	1,358
First level primary	17.8	49.2	6.2	14.5	0.2	11.4	0.4	0.2	100.0	3,840
Second level primary	17.3	55.4	6.2	8.6	0.3	11.8	0.4	0.0	100.0	643
High school and higher	7.1	53.8	25.8	8.9	2.1	1.8	0.4	0.0	100.0	1,564
Wealth quintile										
Lowest	26.7	18.9	0.5	7.1	0.0	46.5	0.4	0.1	100.0	1,154
Second	21.7	39.3	3.1	12.8	0.0	22.5	0.3	0.2	100.0	1,429
Middle	17.4	54.8	7.8	11.4	0.1	7.5	0.6	0.3	100.0	1,559
Fourth	12.1	61.5	11.2	12.4	0.2	1.9	0.4	0.3	100.0	1,618
Highest	6.5	54.0	23.1	13.6	2.3	0.3	0.2	0.0	100.0	1,645
Total	16.1	47.5	9.9	11.7	0.6	13.7	0.4	0.2	100.0	7,405

3.6 Smoking Status

Smoking affects women's health and may adversely affect their children's health, especially in terms of vulnerability to respiratory illness. In addition, cigarette use during pregnancy increases the risk of having a small or low birth weight baby. Table 3.10 indicates the percentage of cigarette use among ever-married women according to the basic socio-economic background characteristics and maternity status. To obtain this information, women were first asked about current and past cigarette use. In addition, women who currently smoke cigarettes were asked about the age when they began to smoke and the number of cigarettes they smoked each day.

The TDHS-2008 results show that 30 percent of ever-married women have ever smoked and 22 percent of women are currently smoking. This proportion for cigarette use among ever-married women has increased since the TDHS-2003 (28 percent). Women in urban areas and in Istanbul are more likely than women in other areas to use cigarette. As the level of education increases, cigarette use also increases; the percentage of women who have at least a high school education are more than twice as likely to have ever used or be currently using cigarette as women in the lowest educational category (44 and 21 percent, respectively). Similarly, women who are in the highest wealth quintile smoke more than women in lower quintiles.

Considering maternity status, one in ten pregnant women currently smoke and 17 percent of women who are breastfeeding are currently using cigarette.

The mean age at which ever-married women began smoking cigarettes was 19.3 years. The mean number of cigarettes women reported using during the 24 hours before the survey was 10.5 cigarettes.

Table 3.10 Use of cigarettes

Percentage of ever-married women age 15-49 who ever smoked cigarettes, and the percentage currently smoking, and among ever smokers the mean age they began smoking and the mean number of cigarettes smoked, according to socio-economic background characteristics and maternity status, Turkey 2008

Background characteristic	Ever smoked	Currently smoking	Mean age for beginning smoking	Mean number of cigarettes per day	Number of smokers	Number of woman
Age						
15-19	(15.0)	(8.8)	(15.0)	(10.8)	27	183
20-24	26.0	19.0	16.3	8.8	217	836
25-29	34.1	26.2	17.7	9.1	461	1,353
30-34	33.8	25.1	18.7	10.1	466	1,379
35-39	27.5	21.4	20.2	11.0	367	1,336
40-44	31.3	25.2	21.5	12.0	376	1,202
45-49	25.2	17.6	21.5	12.1	281	1,115
Residence						
Urban	33.9	26.0	19.4	10.6	1,903	5,615
Rural	16.4	11.4	18.6	9.7	293	1,790
Region						
West	35.7	27.7	19.4	10.7	1,159	3,252
South	22.7	18.0	19.6	10.4	203	894
Central	26.3	18.8	19.1	10.7	429	1,631
North	25.5	18.5	19.2	8.6	121	477
East	24.6	17.8	18.8	10.3	283	1,151
Region (NUTS 1)						
İstanbul	39.0	29.5	19.3	10.6	582	1,491
West Marmara	30.4	24.4	18.9	11.1	100	327
Aegean	28.0	22.4	19.5	11.0	299	1,065
East Marmara	36.3	27.8	19.6	10.5	276	759
West Anatolia	31.4	22.2	19.2	11.1	225	717
Mediterranean	22.7	18.0	19.6	10.4	203	894
Central Anatolia	21.9	15.6	19.3	10.1	81	371
West Black Sea	24.0	17.8	19.1	8.4	108	448
East Black Sea	(21.4)	(15.5)	(19.8)	(8.9)	40	186
Northeast Anatolia	25.4	18.5	18.6	10.6	49	191
Central East Anatolia	28.5	20.5	17.8	11.0	93	327
Southeast Anatolia	22.4	16.3	19.6	9.7	141	628
Education						
No education/Primary incomplete	21.0	14.5	19.1	10.6	286	1,358
First level primary	26.1	19.3	19.3	10.3	1,002	3,840
Second level primary	34.0	27.4	18.2	10.7	218	643
High school and higher	44.1	35.1	19.7	10.7	690	1,564
Maternity status						
Pregnant	26.2	11.4	17.4	10.0	111	423
Breastfeeding (not pregnant)	26.0	16.5	18.0	8.0	242	932
Neither	30.5	24.1	19.6	10.9	1,843	6,050
Wealth quintile						
Lowest	18.0	13.0	18.7	9.8	210	1,166
Second	22.0	15.2	18.4	9.7	307	1,397
Middle	26.0	19.0	18.6	10.9	405	1,558
Fourth	34.4	27.7	20.1	10.4	559	1,625
Highest	43.1	33.2	19.6	11.0	715	1,659
Total	29.7	22.4	19.3	10.5	2,196	7,405

Note: Parentheses indicate that a figure is based on 25-49 unweighted cases.

FERTILITY 4

İsmet Koç, Pelin Çağatay and Tuğba Adalı

This chapter presents the TDHS-2008 results on fertility levels, trends, patterns and differentials. The analysis is based on the birth histories collected from ever-married women age 15-49 interviewed during the survey. To obtain this information, women were first asked a series of questions to determine the total number of live births they had in their lifetime. For each live birth, information was then collected on the age, sex, and survival status of the child. For deceased children, age at death was recorded. Information from the birth history is used to assess current and completed fertility and to look at other factors related to fertility, including age at first birth, birth intervals, and teenage childbearing.

The level of current fertility is one of the most important topics in this report because of its direct relevance to population policies and programs. Measures of current fertility presented in this chapter include age-specific fertility rates, the total fertility rate, the general fertility rate, and the crude birth rate. The various measures of current fertility are calculated for the three-year period preceding the survey, which roughly corresponds to the calendar period 2006-2008. A three-year period was chosen because it reflects the current situation, while also allowing the rates to be calculated on a sufficient number of cases so as not to compromise the statistical precision of estimates.

The following measures of current fertility are derived from birth history data and presented in this chapter: *Age-specific fertility rates*[1] (ASFR) are expressed as the number of births per thousand women in the age group and represent a valuable measure for assessing the current age pattern of childbearing. They are defined in terms of the number of live births during a specified period to women in the particular age group divided by the number of woman-years lived in that age group during the specified period. *Total fertility rate* (TFR) is defined as the total number of births a woman would have by the end of her childbearing period if she were to pass through those years bearing children at the currently observed rates of age-specific fertility. The TFR is obtained by summing the age-specific fertility rates and multiplying by five. *General fertility rate* (GFR) is the number of live births occurring during a specified period per 1,000 women age 15-44. *Crude birth rate* (CBR) is the number of births per 1,000 population during a specified period.

[1]Numerators of age-specific fertility rates are calculated by summing the live births that occurred in the 1-36 months preceding the survey (determined from the date of interview and date of birth of the child), and classifying them by the age of the mother (in five-year age groups) at the time of the child's birth. The denominators of these rates are the number of woman-years lived in each of the specified five-year age groups during the 1-36 months preceding the survey. Because only women who had ever married were interviewed in the TDHS-2008, the number of women in the denominator of the rates was inflated by factors calculated from information in the household questionnaire on the proportions ever married to produce a count of all women. In this procedure, never married women are presumed not to have given birth.

4.1 Current Fertility

Table 4.1 presents information on the current fertility levels for Turkey as a whole and for urban and rural areas. The total fertility rate for Turkey is 2.16 births per woman. This rate, which is just above the fertility replacement level (2.10), indicates that the fertility transition in Turkey is ongoing gradually but continuously. As expected, fertility is considerably higher in rural areas than urban areas. The TFR in rural areas is 2.68, which is 34 percent higher than the TFR in urban areas (2.00). When compared with results from previous demographic surveys, the urban-rural gap in fertility levels appears to be closing in Turkey.

Table 4.1 Current fertility

Age-specific and cumulative fertility rates, general fertility rate, and crude birth rate for the three years preceding the survey, by urban-rural residence, Turkey 2008

Age group	Urban	Rural	Total
15-19	32	47	35
20-24	116	159	126
25-29	128	150	133
30-34	86	107	91
35-39	32	51	36
40-44	7	18	10
45-49	0	4	1
TFR 15-49	2.00	2.68	2.16
GFR 15-44	71	92	76
CBR	18.4	19.4	18.6

Note: Rates are for the period 1-36 months preceding the survey.
TFR: Total fertility rate expressed per woman
GFR: General fertility rate expressed per 1,000 women
CBR: Crude birth rate expressed per 1,000 population

Considering the age pattern of fertility, the tendency for women to have children early in the childbearing period is still evident in Turkey (Table 4.1 and Figure 4.1). Approximately 70 percent of births take place before age 30. Births to women below age 20 and over age 35, to which morbidity and mortality risks related to pregnancy and birth are the highest, constitute about one-fifth of all births. The TDHS-2008 also documents an important shift in the age pattern of fertility, which is observed for the first time. While the highest age-specific fertility rates were observed in the 20-24 age groups in previous surveys, the 25-29 age group is the cohort with the highest age-specific fertility rate in the TDHS-2008. This picture shows that not only is the overall fertility level declining in Turkey, but also that the age patterns of fertility are changing, as childbearing is increasingly postponed to later ages.

At every age rural women bear more children than urban women. The rural age-specific fertility rates rise sharply from age 15-19 to the peak at age 20-24, and then gradually decline. On the other hand, the urban age-specific fertility rates exhibit a more gradual increase to a peak

in the 25-29 age groups, an indication both of delayed marriage and some deliberate attempt to postpone or terminate births by urban women.

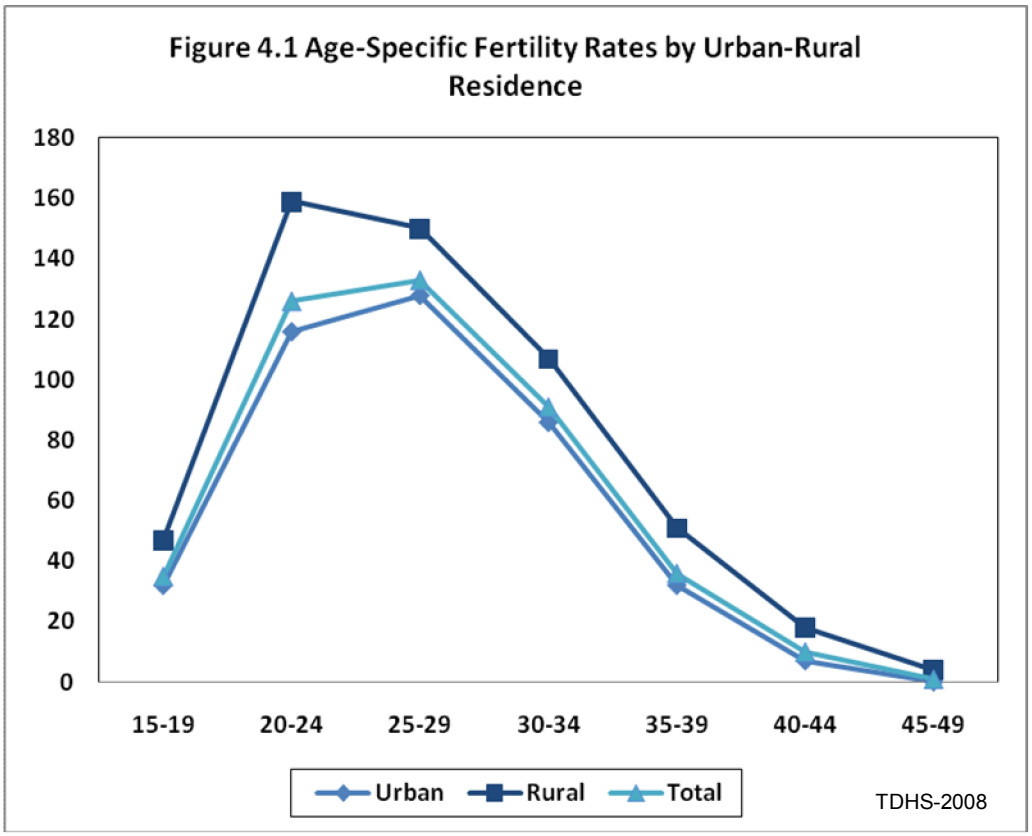


Table 4.1 also presents two other summary measures of fertility: the crude birth rate and the general fertility rate. The crude birth rate in Turkey is 18.6 births per 1,000 population. The GFR is 76 per 1,000 women age 15-44. As with TFR, the GFR and CBR also vary by urban-rural residence. Thus, with a GFR of 92, the average annual number of births to rural women is nearly 30 percent higher than that for urban women (71 births per 1,000 women). The CBR in rural areas (19.4 per 1,000) is somewhat higher than the CBR in urban areas (18.4 per 1,000).

4.2 Fertility Differentials

Table 4.2 shows several indicators of fertility, including the total fertility rate, the mean number of children ever born to women age 40-49, and the percentage of women age 15-49 who are currently pregnant, by key background characteristics. The mean number of children ever born to women age 40-49 is an indicator of cumulative fertility; it reflects the fertility performance of older women who are nearing the end of their reproductive period. If fertility remains stable over time, the two fertility measures, total fertility rate (TFR) and children ever born (CEB), tend to be very similar. On the other hand, if fertility levels have been falling, the TFR will be substantially lower than the mean CEB among women age 40-49. The percentage of women age 15-49 who are pregnant provides a useful additional measure of current fertility,

although it is recognized that it may not capture all early stage pregnancies since some women may be unaware of their pregnancy, or reluctant to disclose a pregnancy in its early stages.

Table 4.2 Fertility by background characteristics

Total fertility rate for the three years preceding the survey, percentage of women age 15-49 currently pregnant, and mean number of children ever born to women age 40-49 years, by background characteristics, Turkey 2008

Background characteristic	Total fertility rate	Percentage currently pregnant	Mean number of children ever born to women age 40-49
Residence			
Urban	2.00	3.7	3.10
Rural	2.68	4.7	3.93
Region			
West	1.73	3.6	2.80
South	2.09	3.7	3.26
Central	2.20	3.3	3.22
North	2.08	2.5	3.11
East	3.27	6.3	5.58
Region (NUTS 1)			
İstanbul	1.78	3.5	3.01
West Marmara	1.38	2.4	2.46
Aegean	1.91	3.4	2.75
East Marmara	1.80	4.2	2.73
West Anatolia	2.40	3.6	2.84
Mediterranean	2.09	3.7	3.26
Central Anatolia	2.09	3.0	3.92
West Black Sea	1.90	2.8	3.20
East Black Sea	2.10	1.8	3.20
Northeast Anatolia	2.59	4.5	5.27
Central East Anatolia	3.33	6.2	5.69
Southeast Anatolia	3.47	6.9	5.67
Education			
No education/Primary incomplete	2.65	4.5	4.96
First level primary	2.25	4.0	3.05
Second level primary	1.30	0.9	2.57
High school and higher	1.53	3.1	1.94
Wealth quintile			
Lowest	3.39	5.9	4.97
Second	2.51	5.0	3.83
Middle	2.19	3.7	3.24
Fourth	1.67	3.3	2.92
Highest	1.36	2.7	2.38
Total	2.16	3.9	3.31

Table 4.2 indicates that there are substantial variations in TFR by residence, region, education and wealth quintile. The regional variations in fertility are marked, ranging from a high of 3.27 births in the East to a low of 1.73 births in the West. All regions in Turkey, except the East and the Central regions, exhibit TFRs below 2.10, known as replacement level of fertility. Consistent with this finding, among all NUTS 1 regions, the fertility rates are below the replacement level, with the exception of the West Anatolia, and the regions located in the eastern part of Turkey. The TFR is inversely related to the level of education. The TFR decreases rapidly with increasing educational level, from 2.65 births among women with no education to 1.53 births among women who had completed high school or higher. Fertility also decreases with increasing wealth, from 3.39 births among women in the lowest wealth quintile to 1.36 births among women in the highest wealth quintile.

Table 4.2 also shows the mean number of children ever born (CEB) to women age 40-49. The comparison of the TFR with the mean CEB among women 40-49 suggests that fertility has fallen sharply in Turkey over the past two decades. Women age 40-49 had an average of 3.31 births during their lifetime, over one birth more than women bearing children will have at the current rates. The decline in fertility implied by a comparison of the current fertility with completed fertility has been greater in rural than in urban areas. The largest implied decline in fertility by region is observed in East region, where the TFR is more than 2 births lower than the mean number of children ever born to women 40-49. The differentials in completed fertility across educational groups are even more striking. The mean number of children ever born is 5 among women age 40-49 with no education, compared with just under 2 among the women who have completed high school or higher. With regard to the trend in fertility, the decline in fertility implied by a comparison of the TFR with the mean CEB is substantial for women in the lowest educational category (2.2 births). Considering wealth quintiles, the comparison suggests that during the past few decades, fertility has fallen by more than one child in all, with the greatest decline occurring among women in the lowest wealth quintile.

The TDHS-2008 results show that slightly less than 4 percent of all women at reproductive age were pregnant at the time of the survey. The regional variation in the proportion of pregnant women follows a pattern similar to that of fertility. Surprisingly, the percentage of women who were pregnant is higher for women with high school or higher education than for women with a second level primary education, as it was in the TDHS-2003. This may be due in part to the fact that, on average, highly-educated women are younger than women in the other education categories and thus more likely to be in the family-building stage than other women. The proportion of women currently pregnant declines as the level of household welfare of women, as represented in the wealth quintiles, rises (Table 4.2).

4.3 Fertility Trends

In addition to comparison of current and completed fertility, trends in fertility in Turkey can be assessed in two other ways. First, the TFR estimates from the TDHS-2008 can be compared with estimates obtained in earlier surveys. Second, fertility trends can be investigated by using the retrospective data from the birth histories collected in the same survey. This method of examining trends provides a basis for assessing the quality of data that were derived from successive surveys.

4.3.1 Comparison with Previous Surveys

A comparison of fertility rates obtained from previous demographic surveys conducted during 1978-2003 with the fertility rates from the TDHS-2008 is shown in the Table 4.3 and Figure 4.2. The surveys vary in the time frames for which the TFR estimates are available. For example, the rates from the 1978, 1988 and 1993 surveys are based on births in a one-year period before the survey, while the rates for the TDHS-1998, TDHS-2003 and TDHS-2008 surveys are based on a three-year period before the interview date.

Table 4.3 shows that both the level and pattern of fertility has changed during the 1978-2008 period. The total fertility rate in Turkey, which was over 4 during the late 1970s, decreased to 3 births during the late 1980s and, in the 1990s, stabilized around 2.6 births. The stabilization in fertility observed in the 1990s, gave way to a declining trend in the current decade and the level of fertility dropped to 2.16 births. These findings indicate that total fertility rate in Turkey has declined by 17 percent during the ten-year period between the 1998 and 2008 TDHS surveys. This reduction is especially striking, given the comparatively low overall fertility level during the decade. When the long-term fertility trend is considered, i.e., the trend for the 1978-2008 period, it is observed that total fertility rate decreased from 4.33 to 2.16 in Turkey. In other words, it has almost halved within this 30-year period.

Table 4.3 Trends in fertility

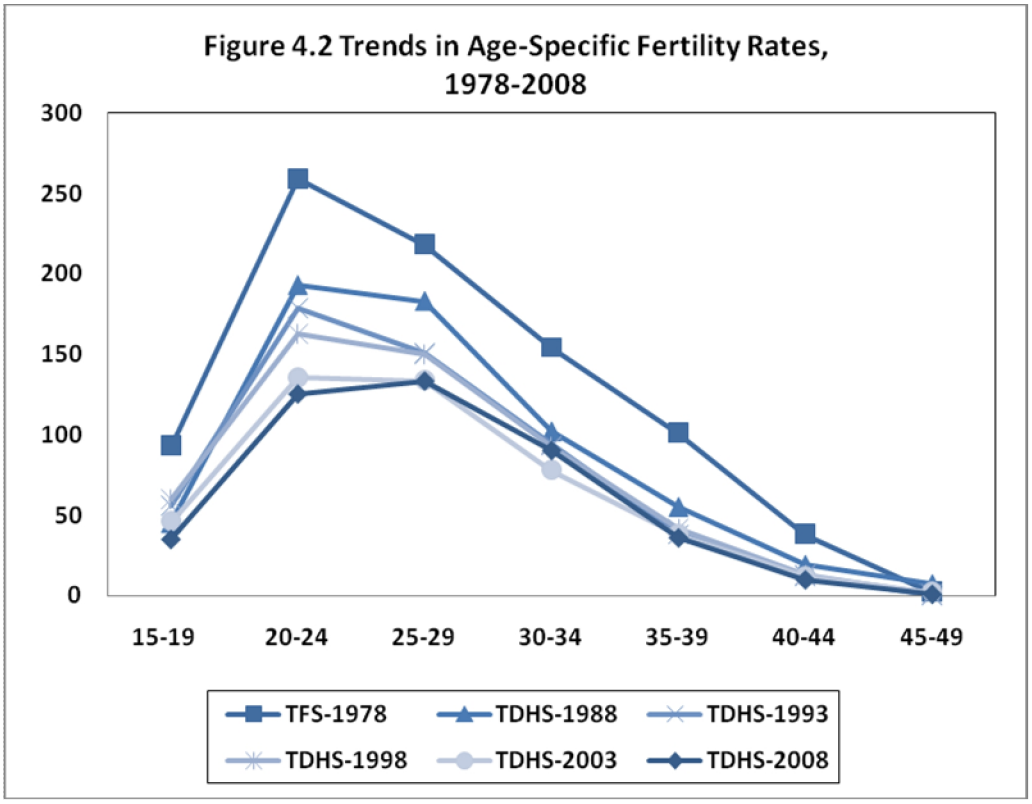
Age specific fertility rates (per 1,000 women) and total fertility rate, the 1978 Turkey Fertility Survey (TFS), the 1988 Turkey Population and Health Survey (TPHS), and the 1993, 1998, 2003 and 2008 Turkey Demographic and Health Surveys (TDHS)

Age at birth	TFS-1978	TPHS-1988	TDHS-1993	TDHS-1998	TDHS-2003	TDHS-2008
15-19	93	45	56	60	46	35
20-24	259	193	179	163	136	126
25-29	218	183	151	150	134	133
30-34	154	102	94	93	78	91
35-39	101	55	38	42	38	36
40-44	38	19	12	13	12	10
45-49	2	7	0	1	2	1
TFR 15 49	4.33	3.02	2.65	2.61	2.23	2.16

Note: 1978, 1988 and 1993 rates refer to the year before the survey; 1998, 2003 and 2008 rates refer to the 3-year period before the survey.

The trends in age-specific fertility rates for the period of 1978-2008 are presented in Figure 4.2. Between 1978 and 2008, there has been a pronounced decrease in the age-specific fertility rates in almost all age groups. Overall, the age pattern of fertility has not changed remarkably during this period; however, due to the especially marked decline in the fertility rate in 20-24 age group the fertility rate observed for the 25-29 age group is now higher than that of 20-24 cohort for the first time in Turkey. The shift in the peak childbearing rate from the 20-24 to 25-29 age group,

reflects the increased desire to postpone births to later ages and is one of the most striking results of fertility transition in Turkey. In line with this finding, when the variation in the age pattern of fertility between 2003 and 2008 is considered, the overall reduction in the total fertility rate during this period is mainly due to the declines that occurred in the fertility rates of women in younger age groups.



4.3.2 Retrospective Data from TDHS-2008 Birth Histories

One way of examining fertility trends over time is to compare age-specific fertility rates from the TDHS-2008 for successive five-year periods preceding the survey, as presented in Table 4.4 and Figure 4.3. The numerators of the rates are classified by five-year segments of time preceding the survey and the mother's age at the time of birth. Because women age 50 years and over were not interviewed in the TDHS-2008, the rates for older age groups become progressively more truncated for periods more distant from the survey date. For example, rates cannot be calculated for women age 35-39 for the period 15-19 years prior to the survey, because women in that age group would have been 50 years or older at the time of the survey and were not interviewed.

The age-specific fertility rates calculated over a 20-year time frame from the TDHS-2008 provide further evidence of a substantial decline in fertility at all ages. The results show that the fertility decline is proportionately greater for women in the prime childbearing ages of 20-29 than women in age 30 and above. Women in the prime childbearing ages experienced an 18 percent decline in fertility in the five years preceding the survey, as opposed to 12 percent

among women in the age 30 and above. This pattern appears to be in line with that of other populations experiencing fertility decline. What is perhaps more unusual is that there has also been 30 percent decline in fertility among women age 15-19 suggesting that women are waiting later to begin childbearing in Turkey.

Table 4.4 Age-specific fertility rates

Age-specific fertility rates for five-year periods preceding the survey, by mother's age, Turkey 2008

	Number of years preceding the survey			
Age at birth	0-4	5-9	10-14	15-19
15-19	38	55	62	80
20-24	129	155	186	207
25-29	127	148	157	169
30-34	89	93	98	[108]
35-39	38	46	[50]	
40-44	10	[17]		
45-49	[1]			

Note: Age-specific fertility rates are per 1,000 women. Estimates in brackets are truncated.

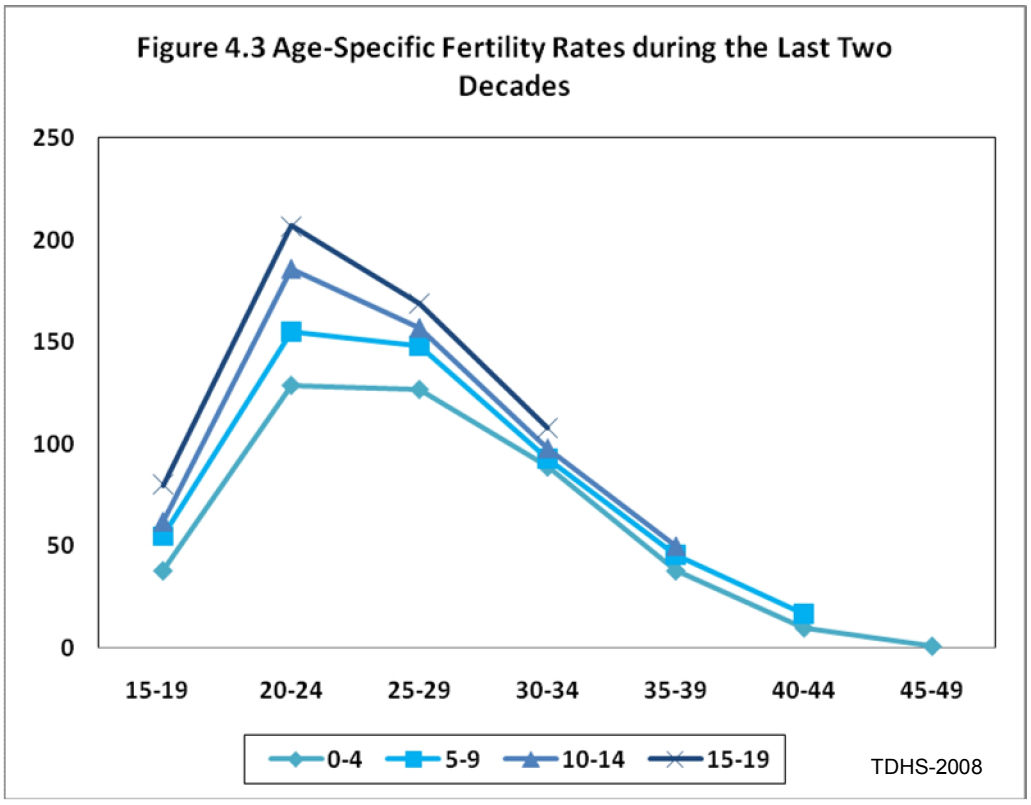


Table 4.5 presents fertility rates for ever-married women by duration since first marriage for five-year periods preceding the survey. The decline in fertility has occurred at all marital

durations; however, the decline was greatest among women with longer marital durations. This pattern is not unexpected. Fertility within the first several years of marriage typically remains resistant to change, even when fertility is declining, because fertility decline usually begins among older women who want to stop childbearing, not among young couples postponing births who are likely to have not yet achieved their desired family size.

Table 4.5 Fertility by marital duration

Fertility rates for ever-married women by duration since first marriage in years, for five-year periods preceding the survey, Turkey 2008

Marriage duration at birth	Number of years preceding the survey			
	0-4	5-9	10-14	15-19
0-4	260	291	307	316
5-9	143	149	181	193
10-14	80	91	100	133
15-19	40	53	69	[118]
20-24	15	23	[32]	[69]
25-29	3	[13]	[69]	

Note: Age-specific fertility rates are per 1,000 women. Estimates enclosed in brackets are truncated.

4.4 Children Ever Born and Children Surviving

Data on the number of children ever born reflect the accumulation of life time births women have given and therefore have limited relevance to current fertility levels, particularly when the country has experienced a decline in fertility. Moreover, the data are subject to recall error, which is typically greater for older than younger women. Nevertheless, the information on children ever born (or parity) is useful in looking at a number of issues. The parity data show how average family size varies across age groups. The percentage of women in their forties who have never had children also provides an indicator of the level of primary infertility or the inability to bear children. Voluntary childlessness is rare in developing countries like Turkey, so that married women in their late forties with no live births are predominantly those involuntarily. A comparison of the differences in the mean number of children ever born and surviving reflects the cumulative effects of mortality levels during the period in which women have been bearing children.

Table 4.6 shows the percent distribution of all women and currently married women by the number of children ever born and the mean number of children surviving. The distribution of children ever born by age shows that early childbearing is not common in Turkey: nearly 96 percent of women age 15-19 have never given birth. However, this proportion declines rapidly to 33 percent for women age 25-29, and to 7 percent or less among women age 35 and over. Only 2 percent of women age 45-49 have never given birth, indicating that childbearing among women in Turkey is nearly universal. Women who have reached the end of their reproductive period have 3.5 children which is 1.5 higher than the total fertility rate. This difference in between is due to the major decline in fertility that took place in the past decade.

Table 4.6 Children ever born and children surviving

Percent distribution of all women and of currently married women by number of children ever born (CEB) and mean number of children ever born and living, according to five-year age groups, Turkey 2008

Age group	Number of children ever born (CEB)											Total percent	Number of women	Mean number of CEB	Mean number of living children
	0	1	2	3	4	5	6	7	8	9	10+				
ALL WOMEN															
15-19	96.1	3.5	0.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	1,871	0.04	0.04
20-24	65.4	21.1	10.7	2.1	0.6	0.0	0.0	0.1	0.0	0.0	0.0	100.0	1,834	0.52	0.51
25-29	33.2	25.6	25.1	9.7	3.7	1.7	0.6	0.3	0.1	0.0	0.0	100.0	1,751	1.35	1.30
30-34	16.6	17.3	33.5	17.1	7.6	3.9	1.8	1.1	0.4	0.3	0.4	100.0	1,546	2.15	2.05
35-39	7.4	10.0	35.6	22.5	12.2	5.4	2.8	2.0	0.9	0.5	0.7	100.0	1,396	2.75	2.60
40-44	4.5	7.9	34.1	22.9	12.2	8.0	3.0	2.6	2.1	1.4	1.3	100.0	1,223	3.13	2.87
45-49	2.4	6.8	27.3	26.1	15.3	7.7	4.6	3.3	2.3	1.8	2.4	100.0	1,116	3.51	3.16
Total	37.4	13.8	22.2	12.7	6.4	3.3	1.5	1.1	0.7	0.5	0.5	100.0	10,738	1.70	1.60
CURRENTLY MARRIED WOMEN															
15-19	59.3	36.5	3.7	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	180	0.46	0.45
20-24	24.0	45.8	23.9	4.6	1.3	0.1	0.0	0.3	0.0	0.0	0.0	100.0	820	1.15	1.13
25-29	12.9	32.8	33.1	12.9	4.8	2.3	0.7	0.4	0.1	0.0	0.0	100.0	1,314	1.76	1.71
30-34	5.5	19.0	37.9	19.7	8.9	4.5	2.1	1.2	0.5	0.4	0.5	100.0	1,326	2.45	2.34
35-39	2.7	9.7	37.5	23.8	13.2	5.8	3.0	2.0	0.9	0.6	0.7	100.0	1,262	2.90	2.74
40-44	2.3	7.0	34.6	24.3	12.7	8.1	3.0	2.9	2.3	1.4	1.5	100.0	1,096	3.25	2.99
45-49	2.2	5.8	27.1	27.2	14.7	8.0	4.7	3.3	2.5	1.9	2.6	100.0	1,002	3.57	3.22
Total	9.0	19.7	32.3	18.7	9.2	4.7	2.2	1.6	1.0	0.7	0.8	100.0	6,999	2.49	2.33

Generally, fertility levels of currently married women are higher for all age groups, especially younger ones. Overall, currently married women age 15-49 have had an average of 3.6 children compared with 3.5 children among all women. Since only ever-married women were interviewed in the TDHS-2008, information on the reproductive histories of never-married women is not available. However, virtually all births in Turkey occur within marriage; thus, in calculating these fertility measures for all women, never-married women were assumed to have had no births. The marked differences between the results for currently married women and for all women at the younger ages are due to the comparatively large numbers of never-married women in those age groups who, as noted, are assumed to have had no births.

Consistent with expectations, the mean number of children ever born and mean number of living children rise consistently with increasing age of women, thus presupposing minimal or no recall lapse, which reinforces confidence in the birth history reports. Comparison of the mean number of children ever born with the mean number of living children reveals the experience of child loss among women in Turkey. By the end of their reproductive years (age 45-49), women in Turkey have given birth, on average, to 3.5 children, with 3.2 surviving. This confirms that survival probability of children increases continuously in Turkey.

Voluntary childlessness is uncommon in Turkey and currently married women with no children are likely to be those who are unable to bear children. The level of childlessness among married women at the end of their reproductive period can be used as an indicator of the level of primary sterility. The TDHS-2008 results indicate that, in Turkey, primary sterility among older currently married women is 2 percent.

4.5 Birth Intervals

Examination of birth intervals, defined as the length of time between two successive live births, is important in providing insights into birth spacing patterns, which in turn provides information on mother and child health.Short birth intervals increase the risks of maternal and child mortality. Studies have shown that children born less than 24 months after a previous sibling are under risk of poorer health. Short birth intervals also threaten maternal health.

Table 4.7 shows the percent distribution of non-first births that occurred in the five years preceding the TDHS-2008 by the number of months since the previous birth. Findings point out long birth intervals in Turkey, and a median birth interval of 44 months. Lengthy breastfeeding and a long period of postpartum amenorrhea are likely to contribute to the relatively high percentage of long birth intervals births in Turkey. Approximately three-fifths of non-first births occur three or more years after the previous birth, while slightly more than one-fifth of births take place 24-35 months after the previous birth. One fifth of children are born after an interval that is considered "too short," i.e., less than 24 months. A comparison with TDHS-2003 shows that there has been progress on this issue (27 percent). The median birth interval also increased by 22 percent between the surveys, rising from 36 months at the time of the TDHS-2003 to 44 months in the 2008 survey.

Birth intervals do not vary much by sex of the preceding child. In general younger women have shorter birth intervals than older women. While 29 percent of women age 20-29 space their births less than 24 months apart, the corresponding statistic for women 30- 39 is 13 percent. Birth intervals also increase with the child's birth order. The birth interval varies markedly by the survival status of the preceding birth. More than four times as many births occurred within an 18-month interval when the preceding child had died than when the child was still alive. The median birth interval is 45 months if the previous child is living, but falls to 25 months if the preceding child is dead.

In general, variations in birth intervals by residence, region, education, and wealth are consistent with differences in fertility levels; i.e., birth intervals are shorter when the TFR is high and longer when TFR is low. Thus, births to urban mothers have a longer median interval than rural births (47.8 months and 34.2 months, respectively). Median birth intervals are shortest in the regions located in the eastern part of Turkey (31-33 months), and significantly longer in West Marmara and West Black Sea regions (56 months each). Births to mothers with with less than primary education have shorter intervals than births to mothers who have high school or higher education. For example, whereas 30 percent of births to mothers who did not attend school or did not complete the first primary level are born less than 24 months after their older sibling, the corresponding statistic for women with high school or higher education is 15 percent. It is worth noting that the percentage of birth intervals shorter than 24 months is low for first level primary school graduates. The median birth interval increases with the wealth quintile, from 30.3 months among non-first births in the lowest wealth quintile to 69.4 months in the highest quintile.

Table 4.7 Birth intervals

Percent distribution of non-first births in the five years preceding the survey by number of months since previous birth, according to demographic and socioeconomic characteristics, Turkey 2008

Background characteristic	Number of months since previous birth						Total	Number of non-first births	Median number of months since previous birth
	7-17	18-23	24-35	36-47	48-59	60+			
Age group									
20-29	15.7	13.1	27.0	19.2	10.8	14.2	100.0	1,032	32.8
30-39	6.8	5.8	15.3	10.6	14.8	46.7	100.0	1,047	56.5
40+	5.8	9.6	15.8	8.8	6.2	53.8	100.0	144	63.5
Birth order									
2-3	10.2	9.1	18.6	15.0	13.2	33.8	100.0	1,545	45.7
4-6	12.2	9.0	24.1	12.3	11.4	31.0	100.0	533	40.5
7+	13.6	15.3	31.9	15.7	7.1	16.3	100.0	152	31.9
Sex of prior birth									
Male	11.4	9.7	19.4	14.4	12.0	33.1	100.0	1,137	44.7
Female	10.4	9.3	22.4	14.5	12.7	30.8	100.0	1,094	42.9
Survival of prior birth									
Living	9.9	9.5	20.6	14.7	12.5	32.7	100.0	2,147	44.6
Dead	37.7	8.5	25.4	6.6	9.9	12.0	100.0	84	25.3
Residence									
Urban	9.3	7.5	19.0	14.4	13.1	36.7	100.0	1,535	47.8
Rural	14.5	13.9	24.9	14.4	10.8	21.4	100.0	696	34.2
Region									
West	9.1	4.2	19.7	13.7	14.1	39.2	100.0	695	51.8
South	9.8	8.7	21.6	14.4	14.4	31.1	100.0	303	45.2
Central	7.8	8.0	14.3	14.5	12.2	43.2	100.0	441	52.0
North	7.9	10.6	12.9	11.4	24.3	32.8	100.0	114	51.3
East	15.8	16.0	27.3	15.7	7.7	17.5	100.0	679	31.5
Region (NUTS 1)									
İstanbul	6.2	2.7	23.2	11.8	14.3	41.9	100.0	327	53.0
West Marmara	3.2	1.6	18.8	14.0	13.4	48.9	100.0	41	56.3
Aegean	12.0	5.3	20.6	13.3	13.4	35.4	100.0	272	47.1
East Marmara	9.4	5.4	9.5	18.3	16.5	40.8	100.0	144	54.6
West Anatolia	9.0	8.4	12.1	14.3	14.0	42.3	100.0	214	52.8
Mediterranean	9.8	8.7	21.6	14.4	14.4	31.1	100.0	303	45.2
Central Anatolia	8.3	12.3	15.9	18.7	8.7	36.2	100.0	105	44.0
West Black Sea	7.0	10.1	12.5	10.6	14.9	44.8	100.0	95	56.2
East Black Sea	8.0	9.4	12.7	9.2	28.0	32.7	100.0	52	51.6
Northeast Anatolia	15.7	13.4	28.3	14.8	8.0	19.9	100.0	93	32.3
Central East Anatolia	16.1	14.1	27.3	18.2	6.4	17.9	100.0	182	32.6
Southeast Anatolia	15.7	17.5	27.0	14.8	8.2	16.8	100.0	404	30.6
Education									
No educ./Prim. inc.	14.2	15.3	26.9	15.6	10.2	17.7	100.0	622	32.8
First level primary	9.5	7.5	20.4	14.6	13.4	34.6	100.0	1,173	46.2
Second level primary	10.2	10.1	17.8	13.8	12.3	35.9	100.0	138	46.8
High school and higher	10.1	5.0	11.2	11.6	12.7	49.4	100.0	299	59.3
Wealth quintile									
Lowest	16.0	16.5	29.0	14.9	8.6	15.0	100.0	658	30.3
Second	12.0	9.2	25.0	16.0	11.1	26.7	100.0	556	39.1
Middle	11.3	7.3	18.3	13.0	18.9	31.2	100.0	383	48.1
Fourth	3.8	5.6	13.1	17.8	12.4	47.2	100.0	339	57.4
Highest	5.2	1.9	6.9	8.5	14.6	63.0	100.0	296	69.4
Total	10.9	9.5	20.8	14.4	12.4	32.0	100.0	2,231	44.0

Note: First-order births are excluded. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth.

Note: Total includes 8 non-first births to women 15-19, which are not shown separately.

4.6. Age at First Birth

The age at which childbearing commences is an important determinant of the overall level of fertility as well as the health and welfare of the mother and child. Women who marry early are typically exposed to the risk of pregnancy for a longer period, especially when there is little or no contraceptive use. Thus, early childbearing generally leads to a larger family size than later onset of childbearing. A rise in the median age at first birth is typically a sign of transition from high to low fertility. Early childbearing also tends to restrict educational and economic opportunities for women.

Table 4.8 presents the percentages of all women by exact age at first birth for different age cohorts. Women under age 25 were not included in the calculation of median ages at first birth because more than half had not yet given birth. Overall, the TDHS-2008 found that, for women 25-49 years old, median age at first birth was 22.3 years. A comparison with the TDHS-2003 results, where the median age was 21.8 years, indicates that the average age at which women have their first birth increased by a half year during the five-year period between the surveys.

An examination of the variations in the median age at first birth across age cohorts shown in the last column of Table 4.8 indicates that the age at first birth has been continuously increasing over the past several decades in Turkey. Women in younger age groups are more likely to give their first births at later ages than women in older age groups. Women aged 25-29 (median age 23.9) give birth for the first time one year later on average than women aged 30-34 (23.0), and 3 years later than women aged 45-49 (21.0). Further evidence of a trend toward delayed onset of childbearing among younger women is found in the changes across age cohorts in the percentages giving birth for the first time at various ages: for example, while 19 percent of women age 45-49 had their first birth by exact age 18, only 7-8 percent of women in the age groups 20-24 and 25-29 had started childbearing by the same age.

Table 4.8 Age at first birth

Percentage of women who gave birth by specific exact ages, and median age at first birth, by current age, Turkey 2008

Current age	Percentage who gave birth by exact age					Percentage who have never given birth	Number of women	Median age at first birth
	15	18	20	22	25			
15-19	0.1	NA	NA	NA	NA	96.1	1,871	a
20-24	0.7	6.9	17.2	NA	NA	65.4	1,834	a
25-29	0.5	8.0	21.9	36.9	56.6	33.2	1,751	23.9
30-34	1.0	10.8	26.6	43.9	64.1	16.6	1,546	23.0
35-39	1.3	11.3	29.3	51.5	72.1	7.4	1,396	21.9
40-44	2.2	15.4	32.0	50.8	72.4	4.5	1,223	21.9
45-49	1.8	18.5	38.9	60.1	79.3	2.4	1,116	21.0
25-49	1.3	12.2	28.9	47.4	67.7	14.5	7,033	22.3

NA = Not applicable due to censoring
a = Omitted because less than 50 percent of women had a birth before reaching the beginning of the age group

Table 4.9 presents differentials in the median age at first birth by background characteristics according to the mother's age at the time of the survey. The median age at first

birth is higher in urban areas than in rural areas, with a difference of almost one and a half years for all women age 25-49. The results indicate that the urban-rural difference in median age at first birth has increased over time, with a gap of more than two years among younger (25-29) than compared to less than a year among older women (45-49). Among region of residence, İstanbul has the highest median age at first birth (22.9 years) for women age 25-49, while the Central Anatolia Region has the lowest median age at first birth (21.0 years). This indicates that women in the Central Anatolia Region initiated childbearing approximately two years earlier on average than women in İstanbul. There is a positive relationship between educational attainment and median age at first birth. Women with at least second level primary education begin childbearing more than two years (22.7 years) later than women with no education (20.5 years). The data also show that women who belong to the wealthiest quintile had their first child 3 years later than women in the poorest quintile.

Table 4.9 Median age at first birth

Median age at first birth among women age 25-49 years, by current age, according to background characteristics, Turkey 2008

	Current age					Women age
Background characteristic	25-29	30-34	35-39	40-44	45-49	25-49
Residence						
Urban	24.4	23.3	22.0	22.2	21.2	22.7
Rural	22.2	21.6	21.0	21.2	20.4	21.3
Region						
West	24.6	23.7	22.2	22.4	21.3	22.8
South	22.9	22.9	22.5	22.5	22.1	22.7
Central	23.1	22.0	20.9	20.9	20.0	21.4
North	24.6	23.6	22.3	22.5	21.6	22.9
East	22.9	21.6	21.0	21.3	19.8	21.6
Region (NUTS 1)						
İstanbul	a	23.9	21.8	22.8	21.0	22.9
West Marmara	24.2	23.0	22.9	22.4	20.6	22.5
Aegean	23.2	22.6	22.3	21.4	21.2	22.0
East Marmara	a	24.5	21.4	21.9	21.9	23.1
West Anatolia	23.1	22.5	21.8	21.9	20.6	22.2
Mediterranean	22.9	22.9	22.5	22.5	22.1	22.7
Central Anatolia	22.4	21.0	20.7	20.5	20.0	21.0
West Black Sea	24.3	22.4	21.8	21.3	20.5	22.0
East Black Sea	24.0	24.0	22.5	22.4	22.0	22.8
Northeast Anatolia	22.3	22.5	21.0	20.2	21.2	21.5
Central East Anatolia	23.2	21.2	21.4	22.0	20.6	21.8
Southeast Anatolia	23.1	21.5	20.7	21.0	18.9	21.4
Education						
No educ./Primary incomplete	23.0	20.6	20.4	20.3	19.7	20.5
First level primary	23.0	21.7	21.6	21.5	20.7	21.7
Second level primary	a	23.7	21.4	21.2	20.7	22.7
High school and higher	a	26.2	25.0	24.6	23.8	a
Wealth quintile						
Lowest	21.3	20.9	20.7	21.6	19.9	20.9
Second	21.8	21.6	21.1	21.7	20.7	21.4
Middle	23.8	22.0	21.8	21.1	20.7	22.0
Fourth	24.2	23.0	21.8	21.9	20.8	22.3
Highest	a	24.8	23.3	23.0	22.3	24.0
Total	21.3	20.9	20.7	21.6	19.9	20.9

Note: The medians for cohorts 15-19 and 20-24 could not be determined because some women may still have a birth before reaching age 20 or 25, respectively.
a=Median ages at first birth for women in some of the categories in the age groups 25-29 and 25-49 cannot be calculated because less than half of these women had a first birth before age 25.

4.7 Teenage Pregnancy and Motherhood

The issue of adolescent fertility is important for both health and social reasons. Adolescent childbearing has potentially negative demographic and social consequences. Children born to very young mothers face an increased risk of illness and death. Teenage mothers, especially those under age 18, are more likely to experience adverse pregnancy outcomes and maternity-related mortality than more mature women. In addition, early childbearing limits a teenager's ability to pursue educational opportunities and can limit access to job opportunities.

Table 4.10 Teenage pregnancy and motherhood

Percentage of women age 15-19 who have had a live birth or who are pregnant with their first child and percentage who have begun childbearing, by background characteristics, Turkey 2008

Background characteristic	Percentage who		Percentage who have begun childbearing	Number of women
	Have had a live birth	Are pregnant with first child		
Current age				
15	0.4	0.0	0.4	404
16	1.7	0.5	2.2	392
17	1.3	3.1	4.4	304
18	6.6	3.1	9.7	410
19	9.4	3.5	12.9	360
Residence				
Urban	3.1	1.9	5.0	1,386
Rural	6.5	2.1	8.6	476
Region				
West	3.8	1.8	5.5	711
South	3.2	1.3	4.5	265
Central	4.2	3.3	7.5	326
North	3.1	1.5	4.6	121
East	4.4	1.8	6.1	472
Region (NUTS 1)				
İstanbul	3.3	1.7	5.0	353
West Marmara	4.7	1.2	5.9	56
Aegean	4.8	4.5	9.3	140
East Marmara	2.5	1.3	3.9	224
West Anatolia	2.6	5.0	7.6	80
Mediterranean	3.2	1.3	4.5	265
Central Anatolia	6.4	1.6	7.9	136
West Black Sea	5.0	3.3	8.3	86
East Black Sea	2.7	0.4	3.1	84
Northeast Anatolia	3.9	1.3	5.2	93
Central East Anatolia	7.3	3.1	10.4	91
Southeast Anatolia	3.6	1.5	5.1	287
Education				
No education/Primary incomplete	5.5	1.6	7.2	424
First level primary	3.4	4.2	7.6	297
Second level primary	0.7	0.3	1.0	4,440
High school and higher	2.6	1.3	3.9	356
Wealth quintile				
Lowest	6.1	1.9	8.0	416
Second	6.8	4.3	11.1	338
Middle	3.3	1.4	4.8	448
Fourth	2.0	2.3	4.3	291
Highest	1.4	0.4	1.7	300
Total	3.9	2.0	5.9	1,871

Table 4.10 shows the percentage of women age 15-19 who are mothers or are pregnant with their first child by background characteristics. Teenagers who have never married are assumed to have had no pregnancies and no births. The TDHS-2008 shows that 6 percent of adolescents have started childbearing: 4 percent have had a live birth, and 2 percent are currently pregnant with their first child. Since TDHS-2003, there has been an important decline in the proportion of adolescents who have begun childbearing, from 8 percent to the current level of 6 percent.

The proportion of teenagers who have started having children increases rapidly with age. While less than 1 percent of women age 15 have started childbearing, 13 percent of women age 19 is either a mother or is pregnant with their first child. Rural teenagers are more likely than urban teenagers to have started childbearing (9 percent compared with 5 percent). Teenage childbearing varies significantly across region of residence, ranging from 3 percent in East Black Sea Region to 10 percent in Central East Anatolia. Surprisingly, as in the TDHS-2003 (13 percent), women in the Aegean Region have one of the highest levels of teenage childbearing in Turkey, with 9 percent.

There is an inverse relationship between early childbearing and education. Teenagers with less education are more likely to start childbearing earlier than better-educated women; 7 percent of teenagers with no education had begun childbearing compared with 4 percent of those with high school and higher education. By wealth status, the proportion of teenagers who have begun childbearing increases from 2 percent among those living in households in the highest wealth quintile to 8-11 percent among those in the second and lowest wealth quintiles.

FAMILY PLANNING 5

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One of the major objectives of the TDHS-2008 is to assess the level of knowledge and use of contraceptive methods in Turkey among women of reproductive ages. This chapter focuses on the findings of the TDHS-2008 with respect to knowledge, attitudes and past and current use of different family planning methods. Also, the timing of sterilization is reviewed for those who rely on this method with the purpose of family planning. Special attention is focused on source of contraception, informed choice, nonuse, reasons for discontinuation and intention of future use.

5.1 Knowledge of Family Planning Methods

Having adequate information about the family planning methods is crucial in the decision on whether to use a contraceptive method and which method to use. To have familiarity with the contraceptive methods is also an important step, at first toward gaining access to and then using the right contraceptive method. Information about knowledge of contraceptive methods was collected by asking the respondent to name all of the methods or ways they have ever known or heard of by which a couple could delay or avoid pregnancy. For methods which were not mentioned spontaneously, a description of the method was then read by the interviewer and the respondents were asked if they had heard of the method. In this report contraceptive methods are grouped into two types as modern and traditional. Modern methods include: female sterilization, male sterilization, the pill, intrauterine device (IUD), injectables, implants, male condom, female condom, diaphragm, and emergency contraception. Traditional methods include: rhythm method (periodic abstinence) and withdrawal. Any other method mentioned by the respondent was also recorded, including lactational amenorrhoea and folk methods named spontaneously by the respondent. However, it is noteworthy that information obtained through these questions does not reflect the quality of the knowledge. Therefore, information on "knowledge of a family planning method" is simply a sign of having heard of that method.

The level of knowledge of contraceptive methods among ever-married women and currently married women by specific methods is presented at Table 5.1. Knowledge of at least one family planning method is almost universal among women; there is almost no difference in the proportions of currently married and ever-married women who have heard a family planning method. Almost all women also know at least one modern method. The most widely known modern methods among both ever-married and currently married women are the IUD (98 percent), the pill (98 percent), male condom (92 percent), female sterilization (92 percent) and injectables (84 and 85 percent respectively for ever and currently married women). Among modern methods, female condom and emergency pills which are new methods for Turkey appear as the least known methods (17 percent and 29 percent respectively). Among traditional

methods, knowledge of withdrawal is widespread with at least 92 percent of ever-married and currently married women.

The mean numbers of methods recognized by ever-married and currently married women are similar; on average, each ever-married and currently married woman know 7.7 methods.

Table 5.1 Knowledge of contraceptive methods

Percentage of ever-married women and of currently married women age 15-49 who know any contraceptive method, by specific method, Turkey 2008

Method	Ever-married women	Currently married women
Any method	99.7	99.8
Any modern method	99.5	99.6
Female sterilization	91.5	91.6
Male sterilization	43.0	42.8
Pill	97.8	98.0
IUD	97.9	98.0
Injectables	84.4	84.9
Implants	41.1	41.0
Male condom	92.1	92.3
Female condom	17.1	17.0
Diaphragm	34.7	34.8
Emergency contraception	29.1	29.2
Any traditional method	93.4	93.6
Periodic abstinence	42.9	42.7
Withdrawal	92.0	92.4
Folk method	6.7	6.7
Mean number of methods known	7.7	7.7
Number of women	7,405	6,999

In Table 5.2, the percentage of currently married women who know any method of contraception and any modern method are presented by background characteristics. In all age groups, residential areas, education levels and wealth categories knowledge of any method and any modern method is widespread with at least 98 percent of currently married women having heard of at least one method of contraception and one modern method.

Table 5.2 Knowledge of contraceptive methods by background characteristics

Percentage of currently married women age 15-49 who have heard of at least one contraceptive method and who have heard of at least one modern method by background characteristics, Turkey 2008

Background characteristic	Heard of any method	Heard of any modern method	Number of women
Age			
15-19	99.4	99.1	180
20-24	99.9	99.8	820
25-29	100.0	99.7	1,314
30-34	99.7	99.4	1,326
35-39	99.9	99.8	1,262
40-44	99.8	99.7	1,096
45-49	99.3	99.1	1,002
Residence			
Urban	99.9	99.8	5,284
Rural	99.5	99.0	1,716
Region			
West	99.9	99.8	3,049
South	99.5	99.1	849
Central	100.0	99.8	1,542
North	100.0	99.8	455
East	99.3	99.0	1,105
Region (NUTS 1)			
İstanbul	100.0	99.8	1,379
West Marmara	99.6	99.6	308
Aegean	100.0	99.8	1,010
East Marmara	99.8	99.8	722
West Anatolia	100.0	99.9	679
Mediterranean	99.5	99.1	849
Central Anatolia	99.8	99.4	356
West Black Sea	100.0	100.0	416
East Black Sea	100.0	99.5	180
Northeast Anatolia	100.0	99.7	188
Central East Anatolia	98.7	97.9	318
Southeast Anatolia	99.5	99.3	594
Education			
No education/Primary incomplete	99.1	98.4	1,274
First level primary	99.9	99.8	3,671
Second level primary	99.9	99.9	594
High school and higher	100.0	100.0	1,461
Wealth quintile			
Lowest	99.0	98.3	1,094
Second	99.7	99.2	1,366
Middle	100.0	99.9	1,475
Fourth	100.0	100.0	1,512
Highest	100.0	100.0	1,553
Total	99.8	99.6	6,999

5.2 Ever Use of Contraceptive Methods

Women interviewed in the TDHS-2008 who said that they had heard of a method of family planning were asked whether they had ever-used that method. Ever use of family planning methods is defined as the use of a contraceptive method at any time during a woman's reproductive years.

Table 5.3 shows the percentages of ever-married and currently married women who have ever used any contraceptive method by specific method and age. Overall, 91 percent of both ever-married and currently married women have used a family planning method at some time. Ever use of modern method (78 percent) and traditional method (64 percent) is slightly higher for currently married women compared to the ever use of these methods for ever-married women (77 percent and 63 percent). The methods most commonly ever used by ever-married women are withdrawal (61 percent), male condom (43 percent), IUD (41 percent) and the pill (34 percent). These are also the most widely used methods among currently married women; however, the percentages who have ever used of withdrawal (62 percent), male condom (44 percent), are slightly higher among currently married women compared to the levels among ever-married women.

Table 5.3 Ever use of contraception

Percentage of ever-married women and of currently married women age 15-49 who have ever used any contraceptive method by specific method, according to age, Turkey 2008

			Modern method										Traditional method				
Age	**Any method**	**Any modern method**	Female sterilization	Male sterilization	Pill	IUD	Injectables	Implants	Male condom	Female condom	Diaphragm	Emergency contraception	**Any traditional method**	Periodic abstinence	Withdrawal	Other	Number of women
							EVER MARRIED WOMEN										
15-19	62.3	38.4	0.0	0.0	9.8	5.3	2.8	0.0	26.3	0.0	0.0	1.6	50.0	3.3	48.2	1.4	183
20-24	84.0	65.5	0.6	0.0	24.0	20.0	5.8	0.1	46.3	0.0	1.1	1.3	62.4	2.6	61.1	1.4	836
25-29	92.4	76.9	3.5	0.0	32.6	30.1	9.5	0.4	51.8	0.1	1.5	3.9	67.9	6.6	66.1	1.3	1,353
30-34	92.9	81.0	7.4	0.0	37.6	44.1	10.8	0.2	50.0	0.3	3.1	3.3	66.4	9.2	64.0	1.8	1,379
35-39	93.3	83.5	13.3	0.2	35.4	51.1	8.3	0.1	41.7	0.0	3.4	1.7	62.7	7.3	60.7	1.3	1,336
40-44	90.9	79.1	12.6	0.2	36.4	50.5	5.1	0.3	38.0	0.2	6.4	2.3	60.9	8.1	58.5	1.7	1,202
45-49	90.8	76.1	11.1	0.1	40.8	48.2	4.5	0.1	29.1	0.3	6.7	0.7	59.6	8.5	56.6	2.2	1,115
Total	90.5	76.9	8.2	0.1	34.4	40.8	7.5	0.2	42.7	0.2	3.6	2.3	63.2	7.2	61.1	1.6	7,405
							CURRENTLY MARRIED WOMEN										
15-19	62.4	38.5	0.0	0.0	9.4	5.4	2.9	0.0	26.7	0.0	0.0	1.6	50.0	3.4	48.0	1.5	180
20-24	84.3	65.6	0.6	0.0	23.6	20.0	5.8	0.1	46.3	0.0	1.2	1.3	62.6	2.7	61.3	1.5	820
25-29	92.4	77.0	3.6	0.0	32.5	30.2	9.3	0.4	51.9	0.1	1.4	3.8	67.7	6.5	66.0	1.3	1,314
30-34	93.5	81.7	7.6	0.0	37.5	44.3	10.8	0.2	50.5	0.4	3.0	3.0	67.2	9.6	64.7	1.8	1,326
35-39	94.2	84.2	13.5	0.2	35.4	51.3	7.6	0.1	42.6	0.1	3.4	1.4	64.0	7.4	62.2	1.3	1,262
40-44	93.1	81.1	13.1	0.2	37.1	51.1	5.5	0.3	39.5	0.0	6.4	2.1	62.7	8.8	60.4	1.6	1,096
45-49	92.1	77.7	11.5	0.2	41.1	48.5	5.0	0.1	30.6	0.3	7.0	0.8	61.0	8.5	58.5	1.9	1,002
Total	91.3	77.6	8.3	0.1	34.3	40.7	7.5	0.2	43.7	0.1	3.6	2.2	64.2	7.4	62.1	1.6	6,999

Note: Other includes folk methods and LAM.

Across age groups, ever use of any family planning method is the lowest among ever-married and currently married women in the 15-19 age group. After age 25, the percentages who have ever used family planning exceeds 90 percent in all cohorts.

5.3 Current Use of Contraceptive Methods

As shown in Table 5.4, the contraceptive prevalence rate (percentage of currently married women age 15-49 who are currently using any method of family planning) at the time of the survey is 73 percent. Forty-six percent of currently married women use a modern contraceptive while 27 percent use a traditional method.

Table 5.4 Current use of contraception by age

Percent distribution of currently married women age 15-49 by contraceptive method currently used, according to age, Turkey 2008

			Modern method										Traditional method					
Age	**Any method**	**Any modern method**	Female sterili-zation	Male steriliz-ation	Pill	IUD	In-ject-ables	Im-plants	Male con-dom	Female con-dom	Dia-phragm	**Any tradi-tional method**	Perio-dic anst nence	With-drawal	Other	**Not currently using**	Total	Number of women
15-19	40.2	17.6	0.0	0.0	4.0	3.8	0.8	0.0	9.1	0.0	0.0	22.6	0.0	21.1	1.4	59.8	100.0	180
20-24	63.4	37.4	0.6	0.0	5.8	11.7	1.2	0.0	18.1	0.0	0.0	26.0	0.0	25.6	0.4	36.6	100.0	820
25-29	73.6	47.2	3.6	0.0	7.3	15.9	1.7	0.2	18.4	0.0	0.1	26.3	0.5	25.6	0.3	26.4	100.0	1,314
30-34	78.6	51.5	7.6	0.0	8.4	18.8	1.1	0.0	15.4	0.1	0.1	27.1	0.6	26.5	0.1	21.4	100.0	1,326
35-39	83.8	57.2	13.5	0.2	5.1	23.0	0.5	0.0	14.6	0.0	0.2	26.6	0.7	25.6	0.4	16.2	100.0	1,262
40-44	78.7	46.0	13.1	0.2	2.4	18.8	0.4	0.0	11.1	0.0	0.1	32.6	0.8	31.8	0.0	21.3	100.0	1,096
45-49	58.9	35.1	11.5	0.2	2.1	12.4	0.2	0.0	8.4	0.0	0.3	23.8	0.8	22.8	0.2	41.1	100.0	1,002
Total	73.0	46.0	8.3	0.1	5.3	16.9	0.9	0.0	14.3	0.0	0.1	27.0	0.6	26.2	0.2	27.0	100.0	6,999

Note: Other includes folk methods and LAM.

The findings indicate that around one in every four currently married women uses withdrawal. The most commonly used modern method among currently married women is IUD, which is used by 17 percent of women. The second most widely used modern method is male condom (14 percent). It is also noteworthy that female sterilization is used by 8 percent of currently married women, which is a larger proportion than that using the pill (5 percent).

Use of any contraceptive method varies by age of women. Current use of any method is lowest among currently married women age 15-19 (40 percent), then rises to a peak of 84 percent in the 35-39 age group and subsequently declines to 59 percent among currently married women age 45-49. The most popular method among women at all ages is withdrawal; withdrawal use peaks at 32 percent among women age 40-44. The highest IUD use rate is found among women age 35-39 age group (23 percent).

Table 5.5 Current use of contraception by background characteristics

Percent distribution of currently married women age 15-49 by contraceptive method currently used, according to background characteristics, Turkey 2008

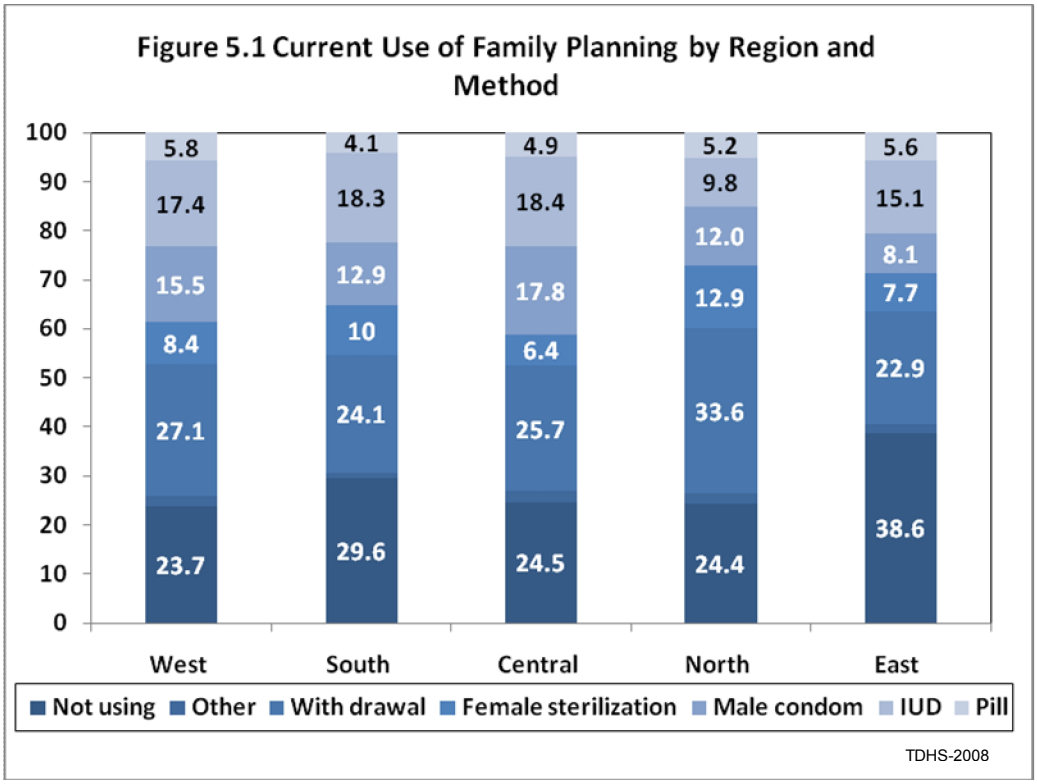
Background characteristic	Any method	Any modern method	Modern method									Any traditional method	Traditional method			Not Currently using	Total	Number of women
			Female steril.	Male steril.	Pill	IUD	Injectables	Implants	Male condom	Female condom	Diaphragm		Rhythm	Withdrawal	Other			
Number of living children																		
0	28.0	15.2	0.3	0.0	4.8	0.3	0.0	0.0	9.8	0.0	0.0	12.8	0.6	12.0	0.3	72.0	100.0	636
1-2	78.1	49.0	4.1	0.1	5.7	19.0	0.9	0.1	19.1	0.0	0.1	29.1	0.7	28.1	0.2	21.9	100.0	3,836
3-4	79.1	50.2	16.0	0.2	5.0	19.1	0.8	0.0	9.0	0.0	0.2	28.9	0.4	28.2	0.3	20.9	100.0	1,938
5+	68.7	45.8	19.5	0.0	4.9	13.6	1.8	0.0	5.8	0.0	0.3	22.9	0.1	22.8	0.1	31.3	100.0	589
Residence																		
Urban	74.3	47.8	8.3	0.1	5.6	17.5	0.8	0.0	15.4	0.0	0.1	26.5	0.7	25.6	0.2	25.7	100.0	5,284
Rural	68.9	40.4	8.5	0.0	4.6	15.0	1.1	0.0	11.0	0.0	0.3	28.6	0.2	28.0	0.3	31.1	100.0	1,716
Region																		
West	76.3	48.2	8.4	0.1	5.8	17.4	0.8	0.0	15.5	0.0	0.1	28.1	0.5	27.1	0.4	23.7	100.0	3,049
South	70.4	45.8	10.0	0.0	4.1	18.3	0.5	0.0	12.9	0.0	0.0	24.6	0.6	24.1	0.0	29.6	100.0	849
Central	75.5	48.8	6.4	0.1	4.9	18.4	0.9	0.1	17.8	0.1	0.1	26.7	0.9	25.7	0.1	24.5	100.0	1,542
North	75.6	41.4	12.9	0.0	5.2	9.8	0.9	0.0	12.0	0.0	0.5	34.2	0.4	33.6	0.2	24.4	100.0	455
East	61.4	37.8	7.7	0.0	5.6	15.1	1.3	0.0	8.1	0.0	0.1	23.5	0.3	22.9	0.3	38.6	100.0	1,105
Region (NUTS 1)																		
İstanbul	74.3	45.4	8.5	0.2	4.9	18.4	1.3	0.0	12.2	0.0	0.0	28.9	0.4	28.3	0.2	25.7	100.0	1,379
West Marmara	76.2	46.4	7.4	0.0	5.6	17.1	0.4	0.0	15.6	0.0	0.4	29.7	0.6	29.2	0.0	23.8	100.0	308
Aegean	80.0	53.1	7.0	0.2	6.0	17.8	0.6	0.0	21.6	0.0	0.0	26.9	0.7	25.5	0.6	20.0	100.0	1,010
East Marmara	76.8	45.9	8.8	0.0	6.4	14.0	0.4	0.0	15.9	0.0	0.3	30.9	1.0	29.7	0.2	23.2	100.0	722
West Anatolia	75.7	51.6	6.1	0.3	5.1	19.2	0.8	0.3	19.7	0.0	0.1	24.2	0.9	23.3	0.0	24.3	100.0	679
Mediterranean	70.4	45.8	10.0	0.0	4.1	18.3	0.5	0.0	12.9	0.0	0.0	24.6	0.6	24.1	0.0	29.6	100.0	849
Central Anatolia	72.2	47.8	8.4	0.0	6.1	20.7	0.6	0.0	11.8	0.0	0.2	24.4	0.9	23.2	0.2	27.8	100.0	356
West Black Sea	77.5	46.0	10.8	0.0	5.6	13.0	1.2	0.0	15.0	0.2	0.2	31.5	0.1	31.1	0.2	22.5	100.0	416
East Black Sea	68.2	35.4	13.0	0.0	3.4	8.0	1.3	0.0	8.9	0.0	0.7	32.7	0.8	31.9	0.0	31.8	100.0	180
Northeast A.	70.4	44.6	4.7	0.0	7.2	23.6	2.0	0.0	6.9	0.0	0.1	25.8	0.5	24.2	1.2	29.6	100.0	188
Central East A.	62.3	34.0	8.4	0.0	5.3	13.2	0.5	0.0	6.6	0.0	0.0	28.3	0.1	27.6	0.5	37.7	100.0	318
Southeast A.	57.8	37.9	8.1	0.0	5.4	13.5	1.4	0.0	9.3	0.0	0.1	19.9	0.3	19.6	0.1	42.2	100.0	594
Education																		
No/Prim. inc	60.8	35.3	12.3	0.0	3.1	13.4	0.8	0.0	5.6	0.0	0.1	25.5	0.0	24.8	0.7	39.2	100.0	1,274
First level prim.	76.8	46.8	9.5	0.1	5.3	18.2	0.9	0.0	12.6	0.0	0.1	30.0	0.3	29.5	0.2	23.2	100.0	3,671
Sec.level prim.	66.5	40.7	3.0	0.0	5.2	15.0	0.9	0.3	16.1	0.0	0.3	25.8	0.7	25.0	0.1	33.5	100.0	594
High and higher	76.7	55.3	3.9	0.1	7.3	17.4	0.8	0.0	25.4	0.1	0.1	21.4	1.7	19.7	0.0	23.3	100.0	1,461
Wealth quintile																		
Lowest	63.3	38.0	9.5	0.0	4.7	13.8	1.8	0.0	8.0	0.0	0.2	25.3	0.0	24.8	0.5	36.7	100.0	1,094
Second	70.5	40.9	8.9	0.0	5.6	17.4	0.6	0.0	8.3	0.0	0.1	29.6	0.3	28.9	0.5	29.5	100.0	1,366
Middle	75.3	47.0	8.8	0.0	4.3	19.0	1.0	0.0	13.8	0.0	0.0	28.3	0.3	27.9	0.0	24.7	100.0	1,475
Fourth	73.8	46.9	8.2	0.2	6.1	15.7	0.5	0.0	16.0	0.0	0.1	27.0	1.1	25.5	0.3	26.2	100.0	1,512
Highest	79.1	54.3	6.7	0.2	5.8	17.7	0.6	0.1	22.9	0.1	0.2	24.8	0.9	23.9	0.0	20.9	100.0	1,553
Total	73.0	46.0	8.3	0.1	5.3	16.9	0.9	0.0	14.3	0.0	0.1	27.0	0.6	26.2	0.2	27.0	100.0	6,999

Note: Other includes folk methods and LAM.

Current use of contraceptive methods varies according to background characteristics of women (Table 5.5). Current use of family planning increases rapidly after women have a child. Twenty-eight percent of currently married women with no children use family planning and the level increases to 78 percent for women with 1 or 2 living children. The level of current use drops off to 69 percent among women with five or more living children.

As regards the place of residence and region, there are marked differences in the percentages of women using a contraceptive method at the time of survey. In urban areas the percentage of women using a method of family planning is higher (74 percent) than that among women residing in rural areas (69 percent). Much of the urban-rural gap in family planning use is due to the greater use of modern methods among urban women (48 percent) compared with rural women (40 percent). Among the five regions, the lowest current use of contraception is observed in the East. Current use is 76 percent in the West, Central and North regions. However, it is noteworthy that in the North current use of any modern method is lower than in any of the other regions except the East while current use of any traditional method is higher in the North (34 percent) than in the remaining regions. With regard to NUTS 1 regions, current use is lowest in the Southeast Anatolia (58 percent) and highest in the Aegean Region (80 percent).

As to the method mix of five regions (Figure 5.1), the North region has the lowest IUD use (10 percent) and the highest female sterilization (13 percent) and withdrawal use (34 percent). When the NUTS 1 regions are considered (Table 5.5), the East Black Sea has the highest use of female sterilization (13 percent) and the lowest rates of use of the IUD and the pill (8 percent and 3 percent respectively). The highest proportion of currently married women using withdrawal (32 percent) among the NUTS 1 regions is also observed in the East Black Sea (Table 5.5).



The level of current use of family planning is lowest among women who never attended school or did not complete primary school (61 percent) and rises, although not uniformly, with education to 77 percent among women with a high school or higher education. Somewhat surprisingly, the level of use among women with a second level primary education (67 percent)

is lower than the use rate among women with first level primary education (77 percent). Because second level primary education was introduced relatively recently, it includes a comparatively high proportion of younger women, which helps to explain the somewhat lower use rate.

Differences in use of family planning methods are also apparent by wealth quintile. Contraceptive use is lowest in the lowest wealth quintile (63 percent) and it gradually rises to 79 percent in the highest wealth quintile. Current use of any modern method ranges from 38 percent of currently married women in the lowest wealth quintile to 54 in the highest quintile. Second wealth quintile has the highest proportion (30 percent) for current use of any traditional method.

5.4 Trends in Current Use of Family Planning

Table 5.6, presents the trends in the use of contraceptive methods in Turkey for the last 20 years. The contraceptive use in Turkey was stable at around 63 percent in the 10-year period from 1988 to 1998 and then increased substantially in the following decade, reaching 71 percent in 2003 and 73 percent in 2008 (Table 5.6). The modern contraceptive use rose over the last 20-year period, from 31 percent to 46 percent. In line with the increase in the use of modern methods, an overall decline has been observed in traditional methods although use of withdrawal remained almost at the same level.

Table 5.6 Trends in current use of contraception

Percent distribution of currently married women age 15-49 by contraceptive method currently used, TPHS-1988, TDHS-1993, TDHS-1998, TDHS-2003 and TDHS-2008

Contraceptive method	TPHS-1988	TDHS-1993	TDHS-1998	TDHS-2003	TDHS-2008
Any method	**63.4**	**62.6**	**63.9**	**71.0**	**73.0**
Any modern method	**31.0**	**34.5**	**37.7**	**42.5**	**46.0**
Pill	6.2	4.9	4.4	4.7	5.3
IUD	14.0	18.8	19.8	20.2	16.9
Male condom	7.2	6.6	8.2	10.8	14.3
Female sterilization	1.7	2.9	4.2	5.7	8.3
Other modern methods	2.0	1.3	1.1	1.1	1.1
Any traditional method	**32.3**	**28.1**	**26.1**	**28.5**	**27.0**
Periodic abstinence	3.5	1.0	1.1	1.1	0.6
Withdrawal	25.7	26.2	24.4	26.4	26.2
Other traditional methods	3.1	0.9	0.6	1.0	0.2
Not currently using	**36.6**	**37.4**	**36.1**	**29.0**	**27.0**
Total	100.0	100.0	100.0	100.0	100.0

Figure 5.2, shows the trend in family planning use for selected methods between 1993 and 2008. Overall, there has been significant change in the level of modern method use since 1993 from 35 percent to 46 percent in 2008. However, the pace of change in modern method use was not as rapid during the period between the TDHS-2003 and the TDHS-2008 as it was between TDHS-1998 and TDHS-2003. Much of the overall increase in use rates during the 15 years preceding the TDHS-2008 has been due to greater use of male condom and female sterilization. Use of the pill remained essentially stable over the period since 1993 while use of the IUD dropped off slightly, from 19 percent to 17 percent. The prevalence of withdrawal as a traditional method did not changed significantly, with around 1 in every 4 married couple using withdrawal throughout the period.

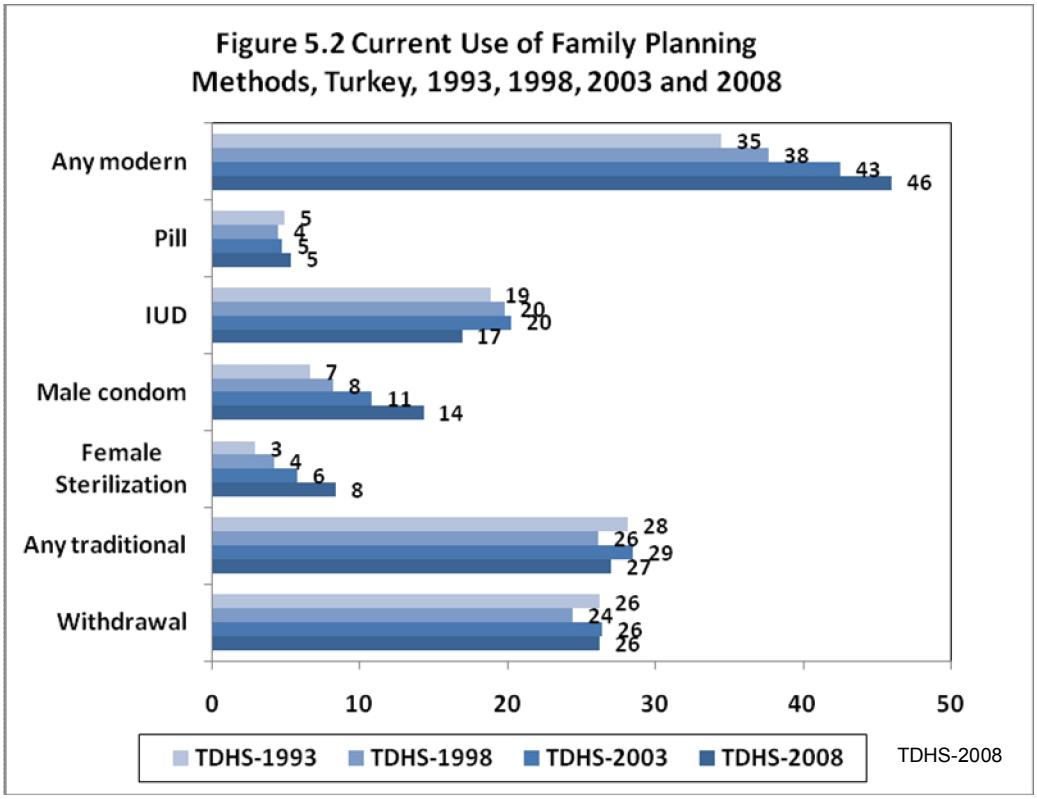


Table 5.7 shows the trend in contraceptive use by residence and region during the last 15 years. The use of modern contraceptive methods increased in both urban and rural areas and in all regions over the period. The trend in the use of traditional methods was more erratic during the entire period; however, use of traditional methods declined in all residential categories between the 2003 and 2008. Overall, the increase in use of all contraceptive methods was greater over the 15-year period in rural areas (23 percent) and in the Central, North, and, especially, East regions (20 percent, 18 percent, and 45 percent, respectively) than that observed for Turkey as a whole (17 percent).

Table 5.7 Trends in current use of contraception by residence and region

Percentage of currently married women 15-49 currently using any method, a modern method and a traditional method by residence and region, TDHS-1993, TDHS-1998, TDHS-2003 and TDHS-2008

	Residence		Region					
Surveys	Urban	Rural	West	South	Central	North	East	Total
TDHS-1993								
Any method	66.2	56.1	71.5	62.8	62.7	64.2	42.3	62.6
Any modern	38.9	26.8	37.3	36.7	36.6	29.8	26.3	34.5
Any traditional	27.3	29.3	34.2	26.0	26.1	34.4	16.0	28.1
TDHS-1998								
Any method	66.7	58.1	70.5	60.3	68.3	67.0	42.0	63.9
Any modern	40.8	31.4	40.5	35.1	42.8	35.2	26.7	37.7
Any traditional	25.2	31.4	29.2	24.6	24.7	31.5	15.2	25.5
TDHS-2003								
Any method	73.6	64.5	74.2	70.8	74.2	71.9	57.9	71.0
Any modern	45.8	34.4	45.7	44.8	46.6	32.5	31.4	42.5
Any traditional	27.8	30.1	28.6	26.0	27.6	39.4	26.5	28.5
TDHS-2008								
Any method	74.3	68.9	76.3	70.4	75.5	75.6	61.4	73.0
Any modern	47.8	40.4	48.2	45.8	48.8	41.4	37.8	46.0
Any traditional	26.5	28.6	28.1	24.6	26.7	34.2	23.5	27.0

5.5 Number of Children at First Use of Contraception

Table 5.8 shows the distribution of ever-married women by current age group and number of living children at the time of first use of contraception. This information is useful in identifying the stage in the family-building process when women begin using family planning as well as their motivation for using family planning.

Table 5.8 Number of children at first use of contraception

Percent distribution of ever-married women age 15-49 by number of living children at the time of first use of contraception, according to current age, Turkey 2008

		Number of living children at time of first use of contraception							
Current age	Never used	0	1	2	3	4+	Missing	Total	Number of women
15-19	37.7	37.6	22.8	1.3	0.6	0.0	0.0	100.0	183
20-24	16.0	36.4	40.0	6.6	0.7	0.2	0.2	100.0	836
25-29	7.6	38.4	40.1	9.5	2.1	2.1	0.2	100.0	1,353
30-34	7.1	30.6	40.2	12.7	5.1	4.0	0.2	100.0	1,379
35-39	6.7	18.8	42.7	18.3	7.0	6.5	0.0	100.0	1,336
40-44	9.1	16.0	37.5	18.8	8.5	9.7	0.4	100.0	1,202
45-49	9.2	11.3	34.6	18.0	13.4	13.5	0.0	100.0	1,115
Total	9.5	25.5	38.9	13.9	6.1	5.9	0.2	100.0	7,405

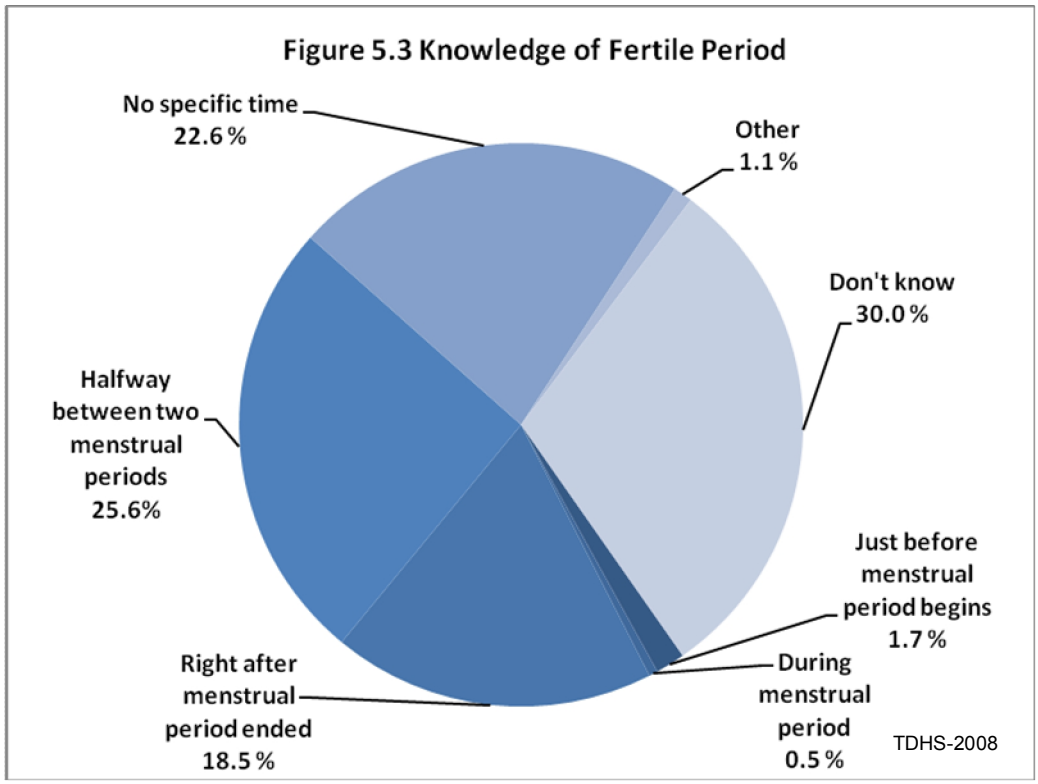
The results indicate that overall women in Turkey are adopting family planning at lower parities; 26 percent of ever-married women begin using contraception before they gave birth, and an additional 39 percent began after having one child (Table 5.8). Early use of family planning is higher among younger women; 38 percent of ever-married women age 15-19 started contraceptive use before they began having children compared with 11 percent of ever-married

women age 45-49. The pattern implies that younger women are adopting family planning to delay or space births, while older women are adopting family planning to limit births.

5.6 Knowledge of the Fertile Period

Successful use of natural family planning methods depends largely on an understanding of when during the menstrual cycle a woman is most likely to conceive. An elementary knowledge of reproductive physiology is thus the foundation for the successful practice of coitus-associated methods such s withdrawal, and especially, periodic abstinence.

In the TDHS-2008, women were asked whether there are certain days a woman is more likely to become pregnant if she has sexual intercourse. Those who responded affirmatively to that question were asked whether this time is just before the period begins, during the period, right after the period ends or halfway between two periods. Overall, 26 percent of ever-married women reported the correct timing of the fertile period (Figure 5.3). Thirty percent do not know when the fertile period is. The small number of periodic abstinence users was considerably more knowledgeable than the average women.



5.7 Timing of Female Sterilization

The results in Table 5.9 show that 61 percent of ever-married women who are sterilized had had the operation between ages 25 and 34, while 11 percent were sterilized before age 25 and 28 percent after age 35. The median reported age at female sterilization was 31.5 years. A comparison of this figure with the median ages at sterilization reported in three previous surveys

(31.8 in the TDHS-1993, 31.7 in TDHS-1998, and 31.6 in TDHS-2003) shows that the median age at sterilization has not changed substantially over the past 15 years in Turkey.

Table 5.9 Timing of female sterilization

Percent distribution of sterilized ever-married women age 15-49 by age at the time of sterilization and median age at sterilization, according to the number of years since the operation, Turkey 2008

	Age at time of sterilization								
Years since operation	<25	25-29	30-34	35-39	40-44	45-49	Total	Number of women	Median age[1]
<2	11.5	17.8	34.7	25.8	9.7	0.6	100.0	107	32.3
2-3	8.5	14.4	40.9	24.0	11.0	1.3	100.0	117	33.0
4-5	4.1	25.6	41.1	20.9	8.4	0.0	100.0	80	32.2
6-7	4.0	29.7	22.1	36.5	7.7	0.0	100.0	90	32.7
8-9	(12.1)	(13.8)	(42.6)	(29.4)	(2.2)	0.0	100.0	39	31.9
10+	19.5	39.2	34.1	7.2	0.0	0.0	100.0	175	a
Total	11.2	25.8	35.2	21.3	6.2	0.4	100.0	607	31.5

a = not calculated due to censoring
[1]Median ages are calculated only for women sterilized at less than 40 years of age to avoid problems of censoring
Note: Parentheses indicate that a figure is based on 25-49 unweighted cases

5.8 Source for Family Planning Methods

Information on where women obtain their contraceptives is useful for family planning programme managers and implementers for logistic planning. In the TDHS-2008, women who reported using a modern contraceptive method at the time of the survey were asked where they had obtained the method the last time they acquired it. The results suggest that, in Turkey, public sector providers are the generally preferred source for modern contraceptives. Of the modern method users, 61 percent named a public sector provider as the source of their method, 35 percent mentioned a private sector source and the remaining 4 percent reported using other sources, such as markets/shops (Table 5.10).

Among public sector providers, health centers/health houses, government hospitals, and maternity houses are most often cited as the source for modern methods (33 percent, 15 percent and 7 percent respectively). Among private sector providers, private hospitals and pharmacies are the main sources of supply (7 percent and 23 percent respectively). With regard to sources for specific methods, public sector providers are the principal source for female sterilization and the IUD; 8 in every 10 women who had had female sterilization report that the operation took place in a public institution. Similarly, 78 percent of IUD users obtain the method from a public institution, most often from health center/health house. Pills are obtained primarily from pharmacies (62 percent), followed by health centers/health houses (34 percent). Pharmacies (48 percent) also are the principal source for male condoms, followed again by health centers/ health houses (38 percent). Markets/shops are the providers of condom for 12 percent of users.

The trend in the sources for modern methods during the five-year period between the TDHS 2003-and TDHS-2008 is presented in Table 5.11. As regards the pill, IUD and condom, the proportion of users relying on public sector sources increased during the period. During the period, the proportion of condom users served by market/shops also doubled.

Table 5.10 Source of supply for modern contraception methods

Percent distribution of users of modern contraceptive methods age 15-49 by most recent source of method, according to method, Turkey 2008

	Pill	IUD	Male condom	Female sterili-zation	All other modern methods[1]	All modern methods
Public sector	36.8	78.0	39.1	80.0	47.4	60.9
Government hospital	1.2	15.1	0.4	46.1	11.1	14.7
Maternity house	0.9	8.0	0.1	18.5	2.9	6.6
MCHFP Centre	1.1	7.2	0.6	0.0	1.1	3.0
Health Centre/ Health house	33.5	44.8	37.9	0.1	23.6	32.6
SSK Hospital/Dispensary	0.0	1.1	0.0	9.0	3.8	2.2
Training and Research hospital	0.0	0.0	0.0	1.4	3.7	0.3
Family Health Centre/Family Doctor	0.0	1.8	0.0	0.0	1.2	0.7
University Hospital	0.0	0.1	0.0	4.7	0.0	0.9
Other public sector	0.1	0.1	0.0	0.0	10.0	0.0
Private medical	62.6	21.9	48.0	18.9	51.3	34.8
Private hospital/Polyclinic	0.1	9.9	0.0	17.9	0.0	7.0
Private Doctor	0.7	10.7	0.0	1.0	3.1	4.2
Private Midwife/Nurse	0.0	0.1	0.0	0.0	0.8	0.0
Pharmacy	61.5	0.8	47.9	0.0	47.3	23.3
Other private sector	0.2	0.4	0.1	0.0	0.0	0.2
Other private	0.2	0.0	12.4	0.0	1.3	3.9
Market/Shop	0.0	0.0	12.3	0.0	0.0	3.8
Friends, relatives	0.2	0.0	0.1	0.0	1.3	0.1
Other	0.2	0.0	0.1	0.2	0.0	0.1
DK/Missing	0.2	0.1	0.3	0.9	0.0	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	374	1,182	1,002	607	78	3,243

[1] Includes users of modern methods other than those of given in the table.

Table 5.11 Trends in source of supply for selected modern methods

Percent distribution of current users of the female sterilization the pill, the IUD and the male condom by the most recent source of supply of the method, Turkey 2008

	Female Sterilization		Pill		IUD		Male condom	
Source of supply for method	TDHS 2003	TDHS 2008	TDHS 2003	TDHS 2008	TDHS 2003	TDHS 2008	TDHS 2003	TDHS 2008
Public sector	82.0	81.0	30.6	36.8	71.3	78.0	34.1	39.1
Private sector	16.3	18.9	67.5	62.6	27.6	21.9	59.3	48.0
Other	1.0	0.2	1.6	0.4	1.0	0.0	6.3	12.6
Unknown	0.6	0.9	0.2	0.2	0.0	0.1	0.1	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 5.12 Informed choice

Among current users of modern contraceptive methods who adopted the current method in the five years preceding the survey, percentage who were informed about the side effects of the method used, percentage who were informed what to do if side effects were experienced, and percentage who were informed of other methods that could be used for contraception by specific method, and background characteristics, Turkey 2008

Background characteristic	Informed about side effects or problems of method used	Informed what to do if experienced side effects	Informed of other methods that could be used
Modern method			
Female sterilization	45.4	38.4	33.4
Male sterilization	100.0	100.0	100.0
Pill	62.0	50.1	53.1
IUD	70.7	68.6	44.5
Injectables	74.7	53.1	62.0
Male condom	26.2	21.0	39.0
Female condom	0.0	0.0	100.0
Diaphragm	25.1	25.1	55.1
Residence			
Urban	51.2	45.4	44.4
Rural	46.2	40.1	37.1
Region			
West	53.1	47.8	46.8
South	56.2	49.4	48.5
Central	45.7	40.6	39.7
North	46.5	35.6	46.0
East	45.4	38.8	30.8
Region (NUTS 1)			
İstanbul	53.1	48.3	49.7
West Marmara	50.7	39.8	40.9
Aegean	51.2	50.3	46.6
East Marmara	52.6	40.4	43.1
West Anatolia	46.6	42.0	40.8
Mediterranean	56.2	49.4	48.5
Central Anatolia	45.3	42.5	35.0
West Black Sea	42.2	33.3	43.3
East Black Sea	58.0	50.5	43.5
Northeast Anatolia	58.6	45.1	41.1
Central East Anatolia	45.0	36.0	26.5
Southeast Anatolia	41.0	37.8	29.0
Education			
No education/Primary incomplete	46.5	40.4	25.7
First level primary	51.7	46.1	41.8
Second level primary	46.0	39.5	44.6
High school and higher	50.5	44.3	51.5
Wealth quintile			
Lowest	46.2	41.1	30.7
Second	49.4	44.2	37.6
Middle	51.4	47.3	42.1
Fourth	49.4	42.9	43.0
Highest	52.6	44.6	53.7
Total	50.2	44.3	42.9
Number	1,941	1,941	1,941

5.9 Informed Choice

Women who are well informed about the side effects and problems associated with methods and know of a range of method options are better placed to make an informed choice about the method they would like to use.

To obtain information on these issues, current users of various modern contraceptive methods were asked whether they were informed of the possible side effects and what they should do if they experience any side effects, at the time they adopted their method; they were also asked whether they were informed about other methods. Table 5.12 presents information on three aspects of informed choice. Half of the current users of modern contraceptive methods who adopted the current method in the five years preceding the survey were informed about potential side effects of their method. Forty-four percent were told what to do if they experience any side effects, and 43 percent were given information about other family planning methods.

Considering the results by methods, users of injectables and IUDs appear to be better informed than users of other methods about potential side effects of the method used (75 percent and 71 percent respectively). Women living in the urban areas, women with higher levels of education and women who are in the top two wealth quintiles are more likely to be informed about the side effects or problems of the method, what to do if they experience side effects and other contraceptive options than their counterparts. Women living in the East region generally appear to have less access to informed choice than women in other regions.

5.10 Discontinuation of Contraceptive Use

Reproductive goals can only be realized when couples use contraceptive methods effectively and continuously. In countries like Turkey where ideal family size has declined and contraceptive prevalence has risen, contraceptive effectiveness becomes an increasingly important determinant of fertility. In addition, the discontinuation of methods is of primary concern since it guides policy makers and health professionals in their efforts to improve service delivery. Thus, information on discontinuation can highlight program areas that require development, as well as groups of users who have particular concerns that need to be addressed.

Table 5.13 presents first-year contraceptive discontinuation rates by reason for discontinuation, according to the method discontinued. The discontinuation rate refers to the proportion of women who have started using a contraception method at some time in the 5 years prior to the survey, but then stopped using that method within 12 months of having started it. The rate is calculated using information from the reproductive event calendar included in the TDHS-2008. In the calendar, all segments of contraceptive use between January 2003 and the date of interview were recorded along with reasons for any discontinuation of use during the period.

Table 5.13 Contraceptive discontinuation rates

Percentage of contraceptive users who discontinued use of a method within 12 months after beginning its use, by reason for discontinuation and specific method, Turkey 2008

		Reasons for discontinuation			
Contraceptive method	Method failure	Desire to become pregnant	Switched to another method	Other reason	All reasons
Pill	4.4	9.5	26.2	10.1	50.2
IUD	1.7	0.9	7.9	2.9	13.4
Male condom	5.1	10.6	16.5	4.9	37.1
Withdrawal	11.4	9.8	11.9	4.4	37.5
All methods	7.0	7.8	15.3	5.2	35.3

The results indicate that 35 percent of contraceptive users in Turkey stop using a contraceptive method within 12 months of starting use. The rates vary by method. Discontinuation rates are highest for the pill (50 percent) followed by withdrawal (38 percent) and male condom (37 percent). The one-year discontinuation rate is lowest for IUD (13 percent). Since IUD is not generally intended as a short-term method, a low discontinuation rate is to be expected.

Switching to another method is common among those who discontinued use (15 percent). Eight percent of users discontinued use of a method of contraception within 12 months of initiating use with the desire to become pregnant. Another 7 percent of users stopped using as a result of method failure, and the remaining 5 percent stopped due to other reasons. Switching to another method accounts for an especially large portion of the relatively high discontinuation of the pill (26 percent). Withdrawal use is associated with a comparatively high rate of method failure (11 percent).

Table 5.14 presents the distribution of all discontinuations during the five years prior to the survey by main reason for discontinuation according to the method used. The desire to become pregnant accounted for one-fourth of all discontinuations. One-fifth of user discontinued because they became pregnant while using. Side effects and wanting a more effective method were also frequently mentioned as reasons for discontinuation of modern methods (14 percent and 10 percent respectively).

Method failure was more common among users of periodic abstinence (39 percent) and withdrawal (35 percent) than among users of other methods. Seventeen percent of condom discontinuations also were due to method failure. Side effects were also a frequently mentioned reason for discontinuing use. More than half of the injectable discontinuations were due to side effects.

Table 5.14 Reasons for discontinuation of contraception

Percent distribution of method discontinuations in the five years preceding the survey the by main reason for discontinuation, according to specific method, Turkey 2008

Reason	Pill	IUD	Injection	Condom	Diaphragm	Periodic absti-nence	With-drawal	Other	All methods
Became pregnant	8.7	5.7	5.9	16.7	(14.7)	39.3	34.7	(22.4)	20.7
Wanted to become pregnant	22.1	23.1	6.3	33.4	(2.5)	16.2	27.1	(8.3)	25.6
Husband disapproved	0.6	0.6	1.2	7.7	(4.4)	0.0	1.9	(0.0)	2.5
Side effects	27.9	37.1	50.9	2.7	(14.8)	0.0	0.3	(0.0)	13.7
Health concerns	16.3	8.4	16.7	1.1	(6.9)	0.8	0.9	(0.0)	5.4
Access/availability	0.8	0.0	1.2	2.5	(21.6)	0.0	0.1	(0.0)	0.9
Wanted a more effective method	3.7	0.9	2.8	11.8	(1.6)	20.9	15.8	(30.7)	10.0
Inconvenient to use	1.8	0.2	0.6	4.3	(0.6)	1.3	1.2	(0.0)	1.7
Infrequent sex/husband away	4.0	0.7	1.2	2.5	(0.0)	7.0	2.4	(2.0)	2.4
Cost too much	0.6	0.0	0.0	1.2	(3.6)	0.0	0.0	(0.0)	0.4
Fatalistic	0.1	0.0	0.0	0.0	(3.3)	0.0	0.2	(2.8)	0.1
Difficult to get pregnant/menopausal	1.5	2.6	2.2	2.0	(10.4)	2.3	3.0	(0.0)	2.5
Marital dissolution/separation	2.6	3.9	0.3	2.2	(4.4)	0.0	1.6	(3.2)	2.3
Other	4.8	12.9	6.3	6.7	(5.9)	3.2	3.7	(4.1)	6.2
Don't know	0.1	0.0	0.6	0.1	(0.0)	0.0	0.1	(0.0)	0.1
Missing	4.4	3.9	4.1	5.0	(5.3)	9.1	7.0	(26.5)	5.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	804	903	174	961	42	83	2,000	35	5,002

Note: Parentheses indicate that a figure is based on 25-49 unweighted cases

5.11 Intention to use Contraception among Non-Users

A key indicator of the changing demand for family planning is the extent to which non-users of contraception plan to use family planning in the future. To obtain information on the intentions, the TDHS-2008 survey asked currently married women who were not using contraception at time of survey whether they planned to use a method of contraception within next 12 months or at some time in the future. Table 5.15 presents the results according to the number of living children. Overall, 47 percent of currently married non-users do not intend to use a method of contraception at any time in the future. Additionally, 3 percent say that they are unsure of their future intentions. On the other hand, almost half of currently married women who are not using a contraceptive method intend to use family planning at some time in the future; 32 percent state that they intend to use a method within next 12 months, and 16 percent intend to use later. The percentage of married women who do not intend to use a method of family planning increases as the number of living children increases, from 35 percent among women with one child up to 60 percent among women with four or more children.

Table 5.15 Future use of contraception

Percent distribution of currently married women who are not using a contraceptive method by intention to use in the future, according to number of living children, Turkey 2008

	Number of living children					
Intention	0	1	2	3	4+	Total
In next 12 months	10.0	38.2	41.0	32.5	33.3	32.3
Use later	44.1	20.2	8.1	7.1	3.0	15.9
Unsure about timing	1.9	1.4	0.7	0.3	0.7	1.0
Unsure about use	5.2	4.1	1.8	2.2	2.4	3.1
Does not intend	37.9	35.2	47.1	57.3	60.0	46.7
Total	99.1	99.0	98.7	99.4	99.4	99.1
Number of women	314	466	451	299	358	1,889

The TDHS-2008 also obtained information from non-users who intended to use a method at some time in the future on the contraceptive method they would prefer to use. The IUD (31 percent) is by far the most popular method among these nonusers, followed by the pill (13 percent) and withdrawal (13 percent) (Table 5.16). Ten percent expressed a preference for the male condom and the same percentage mentioned female sterilization. Method preferences vary somewhat with age; nonusers age 30 and above are more likely to prefer long-term methods like the IUD and female sterilization while nonusers under age 30 were somewhat more likely to prefer the pill, injectable or male condom.

Table 5.16 Preferred method of contraception for future use

Percent distribution of currently married women age 15-49 who are not using a contraceptive method but who intend to use in the future by preferred method, Turkey 2008

	Mother's age		
Method	15-29	30-49	Percent distribution
Female sterilization	8.0	14.0	10.0
Male sterilization	0.1	0.9	0.4
Pill	14.5	10.9	13.3
IUD	30.2	33.9	31.4
Injectables	6.6	2.4	5.2
Implants	0.7	1.1	0.8
Condom	11.4	8.0	10.2
Diaphragm	0.7	0.0	0.5
Periodic abstinence	0.0	2.2	0.7
Withdrawal	12.8	12.0	12.5
Other	2.5	3.7	2.9
Unsure	12.5	10.9	12.0
Total	100.0	100.0	100.0
Number of women	619	312	932

5.12 Reasons for Non-Use of Contraception

Table 5.17 presents the reasons nonusers who do not intend to use in the future give for not planning to use. Nonusers who do not intend to use in the future are mainly over age 30 (89 percent), and their reasons for non-use are quite different from the reasons of younger nonusers. In particular, nonusers over age 30 are more likely than younger nonusers to cite a lack of exposure to pregnancy as the reason they do not plan to use family planning; for example, 42 percent mention they are menopausal or have had a hysterectomy and 28 percent report that they are infecund. However, the latter reason is also among the most commonly cited reasons for not intending to use a method among younger non-users (29 percent).

Table 5.17 Reason for not intending to use contraception in the future

Percent distribution of currently married women age 15-49 who are not using contraception and who do not intend to use in the future by main reason for not intending to use, Turkey 2008

	Mother's age		
Reason	<30	30+	Total
Fertility-related reasons			
Not having sex	1.4	5.2	4.8
Infrequent sex	1.9	2.8	2.7
Menopausal, hyster.	1.1	41.9	37.2
Subfecund, infecund	28.8	27.8	27.9
Husband infecund	6.5	2.5	3.0
Opposition to use			
Husband opposed	3.4	0.6	0.9
Religious prohibit.	5.3	0.8	1.3
Fatalistic	6.7	2.9	3.4
Embarrassed	0.0	0.2	0.2
Lack of knowledge			
Knows no method	8.1	0.8	1.7
Knows no source	0.5	0.2	0.2
Method-related reasons			
Health concerns	5.6	3.0	3.3
Fear side effects	0.0	0.3	0.3
Lack of access	0.0	0.1	0.1
Cost too much	0.0	0.1	0.1
Inconvenient to use	0.4	0.0	0.1
Other	30.4	9.6	11.9
Don't know	0.0	0.8	0.7
Missing	0.0	0.4	0.4
Total	100.0	100.0	100.0
Number of women	101	781	882

ABORTIONS AND STILLBIRTHS 6

Sabahat Tezcan, Banu Ergöçmen and F. Hande Tunçkanat

This chapter presents results from the TDHS-2008 concerning induced abortions, spontaneous abortions (miscarriages), and stillbirths. Stillbirths and spontaneous abortions are important maternal health indicators.

Induced abortions also are important from a maternal health perspective since the practice can have adverse effects on the health of women. Additionally, induced abortions have significance for family planning services because one of the important goals of family planning is to eliminate unwanted pregnancies. Women may resort to induced abortions when problems of availability and accessibility to contraceptive services exist or when there are psychosocial barriers that keep them from using contraceptive methods to avoid unwanted pregnancies. Women may also have induced abortion in order to avoid pregnancy that occurred as a result of contraceptive failure.

Abortion was legalized in Turkey in 1983 with the enactment of the new population planning law, which provided for safe abortion on request during the first ten weeks of gestation for every woman who needed the service. Since the law was legislated, induced abortion has been available to women at government hospitals for a nominal fee and from the private sector.

The TDHS-2008 questionnaire included questions to determine the total number of induced and spontaneous abortions and stillbirths a woman had during her entire reproductive period. In the calendar module, detailed information was collected on the duration of each pregnancy ending in an abortion and on the place where abortion occurred for each pregnancy terminated since January 2003. In addition, information was obtained from women who reported having any pregnancy that ended in miscarriage, abortion or still birth on the month and year in which the last such pregnancy terminated. For last pregnancies that ended in an induced abortion, information was also collected on the person who made the decision to have the abortion, the woman's childbearing preference at the time, the place where pregnancy ended, and if the woman was informed about contraceptives when she had the abortion.

6.1 Life-time Experience with Pregnancy Terminations

Table 6.1 presents the percent distribution of ever-married women by the total number of abortions (induced and spontaneous) and stillbirths that they reported ever having had during their reproductive lives.

According to the table, only 4 percent of women have had a stillbirth. One-fifth of ever-married women in reproductive age reported ever having had a spontaneous abortion while slightly more than one-fifth of ever married women (22 percent) ever had an induced abortion. As the table shows, relatively few ever-married women had more than one spontaneous or

induced abortion (6 percent and 8 percent, respectively). Less than one percent said that they had more than one pregnancy end in a still birth.

Table 6.1 Number of abortions and stillbirths

Percent distribution of ever-married women by number of abortions (spontaneous and induced) and stillbirths, Turkey 2008.

Number of terminations	Abortions		Stillbirths
	Spontaneous	Induced	
None	79.6	77.9	96.0
1	14.6	14.2	3.5
2	4.1	5.0	0.4
3	1.1	1.9	0.1
4	0.3	0.7	0.0
5 or more	0.2	0.2	0.0
Missing	0.1	0.1	0.0
Total	100.0	100.0	100.0
Mean number	0.28	0.34	0.05
Number of women	7,405	7,405	7,405

6.2 Current Levels and Trends in Abortion Rates

Table 6.2 presents the percentage of ever-married women age 15-49 who had ever had an induced abortion by background characteristics. The proportion ever having an induced abortion increases directly with age, from 3 percent of ever-married women in 15-19 age group to 39 percent among women age 45-49. This rise is particularly marked among women age 30 and older, with women age 45-49 more than twice as likely as women age 30-34 to report they have had an abortion. The proportion of ever-married women who have had an induced abortion also increases steadily with the number of living children, from 6 percent of women with no living children to a peak of 29 percent among women with five or more children. Women with three or more children are around twice as likely as women with 1-2 children to have had an abortion.

According to Table 6.2, the proportion of women who have ever had an abortion is higher among urban than rural women (23 percent and 18 percent, respectively). With regard to region, women in the Eastern part of Turkey (14 percent) are the least likely to have ever had an induced abortion and women in the West (26 percent), Central and the North (22 percent) regions are the most likely to report an induced abortion.

Considering the NUTS 1 regions, the percentage of women who have had induced abortion is the highest in Istanbul (31 percent) and lowest in Southeast Anatolia (12 percent). There is little variation in the percentage of women with an induced abortion by education. However, the percentage of women who have had induced abortion increases with the wealth quintile, from 15 percent in the lowest wealth quintile up to 29 percent in the highest wealth quintile.

Table 6.2 Induced abortions by background characteristics

Percentage of ever-married women age 15-49 ever having an induced abortion, by selected background characteristics, Turkey 2008.

Characteristics	Induced Abortions	Number
Age		
15-19	2.9	183
20-24	3.6	836
25-29	11.7	1,353
30-34	18.8	1,379
35-39	25.9	1,336
40-44	32.7	1,202
45-49	39.2	1,115
Number of living children		
0	5.9	698
1-2	12.7	1,552
3-4	24.9	2,511
5+	29.4	1,367
Residence		
Urban	23.3	5,615
Rural	17.9	1,790
Region		
West	26.1	3,252
South	17.8	894
Central	21.8	1,631
North	22.0	477
East	14.1	1,151
Region (NUTS1)		
İstanbul	30.9	1,491
West Marmara	22.0	327
Aegean	24.7	1,065
East Marmara	19.5	759
West Anatolia	20.7	717
Mediterranean	17.8	894
Central Anatolia	19.2	371
West Black Sea	24.2	448
East Black Sea	20.3	186
Northeast Anatolia	17.6	191
Central East Anatolia	15.5	327
Southeast Anatolia	12.3	628
Education		
No education/Primary incomplete	21.0	1,358
First level primary	23.6	3,840
Second level primary	17.1	643
High school and higher	21.0	1,564
Wealth quintile		
Lowest	14.8	1,154
Second	19.1	1,429
Middle	21.6	1,559
Fourth	23.5	1,618
Highest	28.6	1,645
Total	22.0	7,405

Table 6.3 shows the rates of abortions (spontaneous and induced) and stillbirths per 100 pregnancies for the five-year period prior to the TDHS-2008. According to table, 22 of every 100 pregnancies among ever-married women terminated in other than a live birth during 2003-2008 period. There were 21 total abortions per 100 pregnancies, of which 10 were induced. Only

about one out of every 100 pregnancies ended in a stillbirth.

Table 6.3 Abortions and stillbirths per 100 pregnancies

Number of abortions (spontaneous and induced) and stillbirths per 100 pregnancies during the five-year period prior to the survey Turkey 2008.

Outcome	Number per 100 pregnancies
Abortions	20.5
Spontaneous	10.5
Induced	10.0
Stillbirths	1.1

Information on the trend in the levels of induced abortions during the period between the TDHS-1993 and TDHS-2008 are presented by background characteristics in Table 6.4. Overall, the results suggest that there was a substantial decline in level of induced abortions during the period covered by the surveys, from 18 abortions per 100 pregnancies at the time of the 1993 survey to 11 induced abortions per 100 pregnancies in the 2008 survey. Considering the trends within subgroups, ın urban areas, there were 10 induced abortions per 100 pregnancies at the time of the TDHS-2008, which was almost half the level of 21 induced abortions per 100 pregnancies reported for urban areas in the TDHS-1993. Although not as large, induced abortions also declined for urban areas over the period from 12 per 100 pregnancies in the TDHS-1993 to 8 in the TDHS-2008.

All of the regions also had substantial decreases in the numbers of pregnancies ending in induced abortions. The West had the largest decline, from 25 per 100 pregnancies at the time of the TDHS-1993 to 14 in the TDHS-2008. Despite this decline, the West, which had the highest percentage of pregnancies ending in an induced abortion in the TDHS-1993, continued to have the highest proportion at the time of TDHS-2008. In the East, which had the lowest level of induced abortion among the regions throughout the period, the number of induced abortions per 100 pregnancies also dropped substantially, from 9 in 1993 to 5 in 2008. For the NUTS 1 regions, information on induced abortion is available only from the 2003 and 2008 TDHS surveys. A comparison of the results from the two surveys indicates that induced abortions levels decreased in 7 out of the 12 regions. Among the remaining regions, the largest increase occurred in the East Black Sea region.

The results in Table 6.4 also indicate that induced abortion rates have decreased within all educational categories since the TDHS-1993, with the decline being greatest for women with a second level of primary education. Information on induced abortion levels is not available by wealth quintiles in the previous surveys; however, the TDHS-2008 results show that the percentage of pregnancies ending in induced abortions per 100 pregnancies in the highest wealth quintile is almost 4 times more than the number in the lowest wealth quintile (18 and 5 respectively).

Table 6.4 Trends in induced abortions

Trends in the number of induced abortion per 100 pregnancies during the five year period prior to survey, TDHS-1993, TDHS-1998, TDHS-2003 and TDHS 2008.

Background characteristic	TDHS-1993	TDHS-1998	TDHS-2003	TDHS-2008
Age				
15-19	3.8	5.8	3.4	3.2
20-24	8.3	7.7	5.6	4.1
25-29	20.4	12.6	9.5	9.7
30-34	27.9	23.3	19.1	12.8
35-39	36.2	33.4	25.5	25.5
40-44	47.1	42.5	33.7	29.9
45-49	47.6	66.2	27.6	-
Residence				
Urban	21.3	16.1	13.2	10.8
Rural	12.4	11.6	7.2	7.8
Region				
West	24.9	18.0	14.7	14.1
South	16.3	13.7	10.2	9.9
Central	19.8	16.7	14.9	8.8
North	17.0	15.6	8.8	11.5
East	8.7	7.6	5.2	4.6
Region (NUTS 1)				
İstanbul	NA	NA	15.1	17.9
West Marmara	NA	NA	13.0	13.6
Aegean	NA	NA	20.4	13.6
East Marmara	NA	NA	7.4	7.0
West Anatolia	NA	NA	15.5	6.2
Mediterranean	NA	NA	10.2	9.9
Central Anatolia	NA	NA	10.0	6.7
West Black Sea	NA	NA	17.0	13.9
East Black Sea	NA	NA	6.3	11.5
Northeast Anatolia	NA	NA	10.8	5.5
Central East Anatolia	NA	NA	4.4	5.1
Southeast Anatolia	NA	NA	3.9	4.1
Education				
No educ/Prim. inc.	13.9	11.8	8.3	5.5
First level primary	19.4	15.1	11.5	11.1
Second level primary	22.6	17.3	12.8	7.1
High sch.and higher	NA	NA	14.8	13.1
Wealth quintile				
Lowest	NA	NA	NA	5.3
Second	NA	NA	NA	8.4
Middle	NA	NA	NA	10.9
Fourth	NA	NA	NA	8.8
Highest	NA	NA	NA	18.4
Total	18.0	14.5	11.3	10.0

NA= Not applicable

6.3 Patterns of Contraceptive Use Prior to and After Induced Abortion

Data from the TDHS-2008 calendar can be utilized to examine the women's use of contraception before and after an induced abortion. An examination of the patterns of contraceptive use before a woman has an abortion is important because pregnancies that end in abortions often result from the use of ineffective contraceptive methods or from the failure to use methods effectively as well as from not using contraception at all. According to the TDHS-2008 results, all of these factors are related to abortion in Turkey.

As Table 6.5 shows, in around one-third of last abortions during the five-year period prior to the survey, the woman was not using any contraceptive method in the month before she became pregnant. Among abortions in which contraception was used immediately prior to the pregnancy, women were more likely to be using a traditional than a modern method. 39 percent of abortions occurred following a period of use of withdrawal, and 5 percent of abortions occurred after using periodic abstinence. Twenty-two percent of abortions occurred following a period in which a woman was using a modern method, with an abortion more likely to have occurred after use of the condom (11 percent) than the pill (5 percent) or IUD (5 percent).

Table 6.5 Method used before abortion

Method used within one month before pregnancy for the last abortion reported in the five years preceding the survey, Turkey 2008.

Method	Percentage using method before abortion
Pill	4.8
IUD	5.0
Injections	0.4
Diaphragm/foam/jelly	0.6
Male condom	10.8
Periodic abstinence	5.3
Withdrawal	39.0
Other	0.4
Not using	33.7
Total	100.0
Number	417

Table 6.6 Method used after abortion

Method used within one month after pregnancy for the last abortion reported in the five years preceding the survey, Turkey 2008.

Method	Percentage using method after abortion
Pill	14.0
IUD	11.6
Injections	1.6
Male condom	14.9
Female Sterilization	0.5
Periodic abstinence	3.4
Withdrawal	21.7
Not using	32.3
Unknown	0.1
Total	100.0
Number	417

Table 6.6 presents the use of contraception in the month following an abortion. According to the table, about one in three women with an induced abortion were using contraception within a month after pregnancy for their last abortion. Forty-three percent used modern methods while 25 percent used traditional methods (especially withdrawal). In comparison with the mix of methods used before abortion, this represented a substantial increase in the use of modern methods. The condom (15 percent) was the most frequently adopted modern method followed closely by the pill (14 percent) and the IUD (12 percent).

6.4 Decision Maker of Induced Abortion

Table 6.7 presents the percent distribution of women who have ever had induced abortion by the person who decided on the last abortion during the five-year period prior to the survey according to selected background characteristics. Overall, the table reveals that, in almost half of women's last induced abortions, the decision to end the pregnancy was made jointly woman herself and her husband (48 percent). Almost one-quarter of the women made the decision to have their last abortion by themselves. Doctors were cited by women as the decision maker for 22 percent of the abortions while only 4 percent of abortions were decided by partner.

Table 6.7 Decision maker of abortion

Percent distribution of women who ever had an induced abortion by the person who decided on ending the pregnancy at the time of the last abortion during the five-year period before the survey, according to background characteristics, Turkey 2008,

	Person decided to end pregnancy							
Background characteristic	Woman and husband	Women herself	Doctor	Husband	Other	Missing	Total	Number
Age								
15-24	(26.1)	(31.1)	(30.7)	(10.4)	(0.0)	(1.6)	100.0	33
25-29	49.2	15.7	26.3	5.5	0.4	2.9	100.0	113
30-34	43.3	27.4	23.3	4.6	0.6	0.8	100.0	137
35-39	56.5	25.4	12.2	3.3	0.6	2.0	100.0	102
40 and over	55.6	26.4	15.9	1.0	0.0	1.0	100.0	98
Residence								
Urban	47.7	26.0	20.4	4.0	0.3	1.6	100.0	382
Rural	49.2	15.8	27.3	4.9	0.8	1.9	100.0	100
Region								
West	46.9	27.0	20.4	3.7	0.0	2.1	100.0	243
South	52.0	15.0	30.1	1.4	0.0	1.4	100.0	58
Central	52.4	22.2	18.3	5.5	1.5	0.0	100.0	98
North	(45.8)	(20.5)	(26.1)	(6.2)	(0.0)	(1.5)	100.0	30
East	42.2	24.6	23.3	5.9	0.8	3.1	100.0	54
Education								
No education/ Prim incomplete	44.4	24.9	22.5	5.7	1.2	1.3	100.0	55
First level primary	51.2	22.5	19.2	4.0	0.5	2.7	100.0	273
Second level primary	(35.9)	(36.1)	(20.3)	(7.6)	(0.0)	(0.0)	100.0	29
High sc. and higher	45.5	23.7	27.7	3.1	0.0	0.0	100.0	124
Wealth quintile								
Lowest	49.9	24.3	14.5	7.6	2.2	1.4	100.0	58
Second	46.3	28.6	20.3	1.5	0.7	2.8	100.0	97
Middle	53.5	23.4	15.5	3.9	0.0	3.7	100.0	108
Fourth	40.6	18.5	28.0	12.3	0.0	0.6	100.0	72
Highest	48.0	23.7	27.4	0.9	0.0	0.0	100.0	147
Total	48.0	23.9	21.8	4.2	0.4	1.7	100.0	482

Note: Parentheses indicate that a figure is based on 25-49 unweighted cases.

With respect to the differences by background characteristics in the person(s) cited responsible for the decision to have last abortion, Table 6.7 shows that women under age 35 were somewhat more likely than older women to cite a doctor as having made the decision and older women were slightly more likely than younger women to say the decision was made jointly with their husband. Urban women (26 percent) are more likely than rural women (16 percent) to have made the decision on their own and rural women were somewhat more likely than urban women (20 percent) to cite a doctor as the decision-maker (27 percent).

Among the five geographic regions in Turkey, West has the highest proportion of induced abortions (27 percent) that were decided by woman herself while South has the lowest (15 percent). The percentages of abortions that were decided jointly by woman and her partner are highest in South and Central (52 percent) and lowest in East (42 percent). South is the region with the highest proportion of abortions in which a doctor was cited as the decision-maker (30 percent).

The person making the decision about the last abortion is not clearly related to either the woman's educational level or the wealth quintile.

6.5 Timing of Induced Abortion

Although abortions are legal for up to the 10th week of pregnancy (2.5 months), it is safer for women's health to have an abortion as early as possible. Table 6.8 shows the percent distribution of ever-married women with an induced abortion in the five-years prior to survey by the months pregnant at the time of the last abortion according to selected background characteristics. Overall, 67 percent of the abortions occurred in the first month of pregnancy and 22 percent in the second month of pregnancy. As women reported, only 11 percent of induced abortions were performed in the third month of pregnancy or later, i.e., potentially outside of the recommended time limit.

Women age 30 and older are more likely to have had abortion in the first month of pregnancy than younger women. Among the other subgroups, urban women, women in the West, women with a high school or higher education, and women in the highest wealth quintile are most likely to report the last abortion occurred during the first month of pregnancy. The proportion having the last abortion in the third month of pregnancy or later was highest among women in the lowest wealth quintile and women in the East (23 percent and 22 percent, respectively).

Table 6.8 Timing of last induced abortion

Percent distribution of women who had an induced abortion in the 5 years preceding the survey by the number of months the woman was pregnant at time of last abortion, according to background characteristics, Turkey 2008.

Background characteristic	Months of pregnancy 1	2	3+	Total	Number
Age					
15-24	56.4	33.1	10.5	100.0	64
25-29	56.1	24.9	19.0	100.0	122
30-34	69.3	21.8	8.9	100.0	101
35-39	88.4	8.4	3.1	100.0	94
40-44	(78.4)	(15.2)	(6.3)	100.0	36
Residence					
Urban	71.7	19.0	9.3	100.0	328
Rural	51.6	31.7	16.7	100.0	89
Region					
West	70.4	21.7	7.8	100.0	213
South	65.2	24.8	10.0	100.0	52
Central	67.0	20.0	13.0	100.0	81
North	(60.4)	(27.8)	(11.8)	100.0	27
East	(60.6)	(17.8)	(21.6)	100.0	45
Education					
No educ./Primary incomplete	(60.3)	(25.3)	(14.4)	100.0	47
First level primary	65.9	22.1	12.0	100.0	230
Second level primary	(53.6)	(40.1)	(6.3)	100.0	27
High sc. and higher	76.9	15.0	8.1	100.0	112
Wealth quintile					
Lowest	50.7	26.7	22.6	100.0	50
Second	64.7	28.6	6.7	100.0	81
Middle	69.2	25.8	5.0	100.0	94
Fourth	66.3	21.6	12.1	100.0	61
Highest	74.7	12.8	12.5	100.0	130
Total	67.4	21.7	10.8	100.0	417

Note: Parentheses indicate that a figure is based on 25-49 unweighted cases.

6.6 Abortion Provider

Table 6.9 presents information on the abortion provider. The great majority of women who had had an induced abortion in the five-year period preceding the survey reported the abortion took place at a private doctor's office or at a private hospital or clinic (70 percent). About 26 percent of women reported that they had obtained the abortion at a public sector services. The share of women that sought abortion services from university hospitals is only 1 percent.

An examination of the percent distribution of women with recent induced abortions by source of abortion according to age does not reveal any specific pattern. However, rural women were somewhat less likely than urban women to have had the abortion performed at private doctor's office rather than hospitals or clinics. The North region has the highest proportion of women with an induced abortion that took place in state hospital, maternity house or other public sector services.

Table 6.9 reveals that women with higher educational attainment are less likely to obtain an abortion at public sector services and more likely to have their abortion provided by a private hospital or clinic. In the highest wealth quintile, almost 82 percent of women with an abortion had obtained the abortion from private sector services while this percentage decline to 52 percent among women in the lowest wealth quintile. Similarly, women in the lowest wealth quintile were more likely than other women to have had the abortion performed at a public health facilities.

Table 6.9 Abortion providers

Percent distribution of women who had an induced abortion in the five years preceding the survey by the service provider for the last abortion, according to background characteristics. Turkey 2008.

	Abortion provider								
Background characteristic	State/ Sample hospital	Maternity house	Other public	Private	University hospital	Other	Missing	Total	Number of abortion
Age									
15-19	27.2	9.2	2.7	56.6	1.1	0.8	2.5	100.0	57
20-24	21.4	2.1	1.7	70.4	0.0	4.4	0.0	100.0	66
25-29	14.2	10.6	1.2	70.0	1.1	0.7	2.3	100.0	96
30-34	23.7	3.1	1.0	69.6	2.6	0.0	0.0	100.0	83
35-39	7.5	4.3	3.0	82.6	0.0	0.0	2.7	100.0	88
40-44	18.4	9.0	1.8	63.8	2.3	2.6	2.1	100.0	77
Residence									
Urban	13.1	7.5	1.0	74.6	1.2	1.0	1.6	100.0	382
Rural	34.8	2.4	4.7	53.4	0.8	2.0	1.9	100.0	100
Region									
West	13.9	4.4	1.6	76.0	0.0	2.0	2.1	100.0	243
South	15.4	5.8	1.4	70.2	4.7	1.1	1.4	100.0	58
Central	21.8	8.1	2.7	65.9	1.5	0.0	0.0	100.0	98
North	(26.7)	(9.6)	(1.5)	(59.2)	(1.5)	(0.0)	(1.5)	100.0	30
East	23.4	11.3	1.7	58.0	1.7	0.8	3.1	100.0	54
Education									
No education/ Primary incom.	28.0	10.8	5.2	54.8	0.0	0.0	1.3	100.0	55
First level primary	17.9	4.8	1.9	70.6	0.9	1.1	2.7	100.0	273
Second level primary	(20.7)	(3.8)	(0.0)	(75.5)	(0.0)	(0.0)	(0.0)	100.0	29
High sch. and higher	11.3	8.5	0.4	74.9	2.4	2.5	0.0	100.0	124
Wealth quintile									
Lowest	36.5	5.3	4.1	51.9	0.8	0.0	1.4	100.0	58
Second	21.7	4.7	1.8	67.6	1.3	0.0	2.8	100.0	97
Middle	11.2	10.5	1.3	70.1	0.6	2.7	3.7	100.0	108
Fourth	19.0	7.1	3.1	64.7	2.1	3.4	0.6	100.0	72
Highest	11.3	4.7	0.6	81.9	1.1	0.4	0.0	100.0	147
Total	17.6	6.4	1.8	70.2	1.1	1.2	1.7	100.0	482

Note: Parentheses indicate that a figure is based on 25-49 unweighted cases.

6.7 Age-specific and Total Abortion Rates

Abortion rates for the five-year period preceding the survey are shown in Table 6.10 by place of residence. The age-specific rates represent the probability that a woman of a particular age will have an abortion during a one-year period and are shown per 1,000 women. A useful summary index of the age-specific abortion rates is the total abortion rate (TAR). This rate is

analogous to the total fertility rate (TFR). The TAR is the lifetime average number of abortions a woman would have if she experienced the current age-specific abortion rates.

Table 6.10 Total abortion rates

Age-specific and cumulative abortion rates for the five year period preceding the survey by residence, Turkey 2008

Current age	Urban	Rural	Total
15-19	1	4	1
20-24	7	5	6
25-29	16	13	15
30-34	14	14	14
35-39	17	11	16
40-44	6	6	6
45-49	0	0	0
TAR 15-49	0.30	0.27	0.29
TAR 15-44	0.30	0.27	0.29

TAR = Total abortion rate expressed per woman

The TAR per women is 0.3 for the five years preceding the TDHS-2008. The age-specific rates increase to a peak among women in the 35-39 age group and then decline among older women. The rates of abortion are the same or higher in urban than rural areas at all ages, except the 15-19 cohort where the age specific abortion rate in rural is 4 times more than in urban.

Total abortion rates are shown by some additional background characteristics in Table 6.11. Among five geographical regions, the West has the highest total abortion rate while East has the lowest (0.34 and 0.21 respectively). Considering the NUTS I regions, the total abortion rate is highest in Istanbul (0.42) and lowest in West Anatolia (0.18). There is a distinct difference in between the TAR for women with no education or primary incomplete (0.19) and those with a high school or higher educational level (0.35). With regard to wealth quintile, no regular pattern is observed; the highest quintile has the highest rate (0.34) while lowest wealth quintile has the lowest rates (0.22).

Table 6.11 Induced abortion by background characteristics

Total induced abortion rate for the five years preceding the survey by background characteristics, Turkey 2008

Background characteristic	TAR (15-49)
Residence	
Urban	0.30
Rural	0.27
Region	
West	0.34
South	0.30
Central	0.25
North	0.29
East	0.21
Region (NUTS 1)	
İstanbul	0.42
West Marmara	0.26
Aegean	0.35
East Marmara	0.19
West Anatolia	0.18
Mediterranean	0.30
Central Anatolia	0.21
West Black Sea	0.35
East Black Sea	0.28
Northeast Anatolia	0.21
Central East Anatolia	0.24
Southeast Anatolia	0.20
Education	
No education/Primary incomplete	0.19
First level primary	0.31
Second level primary	0.20
High school and higher	0.35
Wealth quintile	
Lowest	0.22
Second	0.32
Middle	0.31
Fourth	0.23
Highest	0.34
Total	0.29

TAR = Total abortion rate expressed per 15-49 woman.

OTHER PROXIMATE DETERMINANTS OF FERTILITY 7

Banu Akadlı Ergöçmen, Mehmet Ali Eryurt and Tuğba Adalı

Fertility levels in most populations can be explained by some key proximate determinants that affect a woman's risk of becoming pregnant. These determinants are nuptiality (including consensual unions), postpartum insusceptibility (including postpartum amenorrhea and sexual abstinence), the onset of menopause, contraceptive use and abortion. This chapter addresses the principal factors other than contraception and abortion that affect fertility. Marriage is a principal indicator of women's exposure to the risk of pregnancy in societies where sexual activity usually takes place within marriage. Populations in which age at marriage is low tend to experience early childbearing and high fertility. Therefore, an increase in the average age at which women marry can help to explain the downward trends in fertility levels. The durations of postpartum amenorrhea and sexual abstinence influence the length of time that a woman is insusceptible to pregnancy, which in turn influence birth spacing. The onset of menopause marks the end of a woman's reproductive life cycle. Taken together, these factors determine the length and pace of a woman's reproductive life and therefore are important in understanding fertility levels and differentials.

7.1 Current Marital Status

In the TDHS-2008, only ever-married women were interviewed through the individual questionnaire. As part of the interview, they were asked the basic questions on marital status and age at marriage that are included in the standard DHS questionnaire. Unlike the standard DHS questionnaire, however, the TDHS-2008 did not ask about the age at which women initiated sexual activity. In addition, a special country-specific nuptiality module included in the individual questionnaire obtained information on family formation, religious marriages, and consanguinity. Although never-married women were not interviewed in the survey, information about them was collected in the household questionnaire.

The distribution of all women age 15-49 by their marital status at the time of the survey is presented in Table 7.1.1. This is a descriptive table of basic importance in defining the population base for many of the subsequent tables in this and other chapters. In the table, the term married refers both to "currently married" and "living together". Table 7.1.1 shows that the majority of women at childbearing age are currently married (65 percent), one-third (31 percent) are never married, and the remaining 4 percent are either divorced, separated or widowed. The proportion of never-married women declines rapidly with age, from 90 percent among teenagers to 23 percent among women in their late twenties. Four percent of women in their late thirties have never married, and only 0.1 percent of women age 45-49, who are approaching the end of the reproductive years, have never married. These data confirm the universality of marriage in Turkey.

Table 7.1.1 Current marital status

Percent distribution of women age 15-49 by current marital status, according to age, Turkey 2008

Current age	Never married	Marital status					Number of women
		Married	Widowed	Divorced	Separated	Total	
15-19	90.2	9.6	0.0	0.1	0.1	100.0	1,871
20-24	54.4	44.7	0.0	0.6	0.2	100.0	1,834
25-29	22.7	75.0	0.3	1.3	0.7	100.0	1,751
30-34	10.8	85.8	0.4	2.6	0.4	100.0	1,546
35-39	4.3	90.4	1.8	2.6	0.9	100.0	1,396
40-44	1.7	89.6	3.9	4.0	0.7	100.0	1,223
45-49	0.1	89.8	6.4	2.1	1.6	100.0	1,116
Total	31.0	65.2	1.5	1.7	0.6	100.0	10,738

Table 7.1.1 also shows that, as age increases, the proportion of women widowed, divorced or separated also increases. The proportion widowed rises from less than 1 percent of women under age 30 to 6 percent among women at ages 45-49. Divorce and separation are socially discouraged, and therefore are uncommon in Turkey (2 percent and 1 percent respectively). The percentage of women who are divorced is markedly higher among women age 30-44 (4 percent or less) than in other age groups.

Table 7.1.2 Trends in proportion never married

Percent distribution of women who have never married, by age group, as reported in various surveys, Turkey 1978-2008

Current age	TFS 1978	TFHS 1983	TPHS 1988	TDHS 1993	TDHS 1998	TDHS 2003	TDHS 2008
15-19	77.8	70.0	85.4	86.5	84.5	88.1	90.2
20-24	26.2	34.2	39.3	41.5	39.3	50.2	54.4
25-29	7.5	8.5	12.2	15.6	12.9	20.0	22.7
30-34	2.6	3.4	4.5	4.3	6.5	8.2	10.8
35-39	0.9	2.6	2.9	1.8	2.4	4.1	4.3
40-44	1.6	1.0	2.8	2.2	1.8	3.0	1.7
45-49	0.7	0.8	1.8	0.9	1.7	1.5	0.1

The proportion of the female population that remains single directly influences fertility levels because childbearing outside marriage is uncommon in Turkey. Table 7.1.2 shows the trend in the proportion of never-married women by age group from previous surveys conducted in Turkey. During the last three decades, this proportion increased in almost all age groups, with the increases being especially marked in the 20-34 age groups.

7.2 Age at First Marriage

In Turkey, marriage marks the onset of the socially acceptable time for childbearing. The age at first marriage has a major impact on childbearing because women who marry early will have, on average, a longer period of exposure to pregnancy, which in turn often leads to a higher number of lifetime births. In Turkey, the minimum legal age at marriage with parental consent is 17 years for both males and females.

Information from the TDHS-2008 on women's age at first marriage is shown in Table 7.2. The survey found that, among women age 25-49, 43 percent marry by age 20, one-fourth marry by age 18 and 5 percent enter marriage before their 15th birthday. Table 7.2 also shows that the median age at first marriage is 20.8 years, indicating that half of women in that age group married before that age. There has been a steady increase in the age at first marriage over the last two decades in Turkey. This is evident from changes in the median age at first marriage across cohorts in Table 7.2; the median increases from 19.5 years for women in their late forties to 22.1 for women in their late twenties. A comparison of the TDHS-2008 results for women age 25-49 with the findings of previous surveys also confirms the increasing tendency to delay marriage; the age at first marriage has increased by almost 2 years during the 15-year period between the TDHS-1993 and the TDHS-2008.

Table 7.2 Age at first marriage

Percentage of women who were first married by specific exact ages and median age at first marriage, according to current age, Turkey 2008

	Percentage first married by exact age:					Percentage never married	Number of women	Median age at first marriage
Current age	15	18	20	22	25			
15-19	0.9	NA	NA	NA	NA	90.2	1,871	a
20-24	2.5	14.0	29.2	NA	NA	54.4	1,834	a
25-29	2.3	17.1	33.7	49.5	67.4	22.7	1,751	22.1
30-34	4.6	21.9	39.3	55.8	74.8	10.8	1,546	21.3
35-39	4.4	23.8	45.7	63.8	80.0	4.3	1,396	20.4
40-44	6.7	28.1	48.1	64.7	81.2	1.7	1,223	20.2
45-49	7.5	35.3	55.3	71.3	85.6	0.1	1,116	19.5
20-49	4.4	22.2	40.3	NA	NA	18.6	8,867	NA
25-49	4.8	24.3	43.2	59.8	76.8	9.2	7,033	20.8

NA = Not applicable

[a] Omitted because less than 50 percent of the women married for the first time before reaching the beginning of the age group

Although the median is a convenient summary measure, not all changes in age at marriage are necessarily reflected in the median. Cohort trends in age at marriage can be more thoroughly examined by comparing the percentages who first marry at specific ages for successive 5-year age groups. These percentages also confirm that substantial changes have occurred in the age at which women marry in Turkey over the past several decades. The percentages of women married at each specific age are all lower for the younger cohorts than for the older cohorts. For example, among the oldest cohort, 55 percent married by age 20, whereas only 34 percent of women in their late

twenties married by age 20. There has been a marked decline in the proportion of women getting married at very young ages; for example, the proportion of women married by age 15 has dropped from 8 percent among women in the oldest cohort to 2 percent among women age 25-29.

Table 7.3 Median age at first marriage

Median age at first marriage among women age 25–49 by current age, according to background characteristics, Turkey 2008

	Current age					Women age
Background characteristics	25–29	30–34	35–39	40–44	45–49	25–49
Residence						
Urban	22.6	21.6	20.6	20.6	19.8	21.1
Rural	20.4	20.1	19.7	19.3	18.6	19.6
Region						
West	22.8	22.0	20.7	21.0	19.9	21.3
South	21.6	21.3	21.3	20.8	20.3	21.1
Central	21.6	20.7	19.6	19.4	18.7	20.0
North	22.6	22.0	20.9	20.5	20.0	21.3
East	21.4	19.9	19.1	18.7	17.7	19.6
Region (NUTS 1)						
İstanbul	23.2	22.2	20.4	21.4	19.8	21.4
West Marmara	21.6	21.3	21.9	21.0	19.2	20.9
Aegean	21.2	21.0	20.5	20.0	20.0	20.6
East Marmara	23.4	22.4	20.5	20.5	19.8	21.5
West Anatolia	21.9	21.3	20.4	21.1	19.5	21.0
Mediterranean	21.6	21.3	21.3	20.8	20.3	21.1
Central Anatolia	20.6	19.9	19.0	18.6	19.2	19.4
West Black Sea	22.5	20.9	20.3	19.4	19.1	20.5
East Black Sea	22.5	21.9	21.5	20.8	19.4	21.3
Northeast Anatolia	20.3	21.2	19.6	18.5	18.8	19.8
Central East Anatolia	21.3	19.6	19.1	19.0	18.0	19.6
Southest Anatolia	21.7	19.9	18.9	18.6	17.4	19.5
Education						
No educ./Prim.inc.	21.1	18.9	18.4	18.5	17.8	18.7
First level primary	21.5	20.1	20.2	19.9	19.3	20.2
Second level primary	24.3	21.7	19.9	19.7	19.4	21.4
High school and higher	a	24.1	23.6	23.5	22.9	24.1
Wealth quintile						
Lowest	19.7	19.3	18.7	19.2	18.6	19.2
Second	20.4	20.3	19.5	19.7	18.8	19.8
Middle	22.3	20.3	20.5	20.0	18.9	20.5
Fourth	22.3	21.6	20.3	20.2	19.3	20.8
Highest	a	22.8	21.8	21.7	21.3	22.5
Total	22.1	21.3	20.4	20.2	19.5	20.8

[a] Omitted because less than 50 percent of the women married for the first time before reaching the beginning of the age group

Table 7.3 compares the current level and cohort trends in the median age at marriage for different subgroups of the population. Urban women tend to marry 1.5 years later than their rural counterparts (21.1 years and 19.6 years respectively). This pattern is observed for all age groups. Looking at the regional variations, the median age at first marriage for women age 25-49 is lowest in the East and Central (19.6 years and 20.0 years, respectively) and above 21 in the other regions.

Comparisons of the NUTS 1 regions indicate that East Marmara has the highest median age (21.5 years) at marriage and Central Anatolia has the lowest (19.4 years). The upward trend in the age at marriage is observed within all regions, with the median age at first marriage for younger women generally higher than those for older women. For example, the median age at first marriage in the 25-29 age group in Southeast Anatolia is 21.7 years, more than four years later than the age at marriage reported for women age 45-49 (17.4 years). Likewise, in İstanbul and East Marmara, half of the women in the 25-29 age group married after age 23, which is more than three years later than women in their late forties.

The level of education has a positive association with the median age at first marriage, with the differences between women who have completed at least high school and other women being especially pronounced. The median age at first marriage for women with a high school or higher education is 24.1 years, nearly three years higher than the median age for women with a second level primary education and more than five years higher than the median age for women with less than primary education (Table 7.3). The median age at first marriage also increases with household wealth. Women in the highest wealth quintile marry more than three years later than those from the lowest wealth quintile (22.5 years and 19.2 years respectively).

7.3 Postpartum Amenorrhea, Postpartum Abstinence, and Insusceptibility

The period of postpartum amenorrhea is the interval between childbirth and the return of menstruation. This period is largely determined by the duration and intensity of breastfeeding. Postpartum abstinence refers to the voluntary sexual inactivity after childbirth. Delaying the resumption of sexual relations after a birth prolongs the period of postpartum protection. Postpartum amenorrhea and sexual abstinence after birth jointly determine the length of the period women are insusceptible to pregnancy following birth; women are insusceptible if they are either abstaining from sex after childbirth or are amenorrhoeic.

In TDHS-2008, women who gave birth in the five years preceding the survey were asked about the duration of amenorrhea and sexual abstinence after each birth that occurred during the period. Table 7.4 presents the percentage of births whose mothers were postpartum amenorrheic, abstaining, and postpartum insusceptible by the number of months since birth for the three years preceding the survey. The estimates of the median and mean durations shown in the table are calculated from these current status proportions. In calculating these averages, the data were grouped by two-month intervals to minimize fluctuations.

The results in Table 7.4 show that a great majority of women (87 percent) are amenorrheic during the first two months following the birth, but this value decreases to 64 percent after the second month. Only one-fourth of women are amenorrheic after the sixth month.

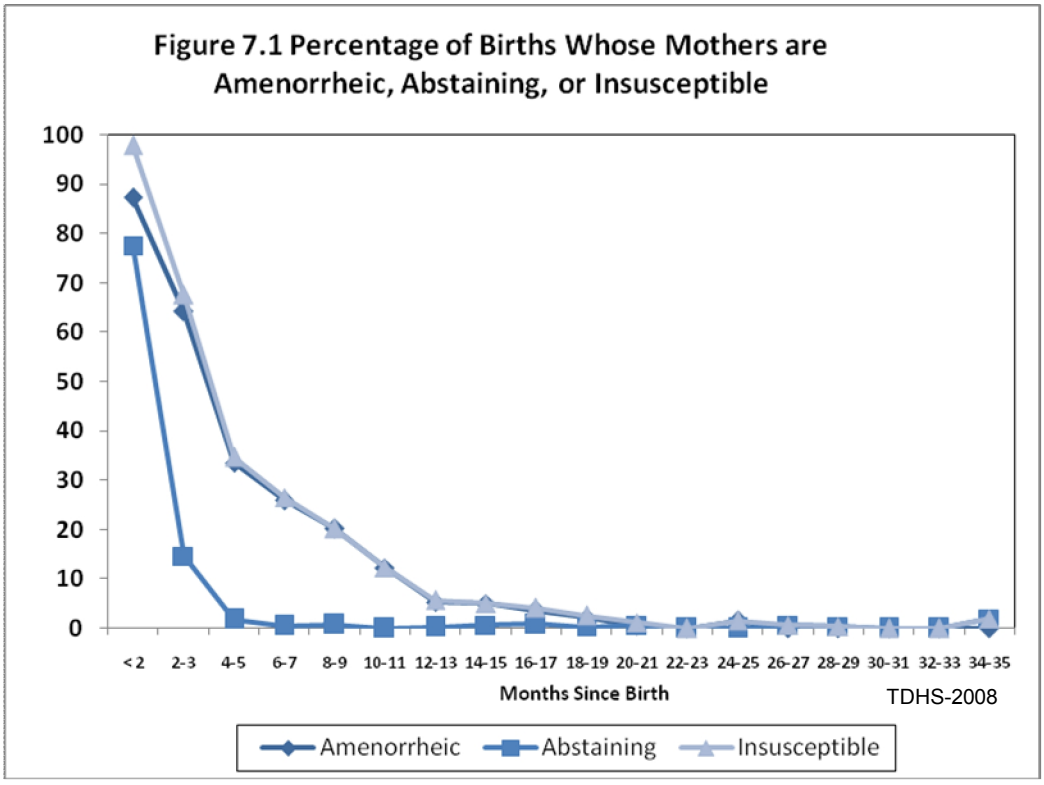
In Turkey, the period of sexual abstinence after birth traditionally lasts 40 days. The estimates of postpartum abstinence in Table 7.4 are compatible with this tradition. Seventy-eight percent of all mothers abstained from sexual relations during first two months following the birth. However, starting from the second month after the birth, the contribution of abstinence to the period of insusceptibility is greatly reduced. At 2-3 months following a birth, the percentage of abstaining mothers decreases to 15 percent and by 6-7 months, to less than 1 percent (Figure 7.1).

Table 7.4 Postpartum amenorrhea, abstinence, and insusceptibility

Percentage of births in the three years preceding the survey for which mothers are postpartum amenorrheic, abstaining, and insusceptible, by number of months since birth, and median and mean durations, Turkey 2008

Number of months since birth	Percentage of births for which the mother is			Number of births
	Amenorrheic	Abstaining	Insusceptible	
< 2	87.2	77.5	97.9	88
2–3	64.2	14.7	67.6	133
4–5	33.6	1.9	34.7	133
6–7	26.0	0.6	26.6	106
8–9	20.2	0.8	20.2	92
10–11	12.3	0.0	12.3	136
12–13	5.4	0.3	5.7	123
14–15	5.1	0.7	5.1	112
16–17	3.7	0.9	4.2	133
18–19	2.3	0.3	2.6	133
20–21	0.6	0.7	1.2	96
22–23	0.0	0.0	0.0	110
24–25	1.6	0.0	1.6	114
26–27	0.0	0.7	0.7	124
28–29	0.0	0.4	0.4	116
30–31	0.0	0.0	0.0	109
32–33	0.0	0.0	0.0	115
34–35	0.0	2.0	2.0	95
Total	14.1	4.8	15.2	2,068
Median	3.6	1.7	3.9	NA
Mean	5.6	2.4	5.9	NA

NA = Not applicable



Overall, the median duration of postpartum amenorrhea is 3.6 months, abstinence is 1.7 months, and insusceptibility is 3.9 months. Thus, the TDHS-2008 results, which are similar to the findings of previous surveys, indicate that the period of postpartum amenorrhea is comparatively longer than the period of postpartum abstinence and therefore is the primary determinant of the length of postpartum insusceptibility to pregnancy in Turkey.

In the absence of contraception, variations in postpartum amenorrhea and abstinence are the most important determinants of the interval between births and, ultimately, of completed fertility. Table 7.5 shows the median duration of postpartum amenorrhea, abstinence, and insusceptibility by background characteristics of mothers. In general, the average duration of postpartum abstinence in Turkey does not vary much by background characteristics, except for minor differences across regions and by the mother's level of education. For example, postpartum abstinence seems to be practiced for a slightly longer period in the West Marmara, East Black Sea and Central East Anatolia than in other regions. West Black Sea has the shortest median duration of postpartum abstinence (1.1 months).

Given the generally similar durations of postpartum abstinence, variations across in the period of insusceptibility mainly reflect differences in the durations of amenorrhea. Older women who are above age 30 have a longer median duration of amenorrhea (4.1 months) than younger women who are under age 30 (3.3 months). Urban women have a shorter median duration of amenorrhea than their rural counterparts (3.2 and 4.9 months, respectively). There are considerable regional variations in the period of amenorrhea. The shortest durations for postpartum amenorrhea are observed in some coastal regions, namely East Marmara, Mediterranean, and East Black Sea regions (2.4 months) and the highest durations are observed in

Central Anatolia and West Marmara regions (5.1 and 5.0 months, respectively). Postpartum amenorrhea is inversely related with mother's education. The median duration of amenorrhea is 3.9 months among women who do not have education, while it is 2.6 months for women with at least high school education. There is an inverted U-shaped relationship between the duration of amenorrhea and wealth status.

Table 7.5 Median duration of postpartum insusceptibility by background characteristics

Median number of months of postpartum amenorrhea, postpartum abstinence, and postpartum insusceptibility following births in the three years preceding the survey , by background characteristics, Turkey 2008

Background characteristic	Amenorrheic	Abstaining	Insusceptible	Number of births
Mother's age				
<30	3.3	1.6	3.6	1,342
30+	4.1	1.8	4.4	726
Residence				
Urban	3.2	1.7	3.5	1,472
Rural	4.9	1.7	5.1	596
Region				
West	3.1	1.6	3.6	708
South	2.4	1.7	2.7	245
Central	4.8	1.7	5.0	456
North	2.4	2.0	2.5	125
East	3.6	1.8	3.8	535
Region (NUTS 1)				
İstanbul	3.6	1.6	3.8	318
West Marmara	5.0	2.0	5.0	55
Aegean	3.8	1.6	4.1	264
East Marmara	2.4	1.5	3.5	183
West Anatolia	3.6	1.8	3.8	208
Mediterranean	2.4	1.7	2.7	245
Central Anatolia	5.1	1.8	5.9	108
West Black Sea	4.2	1.1	4.8	104
East Black Sea	2.4	2.1	3.0	49
Northeast Anatolia	3.2	1.6	3.5	74
Central East Anatolia	4.7	2.1	4.7	149
Southeast Anatolia	3.4	1.6	3.7	312
Education				
No educ./Prim.inc.	3.9	1.9	4.4	442
First level primary	3.6	1.4	3.7	965
Second level primary	4.3	1.8	4.4	222
High school and higher	2.6	1.9	3.5	439
Wealth quintile				
Lowest	3.3	1.8	3.5	493
Second	5.3	1.9	5.6	467
Middle	4.5	1.4	4.5	451
Fourth	2.7	1.4	3.0	340
Highest	2.9	1.9	3.2	317
Total	3.6	1.7	3.9	2,068

Note: Medians are based on current status

Durations of postpartum insusceptibility by sub-population groups exhibit a pattern similar to those for amenorrhea. In general, women over age 30, rural women, women living in the Central region, uneducated women and women living in the second and third quintile households are insusceptible for relatively longer periods.

7.4 Menopause

Exposure to the risk of becoming pregnant declines with age. After age 30, women's susceptibility to pregnancy decreases as the proportion of infecund women increases. Onset of menopause is a main determinant of infecundity.

Table 7.6 presents the percentage women age 30 and over who are menopausal. Menopausal women are defined as women who are neither pregnant nor postpartum amenorrheic, but who have not had a menstrual period in the six months preceding the survey. Women who report that they have had a hysterectomy are also defined as menopausal. Overall, 10 percent of women age 30-49 are estimated to be menopausal. The percentage of menopausal women increases with age, from less than 1 percent for women in their early thirties to 42 percent for women age 48-49.

Table 7.6 Menopause

Percentage of women age 30-49 who are menopausal, by age, Turkey 2008

Age	Percentage menopausal	Number of women
Age		
30-34	0.6	1,379
35-39	1.9	1,336
40-41	4.0	445
42-43	9.3	487
44-45	15.5	527
46-47	30.5	402
48-49	42.0	457
Total	9.8	5,033

FERTILITY PREFERENCES 8

Mehmet Ali Eryurt, A. Sinan Türkyılmaz and Pelin Çağatay

Information on future reproductive preferences is of considerable importance for refining and modifying current family planning policies. Insight into the fertility preferences allows an assessment of the potential unmet need for contraception. Similar to the previous demographic surveys, the TDHS-2008 asked women a series of questions to ascertain their fertility preferences. Respondents were first asked about whether if they wanted additional children and, if so how long would they prefer to wait before the next child. They were also asked, if they could start afresh, how many children in all they would want. Bearing in mind that the underlying rationale of most family planning programs is to give couples the freedom and ability to bear the number of children they want and to achieve the spacing of births they prefer, the importance of this chapter is obvious.

The analysis and interpretation of data on fertility preferences have been criticized on the grounds that answers are misleading, because they do not take into account the effect of social pressures or the attitudes of other family members, particularly the husband, who may exert a major influence on reproductive decisions. Although the evidence from surveys in which both husbands and wives are interviewed suggests that there is no radical difference in between the views of the two sexes, the preferences of TDHS-2008 respondents expressed at the time of the survey are obviously subject to change in response social-familial pressures and other pressures.

8.1 Desire for More Children

Fertility desires of currently married women were determined by asking whether or not they wanted to have another child and, if so, how soon.

The inclusion of women who are currently pregnant complicated the measurement of views on future childbearing. For these women, the question on desire for more children was rephrased to refer to desire for another child *after* the one that they were expecting. To take into account the way in which the preference variable was defined for pregnant women, when the results are classified by number of living children, the current pregnancy is counted as equivalent to a living child. A current pregnancy may also have influenced the responses to question of how soon a woman wanted the next child; i.e., in some cases, the answers of pregnant women with respect to preferred waiting time before the next birth may have included the remaining gestation period of the current pregnancy, and thus, may not be strictly comparable with the answers of non-pregnant women. Also, it should be noted that women who have been sterilized for contraceptive purposes were not asked about their desire for another child. However, for purposes of the fertility preference analysis, these women are classified as wanting no more children.

Table 8.1 and Figure 8.1 show the percent distribution of currently married women by desire for more children according to the number of living children (including any current pregnancy). The table allows the potential need for contraceptive services for spacing as well as for limiting births. The results indicate that the majority of currently married women in Turkey desire to control their future fertility. Sixty-seven percent of currently married want to limit child-bearing: 59 percent want no more children, and an additional 8 percent have been sterilized. Additionally, although 26 percent of currently married women want to have a child at some time in the future, 14 percent of them want to wait for another child at least two years. Thus, about four out of every five currently married are potentially in need of contraception, for the purpose of either limiting their family size or spacing births. The proportion of currently married women who are undecided about having another child is only 3 percent.

As expected, the desire for more children declines noticeably as the number of living children increases. Sixty-five percent of currently married women with one child want to have a child in the future, whereas only 3 percent of women with four or more children want to have another. A strong desire to stop childbearing is evident among women who have had two living children and remains at high levels at higher order parities.

Table 8.1 Fertility preferences by number of living children

Percent distribution of currently married women age 15-49 by desire for children, according to number of living children, Turkey 2008

	Number of living children[1]					
Desire for children	0	1	2	3	4+	Total 15-49
Have another soon[2]	71.6	19.9	4.9	1.9	1.5	11.5
Have another later[3]	17.3	43.3	8.9	3.8	1.7	14.3
Have another, undecided when	1.2	1.4	0.3	0.5	0.2	0.6
Undecided	1.3	4.4	4.0	1.2	1.1	2.8
Want no more	4.3	27.8	72.3	71.3	75.6	58.7
Sterilized[4]	0.4	0.4	6.1	16.5	16.2	8.3
Declared infecund	3.9	2.7	3.3	4.6	3.7	3.5
Missing	0.0	0.0	0.1	0.2	0.0	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number	493	1,443	2,469	1,349	1,246	6,999

[1] Includes current pregnancy
[2] Wants next birth within 2 years
[3] Wants to delay next birth for 2 or more years
[4] Includes both female and male sterilization

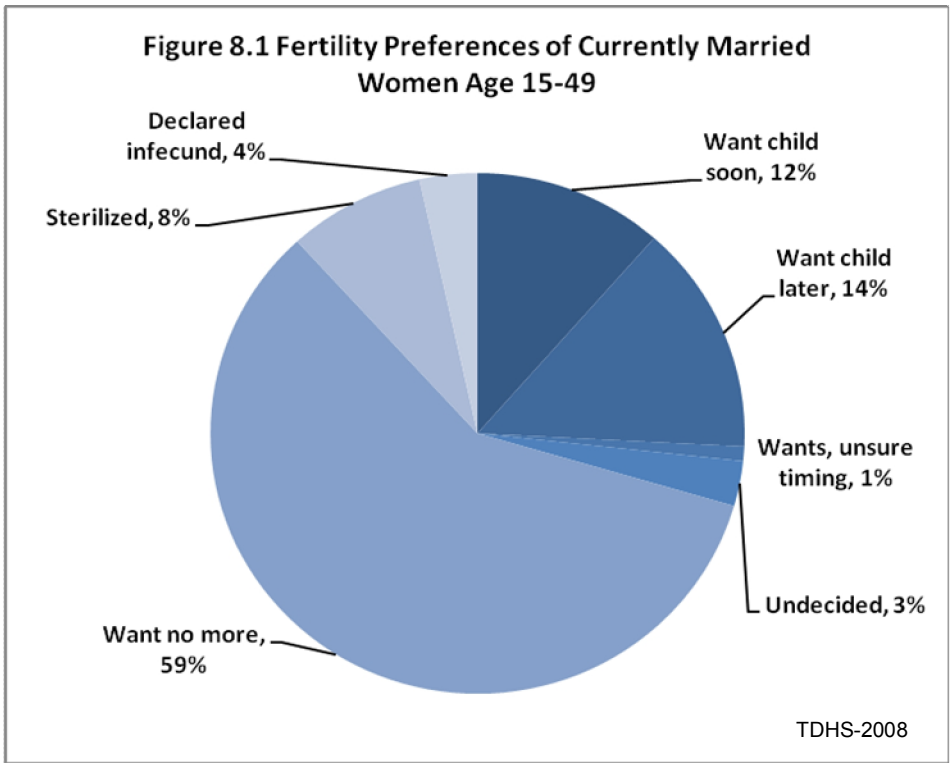


Table 8.2 shows the percent distribution of currently married women by the desire for more children according to current age. As expected, the proportion of women who want more children decreases with age. Eighty-nine percent of women age 15-19 want more children, compared with 10 percent of women age 35-39 years. The proportion of women who want to delay the next birth for two or more years also decreases rapidly with age as women shift from wanting another birth to desiring to limit childbearing. Thus, the desire to space births is mainly concentrated among women under age 25.

Table 8.2 Fertility preference by age

Percent distribution of currently married women age 15-49 by desire for more children, according to age, Turkey 2008

Desire for More children	Current age							Total
	15-19	20-24	25-29	30-34	35-39	40-44	45-49	15-49
Have another soon[1]	32.4	23.8	16.0	13.2	8.5	4.0	1.8	11.5
Have another later[2]	55.5	45.2	28.2	10.6	1.2	0.4	0.0	14.3
Have another, undecided when	0.6	1.9	0.7	0.7	0.4	0.1	0.1	0.6
Undecided	3.8	3.7	5.3	3.9	2.7	0.5	0.1	2.8
Want no more	7.7	24.5	45.7	63.3	71.6	76.0	71.8	58.7
Sterilized	0.0	0.6	3.6	7.6	13.5	13.1	11.5	8.3
Declared infecund	0.0	0.2	0.5	0.7	1.8	5.7	14.5	3.5
Missing	0.0	0.0	0.0	0.0	0.2	0.2	0.2	0.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number	180	820	1,314	1,326	1,262	1,096	1,002	6,999

[1] Wants next birth within 2 years. [2] Wants to delay next birth for 2 or more years

Table 8.3 shows the percentage of respondents who want no more children by number of living children and selected background variables. The table provides information about subgroup variations in the potential demand for fertility control.

Table 8.3 Desire to limit childbearing

Percentage of currently married women age 15-49 who want no more children, by number of living children, according to background characteristics, Turkey 2008

	Number of living children[1]					
Background characteristic	0	1	2	3	4+	Total
Residence						
Urban	4.2	30.7	78.6	87.7	92.8	66.5
Rural	6.8	18.4	77.5	88.0	90.0	68.8
Region						
West	5.9	34.9	82.7	89.1	92.0	66.9
South	4.9	15.2	78.0	87.1	89.7	67.3
Central	4.6	24.3	76.7	92.9	95.8	67.9
North	1.2	32.3	83.7	90.6	89.9	69.8
East	1.7	13.0	55.6	74.3	90.8	64.8
Region (NUTS 1)						
İstanbul	5.3	34.4	77.2	87.3	89.7	64.3
West Marmara	6.8	36.1	93.0	87.0	94.2	69.3
Aegean	2.9	35.7	84.5	92.0	94.1	69.9
East Marmara	8.1	30.9	85.4	90.8	94.2	68.3
West Anatolia	7.7	23.8	74.2	90.5	98.2	65.2
Mediterranean	4.9	15.2	78.0	87.1	89.7	67.3
Central Anatolia	3.6	21.7	74.3	96.7	94.9	71.5
West Black Sea	0.0	33.3	81.3	95.5	97.0	71.8
East Black Sea	2.3	21.7	77.7	83.0	83.2	64.1
Northeast Anatolia	0.0	17.0	76.7	81.0	88.4	69.2
Central East Anatolia	2.2	13.9	57.9	85.2	91.3	65.0
Southeast Anatolia	2.0	9.7	46.9	64.9	91.2	63.1
Education						
No education/Primary inc.	2.4	15.6	64.7	77.4	90.4	73.1
First level primary	3.5	29.7	78.5	90.1	93.2	72.8
Second level primary	5.7	19.6	71.6	91.1	91.3	47.5
High school and higher	5.9	32.5	85.7	91.0	97.0	55.3
Wealth quintile						
Lowest	7.5	15.3	69.1	80.4	90.8	69.7
Second	0.6	19.9	71.2	89.8	89.3	67.7
Middle	6.5	30.2	76.7	88.8	91.4	65.9
Fourth	5.0	22.9	79.0	90.5	97.0	64.6
Highest	4.3	39.9	86.6	86.6	98.3	68.1
Total	4.7	28.2	78.4	87.8	91.8	67.0

Note: Women who have been sterilized are considered to want no more children.
[1]The number of living children includes the current pregnancy.

As expected, the desire to limit the childbearing increases rapidly in all subgroups with the number of living children. Overall, roughly similar proportions of women want to terminate childbearing in urban and rural areas (67 and 69 percent, respectively).Women living in the North (70 percent) are the most likely to desire stop childbearing while those living in the East are the least likely (65 percent). In the NUTS 1 regions, the percentage of currently married women who want no more children ranges from 63 percent in the Southeast Anatolia to 72 percent in West Black Sea and Central Anatolia.

Education is known to be negatively associated with the desire to stop childbearing, largely because better-educated women tend to be younger and still in the early stages of the family-building process. The TDHS-2008 results conform to this pattern, with the proportion of women who desire to stop childbearing decreasing as the level of education increases. Thus, 73 percent of currently married women with less than a primary education want to stop childbearing, compared with 48 percent of those who have completed secondary education. A similar pattern was observed in the TDHS-2003.

Overall, the desire to limit childbearing is not consistently related to wealth status. However, significant differences in the proportions of currently married women who do not want another child are observed among women with one or two children. For example, at parity 2, 69 percent of women in the lowest wealth quintile want to limit childbearing, compared with 87 percent of those who are in the highest wealth quintile.

8.2 Need for Family Planning Services

One of the major concerns of family planning programs is to define the size of the potential demand for contraception and to identify women who are in need of contraceptive services. Currently married fecund women who either want to postpone the next birth (need for spacing) or who want no more children (need for limiting), but who are not using a contraceptive method, are considered to have *unmet need* for family planning. Pregnant women are considered to have an unmet need for spacing or limiting if their pregnancy was mistimed or unwanted, respectively. Similarly, amenorrheic women are classified as having unmet need if their last birth was mistimed or unwanted. Nonusers who are unsure as to whether or when they want another child are included in the unmet need for spacing purposes since they need to use a contraceptive until they decide they definitely want a child within a short time or do not want another at all. Women who are currently using family planning methods are said to have a *met need* for family planning. The sum of unmet need and met need constitute the *total demand* for family planning.

Table 8.4 presents the percentage of currently married women with unmet need, met need and the total demand for family planning, according to whether the need is for spacing births or limiting family size by selected background characteristics. The total demand for family planning among currently married women age 15-49 is 79 percent and 92 percent of this demand is satisfied. The demand for limiting purposes is three times as high as the demand for spacing purposes (59 and 20 percent, respectively). Overall, 6 percent of currently married women in Turkey have an unmet need for family planning, 4 percent for limiting and 2 percent for spacing births. Although the percentage with an unmet need for family planning remained virtually unchanged between 2003 and 2008 (6.0 percent in TDHS-2003 and 6.2 percent in TDHS-2008), it remains considerably below the level observed in the TDHS-1993 (12 percent).

Table 8.4 Need and demand for family planning among currently married women

Percentage of currently married women age 15-49 with unmet need for family planning, percentage with met need for family planning, the total demand for family planning, and the percentage for the demand for contraception that is satisfied, by background characteristics, Turkey 2008

	Unmet need for family planning[1]			Met need for family planning[2]			Total demand for family planning[3]				
Background characteristic	For spacing	For limiting	Total	For spacing	For limiting	Total	For spacing	For limiting	Total	Percentage of demand satisfied	Number of women
Age											
15-19	11.9	2.8	14.7	38.1	2.2	40.2	50.5	5.0	55.5	73.5	180
20-24	6.0	2.9	8.9	45.8	17.6	63.4	52.0	20.5	72.5	87.8	820
25-29	3.8	3.6	7.4	34.5	39.1	73.6	38.4	42.6	81.0	90.9	1,314
30-34	1.6	5.0	6.6	18.7	59.9	78.6	20.3	65.2	85.5	92.3	1,326
35-39	0.6	3.3	3.9	6.9	76.9	83.8	7.5	80.3	87.8	95.5	1,262
40-44	0.0	4.7	4.8	2.4	76.2	78.7	2.5	81.0	83.4	94.3	1,096
45-49	0.1	5.0	5.1	0.2	58.7	58.9	0.4	63.7	64.0	92.0	1,002
Residence											
Urban	2.0	3.4	5.4	19.1	55.2	74.3	21.2	58.7	79.9	93.2	5,284
Rural	2.6	6.2	8.8	14.6	54.3	68.9	17.4	60.5	77.9	88.7	1,716
Region											
West	1.7	2.6	4.3	18.8	57.5	76.3	20.5	60.2	80.7	94.7	3,049
South	1.7	4.2	5.9	16.0	54.3	70.4	17.8	58.6	76.5	92.3	849
Central	2.0	3.3	5.2	19.4	56.1	75.5	21.5	59.4	80.9	93.6	1,542
North	1.2	3.8	4.9	16.4	59.1	75.6	17.9	62.9	80.8	93.9	455
East	4.4	9.4	13.9	16.1	45.3	61.4	20.6	54.9	75.5	81.6	1,105
Region (NUTS 1)											
İstanbul	1.5	2.8	4.3	20.8	53.5	74.3	22.3	56.5	78.9	94.5	1,379
West Marmara	0.6	2.4	3.0	17.4	58.7	76.2	18.1	61.1	79.1	96.2	308
Aegean	1.5	2.6	4.0	18.0	62.0	80.0	19.5	64.5	84.0	95.2	1,010
East Marmara	2.1	1.6	3.7	16.8	60.0	76.8	18.9	61.6	80.5	95.4	722
West Anatolia	2.8	3.2	6.0	20.5	55.2	75.7	23.4	58.4	81.8	92.7	679
Mediterranean	1.7	4.2	5.9	16.0	54.3	70.4	17.8	58.6	76.5	92.3	849
Central Anatolia	2.3	5.6	7.8	17.4	54.8	72.2	19.9	60.4	80.2	90.2	356
West Black Sea	1.0	3.6	4.5	18.2	59.3	77.5	19.6	62.9	82.5	94.5	416
East Black Sea	1.7	3.8	5.5	14.9	53.2	68.2	16.9	57.0	73.9	92.5	180
Northeast Anatolia	3.3	6.9	10.3	16.2	54.2	70.4	19.5	61.2	80.7	87.3	188
Central East Anatolia	4.1	9.6	13.7	17.3	44.9	62.3	21.4	54.7	76.1	82.0	318
Southeast Anatolia	5.0	10.2	15.2	15.5	42.3	57.8	20.7	52.6	73.3	79.3	594
Education											
No educ./Primary inc.	3.3	8.0	11.3	8.5	52.3	60.8	11.8	60.4	72.2	84.3	1,274
First level primary	1.4	4.0	5.4	15.0	61.8	76.8	16.5	66.0	82.5	93.4	3,671
Second level primary	3.0	1.8	4.8	30.3	36.2	66.5	33.4	38.1	71.5	93.3	594
High school and higher	2.7	1.7	4.4	28.9	47.7	76.7	31.7	49.4	81.1	94.6	1,461
Wealth quintile											
Lowest	3.8	8.8	12.5	13.0	50.3	63.3	17.1	59.1	76.2	83.5	1,094
Second	3.1	4.9	8.0	16.0	54.6	70.5	19.1	59.5	78.6	89.8	1,366
Middle	1.7	2.9	4.6	18.6	56.7	75.3	20.3	59.9	80.2	94.3	1,475
Fourth	1.9	2.3	4.2	19.9	53.9	73.8	21.8	56.2	78.1	94.6	1,512
Highest	0.9	2.9	3.7	21.0	58.1	79.1	21.9	61.0	82.9	95.5	1,553
Total	2.1	4.1	6.2	18.0	55.0	73.0	20.2	59.1	79.4	92.1	6,999

[1] *Unmet need for spacing* includes pregnant women whose pregnancy was mistimed; amenorrheic women who are not using family planning and whose last birth was mistimed, or whose last birth was unwanted but now say they want more children; and fecund women who are neither pregnant nor amenorrheic, who are not using any method of family planning, and say they want to wait 2 or more years for their next birth. Also included in *unmet need for spacing* are fecund women who are not using any method of family planning and say they are unsure whether they want another child or who want another child but are unsure when to have the birth.

Unmet need for limiting refers to pregnant women whose pregnancy was unwanted; amenorrheic women who are not using family planning, whose last child was unwanted and who do not want any more children; and fecund women who are neither pregnant nor amenorrheic, who are not using any method of family planning, and who want no more children.

[2] *Using for spacing* is defined as women who are using some method of family planning and say they want to have another child or are undecided whether to have another.

Using for limiting is defined as women who are using and who want no more children. Note that the specific methods used are not taken into account here.

[3] Total demand for family planning includes pregnant or amenorrheic women who became pregnant while using a method (method failure).

As expected, unmet need for spacing purposes is higher among younger women, while unmet need for limiting childbirth is higher among older women. Women living in rural settlements tend to have greater unmet need than in urban settlements (9 percent and 5 percent, respectively). Among the regions, the West has the lowest unmet need (4 percent) and the East has the highest (14 percent). Similarly, unmet need varies substantially across the NUTS 1 regions from 3 percent in West Marmara to 15 percent in Southeast Anatolia. Since

educated women are more likely to use a contraceptive method than uneducated women, it is not unexpected that unmet need decreases and the percentage of demand satisfied increases with increasing educational level. The differentials by wealth quintile show a similar pattern, with the wealthiest women having the lowest unmet need.

8.3 Ideal Number of Children

Thus far in this chapter, interest has focused on the respondent's wishes for the future, implicitly taking into account the number of sons and daughters she already has. The TDHS-2008 attempted to obtain a measure of fertility preferences that is less dependent on the woman's current family size by asking about respondent's ideal number of children. In ascertaining the total ideal number of children, the respondent was required to perform the more difficult task of considering abstractly and independently of her actual family size the number of children she would choose if she could start the family building process over again. To obtain this measure, respondents who had no children were asked, "If you could choose exactly the number of children to have in your whole life, how many would that be?" For respondents who had children, the question was, "If you could go back to the time when you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be?"

There is usually a close association between actual and ideal number of children. The reason is twofold. First, woman who want a large family tend to have more children than other woman has. Second, women may adjust their ideal family size so that as the actual number of children increases, their ideal family size also increases. It is also possible that women with large families, being on average older than those with small families, may prefer larger ideal family size because of attitudes they acquired 20 or 30 years ago. Despite the likelihood that some rationalization occurs in the determination of ideal number of children, respondents often state ideals that are lower than their actual number of surviving children.

Table 8.5 shows the distribution of ever-married women by their ideal number of children and mean ideal number of children according to actual number of living children. Except for women with no children, there is a positive relationship between the actual and ideal number of children. Half of the respondents (51 percent) stated two children as the ideal number while only 18 percent of women consider four or more children as ideal. Among both ever-married and currently married women the mean ideal family size is 2.5 children. Women with four or more children have a mean ideal family size of 3.2 children, compared with 2.2 children for women with no children or only one child. Interestingly, the mean ideal family size among currently married women has remained about the same for the last 15 years (2.4 in TDHS-1993 and 2.5 in TDHS-1998, TDHS-2003 and TDHS-2008).

Table 8.5 Ideal number of children

Percent distribution of women 15-49 by ideal number of children, and mean ideal number of children for ever-married women and for currently married women, according to number of living children, Turkey 2008

	Number of living children[1]					
Ideal number of children	0	1	2	3	4+	Total
0	2.3	2.4	2.8	1.8	2.3	2.4
1	12.3	10.4	5.7	8.5	3.0	7.2
2	61.9	60.5	61.3	31.0	33.7	50.6
3	14.6	18.1	17.2	34.0	17.8	20.5
4	6.4	5.9	10.7	18.6	29.8	14.3
5	0.9	1.2	1.2	1.9	4.3	1.9
6+	0.6	0.3	0.6	1.7	5.0	1.5
Non-numeric responses	0.9	1.1	0.5	2.4	4.1	1.7
Total	100.0	100.0	100.0	100.0	100.0	100.0
Number	555	1,550	2,587	1,404	1,308	7,405
Mean ideal number children for:[2]						
Ever-married women	2.2	2.2	2.3	2.8	3.2	2.5
Number	550	1,533	2,574	1,370	1,255	7,282
Currently married	2.2	2.2	2.4	2.8	3.2	2.5
Number	488	1,426	2,456	1,317	1,194	6,881

[1]The number of living children includes current pregnancy for women.
[2]The means exclude women who gave non-numeric responses.

Table 8.6 shows the mean ideal number of children for ever-married women by age and selected background characteristics. The mean ideal number of children does not vary significantly by age. There is also little difference by residence, with the ideal family size only slightly higher in rural areas than urban areas. However, greater differences are observed across region. The mean ideal number of children is lowest in West and Central regions and highest in the East (2.3 children and 3.1 children, respectively). Similarly, education and wealth status also show notable inverse relationships with the mean ideal number of children. The difference between women with less than a primary education and those who have high school or higher education is almost one child. Women in the three wealthiest quintiles have a lower mean ideal family size than women in the lowest two quintiles.

Table 8.6 Mean ideal number of children

Mean ideal number of children for ever-married women age 15-49 by background characteristics, Turkey 2008

	Age								
Background characteristic	15-19	20-24	25-29	30-34	35-39	40-44	45-49	Total	Number of women[1]
Residence									
Urban	2.3	2.4	2.3	2.4	2.6	2.6	2.6	2.5	5,541
Rural	2.6	2.5	2.6	2.7	2.6	2.8	2.9	2.7	1,741
Region									
West	2.3	2.2	2.3	2.3	2.4	2.4	2.4	2.3	3,237
South	2.4	2.7	2.6	2.7	2.9	3.0	3.0	2.8	873
Central	2.0	2.2	2.1	2.4	2.4	2.6	2.5	2.3	1,594
North	2.3	2.3	2.2	2.3	2.4	2.5	2.6	2.4	470
East	3.0	2.8	2.8	3.1	3.3	3.4	3.7	3.1	1,108
Region (NUTS 1)									
İstanbul	2.2	2.1	2.3	2.4	2.5	2.4	2.5	2.4	1,488
West Marmara	1.8	2.1	2.2	2.0	2.0	2.2	2.1	2.1	322
Aegean	2.2	2.3	2.4	2.3	2.3	2.5	2.5	2.4	1,058
East Marmara	2.3	2.2	2.2	2.3	2.3	2.4	2.3	2.3	756
West Anatolia	2.1	2.1	2.1	2.4	2.4	2.6	2.5	2.3	686
Mediterranean	2.4	2.7	2.6	2.7	2.9	3.0	3.0	2.8	873
Central Anatolia	2.1	2.2	2.3	2.4	2.3	2.5	3.0	2.4	368
West Black Sea	2.1	2.0	2.1	2.2	2.3	2.4	2.5	2.3	448
East Black Sea	2.5	2.7	2.4	2.8	2.6	2.7	2.9	2.7	179
Northeast Anatolia	2.1	2.3	2.5	2.6	2.6	3.3	3.1	2.6	187
Central East Anatolia	2.7	2.9	2.7	3.1	3.2	3.0	4.0	3.1	313
Southeast Anatolia	3.5	3.0	3.0	3.3	3.6	3.6	3.7	3.3	603
Education									
No education/Primary incomplete	3.2	2.8	3.0	3.1	3.2	3.2	3.2	3.1	1,307
First level primary	2.5	2.5	2.4	2.5	2.5	2.5	2.6	2.5	3,778
Second level primary	2.1	2.2	2.3	2.3	2.0	2.5	2.7	2.2	640
High school and higher	2.0	2.1	2.1	2.3	2.3	2.4	2.1	2.2	1,557
Wealth quintile									
Lowest	2.6	2.9	2.9	2.9	2.9	3.1	3.3	3.0	1,114
Second	2.5	2.5	2.4	2.7	2.8	2.7	2.8	2.6	1,394
Middle	2.2	2.3	2.4	2.3	2.5	2.5	2.5	2.4	1,540
Fourth	2.2	2.2	2.2	2.4	2.3	2.6	2.5	2.4	1,602
Highest	2.2	2.1	2.1	2.3	2.5	2.5	2.5	2.4	1,633
Total	2.4	2.4	2.4	2.5	2.6	2.6	2.7	2.5	7,282

[1]Number of women who gave a numeric response

8.4 Planning Status of Births

The issue of unplanned and unwanted fertility was further investigated in the TDHS-2008 by asking women for each child born in the preceding five years and for any current pregnancy, if the pregnancy was desired at the time ("planned"), not desired at the time but wanted at a later time, or unwanted at any time. The women's responses form a potentially powerful indicator of the degree to which couples successfully control childbearing. In addition, the data can be used to gauge the effect of the prevention of unwanted births on period fertility.

The questions on planning of births were extremely demanding. The respondent was required to recall accurately her wishes at one or more points in time during the last five years and to report them clearly and honestly. The danger of rationalization was clearly present; an unwanted conception may well have become a cherished child. Despite the potential problems of comprehension, recall, and truthfulness, results from many surveys have proved that answers to questions about the planning status of births are surprisingly plausible, indicating that respondents are willing to report unwanted and mistimed conceptions. Nevertheless, some postpartum rationalization undoubtedly occurs; therefore, this approach likely underestimates unwanted fertility.

Table 8.7 shows the percent distribution of births in the five years preceding the survey and current pregnancies by whether the birth (pregnancy) was wanted by the mother then, wanted later, or not wanted at all, according to birth order and age of mother at birth. Overall, 71 percent of births in the five-year period preceding the survey were planned, 11 percent were mistimed, and 18 percent were unwanted. The percentage of planned births was somewhat lower at the time of the TDHS-2003 (66 percent).

Table 8.7 Fertility planning status

Percent distribution of births to women 15-49 in the five years preceding the survey (including current pregnancies), by planning status of the birth, according to birth order and mother's age at birth, Turkey 2008

Birth order and mother's age at birth	Planning status of birth				Total	Number of births
	Wanted then	Wanted later	Wanted no more	Missing		
Birth order						
1	90.1	8.5	1.2	0.2	100.0	1,357
2	74.4	15.9	9.1	0.5	100.0	1,148
3	59.7	12.7	27.5	0.2	100.0	621
4+	42.7	4.2	52.1	1.0	100.0	761
Mother's age at birth						
<20	79.1	13.0	6.9	1.1	100.0	384
20-24	75.3	12.5	11.7	0.5	100.0	1,250
25-29	72.2	12.1	15.6	0.1	100.0	1,172
30-34	64.3	6.4	29.0	0.3	100.0	733
35-39	61.9	4.5	31.9	1.8	100.0	270
40 and over	53.8	0.8	45.4	0.0	100.0	77
Total	71.3	10.5	17.7	0.5	100.0	3,886

Table 8.7 shows that, in general, the proportion of unwanted births increases sharply with increasing birth order, ranging from 1 percent of first births to half of fourth and higher births. On the other hand, the proportion of mistimed births has an inverted U-shaped relationship with birth order. A similar pattern is observed for the mother's age at birth: the older the mother at the time of birth, the larger the percentage of children that are unwanted. Only 12 percent of births to women age 20-24 are unwanted, compared with 45 percent of births to women age 40 and over. The percentage of mistimed births is highest among women under age 30 and drops off sharply among women age 30 and older.

8.5 Total Wanted Fertility

Another approach to measuring the extent of unwanted fertility is to compare the total wanted fertility rate (TWFR) with the total fertility rate (TFR). The total wanted fertility rate represents the level of fertility that theoretically would result if all unwanted births were avoided. The *wanted fertility rate* is calculated in a similar manner as the total fertility rates presented in Chapter 4, except that births classified as unwanted are omitted from the numerator. For this purpose, unwanted births are defined as those that exceed the number considered ideal by the respondent. The total wanted fertility rate provides another indicator of fertility aspirations and may be interpreted as the number of wanted births that a woman would bear by age 50, if she experienced the wanted fertility rates observed for the past three years. A birth is considered wanted if the number of living children at the time of conception was less than the ideal number of children reported at the time of the survey.

There is a difference between ideal family size and the wanted fertility rate in that the wanted fertility rate takes observed fertility as its starting point and can never be larger than the actual TFR; ideal family size can be and often is larger than the number of children ever born. This characteristic of the wanted fertility rate has an advantage and a disadvantage. It may be the more realistic measure, because it takes into account the fact that fecundity impairment prevents some women from having wanted births and from achieving their desired family size. But it has the disadvantage of interpretive complexity and, like any period measure, is vulnerable to temporary influences on the level of recent fertility.

Table 8.8 show that, the total wanted fertility rate for Turkey is 1.6 children, which is 27 percent less than the actual total fertility rate of 2.2 children. In other words, if all unwanted births were prevented, the TFR would be 0.6 children less than the observed level. Table 8.8 also shows that wanted fertility is lower than the replacement level in all subgroups. The lowest wanted fertility rates are observed among women living in the richer households, women having high school and higher education, and women living in the West region. The gap between actual and wanted fertility rates is highest among poorest women, women living in the East region, women who have no education, and rural women. On the other hand, the gap is smallest for the richest women and women who have completed secondary or higher education.

Table 8.8 Wanted fertility rates

Total wanted fertility rates and total fertility rates for the three years preceding the survey, by background characteristics, Turkey 2008

Background characteristic	Total wanted fertility rates	Total fertility rate
Residence		
Urban	1.6	2.00
Rural	1.8	2.68
Region		
West	1.4	1.73
South	1.7	2.09
Central	1.7	2.20
North	1.6	2.08
East	2.0	3.27
Education		
No education/Primary incomplete	1.5	2.65
First level primary	1.7	2.25
Second level primary	1.0	1.30
High school and higher	1.4	1.53
Wealth quintile		
Lowest	2.0	3.39
Second	1.8	2.51
Middle	1.8	2.19
Fourth	1.3	1.67
Highest	1.2	1.36
Total	1.6	2.16

Note: Rates are calculated based on births to women age 15-49 in the period 1-36 months preceding the survey. The total fertility rates are the same as those presented in Chapter 4.

INFANT AND CHILD MORTALITY 9

İsmet Koç, İlknur Yüksel and Mehmet Ali Eryurt

This chapter describes levels, trends, and differentials in early childhood mortality and the prevalence of high risk fertility behaviour of women in Turkey. The information is disaggregated by socioeconomic and demographic characteristics since studies have shown the existence of differentials in mortality by these characteristics and the disaggregation helps to identify subgroups that are at high risk. Information on infant and child mortality rates contributes to a better understanding of Turkey's socioeconomic situation and sheds light on the quality of life of the population. Childhood mortality in general and infant mortality in particular are often used as broad indicators of social development or as specific indicators of health status. Childhood mortality analyses are thus useful in identifying promising directions for health programmes and advancing child survival efforts. Measures of childhood mortality are also useful for population projections.

One of the targets of the Millennium Development Goals (MDGs) is a two-third reduction in infant and child mortality by 2015, to be achieved through upgrading the proportion of births attended by skilled health personnel, increasing immunization against the eight vaccine preventable diseases, and upgrading the status of women through education and enhancing their participation in the labour force. Results from the TDHS-2008 are timely in evaluating the impact of some of the major national policies on the achievement of this fundamental MDG goal.

The mortality rates presented in this chapter are computed from information gathered from the birth history section of the individual questionnaire. Ever-married women in the age group 15-49 were asked whether they had ever given birth, and if they had, they were asked to report the number of sons and daughters who live with them, the number who live elsewhere, and the number who have died. In addition, they were asked to provide a detailed birth history of their children in chronological order starting with the first child. Women were asked whether a birth was single or multiple; the sex of the child; the date of birth (month and year); survival status; age of the child on the date of the interview if alive; and if not alive, the age at death of each live birth. Age at death was recorded in days for children dying in the first month of life, in months for children dying before their second birthday, and in years for children dying at later ages. In this chapter, the following direct estimates of infant and child mortality[1] derived from the birth history data are used:

[1]A detailed description of the method for calculating the probabilities presented here is given in Rutstein (1984). The mortality estimates are not rates but are true probabilities calculated according to the conventional life-table approach. Deaths and exposure in any period are first tabulated for the age intervals 0, 1-2, 3-5, 6-11, 12-23, 24-35, 36-47, and 48-59 months. Then age-interval-specific probabilities of survival are calculated. Finally, probabilities of mortality for larger age segments are produced by multiplying the relevant age-interval survival probabilities together and subtracting the product from one:

$$nqx = 1 - \prod_{i=x}^{i=x+n} (1 - qi)$$

Neonatal mortality, the probability of dying in the first month of life

- **Post-neonatal mortality**, the probability of dying after the first month of life but before the first birthday
- **Infant mortality** ($_1q_0$), the probability of dying in the first year of life
- **Child mortality** ($_4q_1$), the probability of dying between the first and fifth birthday
- **Under-five mortality** ($_5q_0$), the probability of dying before the fifth birthday.

The rates of childhood mortality are expressed as deaths per 1,000 live births, except in the case of child mortality, which is expressed as deaths per 1,000 children surviving to age one. In addition to questions on live births, women were asked additional questions about pregnancies that ended in miscarriage, abortion, or stillbirth. This information was collected for the five years preceding the survey to minimize recall errors. Information on stillbirths and deaths that occurred within seven days of birth is used to estimate perinatal mortality, which is the number of stillbirths and early neonatal deaths per 1,000 stillbirths and live births.

9.1 Assessment of Data Quality

The accuracy of mortality estimates depends both on the sampling variability associated with the estimates and on nonsampling errors. Sampling variability and sampling errors are discussed in detail in Appendix C. Nonsampling errors depend on the extent to which the date of birth and age at death are accurately reported and recorded and the completeness with which child deaths are reported. Omission of births and deaths affects mortality estimates, displacement of birth and death dates impacts mortality trends, and misreporting of age at death may distort the age pattern of mortality. Typically, the most serious source of nonsampling errors in a survey that collects retrospective information on births and deaths is the underreporting of births and deaths of children who were dead at the time of the survey. It may be that mothers are reluctant to talk about their dead children because of the sorrow associated with their death, or they may live in a culture that discourages discussion of the dead. Underreporting of births and deaths is generally more severe the further back in time an event occurred. Several tables are presented in Appendix D which may be used to examine the occurrence of such problems in the TDHS-2008.

An unusual pattern in the distribution of births by calendar years is an indication of omission of children or age displacement. Table D.3 presents that the percentage of live births in the 15 years preceding the survey for which information on year of birth was missing. Around two percent of births had information on the year but not the month of birth. Both month and year of birth were missing for less than 1 percent of all live births in the 15-year period before the TDHS-2008. Approximately 1 percent of deaths recorded in the birth histories lacked an age at death. Table D.4 also shows that the overall percentage of births for which a month and year of birth was reported is relatively complete, with incomplete information being only slightly higher for children who have died than those who are alive (81 percent versus 97 percent). There is somewhat greater deterioration in the completeness of birth date information the further back one goes from the survey date, but the percentage is above 95 percent for births occurring since 1994 and 100 percent for births occurring in 2003 or later, i.e., in the period covered by the calendar.

Age displacement is common in surveys that include both demographic and health information for children under a specified age. This shifting usually results from interviewers transferring births out of the five-year period for which data are collected on maternal and child health indicators (January 2003 to date of interview for the TDHS-2008) in an attempt to reduce the length of interview. Table D.4 shows there is some age displacement across this boundary. The distribution of births shows a deficit in 2003 and an excess in 2002, as denoted by the calendar year ratios; the deficit is much larger for dead than living children. The deficit among births in 2003 can be attributed to the transference of births by interviewers out of the period for which health data were collected. The transference of children and especially deceased children out of the five-year period preceding the survey, is likely to underestimate the true level of childhood mortality for that period. There is also evidence of a possible omission of children who died, as evidenced by the lower numbers of dead children in 2003-2005 compared with 2000-2002. However, as the cutoff dates for the most recent 5-year period include only two months from 2003 (November and December), the underestimation originated from the transference of deceased children out of the five-year period preceding the survey is at a negligible level. Only 2 under five deaths and 73 births taken place during November-December 2003 were included into the numerator and denominator of the mortality rates estimated for the five-year period preceding the survey.

One further check that was performed to assess the reliability of birth history data was to calculate sex ratios at birth for all live births. These ratios are expected to fluctuate around 105 male births per 100 female births. Table D.4 shows that the overall sex ratio for all births in the birth history is 106, which is in line with expectations. The sex ratio of live births during the period of 2004-2008 is also in line with expectations, at 104. For earlier periods, fluctuations are observed in sex ratios at birth, without any systematic over or under reporting of males or females.

Underreporting of deaths is usually assumed to be higher for deaths that occur very early in infancy. Omission of deaths or misclassification of deaths as stillbirths may also be more common among women who have had several children or in cases where death took place a long time ago. In order to assess the impact of omission on measures of child mortality, two indicators are used: the percentage of deaths that occurred under seven days among all deaths that occurred under one month and the percentage of neonatal among all infant deaths. It is hypothesized that omission will be more prevalent among those who died immediately after birth than those who lived longer and that it will be more serious for events that took place in the distant past rather than those in the more recent past. Selective underreporting of early neonatal deaths would result in an abnormally low ratio of deaths within the first seven days of life to all neonatal deaths. Table D.5 shows data on age at death for early infant deaths. Early infant deaths do not seem to have not been underreported in the TDHS-2008 survey as suggested by the high ratio of deaths in the first seven days of life to all neonatal deaths (88 percent for the most recent period). Table D.6 shows that the proportion of infant deaths occuring during the first month of life (79 percent) are also entirely plausible and in line with declining mortality rates in Turkey.

Heaping of the age at death on certain digits is another problem that is inherent in most retrospective surveys. Misreporting of age at death biases age pattern estimates of mortality if

the net result is the transference of deaths between age segments for which the rates are calculated; for example, child mortality may be overestimated relative to infant mortality if children who died in the first year of life are reported as having died at age one or older. In an effort to minimize misreporting of age at death, TDHS-2008 interviewers were instructed to record deaths under one month in days and under two years in months. In addition, they were trained to probe deaths reported at exactly 1 year or 12 months to ensure that they had actually occurred at 12 months. The distribution of deaths under 2 years during the 20 years prior to the survey by month of death shows that there is definite heaping at 12, and 18 months of age with corresponding deficits in adjacent months (Table D.6). However, heaping is less pronounced for deaths in the five years preceding the survey, for which the most recent mortality rates are calculated.

Finally, in addition to recall errors for the more distant retrospective periods, there are structural reasons for limiting mortality estimation to recent periods, preferably to the 0-4, 5-9, and 10-14 years before the survey. In particular, except for the most recent period, rates are slightly biased estimates because they are based on the child mortality experience of women age 15-44 and 15-39, respectively, instead of women age 15-49. Therefore, estimating mortality for the periods further than 10-14 years before the survey is not advisable.

9.2 Levels and Trends in Infant and Child Mortality

Mortality rates for children under five years of age are presented in Table 9.1 for the three five-year periods preceding the survey. Data from the TDHS-2008 show that under-five mortality during the five years preceding the survey (which roughly corresponds to the date December 2003-November 2008) is 24 per 1,000 live births. This means that slightly more than 2 in 100 children born in Turkey die before reaching the fifth birthday. The infant mortality rate is 17 deaths per 1,000 live births, and the child mortality rate is 6 per 1,000. The risk of dying in the first month of life (13 per 1,000) is nearly three times greater than in the subsequent 11 months (4 per 1,000). Deaths in the neonatal period account for 76 percent of all infant deaths.

Table 9.1 Infant and child mortality

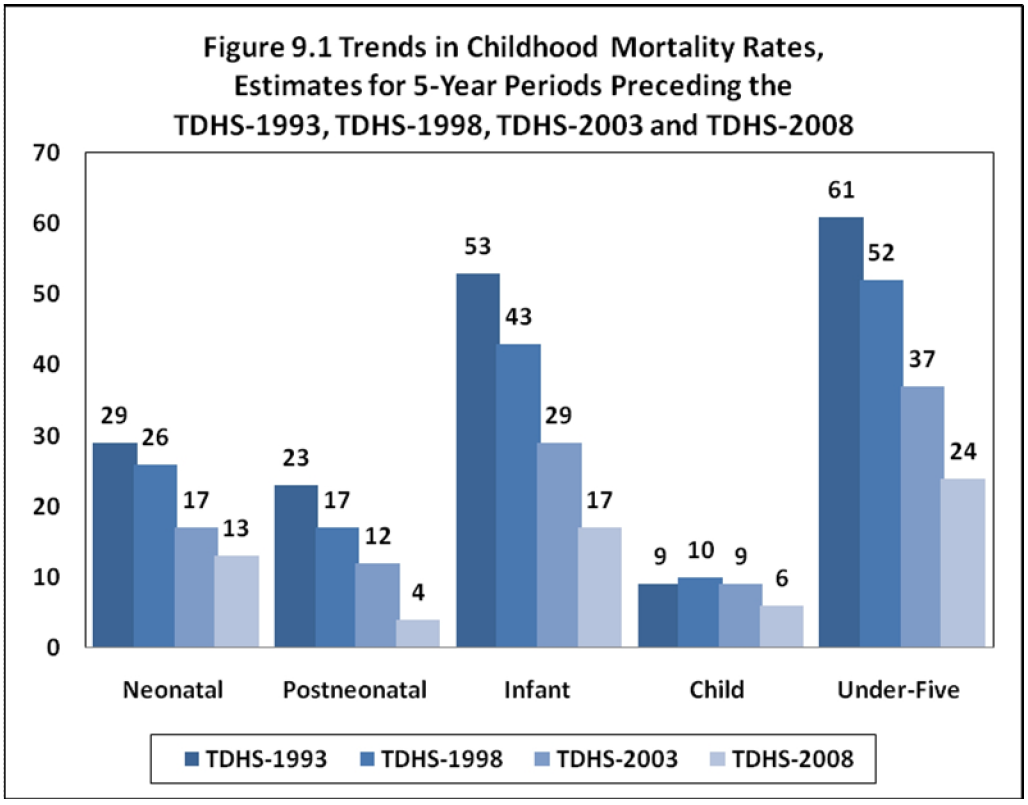
Neonatal, post neonatal, infant, child and under-five mortality rates by five-year periods preceding the TDHS-2008, TDHS-2003 and TDHS-1998

Years preceding survey	Approximate reference date	Neonatal Mortality (NN)	Post neonatal Mortality (PNN)	**Infant Mortality ($_1q_0$)**	Child Mortality ($_4q_1$)	**Under-five Mortality ($_5q_0$)**
TDHS-2008						
0-4	2003-2008	13	4	17	6	24
5-9	1998-2003	17	16	33	9	41
10-14	1993-1998	21	23	50	10	59
TDHS-2003						
0-4	1998-2003	17	12	29	9	37
5-9	1993-1998	24	22	47	10	56
TDHS-1998						
0-4	1993-1998	26	17	43	10	52

The figures in Table 9.1 show a relatively fast pace of decline in infant and child mortality rates in Turkey. A decrease about 48 percent is observed in infant mortality rate for

the five-year between 1998-2003 and 2003-2008. In the same period, there was a 33 percent decrease in child mortality and 41 percent decrease in overall under-five mortality. The decline in child mortality rate during the last five years is especially noteworthy, considering the stability in child mortality rate at a level of 9-10 per thousand during the period 5-14 years the TDHS-2008.

Table 9.1 also presents comparable mortality estimates from the TDHS-1998, TDHS-2003 and TDHS-2008. The early age mortality rates obtained from TDHS-2008 are consistent with the findings of previous surveys calculated for the same reference periods. The consistency between the surveys is impressive. The difference between early age mortality rates calculated from the TDHS-2008 data set for reference periods of TDHS-2003 and TDHS-1998 and findings obtained from those two previous surveys is less than 5 per thousand. This difference is negligible and constitutes virtually full agreement between independent estimates in the last three surveys. Once again, this finding highlights the excellent quality of the birth history data for the three surveys from which the early childhood mortality rates are calculated. Both approaches to examining mortality trends, i.e., comparisons of the rates from the TDHS-2008 across successive to the 5-year periods preceding survey as well as comparison of TDHS-2008 rates to those of TDHS-2003 and TDHS-1998, indicate that the decrease in infant and child mortality rates in Turkey has accelerated in recent years, especially in the last five years (Table 9.1 and Figure 9.1).



9.3 Differentials in Infant and Child Mortality

Table 9.2 shows differentials in childhood mortality for four socioeconomic variables: residence, region, mother's education, and wealth quintile. A ten-year period is used to calculate the mortality estimates by these background characteristics, so as to obtain enough cases in each category. Although, the use of the ten-year reference period improves the reliability of the mortality estimates, these findings must be interpreted with caution given the comparatively large sampling errors associated with the ten-year rates.

Table 9.2 Early childhood mortality rates by socioeconomic characteristics

Neonatal, post-neonatal, infant, child, and under-five mortality for the ten-year period preceding the survey by socioeconomic characteristics, Turkey 2008

Socioeconomic characteristic	Neonatal mortality (NN)	Post neonatal mortality (PNN)[1]	**Infant mortality ($_1q_0$)**	Child mortality ($_4q_1$)	**Under-five mortality ($_5q_0$)**
Residence					
Urban	13	9	22	7	29
Rural	20	14	33	10	43
Region					
West	9	7	16	10	26
South	17	13	30	6	35
Central	12	9	22	1	23
North	16	8	24	3	27
East	24	15	39	11	50
Selected regions of residence (NUTS 1)					
Istanbul	2	6	9	14	23
Southeast Anatolia	20	13	33	12	45
Education					
No education/Prim. incomplete	23	18	41	12	53
First level primary	14	10	24	5	29
Second level primary and higher	9	4	13	8	21
Wealth quintile					
Lowest	22	19	41	11	52
Second	19	11	30	9	38
Middle	10	6	16	4	21
Fourth	11	7	18	4	23
Highest	7	4	12	9	20
Total	15	11	26	8	33

[1] Computed as the difference between infant and neonatal mortality rates

The infant mortality rate for the ten-year period preceding the survey is found to be 26 per 1,000 live births. The infant mortality rates calculated from TDHS-1998 and TDHS-2003 for the same period were 48 and 36 per 1,000 live births. The infant mortality rate in the rural areas is about 33 percent higher than in urban areas. Most of this difference appears to be attributable to differences in the post-neonatal mortality. Variations in mortality levels are also evident by region. Neonatal mortality exceeds post-neonatal mortality in all regions. The East has the highest mortality rates at all ages; which was true in previous demographic and health surveys. The mother's level of education is inversely related to her child's risk of dying. This pattern is expected because education exposes mothers to information about better nutrition, use of contraception to limit and space births, health care during pregnancy, and childhood

illnesses, vaccinations, and treatments, all of which contribute to lower mortality risks for children. The TDHS-2008 results indicate that the largest decrease in mortality by mother's education was in the postneonatal period; the rate is almost 78 percent lower for children whose mothers have at least some secondary education, compared with children whose mothers have no or an incomplete primary education.

A child's risk of dying is also associated with the economic status of the household. All childhood mortality rates, except for child mortality, are lowest for those in the highest wealth quintile. The risk of dying by age five in the top quintile is about one-third of that in the bottom quintile. The relationship between childhood mortality and household wealth is especially notable for neonatal and post neonatal mortality rates.

Besides socio-economic characteristics, a number of demographic characteristics of the child and the mother have been found to affect mortality risks, including the sex of the child, mother's age at birth, birth order, length of previous birth interval, and the size of the child at birth. The relationship between these demographic characteristics and childhood mortality is shown in Table 9.3. Again, for all variables except birth size, mortality estimates are calculated for a ten-year period before the survey to reduce the sampling variability.

Table 9.3 Early childhood mortality rates by biodemographic characteristics

Neonatal, post-neonatal, infant, child, and under-five mortality for the ten-year period preceding the survey by biodemographic characteristics, Turkey 2008

Biodemographic characteristic	Neonatal mortality (NN)	Post neonatal mortality (PNN)[1]	**Infant mortality ($_1q_0$)**	Child mortality ($_4q_1$)	**Under-five mortality ($_5q_0$)**
Sex of child					
Male	15	13	28	8	36
Female	15	8	23	7	30
Mother's age at birth					
< 20	22	12	33	12	45
20-29	12	11	23	6	29
30-39	19	8	27	11	37
40-49	28	6	34	0	34
Birth order					
1	13	7	21	5	26
2-3	12	10	22	7	28
4-6	23	17	40	12	52
7+	30	17	47	17	63
Previous birth interval[2]					
< 2 years	27	24	51	12	62
2 years	15	12	27	7	33
3 year	11	6	17	2	19
4 years or more	11	7	18	9	27
Size at birth[3]					
Small or very small	18	6	24	NA	NA
Average or larger	9	2	11	NA	NA

NA= not applicable
[1] Computed as the difference between the infant and child mortality rates
[2] Excludes first-order births
[3] Refers for the five-year period before the survey

Male children in general experience higher mortality than female children. The sex difference is especially pronounced for postneonatal mortality. The relationship between mother's age at delivery and infant mortality generally exhibits a U-shaped curve. Infant mortality rate is substantially higher among children born to mothers less than 20 and those age 40 and over. The TDHS-2008 results show that there is a clear positive association between birth order and the probability of dying -the risk of dying increases with higher order births. Mortality among children is negatively associated with the length of the previous birth interval. For example, infant mortality decreases sharply from 51 per 1,000 live births for children born less than two years after a previous birth to 18 per 1,000 live births for children born four years or more after a previous birth. Children's weight at birth is also closely associated with their chances of survival, particularly during the first year of life. Children reported as "small or very small" at birth were at two times the risk of dying compared with children whose size at birth was reported as "average or larger."

9.4 Perinatal Mortality

Perinatal deaths are composed of pregnancy losses occurring after seven completed months of gestation (stillbirths) and deaths within the first seven days of life (early neonatal deaths). The causes of stillbirths and early neonatal deaths overlap, and examining just one or the other can understate the true level of mortality around delivery. For these reasons, it is suggested that both events be combined and examined together. The perinatal death rate is calculated by dividing the total number of perinatal deaths by the total number of pregnancies reaching seven months of gestation. The distinction between a stillbirth and an early neonatal death is a delicate one, often depending on the observed presence or absence of some signs of life after delivery. In the TDHS-2008, information on stillbirths was obtained for the five years preceding the survey, using the calendar at the end of the Women's Questionnaire.

Table 9.4 presents the number of stillbirths and early neonatal deaths and the perinatal mortality rate for the five-year period preceding the TDHS-2008, by selected demographic and socioeconomic characteristics. Out of the 3,490 reported pregnancies of at least seven months' gestation during the five years preceding the survey, 27 ended in stillbirths and 40 ended in early neonatal deaths, yielding an overall perinatal mortality rate of 19 per 1,000 stillbirths and live births. Comparable data from the TDHS-2003 suggest that perinatal mortality has declined from 24 per 1,000 to its current level.

Perinatal mortality is highest among women who were 40-49 years or under age 20 at the time of the birth. The interval between the previous and current pregnancies is strongly associated with perinatal mortality. Pregnancies that occured less than 15 months after a previous pregnancy are approximately two times more likely to have ended in perinatal death as pregnancies that followed an interval of 15-26 and 27-38 months. Perinatal mortality is slightly higher in urban areas than in rural areas. The West has the highest perinatal mortality rate among all regions. Highly educated mothers are less likely to experience perinatal losses than uneducated mothers.

Table 9.4 Perinatal mortality

Number of stillbirths and early neonatal deaths, and the perinatal mortality rate for the five-year period preceding the survey, by background characteristics, Turkey, 2008

Background characteristic	Number of stillbirths[1]	Number of early neonatal deaths[2]	Perinatal mortality rate[3]	Number of pregnancies of 7+ months duration
Mother's age at birth				
<20	3	8	34	347
20-29	12	17	13	2,177
30-39	9	15	26	897
40-49	4	0	(51)	70
Previous pregnancy interval in months				
First pregnancy	6	11	16	1,090
<15	0	9	28	315
15-26	3	6	15	561
27-38	3	2	14	403
39+	15	12	24	1,121
Residence				
Urban	20	30	20	2,496
Rural	7	10	17	995
Region				
West	18	12	25	1,191
South	3	5	18	444
Central	1	10	14	742
North	0	0	(2)	197
East	6	13	21	917
Selected NUTS 1 Regions				
Istanbul	9	3	21	557
Southeast Anatolia	3	7	18	536
Education				
No education/Prim. incomplete	7	8	20	788
First level primary	16	26	25	1,707
Second level primary and higher	4	6	9	995
Wealth quintile				
Lowest	6	10	19	858
Second	7	13	24	824
Middle	5	6	16	714
Fourth	2	7	14	581
Highest	7	4	22	513
Total	27	40	19	3,490

[1] Stillbirths are foetal deaths in pregnancies lasting seven or more months.
[2] Early neonatal deaths are deaths at age 0-6 days among live-born children.
[3] The sum of the number of stillbirths and early neonatal deaths divided by the number of pregnancies of seven or more months' duration.
Note: Figures in parentheses are based on less than 250 unweighted pregnancies.

9.5 High-risk Fertility Behavior

Many studies have found a strong relationship between children's chances of dying and certain fertility behaviors. In general, the probability of dying in early childhood is much greater if children are born to mothers who are "too young" or "too old", if they are born after a short birth interval, or if they are born to mothers with high parity. For this analysis, mothers are classified as "too young" if they are less than 18 years of age and "too old" if they are over 34 years of age at the time of delivery. A short birth interval is defined as a birth occurring within

24 months of a previous birth, and a high birth order is defined as occurring after three or more previous births (birth order four or higher). After cross-classification of births by combinations of all three characteristics, a birth may have from zero to three high-risk characteristics. All risk categories are potentially avoidable except for one: first births to mothers age 18-34.

Table 9.5 High-risk fertility behaviour

Percent distribution of children born in the five years preceding the survey by category of elevated risk of mortality and the risk ratio, and percent distribution of currently married women by category of risk if they were to conceive a child at the time of the survey, Turkey 2008

Risk category	Births in the 5 years preceding the survey		Percentage of currently married women[a]
	Percentage of births	Risk ratio	
Not in any high risk category	33.2	1.0	31.1[b]
Unavoidable risk category			
First order births between ages 18 and 34 years	31.8	1.4	7.4
Single high-risk category			
Mothers's age <18	2.7	1.5	0.2
Mothers's age >34	3.8	0.2	20.9
Birth interval <24 months	8.2	3.1	7.3
Birth order >3	11.2	1.5	6.1
Subtotal	26.0	1.8	34.5
Multiple high-risk category			
Age <18 & birth interval <24 months[c]	0.1	0.0	0.1
Age >34 & birth interval <24 months	0.3	0.0	0.4
Age >34 & birth order >3	4.1	3.3	22.8
Age >34 & birth interval <24 months & birth order >3	0.7	8.3	0.9
Birth interval <24 months & birth order >3	3.9	3.5	2.7
Subtotal	9.0	3.6	27.0
In any avoidable high-risk category	35.0	2.3	61.4
Total	100.0	NA	100.0
Number of births/women	3,463	NA	6,999

[a] Women were assigned to risk categories according to the status they would have at the birth of a child, if the child were conceived at the time of the survey: age less than 17 years and 3 months, age older than 34 years and 2 months, latest birth less than 15 months ago, and latest birth of order 3 or higher.
[b] Includes sterilised women.
[c] Includes the combined categories *Age <18 and birth order >3*.
NA=Not Applicable.

Table 9.5 shows the percent distribution of births in the five-year period preceding the survey and the distribution of all currently married women across various risk categories. It also shows the relative risk of children dying across the different risk categories. The purpose of this table is to identify areas in which changes in reproductive behavior would be likely to reduce infant and child mortality. Mortality risk is represented by the proportion of children born during the five years preceding the survey who had died by the time of the survey. The "risk ratio" is the ratio of the proportion of dead children in a given high-risk category to the proportion of dead children not in any high-risk category.

One in three children born in the five years preceding the survey were not in any of the high-risk categories. More than one-third of births (35 percent) fell in any avoidable high-risk categories. The remainder (32 percent) fell into the category of unavoidable risk, that is, first order births to women age 18-34. Thus, 61 percent of births in Turkey were in some elevated risk category. The most common single categories are the birth order three or higher (11 percent) and the birth interval less than 24 months (8 percent).

In general, risk ratios are higher for children in a multiple high risk category than in a single high-risk category. The most vulnerable births are births to women age 34 or older with a birth interval less than 24 months and birth order of three or higher; and births at an interval less than 24 months and of birth order 3 and higher. These children are more than 8 and about 4 times as likely to die as children who were not in any high-risk category. One percent and 3 percent of births, respectively, fall into these two categories.

The last column of Table 9.5 shows the distribution of currently married women who have the potential for having a high-risk birth by category. This column is purely hypothetical and does not take into consideration the protection provided by family planning, postpartum insusceptibility, and prolonged abstinence. However, it provides an insight into the magnitude of high risk births. Sixty-one percent of women who were married at the time of the TDHS-2008 were found to be at risk of conceiving a child with an increased risk of dying. Approximately one in four births (23 percent) is to women who are too old and having more than 3 children. A substantially higher proportion of women (35 percent) have the potential of having a birth in a single high-risk category and 27 percent of women are in a multiple high-risk category.

REPRODUCTIVE HEALTH 10

Banu Akadlı Ergöçmen, Sabahat Tezcan and Pelin Çağatay

This chapter provides information from the TDHS-2008 on the use of maternal and child health services. Specifically, it presents the findings on antenatal care, delivery and postnatal care. This information can be used to identify the subgroups that are at risk because they are not using reproductive health services and help policymakers in the planning and implementing of appropriate strategies to improve those services.

The results in this section are based on data obtained from mothers on all live births that occurred in the five years preceding the survey. It should be mentioned that questions about postnatal care were included for the first time in this survey and were asked only for the last birth occurred in the five years preceding the survey.

Aspects of antenatal care (ANC) that are examined include the type of provider, number of visits made, components of the antenatal care, and the stage of pregnancy at the time of the first visit. With regard to delivery services, information is presented on the person assisting and the type and place of delivery. Postnatal care services are assessed according to the timing of first checkup and type of service provider.

10.1 Antenatal Care

Table 10.1 shows the percent distribution of women who had a live birth in the five years preceding the survey by the provider of antenatal care during pregnancy for the last birth, according to the selected background characteristics. In collecting the information about the ANC provider, interviewers were instructed to record all providers a woman had consulted for care if more than one source of ANC was mentioned for the same pregnancy. However, for this tabulation, only the provider with the highest qualifications is considered if there were more than one provider. It is important to take into account in reviewing these results that the quality of antenatal services is not reflected in these figures.

As it is seen from Table 10.1, 92 percent of women received antenatal care from a medical provider (doctor and nurse/midwife) at least once for the last birth in the five years preceding the survey. Almost all women (90 percent) sought ANC from the doctor.

When compared to the results of the previous demographic survey conducted in 2003, there are substantial improvements in ANC coverage. The proportion of last births with ANC increased from 81 percent to 92 percent within the five-year period between the surveys. This represents around a 50 percent decrease in the proportion of women who did not have any antenatal care.

Although ANC coverage levels are generally high, the results in Table 10.1 document some differences in the proportions of women receiving ANC from a health provider by background characteristics. Considering the mother's age at birth, younger women (92-93 percent) had somewhat higher antenatal care rates than women age 35 and older (86 percent). More noticeable differences are observed when birth order is considered. Almost all mothers sought for ANC from a doctor (96 percent) and nurse/midwife (2 percent) for their first births. However, the proportion of women who received ANC from a trained provider decreased substantially as the birth order increased, to a level of 72 percent among mothers of children of birth order sixth or higher.

Variations are evident by residence and region as well. The percentage of rural women who did not receive ANC is two times higher than the national average, and almost three times the level among urban women. Although there have been significant improvements in ANC coverage between 2003 and 2008, the gap between the East and other regions is still comparatively wide; ANC coverage exceeded 90 percent in all regions except the East (79 percent). Considering the NUTS 1 regions, ANC coverage was lowest in Northeast Anatolia, Central East Anatolia and Southeast Anatolia (73 percent, 76 percent and 82 percent respectively).

There was a close relationship between education and the use of antenatal care services. As women's educational level increased, the proportion of last live births having ANC also increases. Almost all births to women with at least high school education received antenatal care from health personnel compared 8 out of 10 births to women with no or incomplete primary education. Similarly, wealth was closely associated with receiving antenatal care. Women in households in the lowest wealth quintile (76 percent) were much less likely to receive ANC than women in households in middle and higher quintiles (above 98 percent).

Table 10.1 Antenatal care

Percent distribution of women age 15-49 who had a live birth in the five years preceding the survey by antenatal care (ANC) provider during pregnancy for the last birth and the percentage receiving antenatal care for the last birth from a health provider, according to background characteristics, Turkey 2008

Background characteristic	Doctor	Nurse/ midwife	Traditional birth attendant	No one	Missing	Total	Percentage receiving antenatal care from a health provider	Number of women
Age at birth								
<20	88.2	3.8	0.0	8.0	0.0	100.0	92.0	221
20-34	90.2	2.4	0.0	7.1	0.2	100.0	92.7	2,273
35-49	84.6	1.7	0.0	13.4	0.3	100.0	86.3	274
Birth order								
1	95.9	2.2	0.0	1.6	0.2	100.0	98.2	896
2-3	90.8	1.9	0.0	7.1	0.1	100.0	92.7	1,340
4-5	79.7	3.6	0.0	16.7	0.0	100.0	83.3	362
6+	66.0	6.3	0.0	26.9	0.8	100.0	72.3	171
Residence								
Urban	93.0	1.7	0.0	5.0	0.2	100.0	94.7	2,049
Rural	79.4	4.7	0.0	15.7	0.1	100.0	84.2	719
Region								
West	94.7	2.1	0.0	3.1	0.0	100.0	96.9	1,004
South	93.6	1.0	0.0	5.1	0.3	100.0	94.6	354
Central	90.8	3.6	0.1	5.2	0.2	100.0	94.4	627
North	91.4	4.3	0.0	4.2	0.0	100.0	95.8	165
East	76.8	2.3	0.0	20.5	0.5	100.0	79.1	619
Region (NUTS 1)								
İstanbul	95.1	0.6	0.0	4.3	0.0	100.0	95.7	472
West Marmara	95.3	3.1	0.0	1.7	0.0	100.0	98.3	79
Aegean	92.8	4.1	0.0	3.1	0.0	100.0	96.9	346
East Marmara	95.3	2.2	0.0	1.9	0.6	100.0	97.6	252
West Anatolia	89.2	4.4	0.0	6.3	0.0	100.0	93.7	287
Mediterranean	93.6	1.0	0.0	5.1	0.3	100.0	94.6	354
Central Anatolia	89.0	4.3	0.4	6.2	0.0	100.0	93.3	145
West Black Sea	95.4	3.3	0.0	1.3	0.0	100.0	98.7	148
East Black Sea	88.8	3.4	0.0	7.8	0.0	100.0	92.2	65
Northeast Anatolia	70.2	2.7	0.0	26.1	1.0	100.0	72.9	92
Central East Anatolia	74.3	1.8	0.0	23.7	0.3	100.0	76.0	176
Southeast Anatolia	79.8	2.4	0.0	17.4	0.4	100.0	82.2	352
Education								
No educ./Prim. incomp.	74.4	3.8	0.0	21.5	0.3	100.0	78.3	541
First level primary	90.5	2.8	0.0	6.5	0.2	100.0	93.2	1,365
Second level primary	95.4	1.7	0.0	2.9	0.0	100.0	97.1	272
High school and higher	98.4	0.9	0.0	0.5	0.2	100.0	99.3	591
Wealth quintile								
Lowest	71.6	4.4	0.0	23.5	0.4	100.0	76.1	572
Second	87.3	3.3	0.1	9.2	0.1	100.0	90.6	635
Middle	96.7	1.9	0.0	1.3	0.2	100.0	98.5	597
Fourth	95.8	2.2	0.0	2.0	0.0	100.0	98.0	497
Highest	98.6	0.0	0.0	1.1	0.3	100.0	98.6	466
Total	89.5	2.5	0.0	7.8	0.2	100.0	92.0	2,768

Note: If more than one source of ANC was mentioned, only the provider with the highest qualifications is considered in this tabulation.

10.2 Number and Timing of Antenatal Care Visits

Antenatal care is most beneficial and effective in avoiding adverse pregnancy outcomes when it is sought early during pregnancy. The first antenatal visit should take place before the third month of pregnancy. The advantage of early detection of pregnancy is that a woman's normal baseline health status can be assessed, making early diagnosis of any negative condition easier. The total number of antenatal visits is also important in assessing the adequacy of ANC since regular visits allow proper monitoring of the mother and child throughout pregnancy. According to the recommended schedule, antenatal care visits should be done monthly until the 7th month (28 weeks' gestation), then every two weeks until 36 weeks gestation, and then every week until 40 weeks or delivery. This represents a minimum of 10 visits throughout the pregnancy.

Information on the number and timing of antenatal visits made to health providers for the last birth in the five years preceding the survey is presented in Table 10.2 by place of residence. In Turkey, around three-quarters of women had four or more antenatal visits. Noticeable improvements with regard to the number of ANC visits occurred among rural mothers during the period between the 2003 and 2008 TDHS surveys; the percentage of rural women who reported making at least four ANC visits in 2008 was more than 1.5 times the figure in 2003. Nevertheless, significant differences in the proportion of women having four or more visits still exist between urban and rural areas (80 percent and 55 percent, respectively).

With regard to the timing of the first ANC visit, overall, women made an ANC visit before the sixth month for 87 percent of last births in the five years preceding the survey. Considering the differences by residence, 91 percent of women in urban areas sought care before the sixth month of pregnancy compared to 76 percent in rural areas. This represents a marked increase over the levels reported at the time of the 2003 TDHS (71 percent at the national level and 80 percent and 52 percent in urban and rural areas, respectively). Thus, when compared to the TDHS-2003, the TDHS-2008 findings show that not only more women are receiving antenatal care; they appear also to be more aware of the importance of early ANC visits than before.

Considering only the births for which care was received, the median duration of pregnancy at first visit is 2.2 months in Turkey. On average, women living in rural areas seek antenatal care later in their pregnancy (2.8 months) than urban women (2.0 months).

Table 10.2 Number of antenatal care visits and timing of first visit

Percent distribution of women age 15-49 who had a live birth in the five years preceding the survey by number of antenatal care (ANC) visits for the last live birth, and by the timing of the first visit, and among women with ANC, median months pregnant at first visit, according to place of residence, Turkey 2008

Number and timing of ANC visits	Place of Residence		Total
	Urban	Rural	
Number of ANC visits			
None	5.0	15.7	7.8
1	3.1	7.7	4.3
2-3	11.1	21.4	13.8
4+	80.4	54.8	73.7
Don't know/missing	0.4	0.3	0.4
Total	100.0	100.0	100.0
Months of pregnancy at time of first ANC visit			
No antenatal care	5.0	15.7	7.8
<4	78.9	60.8	74.2
4-5	11.7	15.1	12.5
6-7	3.4	5.7	4.0
8+	0.8	2.5	1.2
Don't know/missing	0.2	0.2	0.2
Total	100.0	100.0	100.0
Number of women	2,049	719	2,768
Median months of pregnancy at first visit (for those with ANC)	2.0	2.8	2.2
Number of women with ANC	1,942	605	2,547

10.3 Components of Antenatal Care

Pregnancy complications are an important cause of maternal and early neonatal child mortality and morbidity. Thus, the effectiveness of ANC in ensuring safe motherhood depends in part on the tests and measurements done during the checkups to detect potential complications. To obtain information on the nature of the ANC women are receiving, the TDHS-2008 included a series of questions about the care mothers received during ANC visits for the last birth during the five years prior to the survey. Women who had at least one ANC visit were asked if they were weighed, blood pressure measured, urine and blood samples taken, an ultrasound performed, and an external examination conducted during any of their ANC visits. In

addition, regardless of whether or not women received ANC, women were asked if they received iron tablets at any time during pregnancy.

Table 10.3 shows that, among women receiving antenatal care, 92 percent had their blood pressure measured, which is one of the most important components of antenatal care for mothers. Urine and blood samples were taken for 82 and 86 percent of women, respectively. Ninety-six percent of women had ultrasound was performed during at least one of their visits to a medical provider. Eighty-three percent had their weight measured. Women were much less likely to have an external examination (74 percent) during ANC than the other tests or procedures shown in Table 10.3. Including both women who had ANC and those that did not get any care, 80 percent reported receiving iron tablets. Overall, the levels of use reported in TDHS-2008 for all services mentioned above are notably higher than the levels reported in TDHS-2003.

Differences by age in the proportions of women reporting having had the various components of care are not large, with women age 20-34 somewhat more likely to receive all components of ANC, except for urine sample and external physical examination, than older and younger women. There is an inverse relationship between the proportions reporting have the various antenatal care procedures and the child's birth order. The likelihood of receiving all components of ANC (except for external physical examination) is the highest for first births.

Considering the residential differentials, urban women were more likely than rural women to have had all of the ANC components. Although regional differences are smaller than in 2003, variations are still observed. Women in the East were least likely to have had the various routine ANC screening procedures. Especially notable is the low level of iron supplementation among women in the East compared to women in the other regions (61 percent compared to 83 percent or more). As regards NUTS 1 regions, except for ultrasound, the proportions having the various ANC procedures were lowest in Southeast Anatolia. Central East and Northeast Anatolia had the lowest percentages of women reporting they received iron tablets (53 percent and 57 percent, respectively).

As expected, the likelihood of having the various components of ANC is positively associated with both education and wealth. The education and wealth differentials were smallest for ultrasound and largest for weight measurement and iron supplementation.

Table 10.3 Components of antenatal care

Percentage of women with a live birth in the five years preceding the survey who received antenatal care for the last birth, by content of antenatal care, and percentage of women with a live birth in the five years preceding the survey who received iron tablets for the last birth, according to background characteristics, Turkey 2008

	Among women who received antenatal care, percentage who had:								
Background characteristic	Weight measured	Blood pressure measured	Urine sample taken	Blood sample taken	Ultra-sound	External exam	Number of women receiving ANC	Received iron tablets	Number of women
Age at birth									
<20	79.2	91.2	84.3	85.1	96.4	73.3	204	72.5	221
20-34	83.6	92.4	82.3	86.2	96.5	74.3	2,107	81.7	2,273
35-49	78.9	91.3	78.9	83.2	93.0	74.8	237	70.9	274
Birth order									
1	88.1	94.9	86.9	91.1	98.5	74.4	879	88.8	896
2-3	85.2	92.4	83.5	87.2	97.1	75.9	1,243	80.5	1,340
4-5	69.5	88.3	71.4	73.1	91.0	69.9	302	69.7	362
6+	53.8	81.6	61.2	64.7	82.7	68.3	123	50.7	171
Residence									
Urban	86.0	93.3	84.1	88.2	97.3	74.3	1,942	83.5	2,049
Rural	72.7	88.9	76.1	78.2	92.6	74.4	605	69.7	719
Region									
West	91.8	96.4	87.5	91.0	97.9	78.5	972	85.6	1,004
South	84.8	93.1	80.3	85.4	95.6	73.0	335	82.6	354
Central	89.9	94.2	86.4	88.4	98.4	75.2	592	87.1	627
North	87.4	97.1	88.7	91.8	96.3	68.0	158	82.6	165
East	53.5	79.5	65.8	70.8	90.3	67.8	490	61.3	619
Region (NUTS 1)									
İstanbul	90.2	94.7	86.3	90.2	99.4	77.4	452	82.7	472
West Marmara	95.5	99.1	87.3	93.8	97.4	89.2	78	88.3	79
Aegean	87.5	94.5	84.9	86.8	96.4	79.2	336	87.1	346
East Marmara	94.7	97.0	88.6	93.3	97.9	73.4	245	89.5	252
West Anatolia	91.4	96.8	89.1	91.2	98.5	71.7	269	86.8	287
Mediterranean	84.8	93.1	80.3	85.4	95.6	73.0	335	82.6	354
Central Anatolia	93.2	94.9	83.9	86.1	98.3	78.7	136	84.9	145
West Black Sea	90.0	94.9	91.9	91.8	96.4	73.6	147	87.0	148
East Black Sea	84.4	98.8	88.6	92.3	96.9	70.6	60	79.5	65
Northeast Anatolia	72.7	89.5	80.2	81.6	89.9	81.8	67	56.8	92
Central East Anatolia	54.3	83.2	71.0	75.0	88.2	68.9	134	53.2	176
Southeast Anatolia	48.8	75.4	60.0	66.4	91.4	64.0	289	66.6	352
Education									
No educ./Prim. incomp.	57.7	82.3	67.7	70.3	88.1	71.3	423	57.3	541
First level primary	84.1	92.9	81.6	84.7	96.6	74.0	1,273	81.7	1,365
Second level primary	86.5	93.1	84.3	90.4	99.3	72.1	264	88.2	272
High school and higher	96.6	97.7	92.8	97.3	99.6	78.1	587	92.8	591
Wealth quintile									
Lowest	62.6	82.0	71.1	72.0	87.2	68.7	435	61.8	572
Second	74.4	88.2	73.7	79.7	96.4	78.4	576	74.8	635
Middle	87.9	95.5	82.1	87.0	96.9	70.4	589	87.7	597
Fourth	91.2	95.7	91.3	93.7	99.3	75.9	487	88.4	497
Highest	97.1	99.1	93.7	96.8	100.0	77.7	460	90.1	466
Total	82.8	92.2	82.2	85.8	96.2	74.3	2,547	79.9	2,768

10.4 Place of delivery

The TDHS-2008 collected information on the place of delivery for all children born in the five years preceding the survey. Table 10.4 presents these results by background characteristics. Overall, the TDHS-2008 found that 90 percent of all births were delivered at a health facility compared to 78 percent in the TDHS-2003. Women were more than three times as likely to deliver in a public sector facility as in a private facility (70 percent and 20 percent, respectively).

Considering subgroup differences, women under age 35 (around 90 percent) were somewhat more likely to deliver at a health facility than older women (84 percent). The percentage of women delivering at a health facility declined as the birth order increase, from 96 percent among first births to 61 percent for sixth and higher order births. Furthermore, there was a positive relationship between the number of antenatal care visits and the likelihood of delivering in a health facility delivery. Almost all births to women having at least four or more antenatal checkups occurred at a health facility (97 percent). On the other hand, deliveries were much more likely to occur at home if the mother had no antenatal visits (34 percent).

Deliveries at health facilities are more common in urban areas (94 percent) than in rural areas, where one fifth of deliveries occur at home. The proportion of health facility deliveries is above the national average in all regions except the East, where 72 percent occur at a health facility. The highest percentage of deliveries taking place in a health facility is observed for the Central region (98 percent), followed by the West and the North region (96 percent). Considering the NUTS 1 regions, in West Marmara, all deliveries occur at a health facility. On the other hand, Central East Anatolia, Southeast Anatolia and Northeast Anatolia have the lowest percentages of health facility deliveries (65 percent, 75 percent and 76 percent respectively).

Both the level of education and wealth status are positively associated with the likelihood of delivering in a health facility. The proportions of births occurring at a health facility rise from 71 percent among women in the lowest education and wealth quintile levels to nearly 100 percent among women in the highest education and wealth categories.

Regarding the type of facility, the majority of births to women in İstanbul are delivered in private institutions (58 percent). The proportion choosing a private sector facility increases with educational attainment and wealth level. Forty percent of women with at least high school education and 49 percent in the highest wealth quintile chose to deliver their baby in a private health facility. On the other hand, women in the lowest education and wealth quintile are the least likely among all of the subgroups in Table 10.4 to deliver in a private facility (9 percent and 4 percent, respectively).

Table 10.4 Place of delivery

Percent distribution of live births in the five years preceding the survey by place of delivery and percentage delivered in a health facility, according to background characteristics, Turkey 2008

Background characteristic	Health facility: Public sector	Health facility: Private sector	Home	Other	Missing	Total	Percentage delivered in a health facility	Number of births
Age at birth								
<20	75.0	13.7	10.4	0.0	1.0	100.0	88.6	344
20-34	69.1	21.4	9.2	0.2	0.2	100.0	90.4	2,811
35-49	68.3	16.2	13.5	0.0	2.1	100.0	84.4	308
Birth order								
1	71.7	24.2	3.9	0.0	0.2	100.0	95.9	1,214
2-3	71.8	20.4	7.3	0.2	0.4	100.0	92.2	1,563
4-5	65.3	14.3	18.8	0.6	1.0	100.0	79.6	448
6+	52.1	8.7	38.1	0.2	0.9	100.0	60.9	237
Residence								
Urban	68.9	25.1	5.4	0.1	0.5	100.0	94.0	2,475
Rural	71.3	7.7	20.4	0.3	0.3	100.0	79.0	988
Region								
West	59.9	36.1	3.3	0.2	0.5	100.0	96.0	1,174
South	74.0	18.2	7.2	0.2	0.4	100.0	92.2	441
Central	86.3	12.0	1.2	0.0	0.5	100.0	98.3	741
North	89.3	6.3	3.9	0.0	0.5	100.0	95.6	197
East	62.1	10.2	27.2	0.2	0.3	100.0	72.2	911
Region (NUTS 1)								
İstanbul	36.9	58.3	4.3	0.0	0.5	100.0	95.2	548
West Marmara	89.5	10.5	0.0	0.0	0.0	100.0	100.0	88
Aegean	82.4	13.4	3.3	0.4	0.6	100.0	95.8	427
East Marmara	80.7	17.6	0.6	0.5	0.5	100.0	98.4	275
West Anatolia	86.0	12.3	1.2	0.0	0.6	100.0	98.3	345
Mediterranean	74.0	18.2	7.2	0.2	0.4	100.0	92.2	441
Central Anatolia	77.7	19.6	2.8	0.0	0.0	100.0	97.2	177
West Black Sea	90.9	5.3	3.2	0.0	0.6	100.0	96.3	172
East Black Sea	92.1	5.1	2.8	0.0	0.0	100.0	97.2	79
Northeast Anatolia	72.8	2.7	23.4	0.0	1.1	100.0	75.5	128
Central East Anatolia	59.2	6.1	33.6	0.6	0.4	100.0	65.3	250
Southeast Anatolia	60.8	13.9	25.2	0.1	0.1	100.0	74.7	533
Education								
No educ./Prim. incomp.	62.2	9.0	28.3	0.3	0.2	100.0	71.2	781
First level primary	74.9	18.0	6.2	0.2	0.7	100.0	92.9	1,691
Second level primary	80.9	16.6	2.4	0.0	0.0	100.0	97.6	322
High school and higher	59.3	40.3	0.3	0.0	0.2	100.0	99.6	669
Antenatal care visits[1]								
None	60.0	5.1	33.8	1.1	0.0	100.0	65.1	216
1-3	76.2	9.7	13.8	0.3	0.0	100.0	85.9	501
4+	70.7	26.6	2.6	0.0	0.1	100.0	97.2	2,041
Wealth quintile								
Lowest	66.2	4.3	28.5	0.6	0.4	100.0	70.5	852
Second	78.5	13.4	7.7	0.0	0.5	100.0	91.8	818
Middle	76.8	19.7	2.9	0.1	0.6	100.0	96.4	709
Fourth	70.1	28.7	0.9	0.0	0.3	100.0	98.8	579
Highest	50.3	48.5	0.9	0.0	0.3	100.0	98.9	506
Total	69.6	20.1	9.7	0.2	0.4	100.0	89.7	3,463

[1]Includes only the last birth in the five years preceding the survey.

Note: An asterisk indicates a figure is based on fewer than 25 unweighted cases.

10.5 Assistance during delivery

Assistance by medically trained birth attendants during delivery is considered to be essential in the reduction of maternal and neonatal mortality. The type of assistance a woman receives during the birth of her child depends to a great extent on the place of delivery. Births that are delivered outside the health facility are much less likely to be assisted by a doctor or other trained health personnel. Overall, as Table 10.5 shows, medically trained providers assisted at the delivery of 91 percent of all births, compared to 83 percent at the time of the TDHS-2003. More than six in ten births are delivered by doctors, a little more than one-quarter by nurse/midwives and 8 percent by traditional birth attendants or relatives/friends.

The likelihood that trained health personnel assisted at delivery varies according to background characteristics in Table 10.4. Births to older women are slightly less likely than births among women under age 35 to be assisted by medical personnel. The proportion of births assisted at delivery by a medical provider declines sharply with birth order, from 97 percent among first births to 65 percent among the small number of sixth and higher order births. Furthermore, urban women are more likely than rural women to have medical assistance at delivery (96 and 80 percent, respectively). Medical assistance at delivery is least likely for births in the East region, births to women with no education or incomplete primary and births in the lowest wealth quintile. On the other hand, almost all births to women in the highest wealth quintile and to women with high school or more education are delivered with medical assistance. Among the NUTS 1 regions, the proportions of medically assisted deliveries are much lower than the national average in Central East Anatolia, Northeast Anatolia and Southeast Anatolia.

There are also differences in the percentage of deliveries assisted by specific types of providers. For instance, in the East—especially in Southeast region—the proportion of births assisted by a doctor (33 percent and 29 percent, respectively) is lower than that assisted by a nurse/midwife (42 percent and 49 percent respectively). Not surprisingly, the place of delivery is closely associated with the type of assistance at delivery. Almost none of the deliveries taking place outside a facility are assisted by a doctor and only 16 percent are assisted by a nurse midwife. The proportions of births delivered with the assistance of a traditional birth attendant or a relative of friend is highest among births of order 6 or higher (34 percent), births in rural areas (19 percent), in the East (24 percent) and Central East Anatolia (33 percent), and births in the lowest wealth quintile (25 percent) and education category (25 percent).

In Turkey, caesarean deliveries are very common; 37 percent of all deliveries are delivered by caesarean section. The caesarean delivery rate is substantially higher than that reported at the time of the TDHS-2003 (21 percent). The likelihood of delivering by caesarean section increases with the age of the mother and decreases with child's birth order. Forty-five percent of first births are caesarean deliveries. Caesarean deliveries are more common among women living in urban areas (42 percent) than rural areas (24 percent). Forty percent or more of births are caesarean deliveries in all regions except the East, where only 16 percent of births are delivered by caesarean section. The C-section rate increases directly with education and wealth; 60 percent or more of births in the highest education and wealth categories are delivered by caesarean section, more than three times the rate among births in the lowest education and wealth levels.

Table 10.5 Assistance during delivery

Percent distribution of live births in the five years preceding the survey by person providing assistance during delivery, percentage of birth assisted by a skilled provider and percentage delivered by caesarean-section, according to background characteristics, Turkey 2008

	Person providing assistance during delivery									
Background characteristic	Doctor	Nurse/ midwife	Traditional birth attendant	Relative/ other	No one	Don't know/ missing	Total	Percentage delivered by a health provider[1]	Percentage delivered by C-section	Number of births
Age at birth										
<20	60.1	30.4	5.3	2.7	0.4	1.2	100.0	90.4	26.6	344
20-34	64.4	27.4	3.4	4.3	0.4	0.2	100.0	91.8	37.0	2,811
35-49	65.6	22.0	4.0	6.9	0.3	1.2	100.0	87.6	45.4	308
Birth order										
1	73.2	23.7	1.9	0.8	0.1	0.2	100.0	96.9	44.6	1,214
2-3	66.3	26.9	3.2	3.0	0.4	0.3	100.0	93.2	37.7	1,563
4-5	47.0	36.2	5.4	9.7	0.7	1.0	100.0	83.2	21.9	448
6+	34.7	30.0	12.4	21.1	0.9	0.9	100.0	64.7	18.3	237
Place of delivery										
Health facility	71.2	28.6	0.1	0.0	0.0	0.0	100.0	99.8	40.8	3,107
Elsewhere	0.8	15.9	35.9	43.8	3.3	0.3	100.0	16.7	0.1	341
Residence										
Urban	71.2	24.5	1.9	1.7	0.3	0.4	100.0	95.7	41.7	2,475
Rural	46.1	34.0	8.0	10.9	0.5	0.4	100.0	80.2	24.3	988
Region										
West	82.5	15.5	0.9	0.8	0.1	0.2	100.0	98.0	46.0	1,174
South	60.4	33.7	2.8	1.8	0.8	0.6	100.0	94.0	39.8	441
Central	76.0	22.5	0.7	0.2	0.1	0.5	100.0	98.5	43.3	741
North	64.0	32.0	1.0	2.5	0.0	0.5	100.0	96.0	44.8	197
East	32.5	41.9	10.5	13.9	0.7	0.4	100.0	74.4	16.1	911
Region (NUTS 1)										
İstanbul	90.2	7.7	0.5	1.6	0.0	0.0	100.0	97.9	49.1	548
West Marmara	80.2	18.3	1.5	0.0	0.0	0.0	100.0	98.5	54.4	88
Aegean	79.5	18.7	1.3	0.0	0.0	0.6	100.0	98.2	45.1	427
East Marmara	67.7	30.7	0.3	0.3	0.5	0.5	100.0	98.4	41.0	275
West Anatolia	82.2	16.2	0.8	0.0	0.2	0.6	100.0	98.4	42.3	345
Mediterranean	60.4	33.7	2.8	1.8	0.8	0.6	100.0	94.0	39.8	441
Central Anatolia	65.8	31.8	1.6	0.8	0.0	0.0	100.0	97.6	36.2	177
West Black Sea	67.2	29.3	1.2	1.7	0.0	0.6	100.0	96.5	44.3	172
East Black Sea	64.5	33.1	0.0	2.4	0.0	0.0	100.0	97.6	50.6	79
Northeast Anatolia	41.9	33.5	6.9	14.7	1.7	1.3	100.0	75.5	21.9	128
Central East Anatolia	35.6	30.4	16.0	16.6	0.7	0.7	100.0	66.0	16.8	250
Southeast Anatolia	28.7	49.4	8.9	12.4	0.5	0.1	100.0	78.1	14.4	533
Education										
No educ./Prim. incomp.	40.8	33.1	10.2	14.7	1.0	0.3	100.0	73.9	18.9	781
First level primary	65.2	29.7	2.4	2.0	0.2	0.6	100.0	94.8	35.5	1,691
Second level primary	70.1	27.5	1.6	0.7	0.0	0.2	100.0	97.6	38.8	322
High school and higher	85.7	13.9	0.2	0.0	0.1	0.2	100.0	99.6	59.5	669
Wealth quintile										
Lowest	34.8	38.6	10.8	14.4	0.9	0.5	100.0	73.4	18.1	852
Second	60.2	33.5	3.1	2.3	0.4	0.5	100.0	93.7	30.1	818
Middle	71.9	25.8	0.9	1.2	0.1	0.1	100.0	97.7	39.7	709
Fourth	79.7	19.4	0.3	0.1	0.0	0.5	100.0	99.1	48.5	579
Highest	90.9	8.6	0.2	0.0	0.0	0.3	100.0	99.5	60.9	506
Total	64.1	27.2	3.6	4.3	0.4	0.4	100.0	91.3	36.7	3,463

Note: If the respondent mentioned more than one person attending during delivery, only the most qualified person is considered in this tabulation.

[1]Health provider includes doctor, nurse and midwife.

Note: An asterisk indicates a figure is based on fewer than 25 unweighted cases.

10.6 Postnatal Care

Care after delivery is very important for both mother and her child, especially for births occurring at home. In order to assess the extent of postnatal care utilization, women whose last live birth occurred in the five years preceding the survey were asked in the TDHS-2008, whether they and/or that child had received a postnatal checkup from a health provider and, if yes, within how many days of delivery the checkup was received. These questions were asked both of women who delivered in a health facility or at home.

Table 10.6 and Table 10.7 present the type of the provider and the timing of the first postnatal checkup for the mother, respectively. Eighty-two percent of women reported that they had a postnatal checkup, almost all by a doctor.

The proportion of women receiving postnatal care for the last birth does not vary markedly with age, but is substantially higher among women with three or fewer births than higher parity mothers. The likelihood of receiving postnatal care is also higher for women in urban areas than in rural areas. In all regions except the East (64 percent), the proportion of women having postnatal care is above the national average. The Aegean and West Marmara regions have the highest proportions having a postnatal checkup (94 percent and 91 percent, respectively) and Northeast Anatolia and Central East Anatolia the lowest (60 percent and 56 percent, respectively). Furthermore, there is a strong relationship between receiving postnatal care and educational level. Ninety-four percent of women with at least high school education have postnatal care compared to 63 percent for women with less than primary education. Likewise, as the wealth level of women increases, the likelihood of receiving postnatal care increases; 94 percent of women in the highest wealth quintile receive care after delivery compared to 64 percent of women in the lowest quintile (Table 10.6).

With respect to the timing of the first postnatal care visit, the results in Table 10.7 indicate that 63 percent of women have the first checkup within four hours after delivery. Considering regional differences, the likelihood of receiving postnatal care shortly after delivery is lowest in the East (49 percent) and varies from 35 percent in the Central East Anatolia to 75 percent in Istanbul. It increases markedly with education and the wealth quintile (Table 10.7).

Postnatal checkups for the baby are important in reducing infant deaths. Approximately 90 percent of infants receive postnatal care from health personnel and most of these babies—67 percent of all last births—are seen for care within four hours following delivery in Turkey. As Tables 10.8 and 10.9 show, variations across subgroups in the likelihood of an infant receiving postnatal care from a health provider and in the timing when postnatal care is first received are similar to the patterns observed with respect to the mother's receipt of postnatal care.

Table 10.6 Type of provider of first postnatal checkup for women

Among women age 15-49 giving birth in the five years preceding the survey, the percent distribution by type of provider of the mother's first postnatal health check for the last live birth, according to background characteristics, Turkey 2008

Background characteristic	Type of health provider of mother's first postnatal checkup: Doctor/ nurse/ midwife	Other	Don't know/ missing	No check-up	Total	Number of women
Age at birth						
<20	78.1	1.0	0.9	20.0	100.0	221
20-34	82.1	0.3	2.5	15.1	100.0	2,273
35-49	81.0	0.6	3.0	15.3	100.0	274
Birth order						
1	86.5	0.4	2.4	10.7	100.0	896
2-3	84.6	0.5	2.5	12.4	100.0	1,340
4-5	69.0	0.0	2.9	28.1	100.0	362
6+	60.5	0.6	0.7	38.2	100.0	171
Residence						
Urban	84.6	0.4	2.7	12.2	100.0	2,049
Rural	73.3	0.4	1.6	24.8	100.0	719
Region						
West	88.6	0.1	1.9	9.4	100.0	1,004
South	80.1	0.9	2.5	16.5	100.0	354
Central	88.4	0.8	2.8	8.0	100.0	627
North	84.3	0.0	1.8	13.9	100.0	165
East	63.9	0.3	3.1	32.6	100.0	619
Region (NUTS 1)						
İstanbul	87.1	0.0	1.2	11.7	100.0	472
West Marmara	91.4	0.0	1.7	7.0	100.0	79
Aegean	94.2	0.5	0.7	4.5	100.0	346
East Marmara	83.1	0.6	5.6	10.8	100.0	252
West Anatolia	87.9	1.1	2.8	8.2	100.0	287
Mediterranean	80.1	0.9	2.5	16.5	100.0	354
Central Anatolia	86.4	0.0	1.9	11.7	100.0	145
West Black Sea	88.7	0.0	3.0	8.3	100.0	148
East Black Sea	82.0	0.0	0.5	17.4	100.0	65
Northeast Anatolia	59.6	0.0	4.4	36.0	100.0	92
Central East Anatolia	56.0	1.1	1.3	41.6	100.0	176
Southeast Anatolia	69.0	0.0	3.7	27.3	100.0	352
Education						
No educ./Prim. inc.	62.8	0.3	1.8	35.2	100.0	541
First level primary	84.2	0.6	1.9	13.2	100.0	1,365
Second level primary	86.6	0.7	3.3	9.3	100.0	272
High school and higher	90.8	0.0	3.8	5.4	100.0	591
Wealth quintile						
Lowest	63.5	0.4	1.7	34.3	100.0	572
Second	81.5	0.4	2.0	16.2	100.0	635
Middle	85.9	0.9	1.7	11.5	100.0	597
Fourth	86.6	0.4	4.5	8.6	100.0	497
Highest	93.6	0.0	2.6	3.8	100.0	466
Total	81.7	0.4	2.4	15.5	100.0	2,768

Table 10.7 Timing of first postnatal checkup for women

Among women age 15-49 giving birth in the five years preceding the survey, the percent distribution of the mother's first postnatal check-up for the last live birth by time after delivery, according to background characteristics, Turkey 2008

	Timing after deliver of mother's first postnatal checkup							
Background characteristic	Less than 4 hours	4-23 hours	2 days	3-41 days	Don't know/ missing	No check-up	Total	Number of women
Mother's age at birth								
<20	53.9	14.8	5.3	2.3	3.7	20.0	100.0	221
20-34	64.4	11.8	4.7	2.9	1.1	15.1	100.0	2,273
35-49	62.7	13.6	2.7	2.3	3.4	15.3	100.0	274
Birth order								
1	66.7	13.3	5.2	3.0	1.2	10.7	100.0	896
2-3	66.0	12.5	4.6	2.7	1.7	12.4	100.0	1,340
4-5	52.3	11.1	3.7	2.7	2.1	28.1	100.0	362
6+	48.7	6.7	2.7	2.7	1.1	38.2	100.0	171
Residence								
Urban	66.9	12.1	4.9	2.8	1.1	12.2	100.0	2,049
Rural	53.3	12.5	3.6	3.0	2.9	24.8	100.0	719
Region								
West	69.7	12.2	4.9	2.8	1.0	9.4	100.0	1,004
South	61.7	11.4	5.8	2.5	2.1	16.5	100.0	354
Central	67.3	15.3	4.2	2.8	2.4	8.0	100.0	627
North	66.9	10.4	7.9	0.2	0.7	13.9	100.0	165
East	49.1	10.2	2.8	3.8	1.5	32.6	100.0	619
Region (NUTS 1)								
İstanbul	74.7	6.2	3.7	3.7	0.0	11.7	100.0	472
West Marmara	70.2	13.4	6.4	3.1	0.0	7.0	100.0	79
Aegean	67.5	16.0	6.7	1.6	3.7	4.5	100.0	346
East Marmara	61.2	21.0	3.2	1.7	2.2	10.8	100.0	252
West Anatolia	66.1	16.0	3.7	4.2	1.9	8.2	100.0	287
Mediterranean	61.7	11.4	5.8	2.5	2.1	16.5	100.0	354
Central Anatolia	67.7	13.0	5.8	1.5	0.4	11.7	100.0	145
West Black Sea	69.9	11.1	8.8	0.9	0.9	8.3	100.0	148
East Black Sea	67.5	9.3	4.2	0.5	1.1	17.4	100.0	65
Northeast Anatolia	47.4	8.0	2.4	4.4	1.8	36.0	100.0	92
Central East Anatolia	35.0	10.2	4.9	5.3	3.0	41.6	100.0	176
Southeast Anatolia	56.6	10.8	1.9	2.8	0.6	27.3	100.0	352
Education								
No educ./Prim. inc.	48.2	8.7	3.0	3.1	1.8	35.2	100.0	541
First level primary	65.0	12.1	4.9	2.7	2.0	13.2	100.0	1,365
Second level primary	62.5	19.6	4.6	2.7	1.4	9.3	100.0	272
High school and higher	73.8	12.3	5.2	2.8	0.5	5.4	100.0	591
Wealth quintile								
Lowest	46.8	9.5	4.2	2.8	2.4	34.3	100.0	572
Second	65.0	11.8	3.7	1.6	1.8	16.2	100.0	635
Middle	62.4	15.1	6.4	2.8	1.8	11.5	100.0	597
Fourth	71.5	11.4	3.7	3.4	1.5	8.6	100.0	497
Highest	74.1	13.4	4.8	3.8	0.1	3.8	100.0	466
Total	63.4	12.2	4.6	2.8	1.6	15.5	100.0	2,768

Table 10.8 Type of provider of first postnatal checkup for child

Among last births in the five years preceding the survey, the percent distribution by type of provider of the child's first postnatal health check for the last live birth, according to background characteristics, Turkey 2008

Background characteristic	Type of health provider of child's first postnatal checkup: Doctor/ nurse/ midwife	Other	Don't know/ missing	No check-up	Total	Number of children
Mother's age at birth						
<20	87.7	0.4	0.0	11.9	100.0	221
20-34	88.4	0.8	0.1	10.6	100.0	2,273
35-49	85.1	0.8	0.0	14.1	100.0	274
Birth order						
1	93.9	0.5	0.0	5.6	100.0	896
2-3	89.0	1.2	0.1	9.6	100.0	1,340
4-5	79.4	0.1	0.2	20.3	100.0	362
6+	67.3	0.6	0.0	32.1	100.0	171
Residence						
Urban	91.1	0.9	0.1	7.9	100.0	2,049
Rural	79.2	0.7	0.0	20.2	100.0	719
Region						
West	95.4	0.6	0.0	4.0	100.0	1,004
South	88.2	0.4	0.2	11.2	100.0	354
Central	92.7	1.1	0.3	5.9	100.0	627
North	95.1	0.3	0.0	4.6	100.0	165
East	69.3	1.2	0.0	29.5	100.0	619
Region (NUTS 1)						
İstanbul	96.3	0.6	0.0	3.1	100.0	472
West Marmara	92.8	0.8	0.0	6.4	100.0	79
Aegean	95.6	0.7	0.0	3.8	100.0	346
East Marmara	94.2	1.0	0.0	4.8	100.0	252
West Anatolia	90.5	1.3	0.7	7.5	100.0	287
Mediterranean	88.2	0.4	0.2	11.2	100.0	354
Central Anatolia	95.1	0.4	0.0	4.5	100.0	145
West Black Sea	95.2	0.3	0.0	4.5	100.0	148
East Black Sea	92.2	0.0	0.0	7.8	100.0	65
Northeast Anatolia	65.5	0.0	0.3	34.2	100.0	92
Central East Anatolia	69.1	1.3	0.0	29.6	100.0	176
Southeast Anatolia	70.4	1.5	0.0	28.1	100.0	352
Education						
No education/Primary inc.	71.3	0.8	0.0	27.9	100.0	541
First level primary	88.6	1.1	0.2	10.1	100.0	1,365
Second level primary	95.8	0.2	0.0	4.0	100.0	272
High school and higher	98.3	0.3	0.0	1.3	100.0	591
Wealth quintile						
Lowest	70.8	0.5	0.2	28.6	100.0	572
Second	87.0	0.9	0.0	12.0	100.0	635
Middle	92.1	0.9	0.3	6.7	100.0	597
Fourth	95.7	0.5	0.0	3.7	100.0	497
Highest	97.1	1.2	0.0	1.7	100.0	466
Total	88.0	0.8	0.1	11.1	100.0	2,768

Table 10.9 Timing of first postnatal checkup for child

Among last births in the five years preceding the survey, the percent distribution of the child's first postnatal check-up for the last live birth by time after delivery, according to background characteristics, Turkey 2008

	Timing after delivery of child's first postnatal checkup							
Background characteristic	Less than 4 hours	4-23 hours	2 days	3-41 days	Don't know/ missing	No check-up	Total	Number of children
Mother's age at birth								
<20	68.1	7.0	6.3	5.3	1.3	11.9	100.0	221
20-34	67.2	7.6	5.0	7.8	1.7	10.6	100.0	2,273
35-49	60.3	7.8	6.2	8.0	3.5	14.1	100.0	274
Birth order								
1	73.2	7.3	5.7	6.4	1.9	5.6	100.0	896
2-3	68.0	8.3	5.5	6.8	1.8	9.6	100.0	1,340
4-5	56.4	6.8	3.9	11.1	1.6	20.3	100.0	362
6+	43.4	5.3	3.4	12.6	3.2	32.1	100.0	171
Residence								
Urban	70.0	7.8	5.3	7.2	1.8	7.9	100.0	2,049
Rural	57.0	7.1	4.9	8.7	2.1	20.2	100.0	719
Region								
West	78.6	7.3	4.3	5.0	0.8	4.0	100.0	1,004
South	63.7	7.2	6.2	9.5	2.1	11.2	100.0	354
Central	68.9	9.7	6.5	6.1	2.9	5.9	100.0	627
North	71.4	9.3	8.6	5.3	0.9	4.6	100.0	165
East	45.3	5.6	4.0	12.9	2.8	29.5	100.0	619
Region (NUTS 1)								
İstanbul	85.2	3.7	0.6	6.8	0.6	3.1	100.0	472
West Marmara	76.8	5.9	5.0	5.9	0.0	6.4	100.0	79
Aegean	76.5	10.0	6.7	2.0	1.1	3.8	100.0	346
East Marmara	71.4	12.3	6.2	2.6	2.7	4.8	100.0	252
West Anatolia	65.7	10.2	5.7	8.0	3.0	7.5	100.0	287
Mediterranean	63.7	7.2	6.2	9.5	2.1	11.2	100.0	354
Central Anatolia	63.6	9.0	11.5	9.9	1.5	4.5	100.0	145
West Black Sea	68.0	11.0	9.9	4.1	2.5	4.5	100.0	148
East Black Sea	74.5	4.7	7.6	5.3	0.0	7.8	100.0	65
Northeast Anatolia	43.9	5.3	5.3	9.7	1.6	34.2	100.0	92
Central East Anatolia	40.3	7.2	5.9	12.6	4.3	29.6	100.0	176
Southeast Anatolia	48.1	4.9	2.7	13.8	2.3	28.1	100.0	352
Education								
No education/Primary inc.	48.8	6.0	3.9	10.9	2.4	27.9	100.0	541
First level primary	67.2	7.7	5.6	7.8	1.6	10.1	100.0	1,365
Second level primary	68.9	10.4	7.5	6.1	3.0	4.0	100.0	272
High school and higher	80.4	7.5	4.5	4.7	1.5	1.3	100.0	591
Wealth quintile								
Lowest	48.5	5.2	4.9	11.2	1.7	28.6	100.0	572
Second	66.0	7.0	5.8	6.8	2.4	12.0	100.0	635
Middle	65.5	11.2	6.1	8.4	2.0	6.7	100.0	597
Fourth	76.4	6.5	5.7	5.4	2.4	3.7	100.0	497
Highest	80.8	7.9	3.2	5.7	0.8	1.7	100.0	466
Total	66.6	7.6	5.2	7.6	1.9	11.1	100.0	2,768

CHILD HEALTH 11

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This chapter looks at several factors that are important in improving the survival chances for young children in Turkey. The chapter first presents findings from the TDHS-2008 concerning birth weight and size. It then considers information on the vaccination status and on diarrhea treatment practices.

11.1 Child's Weight and Size at Birth

For all births in the five years preceding the survey, the birth weight was recorded in the TDHS-2008 questionnaire from either a written record if available or the mother's recall. In addition, the mother's perception of the baby's size at birth was obtained. Table 11.1 presents the percent distribution of live births in the five years preceding the survey by the reported birth weight and the mother's perception of the baby's size at birth according to mother's background characteristics. Children whose birth weight is less than 2.5 kilograms or children reported to be "very small" or "smaller than average" at birth have been shown to have a higher than average risk of dying during early childhood.

Overall, Table 11.1 shows that data on the child's weight at birth were available for more than eight in ten births during the five-year period prior to the TDHS-2008. Birth weight information was less likely to be available for births of order six and higher, rural births, births in the East, births in Central East and Southeast Anatolia and births to mothers in the lowest education and wealth categories than for other births.

Among births with a reported weight, 11 percent had a low birth weight (less than 2.5 kg.). In addition, 11 and 14 percent of all babies were reported to be "very small" and "smaller than average" respectively by mothers. Although the differentials are not large, both the proportions of low-birth-weight babies and of babies reported as "very small" or "smaller than average" were higher among births to mothers age 35 and older compared with births to mothers under age 35. Low birth weight and small size were also somewhat more common among births of order four and higher than lower parity births.

Among the five geographical regions of Turkey, the West had the lowest proportion of live births with low birth weight (9 percent) while the East had the highest proportion (17 percent). The proportion of babies considered as "very small" at birth by mothers in East (18 percent) is more than double in the West, Central and North regions (8 percent in all three regions). The percentage of children weighing less than 2.5 kilograms at birth varies from 7 percent in the Aegean to 18 percent in Northeast Anatolia. The Aegean region also had the lowest percentage of births mothers considered to be "very small" while Southeast Anatolia had the highest percentage (6 percent and 20 percent, respectively). Women with secondary or

higher education were less likely to have babies with a low birth weight and also less likely to report their children's size at birth as "very small" than less educated mothers. The likelihood of having a low birth weight or "very small" baby also declined with the wealth quintile.

Table 11.1 Child's weight and size at birth

Percent distribution of live births in the five years preceding the survey with a reported birth weight by birth weight; percentage of births with a reported birth weight; and percent distribution of all live births in the five years preceding the survey by mother's estimate of baby's size at birth and, according to background characteristics, Turkey 2008

Background characteristic	Percent distribution of births with a registered reported birth weight[1]					Percent distribution of all live births by size of child at birth as reported by mother					
	Less than 2.5 kg	2.5 kg or more	Total	Number of births	Percentage of all births with a reported birth weight	Very small	Smaller than average	Average or bigger	Don't know/ missing	Total	Number of births
Mother's age at birth											
<20	12.7	87.3	100.0	282	82.1	16.8	10.4	71.8	1.0	100.0	344
20-34	10.5	89.5	100.0	2,382	84.8	10.6	13.8	75.3	0.4	100.0	2,811
35-49	14.3	85.7	100.0	243	78.8	11.9	15.7	70.9	1.5	100.0	308
Birth order											
1	9.8	90.2	100.0	1,113	91.7	11.7	12.7	75.0	0.6	100.0	1,214
2-3	10.2	89.8	100.0	1,378	88.2	9.3	13.9	76.6	0.2	100.0	1,563
4-5	17.3	82.7	100.0	310	69.2	14.2	16.2	68.5	1.1	100.0	448
6+	17.2	82.8	100.0	106	44.7	16.5	12.1	70.2	1.3	100.0	237
Residence											
Urban	10.8	89.2	100.0	2,241	90.5	10.3	13.3	75.9	0.6	100.0	2,475
Rural	12.0	88.0	100.0	666	67.4	13.9	14.5	71.2	0.5	100.0	988
Region											
West	9.1	90.9	100.0	1,132	96.5	8.1	12.3	79.2	0.5	100.0	1,174
South	11.6	88.4	100.0	384	87.2	13.1	12.2	74.4	0.4	100.0	441
Central	10.4	89.6	100.0	728	98.2	8.3	14.4	76.6	0.7	100.0	741
North	10.3	89.7	100.0	186	94.5	7.5	13.3	78.7	0.5	100.0	197
East	16.7	83.3	100.0	477	52.4	17.8	15.5	66.1	0.6	100.0	911
Region (NUTS 1)											
İstanbul	10.9	89.1	100.0	536	97.9	10.8	13.4	75.3	0.5	100.0	548
West Marmara	7.6	92.4	100.0	87	99.2	7.3	12.8	79.9	0.0	100.0	88
Aegean	7.0	93.0	100.0	400	93.6	5.8	11.0	82.7	0.6	100.0	427
East Marmara	8.3	91.7	100.0	269	98.0	6.5	12.0	81.0	0.5	100.0	275
West Anatolia	11.2	88.8	100.0	341	98.8	8.8	13.5	76.5	1.2	100.0	345
Mediterranean	11.6	88.4	100.0	384	87.2	13.1	12.2	74.4	0.4	100.0	441
Central Anatolia	11.9	88.1	100.0	173	97.7	8.4	19.5	72.1	0.0	100.0	177
West Black Sea	7.7	92.3	100.0	164	95.3	7.1	11.2	81.1	0.6	100.0	172
East Black Sea	14.5	85.5	100.0	75	94.8	7.2	15.3	77.5	0.0	100.0	79
Northeast Anatolia	18.0	82.0	100.0	82	64.0	15.4	18.0	65.4	1.1	100.0	128
Central East Anatolia	16.5	83.5	100.0	120	48.2	15.5	16.1	67.1	1.2	100.0	250
Southeast Anatolia	16.3	83.7	100.0	275	51.6	19.5	14.5	65.7	0.3	100.0	533
Education											
No/Primary incomplete	18.3	81.7	100.0	420	53.8	17.3	15.1	67.1	0.5	100.0	781
First level primary	10.9	89.1	100.0	1,516	89.7	11.0	13.9	74.5	0.7	100.0	1,691
Second level primary	6.6	93.4	100.0	308	95.7	7.2	11.5	81.1	0.2	100.0	322
High school and higher	8.9	91.1	100.0	663	99.1	7.0	12.4	80.2	0.5	100.0	669
Wealth quintile											
Lowest	16.5	83.5	100.0	479	56.2	15.3	16.3	67.7	0.7	100.0	852
Second	12.2	87.8	100.0	689	84.3	13.0	14.4	72.1	0.5	100.0	818
Middle	9.6	90.4	100.0	676	95.4	10.5	11.6	77.7	0.1	100.0	709
Fourth	8.1	91.9	100.0	563	97.2	8.1	11.2	79.8	0.8	100.0	579
Highest	9.4	90.6	100.0	501	99.0	6.5	13.4	79.4	0.7	100.0	506
Total	11.0	89.0	100.0	2,908	84.0	11.3	13.6	74.5	0.6	100.0	3,463

[1] Based on either written record or the mother's recall.

11.2 Vaccination of Children

Universal immunization of children against six common vaccine-preventable diseases (tuberculosis, diphtheria, pertussis, tetanus, poliomyelitis, and measles) is one of the most cost-effective programs in reducing infant and child morbidity and mortality. To be fully immunized, a child should receive the following vaccinations: one dose of BCG, three doses of DPT and polio, and one dose of measles vaccine. BCG, which is given in the second month of life or at first clinical contact, protects against tuberculosis. DPT protects against diphtheria, pertussis, and tetanus. DPT and polio (OPV) each require three vaccinations at approximately six, ten and 14 weeks of age. However, since this regime is not always carefully followed, the goal is to for a child to have all three doses by 12 months of age. Previously, it was also recommended that children receive a measles vaccination at 9 months of age. The vaccination schedule was changed in July 2006 to include a measles, mumps, and rubella (MMR) vaccination given around 12-14 months of age. In addition to receiving protection against all six vaccine-preventable illnesses, it is also recommended that children be given three doses of Hepatitis B vaccine in the context of the Ministry's of Health "extended immunisation program" that has been in place since August 1998.

In the TDHS-2008, information was collected on immunization status (BCG, DPT, polio, measles, and hepatitis B) of all children born in or after January 2005. To obtain data for each eligible child, mothers were asked whether they had a vaccination card for the child, and if so, to show the card to the interviewer. The dates of the vaccinations were copied from the card to the questionnaire. Mothers were also asked whether the child has been given any vaccination not recorded on the card. If a vaccination card was not available for the child, the mother was asked a number of questions in order to determine the vaccination status of the child for each specific vaccine. In case of DPT, polio and hepatitis, the mother was asked to report the number of doses of the vaccine that the child had received.

11.2.1 Vaccination Coverage of Children Age 15-26 Months

Table 11.2 presents information on vaccination coverage according to the source of information used to determine coverage, i.e., the child's vaccination card or the mother's report. Data are presented for children age 15-26 months. This differs from the age range of 12-23 months that was used in presenting vaccination coverage data in the TDHS-2003 and earlier reports. The change in the age range reflects the fact that, with the introduction of the MMR vaccine into the immunization schedule, the age by which children should have received all of the recommended vaccines has shifted upward from 12 to 15 months.

With regard to the source of information on the child's vaccination status, Table 11.2 shows information was recorded from a vaccination card for 73 percent of children while mothers provided the information for the remaining 27 percent. For children for whom a written record was seen, the proportion fully vaccinated against tuberculosis, diphtheria, pertussis, tetanus, poliomyelitis, and measles during the first 15 months of life was 64 percent while this proportion was 17 percent for those whose information based on the mother's report.

Table 11.2 Vaccinations by source of information

Percentage of children age 15–26 months who received specific vaccines at any time before the survey, by source of information (vaccination card or mother's statement), and percentage vaccinated by 15 months of age, Turkey 2008

Source of information	BCG	Measles	DPT 1	DPT 2	DPT 3	Polio 1	Polio 2	Polio 3	Hepatitis B 1	Hepatitis B 2	Hepatitis B 3	All[1]	None	All + Hepatitis	Number of children
Vaccinated at any time before survey															
Vaccination card	71.3	65.9	72.3	71.6	70.8	71.9	70.8	69.7	72.1	71.9	70.0	63.8	0.0	62.8	516
Mother's statement	24.6	23.3	24.9	20.1	18.5	24.8	21.5	19.1	24.3	18.8	15.9	16.8	1.6	14.0	195
Either source	95.9	89.3	97.2	91.8	89.3	96.8	92.3	88.8	96.5	90.7	85.9	80.5	1.6	76.8	711
Vaccinated by 15 months of age[2]	95.7	85.9	96.5	90.9	85.3	96.1	91.8	85.3	96.4	90.7	83.9	74.6	1.7	70.9	711

[1] Children who are fully vaccinated (i.e., those who have received BCG, measles, and three doses of DPT and polio).
[2]For children whose information was based on the mother's report, the proportion of vaccinations given during the first 15 months of life was assumed to be the same as for children with a written record of vaccination.

Taking into account both the card information and the mother's report, Table 11.2 shows that 81 percent of the children received the full schedule of vaccinations against these six diseases. Most children who were immunized against these six diseases were also fully immunized against hepatitis B; overall, 77 percent of children received all of the basic immunizations plus 3 doses of the hepatitis B vaccines. Only 2 percent of all children between ages 15-26 months had not received any vaccination at all.

11.2.2 Coverage Rates by Background Characteristics

Table 11.3 presents information on differentials in the various vaccination indicators by background characteristics. The proportion of children for whom a vaccination card was seen varies considerably across the subgroups in the table. For example, the proportion of children with a card was 63 percent in the South compared with 80 percent in the West. The results in Table 11.3 show that female children were slightly more likely than male children to have been vaccinated against all seven vaccine-preventable diseases (79 percent and 75 percent respectively). The proportion of children fully immunized declined from 81 percent among first order births to 55 percent among sixth and higher order births.

As expected, there are differences in coverage by place of residence. The percentage of children receiving the first dose of the polio vaccine was similar for children living in urban and rural areas (97 and 95 percent respectively). However, the percentages receiving the second and third polio doses were 89 and 81 for rural children compared with 94 and 92 for urban children. The coverage rates for the third DPT and hepatitis doses and for the BCG and measles vaccines were also higher for urban children than for rural children. Overall, 80 percent of urban children were fully vaccinated against all seven diseases compared to 67 percent for rural children.

Table 11.3 Vaccinations by background characteristics

Percentage of children age 15-26 months who received specific vaccines at any time before the survey (according to a vaccination card or the mother's report), and percentage with a vaccination card, by background characteristics, Turkey 2008

Background characteristic	BCG	DPT 1	DPT 2	DPT 3	Polio 1	Polio 2	Polio 3	Measles	Hepatitis 1	Hepatitis 2	Hepatitis 3	All[1]	None	Percentage with a vaccination card seen	All +Hep	Number of children
Sex																
Male	96.0	97.6	92.5	89.4	97.3	93.5	89.1	88.1	97.0	91.2	85.9	78.7	1.1	74.9	75.0	370
Female	95.8	96.7	91.0	89.3	96.2	91.0	88.5	90.5	95.9	90.2	86.0	82.6	2.2	70.2	78.7	340
Birth order																
1	97.9	98.3	94.2	92.3	97.4	93.1	90.9	88.8	97.6	94.5	91.5	82.4	1.1	75.3	80.8	278
2-3	96.1	97.9	91.9	89.5	97.5	93.3	89.6	93.4	97.1	90.6	85.0	85.1	1.2	74.9	79.7	321
4-5	92.2	92.8	82.7	81.9	93.8	84.3	78.5	82.8	92.7	79.0	73.7	65.2	3.4	58.3	60.6	66
6+	88.2	91.7	88.9	80.9	92.4	91.9	86.1	72.6	91.0	85.8	76.6	59.6	4.9	61.0	55.0	46
Residence																
Urban	96.5	97.8	93.9	92.1	97.3	93.6	91.7	90.3	97.0	93.1	88.9	84.2	1.6	75.8	80.3	515
Rural	94.3	95.5	86.2	82.2	95.4	89.0	81.4	86.5	94.9	84.5	78.2	71.0	1.6	64.4	67.4	196
Region																
West	97.3	98.4	95.2	93.7	97.3	94.3	91.7	90.4	97.5	92.6	87.9	84.6	1.6	79.7	78.5	256
South	96.1	98.9	89.9	88.1	97.8	89.5	87.7	93.9	96.9	91.0	85.5	81.8	1.1	62.6	77.9	95
Central	96.4	98.3	95.6	94.3	98.2	96.4	94.5	94.8	99.2	96.8	94.5	90.0	1.2	70.9	89.6	149
North	100.0	100.0	91.2	88.1	100.0	95.6	85.8	97.8	99.2	88.1	85.8	83.6	0.0	74.6	82.7	43
East	92.2	92.5	84.3	79.2	93.3	86.5	80.8	77.7	91.5	83.0	75.6	64.3	2.8	68.5	60.5	167
Region (NUTS 1)																
İstanbul	95.7	97.8	95.7	95.7	95.7	93.5	93.5	84.8	97.8	93.5	89.1	80.4	2.2	76.1	73.9	134
Southeast A.	94.8	95.8	90.0	84.5	95.3	90.0	85.5	76.5	93.7	88.5	79.9	66.7	2.1	71.7	62.4	97
Education																
No//Prim. inc.	92.8	92.3	85.7	81.5	91.7	85.1	81.0	77.2	92.2	85.4	77.6	64.9	3.2	69.5	62.3	117
First level p.	94.9	97.4	91.6	89.8	96.6	92.9	89.6	89.9	97.1	89.4	84.1	81.6	1.8	72.5	76.0	358
Sec. level p.	98.0	99.2	92.1	89.4	99.2	92.4	87.4	95.8	98.0	93.2	89.4	84.4	0.8	75.5	82.3	72
High and h.	99.5	99.5	96.3	94.0	99.7	96.2	93.3	93.5	97.5	96.4	94.5	87.8	0.2	73.7	86.3	163
Wealth quintile																
Lowest	90.4	91.8	82.8	78.1	92.1	85.8	78.0	79.6	91.0	81.4	75.7	62.2	3.8	61.1	60.0	148
Second	96.7	97.1	88.4	85.9	95.3	87.9	85.1	92.6	96.2	85.7	80.6	81.6	2.1	71.3	77.3	163
Middle	97.7	99.4	95.7	94.3	98.8	95.4	93.9	89.5	98.8	93.8	91.2	86.2	0.6	81.0	82.0	166
Fourth	99.5	98.9	97.1	94.9	99.2	97.7	94.2	94.7	99.5	98.7	91.6	89.5	0.5	68.6	83.7	111
Highest	95.9	99.3	96.9	95.6	99.3	96.9	94.9	91.1	97.6	97.4	93.0	85.3	0.7	80.5	82.9	124
Total	95.9	97.2	91.8	89.3	96.8	92.3	88.8	89.3	96.5	90.7	85.9	80.5	1.6	72.6	76.8	711

[1]Children who are fully vaccinated (i.e., those who have received BCG, measles, and three doses of DPT and polio).

Considering regional differences, the percentage children who were fully immunized was lowest in the East (61 percent) and highest in the Central region (90 percent). The data in Table 11.3 also show that drop-out rates for DPT and polio were higher in the North compared to other regions. With regard to the two NUTS 1 regions for which are sufficient cases to look at coverage rates, the proportion fully vaccinated against the seven diseases was substantially higher in İstanbul (74 percent) than in Southeast Anatolia (62 percent).

Mother's educational status was directly related to the likelihood that a child was vaccinated. The percentage of children who were fully vaccinated varied from 62 percent among children whose mothers with no or incomplete primary education to 86 percent among children whose mothers had at least a high school education. Coverage rates also rose rapidly with wealth; 60 percent of children in the lowest wealth quintile were fully immunized against the seven diseases compared to more than 80 percent of children in the third or higher quintiles.

11.2.3 Trends in Vaccination Coverage

Table 11.4 shows the percentage of children age 12-35 months who received specific vaccines before 15 months of age according to the child's current age. The table can be used to look at trends over time in the proportion of children who have received all of the recommended vaccinations. In considering the trends, it is important to remember that, for children whose information was based on the mother's recall, the proportion of vaccinations given before age 15 months is assumed to be the same as that for children for whom a vaccination record was available.

Table 11.4 Vaccinations by current age of child

Percentage of children age 12–35 months at the time of the survey who received specific vaccines by 15 months of age, and percentage with a vaccination card, by current age of child, Turkey 2008

	Child's age in months		
Vaccine	12–23	24–35	Total
BCG	95.9	94.3	95.1
DPT 1	96.6	92.8	94.6
DPT 2	91.2	82.2	86.4
DPT 3	85.9	75.5	80.4
Polio 1	95.8	94.4	95.1
Polio 2	92.3	82.6	87.2
Polio 3	86.3	75.6	80.7
Measles	85.8	82.5	84.3
Hepatitis1	96.5	94.0	95.2
Hepatitis 2	90.8	85.0	87.6
Hepatitis3	84.7	72.1	77.9
All vaccinations[1]	74.9	66.5	70.5
All vaccinations plus hepatitis	71.3	61.7	66.2
No vaccinations	1.8	3.4	2.6
Percentage with vaccination card seen[2]	75.8	57.5	65.6
Number of children	534	672	1,206

[1] Children who have received BCG, measles, and three doses each of DPT and polio vaccines
[2] Information was obtained either from a vaccination card or from the mother if there was no written record. For children whose information was based on the mother's report, the proportion of vaccinations given before age 15 months is assumed to be the same as that for children with a written vaccination record.

The proportion of children for whom vaccination cards were seen declines with increasing age of child, from 76 percent among children age 12-23 months to 58 percent among children age 24-35 months. This suggests that either there has been an increase in vaccination

levels in the recent past or the mothers misplaced vaccination cards for a greater proportion of older children. Similarly, the proportion of children who received all vaccines before age 15 months is higher for children age 12-23 months (75 percent) than for children in the 24-35 age groups (67 percent).

11.3 Prevalence and Treatment of Diarrhea

Dehydration caused by diarrhea is one of the most important causes of childhood mortality. In Turkey, the National Control of Diarrheal Diseases Programme was established in 1986 with the objective of reducing child deaths by preventing dehydration. Oral Rehydration Therapy (ORT) has been actively promoted since the inception of this programme.

In the TDHS-2008, mothers who had children under age five were asked if their children experienced diarrhea during the last two weeks before the survey. Mothers were also asked what treatment they had given to children who had diarrhea. As the prevalence of diarrhea varies seasonally, the results represent the prevalence of diarrhea during the period of the TDHS-2008 fieldwork (October-December 2008) and not the average throughout the year in Turkey.

Table 11.5 shows the percentage of children under five years of age with diarrhea during the last two weeks preceding the survey by selected background characteristics. Overall, 23 percent of children suffered from diarrhea during the period, and 1 percent had diarrhea with bloody stools.

As expected, the small number of children living in households with non-improved, shared toilet facilities had a higher rate of diarrheal illness than children living in households with improved, not shared facilities (23 percent and 47 percent, respectively). Looking at the variation by other background characteristics, children age 6-23 months were more likely than younger and older children to have had diarrhea. There was little variation in diarrhea prevalence by sex and place of residence. Children living in the East (36 percent), children living in Central East Anatolia (43 percent), children whose mothers have no education (36 percent), and children in the lowest wealth quintile (31 percent) had higher rates of diarrheal illness than other children.

Table 11.5 Prevalence of diarrhea

Percentage of children under age five who had diarrhea in the last two weeks preceding the survey, by background characteristics, Turkey 2008

Background characteristic	Diarrhea in the two weeks preceding the survey		Number of children
	All diarrhea	Diarrhea with blood in stools	
Toilet facility			
Improved, not shared	22.5	1.1	1,987
Non-improved or shared	46.7	3.3	68
Age in months			
<6	18.5	0.8	361
6-11	33.6	2.4	336
12-23	25.6	1.0	704
24-35	18.4	0.9	672
Sex			
Male	22.3	1.6	1,041
Female	24.4	0.8	1,032
Residence			
Urban	22.8	0.9	1,477
Rural	24.7	1.9	596
Region			
West	20.4	0.6	715
South	20.3	0.4	245
Central	16.2	0.4	459
North	18.8	0.0	125
East	35.9	3.3	529
Region (NUTS 1)			
İstanbul	22.7	0.9	324
West Marmara	18.0	0.0	55
Aegean	16.4	0.6	269
East Marmara	17.9	0.0	182
West Anatolia	17.0	0.0	210
Mediterranean	20.3	0.4	245
Central Anatolia	20.2	1.6	106
West Black Sea	14.6	0.0	104
East Black Sea	(23.6)	(0.0)	49
Northeast Anatolia	29.4	2.9	74
Central East Anatolia	42.7	5.1	147
Southeast Anatolia	34.2	2.6	309
Education			
No education/Primary incomplete	36.2	3.0	440
First level primary	20.0	0.9	966
Second level primary	23.1	1.0	221
High school and higher	18.0	0.2	446
Wealth quintile			
Lowest	31.3	2.2	493
Second	24.4	1.7	464
Middle	20.7	0.3	449
Fourth	21.4	1.0	344
Highest	15.4	0.3	324
Total	23.3	1.2	2,073

Note: Parentheses indicate a figure is based on 25-49 unweighted cases.

Findings related to the treatment of diarrhea are presented in Table 11.6. A simple and effective response to the dehydration with diarrhea is a prompt increase in the child's fluid intake through some form of oral rehydration therapy (ORT). ORT includes the use of a solution prepared by mixing water with the commercially prepared packet of oral rehydration salts (ORS) or a recommended home fluid (RHF), typically prepared with sugar, salt and water. The majority of children under five years of age with diarrheal episodes received some kind of treatment. Sixty-three percent of mothers reported that they increased the fluids given the child during the diarrheal episodes or used some form of oral rehydration therapy. Almost half of the children with diarrhea were taken to health provider (47 percent).

Use of ORT and increased fluids was more common among children age 12 months and older than among younger children. Girls were less likely to be taken to a health provider during a diarrheal episode and to receive ORT or increased fluids than boys. The type of diarrhea made a difference in the likelihood of a consultation with a health provider; among the small number of children with bloody diarrhea, 70 percent were taken to a health provider compared to 46 percent among children with diarrhea who did not have bloody stools. On the other hand, the percentages receiving ORT or increased fluids were almost identical among children with bloody and non-bloody diarrhea. Urban mothers were more likely then rural mothers to use some form of oral rehydration therapy (ORT), but rural mothers were as likely to seek care from a health provider as urban mothers. Among the regions, the West had the highest percentage seeking health care (54 percent) and using ORT or increased fluids (75 percent). Treatment practices did not vary consistently with either the mother's education or the wealth quintile.

The TDHS-2008 also investigated the extent to which mothers made changes in the amount of fluids and food that a child received during a diarrheal episode. To obtain this information, mothers who had a child under age five with diarrhea during the two week period preceding the survey were asked whether they had changed the amount that child was given to drink and eat during the diarrheal episode. Table 11.7 shows that 27 percent of children with diarrhea were offered the same amount of fluids as usual, 49 percent were offered more fluids than usual, and 16 percent were given less fluid than usual. Among children with diarrhea only 6 percent received more food than before the illness. More than half of children with diarrheal episode were offered less food than they usually had.

Optimally, children ill with diarrhea should be offered around the same amount of food as when they are not sick and increased fluids. Table 11.7 shows that feeding practices were optimal for only 17 percent of children who had a diarrheal episode in the two week period prior to the survey. Overall the table shows that 22 percent of the children who experienced diarrhea were fed and given fluids appropriately during their illness or received some form of ORT. Children whose mothers had a high school or higher education, children in the two highest wealth quintiles, children from the West, and children from Istanbul were more likely than other children to have been fed and given fluids appropriately or to have received ORT.

Table 11.6 Diarrhea treatment

Among children under age five who had diarrhea in the two weeks preceding the survey, the percentage for whom advice or treatment was sought from a health facility or provider, the percentage given oral rehydration therapy (ORT), the percentage given increased fluids, the percentage given ORT or increased fluids, and the percentage who were given no treatments, by background characteristics, Turkey 2008

Background characteristic	Percentage of children with diarrhea taken to a health provider	Oral rehydration therapy (ORT): ORS packets or pre-packaged liquid	Oral rehydration therapy (ORT): Recommended home fluids (RHF)	Oral rehydration therapy (ORT): Either ORS or RHF	Increased fluids	ORT or increased fluids	No treatment	Number of children
Age in months								
<6	47.7	9.2	7.5	14.7	24.1	32.9	24.6	67
6-11	49.4	21.0	11.0	28.1	40.6	59.7	14.3	113
12-23	48.8	24.7	17.3	32.8	54.5	70.1	16.0	181
24-35	42.0	19.6	10.0	22.6	61.8	71.7	9.9	124
Sex								
Male	52.8	19.6	11.1	25.5	54.2	65.8	11.6	232
Female	41.7	21.1	14.0	27.6	44.0	60.3	18.6	252
Type of diarrhea								
Non bloody	45.9	20.0	11.9	26.1	49.2	62.9	15.5	454
Bloody	(70.1)	(20.7)	(15.8)	(29.8)	(51.9)	(62.6)	(12.6)	25
Residence								
Urban	47.3	21.4	12.0	26.9	49.8	65.2	12.8	336
Rural	46.4	18.1	14.0	26.0	47.0	57.9	20.8	147
Region								
West	53.7	24.6	20.1	30.3	53.7	75.4	8.1	146
South	43.5	17.6	8.0	24.3	37.2	49.4	28.5	50
Central	29.1	7.2	4.1	10.1	59.0	62.6	17.0	75
North	46.3	26.3	8.9	35.2	45.0	53.7	15.9	24
East	49.9	22.3	11.9	29.8	44.8	58.3	16.4	190
Region (NUTS 1)								
İstanbul	44.5	31.7	19.8	35.7	56.4	84.2	4.0	73
Southeast Anatolia	50.5	19.9	5.7	22.7	43.1	53.6	15.9	106
Education								
No education /Primary incomplete	49.3	26.2	16.7	33.1	42.0	61.1	16.2	159
First level primary	47.8	15.7	10.0	22.6	45.5	59.0	14.6	193
Second level primary	54.6	21.2	14.1	29.1	47.9	63.4	11.8	51
High school and higher	35.6	19.5	9.7	21.7	71.7	75.8	17.0	80
Wealth quintile								
Lowest	46.3	21.2	15.1	28.5	42.5	56.2	20.2	154
Second	52.6	26.1	17.8	33.9	44.2	61.2	15.7	113
Middle	50.8	21.3	10.4	28.5	45.4	69.4	8.1	93
Fourth	39.0	14.5	7.8	16.0	67.6	74.0	7.8	74
Highest	41.3	11.9	4.2	16.1	58.5	59.7	23.2	50
Total	47.0	20.4	12.6	26.6	48.9	63.0	15.2	484

Note: Parentheses indicate a figure is based on 25-49 unweighted cases.

Table 11.7 Feeding practices during diarrhea

Percent distribution of children under age five who had diarrhea in the two weeks preceding the survey by amount of liquids and food offered compared with normal practice, the percentage of children given increased fluids and continued feeding during the diarrhea episode, and the percentage of children who continued feeding and were given ORT and/or increased fluids during the episode of diarrhea, by background characteristics, Turkey 2008

Background characteristic	Amount of liquids offered					Amount of food offered					Percentage given increased fluids and continued feeding	Percentage given ORT or increased fluids and continued	Number of children with diarrhea
	More	Same as usual	Much less	Don't know/ missing	Total	More	Same as usual	Much less	Don't know/ missing	Total			
Age in months													
<6	24.1	34.3	9.1	32.5	100.0	11.7	40.0	15.7	32.6	100.0	18.5	22.6	67
6-11	40.6	39.7	15.2	4.5	100.0	5.5	41.2	50.2	3.1	100.0	18.9	23.5	113
12-23	54.5	23.1	20.3	2.0	100.0	6.5	29.7	63.1	0.7	100.0	12.5	19.1	181
24-35	61.8	18.0	15.6	4.5	100.0	4.3	31.5	59.4	4.9	100.0	21.1	23.5	124
Sex													
Male	54.2	22.0	15.7	8.0	100.0	8.1	31.2	53.4	7.3	100.0	19.1	23.5	232
Female	44.0	32.0	17.0	6.9	100.0	4.9	37.1	51.8	6.2	100.0	15.1	20.1	252
Type of diarrhea													
Non bloody	49.2	27.5	15.9	7.5	100.0	6.1	34.5	52.8	6.7	100.0	16.7	21.8	454
Bloody	(51.9)	(24.0)	(15.4)	(8.6)	(100.0)	(11.4)	(34.1)	(45.8)	(8.6)	(100.0)	(24.1)	(24.1)	25
Residence													
Urban	49.8	26.6	16.8	6.8	100.0	5.5	34.0	53.5	7.0	100.0	17.2	21.7	336
Rural	47.0	28.6	15.4	9.0	100.0	8.6	34.9	50.5	6.0	100.0	16.6	21.9	147
Region													
West	53.7	25.1	16.6	4.5	100.0	5.3	35.2	56.4	3.2	100.0	21.5	25.5	146
South	37.2	40.6	11.7	10.5	100.0	2.9	43.5	46.4	7.1	100.0	12.5	15.9	50
Central	59.0	27.4	8.3	5.2	100.0	3.9	36.7	54.3	5.1	100.0	16.4	20.0	75
North	45.0	34.7	12.7	7.6	100.0	9.3	35.7	49.3	5.7	100.0	15.9	21.2	24
East	44.8	24.4	21.0	9.8	100.0	8.9	30.0	51.0	10.1	100.0	15.1	21.1	190
Region (NUTS1)													
İstanbul	56.4	23.8	15.8	4.0	100.0	4.0	39.6	52.5	4.0	100.0	23.8	31.7	73
Southeast Anat.	43.1	20.3	22.4	14.2	100.0	9.3	30.0	46.1	14.6	100.0	14.6	19.7	106
Education													
No/Primary inc.	42.0	28.7	19.4	9.9	100.0	9.3	29.5	52.2	9.0	100.0	16.5	22.3	159
First level prim.	45.5	26.9	20.9	6.6	100.0	4.2	31.6	58.0	6.3	100.0	11.0	14.1	193
Second level p.	47.9	28.4	13.5	10.2	100.0	8.2	36.4	48.0	7.5	100.0	15.2	24.5	51
High and higher	71.7	24.2	1.2	3.0	100.0	4.9	49.0	43.2	3.0	100.0	33.9	37.3	80
Wealth quintile													
Lowest	42.5	27.2	19.2	11.1	100.0	10.0	28.9	52.4	8.8	100.0	15.5	19.5	154
Second	44.2	25.0	21.8	8.9	100.0	5.3	37.2	49.1	8.4	100.0	12.2	22.1	113
Middle	45.4	27.7	22.6	4.3	100.0	4.6	16.3	74.1	5.0	100.0	8.1	11.6	93
Fourth	67.6	23.7	4.4	4.3	100.0	1.9	47.0	46.8	4.3	100.0	29.1	31.0	74
Highest	58.5	36.6	1.4	3.5	100.0	7.9	58.9	29.7	3.5	100.0	31.5	32.7	50
Total	48.9	27.2	16.4	7.5	100.0	6.4	34.3	52.6	6.7	100.0	17.0	21.7	484

Note: Parentheses indicate a figure is based on 25-49 unweighted cases.

CHILDREN'S AND WOMEN'S NUTRITIONAL STATUS 12

Elif Kurtuluş Yiğit, Sabahat Tezcan and F.Hande Tunçkanat

The TDHS-2008 obtained information on several aspects of infant feeding practices including the duration and intensity of breastfeeding, the types of the complimentary foods given, and whether or not a bottle with a nipple was used. To further assess the nutritional status of all children under age five and women age 15-49, anthropometric (height and weight) measurements were also obtained. With respect to the child, they relate directly to the nutritional status, which in turn influences the risk of morbidity and mortality of young children. The magnitude of the effects is influenced by both the duration and intensity of breastfeeding, and by the age at which the child receives supplemental foods and liquids.

Anthropometric measures obtained for women also allow an assessment of their nutrition status. Maternal nutrition status has important implications for the health of the mother and her child. A woman who is in poor nutritional health has a greater risk of having an adverse pregnancy outcome and is more likely to give birth to underweight babies.

12.1 Initiation of Breastfeeding

Breastfeeding of infants is among the most important factors contributing to the maintenance of healthy growth. Breast milk contains all the nutrients needed by children in the first 4-6 months of life. Moreover, breast milk is clean and always available at just the right temperature, and it promotes a close mother-child relationship. In addition, it provides some immunity to disease through the mother's antibodies, helps in reducing the prevalence of nutritional deficiencies, and avoids food-borne infections.

Table 12.1 shows the percentage of children born in the five years preceding the survey according to breastfeeding status and the timing of the initial breastfeeding by selected background characteristics. Breastfeeding is almost universal in Turkey; 97 percent of all children are breastfed for some period of time, with minimal differences by background characteristics.

Early initiation of breastfeeding is of benefit to both mother and infant. Suckling stimulates production of oxytocin, a hormone that causes the mother's uterus to contract thus returning it back to normal size and function. The first breast milk, colostrum, protects the newborn infant from infections because of its high concentration of antibodies. Information from the TDHS-2008 indicates that initiation to breastfeeding is rather late (Table 12.1). Only 39 percent of ever-breastfed children started breastfeeding within one hour after birth, and 27 percent were not put to the breast within 24 hours of their birth. These proportions are below from those reported in the TDHS-2003 suggesting that there continues to be a shift away from early initiation of breastfeeding, which is the optimal pattern.

Table 12.1 Initial breastfeeding

Percentage of children born in the five years preceding the survey who were ever breastfed, and among children ever breastfed, percentage who started breastfeeding within one hour and within one day of birth and percentage who received a prelacteal feed, by background characteristics, Turkey 2008

Background characteristic	Percentage ever breastfed	Number of children	Percentage who started breastfeeding within 1 hour after birth	Percentage who started breastfeeding within 1st day of birth[1]	Percentage who received a prelacteal feed[2]	Number of children ever breastfed
Assistance at delivery						
Health professional [3]	96.6	3,161	40.6	75.8	23.5	3,054
Traditional birth attendant	97.0	126	19.4	49.4	25.7	122
Other	98.3	150	26.2	48.2	16.2	148
Place of delivery						
Health facility	96.5	3,107	40.6	76.0	23.7	3,000
At home	97.7	336	26.1	51.6	19.2	328
Sex						
Male	97.2	1,770	36.9	73.5	22.2	1,720
Female	96.1	1,693	41.1	73.2	24.2	1,627
Residence						
Urban	96.7	2,475	41.0	76.2	23.5	2,393
Rural	96.7	988	33.9	66.1	22.3	955
Region						
West	96.7	1,174	47.9	80.0	23.4	1,135
South	95.4	441	40.7	75.2	20.9	420
Central	97.2	741	31.8	76.0	27.0	720
North	97.3	197	41.0	77.0	20.2	191
East	96.7	911	32.1	61.0	21.5	881
Region (NUTS 1)						
İstanbul	96.3	548	53.8	81.2	22.1	528
West Marmara	98.5	88	46.8	80.9	23.4	87
Aegean	96.8	427	41.7	75.5	25.8	414
East Marmara	98.3	275	40.9	82.7	28.8	270
West Anatolia	96.7	345	27.7	75.6	26.0	334
Mediterranean	95.4	441	40.7	75.2	20.9	420
Central Anatolia	96.3	177	35.2	74.9	25.0	170
West Black Sea	97.0	172	33.5	77.1	20.9	167
East Black Sea	97.5	79	45.5	76.2	16.5	77
Northeast Anatolia	96.9	128	42.4	66.0	11.6	124
Central East Anatolia	96.5	250	26.7	57.3	26.1	241
Southeast Anatolia	96.8	533	32.2	61.5	21.7	516
Education						
No education/Primary inc	96.9	781	31.8	62.6	22.5	756
First level primary	96.5	1,691	40.2	75.4	21.9	1,631
Second level primary	97.8	322	39.9	77.7	19.5	315
High school and higher	96.5	669	43.9	78.7	29.0	646
Wealth quintile						
Lowest	95.9	852	32.6	60.2	19.7	817
Second	96.3	818	38.5	73.2	21.3	787
Middle	97.5	709	35.8	76.7	23.2	691
Fourth	97.7	579	45.1	80.0	23.9	566
Highest	96.3	506	47.8	83.2	30.9	487
Total	96.7	3,463	39.0	73.4	23.2	3,348

Note: Table is based on all births whether the children are living or dead at the time of interview.

[1] Includes children who started breastfeeding within one hour of birth.

[2] Children given something other than breast milk during the first three days of life before the mother started breastfeeding regularly.

[3] Doctor, nurse/midwife, or auxiliary midwife.

Since TDHS-2003, decreases in the proportions of children for whom breastfeeding was initiated early occurred in all regions, especially in the West, Central and North. Despite these changes, marked variations in the timing of initiation of breastfeeding still remain across subgroups. Initiation of breastfeeding within one hour of birth is much more common for babies born in health facilities or with the assistance of a health professional than among babies born at home or with the assistance of a traditional birth attendant or other nonprofessional. Breastfeeding is more likely to be initiated within one hour of birth for urban than rural children (41 percent and 34 percent, respectively). The percentage of children who started breastfeeding within one hour after birth is highest in the West region (48 percent) and lowest in the Central and East regions (32 percent). When NUTS 1 levels are considered, İstanbul has the highest proportion of children for whom breastfeeding was initiated within an hour of birth and Central East Anatolia has the lowest (54 percent and 27 percent, respectively). The percentage of children of whom breastfeeding was initiated within an hour of birth varies from 32 percent for births to mothers with no education to 44 percent for births to mothers with at least high school education. Breastfeeding is initiated early most often for children in the highest wealth quintile (48 percent) and least often for children in the lowest quintile (33 percent).

The proportion of children who started breastfeeding within first day of birth also varies across subgroups. For example, the East, where mothers are usually less educated and are more likely to give birth without the assistance of a medically trained person, has the lowest proportion; 61 percent of all children in this region were put to the breast during the first day. Regarding the education patterns, 63 percent of children of mothers with no education started breastfeeding within first day of their birth compared with 79 percent of births to the most highly educated mothers.

Prelacteal feeding is the practice of giving other liquids to an infant during the period immediately after birth before mother's milk is flowing easily. Table 12.1 shows this practice is not as common today in Turkey as in the past. Overall, 23 percent of children received a prelacteal feed. This percentage is highest for children living in East Marmara (29 percent) and children in the highest wealth quintile (31 percent).

12.2 Breastfeeding Status by the Age of the Child

UNICEF and WHO recommend that children be exclusively breastfed (i.e., without receiving other liquids or solid foods or plain water) during the first 6 months of life and that solid or mushy supplements be given beginning with the seventh month of life. While complementary feeding is acceptable after the first 6 months, breastfeeding is recommended to be continued through the second year of life. Use of bottles with nipples is not recommended at any age.

The percent distribution of living children by breastfeeding status at the time of the survey is shown in Table 12.2. The child's breastfeeding status is based on information collected from mothers on feeding practices in the last 24 hours before the interview. "Exclusively breastfed" refers to children who receive breast milk only. "Children who are fully breastfed" includes those who are exclusively breastfed and those who receive only plain water in addition to breast milk. Table 12.2 also shows the percentage who drank anything from a bottle with a nipple in the day or night before the interview. The table allows for an assessment of the timing of the introduction of liquid and solid supplements. This is important since early introduction of supplementary food

increases the risk of gastrointestinal infections, which is one of the leading causes of infant mortality in Turkey.

Table 12.2 Breastfeeding status by age

Percent distribution of the youngest children under three years living with the mother by breastfeeding status and percentage of children using a bottle with a nipple, according to age in months, Turkey 2003

Age in months	Not breastfeeding	Exclusively breastfed	Breastfeeding and consuming: Plain water only	Water-based liquids/ juice	Other milk	Complementary foods	Total	Percentage using a bottle with a nipple	Number of children
<2	1.5	68.9	7.3	0.0	22.2	0.0	100.0	21.8	85
2-3	2.3	42.0	28.3	1.7	23.3	2.3	100.0	36.1	133
4-5	7.5	23.6	15.7	5.2	29.3	18.8	100.0	57.0	143
6-7	16.2	1.6	4.7	1.2	10.9	65.5	100.0	59.8	105
8-9	23.6	1.6	2.8	0.0	2.1	69.9	100.0	49.7	91
10-11	31.1	0.0	0.5	0.6	4.5	63.3	100.0	58.9	140
12-15	33.3	0.0	0.5	0.2	1.1	64.9	100.0	51.9	233
16-19	58.5	0.0	0.0	0.0	0.4	41.1	100.0	56.0	267
20-23	78.4	0.0	1.1	0.0	0.3	20.3	100.0	52.9	204
24-27	90.6	0.2	0.0	0.0	0.0	9.1	100.0	53.2	239
28-31	92.0	0.0	0.0	0.0	0.0	8.0	100.0	43.7	223
32-35	96.6	0.0	0.0	0.0	0.0	3.4	100.0	40.1	210
<6	4.1	41.6	18.4	2.6	25.3	8.0	100.0	41.0	361
6-9	19.6	1.6	3.8	0.6	6.8	67.5	100.0	55.1	196

Note: Breastfeeding status refers to a last "24-hour" period (yesterday and last night). Children classified as *breastfeeding and consuming plain water only* consume no supplements. The categories of not breastfeeding, exclusively breastfed, breastfeeding and consuming plain water, water-based liquids/juice, other milk, and complementary foods (solids and semi-solids) are hierarchical and mutually exclusive, and their percentages add to 100 percent. Thus children who receive breast milk and water-based liquids and who do not receive complementary foods are classified in the water-based liquid category even though they may also get plain water. Any children who get complementary food are classified in that category as long as they are breastfeeding as well.

The TDHS-2008 results in Table 12.2 indicate that, in the first two months of life, 69 percent of babies are being exclusively breastfed, a figure which is significantly higher than that found in the TDHS-2003 (44 percent). The table also shows that the proportion of babies under two months of age that are predominantly breastfed, i.e., receiving only water, water-based liquids or juices in addition to breast milk is 7 percent compared to 47 percent in the TDHS-2003. Twenty percent of babies less than 2 months of age are receiving milk other than breast milk. By age 2-3 months, the proportion of children exclusively breastfed drops to 42 percent. The table shows that, after the sixth month, feeding with other milk and complementary foods is more common than breastfeeding. By 12-15 months, 33 percent of children are not being breastfed, which is lower than the THDS-2003 figure (45 percent).

Bottle-feeding is discouraged among very young children, because it contributes to an increased risk of gastrointestinal infections. Table 12.2 shows that, among children less than six months of age the percentage of using a bottle with a nipple is 41 percent, and it increases to a peak of 60 percent among children age 6-7 months.

12.3 Duration and Frequency of Breastfeeding

Table 12.3 shows the median durations of any, exclusive and predominant breastfeeding by background characteristics. The median duration of breastfeeding among all children is 16 months, which is one and a half months longer than the median reported in TDHS-2003. Differences in breastfeeding durations are also evident among subgroups. Male children (16.9 months) are breastfed 2 months longer than the female children (14.9 months). Women living in the East are breastfeeding their children for an average of almost 18 months, which is 2-3 months longer than in any other region.

Median durations for exclusive breastfeeding are very short, around two months or less for all subgroups. There are also only comparatively minor variations in the median duration of predominant breastfeeding across subgroups. Male children, children living in rural areas, children from the Central region, and those whose mothers have a first level primary education or are in the second and middle wealth quintiles are likely to have a somewhat longer period of predominant breastfeeding than other children**.**

The frequency of breastfeeding is also examined in Table 12.3. It is important for an infant to breastfeed frequently as it improves milk production. In addition, frequent feeds help to prolong the period of postpartum amenorrhea during which the mother is insusceptible to pregnancy. Ninety-five percent of children under 6 months of age were breastfed 6 times or more in the 24-hour period preceding the survey. The percentage of children breastfed 6 times or more is lowest in the Central region (92 percent) and highest among male children (97 percent). On the average, children were breastfed 6 times in day time and 5 times at evening and night.

Table 12.3 Median duration and frequency of breastfeeding

Median duration of any breastfeeding, exclusive breastfeeding, and predominant breastfeeding among children born in the three years preceding the survey, percentage of breastfeeding children under six months living with the mother who were breastfed six or more times in the 24 hours preceding the survey, and mean number of feeds (day/night), by background characteristics, Turkey 2008

	Median duration (months) of breastfeeding[1]				Breastfeeding children under six months[2]			
Background characteristic	Any breastfeeding	Exclusive breastfeeding	Predominant breastfeeding[3]	Number of children	Percentage breastfed 6+ times in last 24 hours	Mean number of day feeds	Mean number of night feeds	Number of children
Sex								
Male	16.9	2.0	4.0	1,058	97.4	7.2	5.8	152
Female	14.9	1.6	3.1	1,044	92.9	6.5	5.0	177
Residence								
Urban	15.9	2.0	3.5	1,495	95.8	6.9	5.3	235
Rural	15.1	1.3	4.0	606	93.1	6.7	5.6	94
Region								
West	15.2	1.6	3.4	719	95.9	7.2	5.6	114
South	14.7	1.2	2.1	249	95.8	(6.0)	(4.3)	35
Central	14.7	2.0	4.2	463	92.2	6.0	4.9	81
North	15.2	1.9	2.6	127	94.4	*	*	17
East	17.7	2.0	3.8	543	96.3	7.2	6.0	83
Region (NUTS1)								
İstanbul	15.5	2.1	3.3	327	100.0	7.3	4.2	55
Southeast Anatolia	17.6	2.2	4.2	317	94.0	7.0	6.0	51
Education								
No/ Primary inc.	17.0	1.3	3.7	450	94.7	7.1	5.9	72
First level primary	14.7	2.3	4.1	978	95.4	7.0	5.2	150
Second level prim.	16.1	1.9	3.4	223	(93.4)	(6.8)	(5.0)	40
High school and higher	16.6	0.7	1.8	451	95.4	6.1	5.3	68
Wealth quintile								
Lowest	16.1	1.9	3.7	502	95.3	7.5	6.5	72
Second	14.0	2.1	4.3	472	97.0	7.5	5.2	79
Middle	15.8	1.6	4.2	456	97.6	6.2	5.0	73
Fourth	16.5	2.0	3.0	346	89.8	6.9	4.9	63
Highest	16.5	0.6	1.2	327	(94.1)	(5.4)	(5.1)	41
Total	15.7	1.8	3.6	2,101	95.0	6.8	5.4	329
Mean for all children	16.0	3.2	4.5	-	-	-	-	-

Note: Median and mean durations are based on current status.
[1]It is assumed that non-last-born children and last-born children not currently living with the mother are not currently breastfeeding.
[2]Excludes children who do not have a valid answer on the number of times breastfed
[3]Either exclusively breastfed or received breast milk and plain water, water-based liquids, and/or juice only (excludes other milk)
Note: An asterisk indicates a figure is based on fewer than 25 unweighted cases. Parentheses indicate a figure is based on 25-49 unweighted cases.

12.4 Types of Complementary Foods

Table 12.4 shows the percentage of breastfed and non-breastfed children receiving different types of supplements. Because children may have received more than one type of supplement, the percentages do not add to 100. Among breastfeeding children under 6 months of age, 25 percent received infant formula. The percentage that were given infant formula peaks at 46 percent for infants age 6-7 months and then decreases to 22 percent among babies age 8-9 months who are increasingly being given other fluids. Although the numbers of observations are small for the first year of life for non-breastfed children, the results for this group also suggest

that infant formula is commonly given in the first months of life, with other types of milk being given more often as baby grows older.

Table 12.4 Foods consumed by children in the day or night preceding the interview

Percentage of youngest children under three years of age living with the mother who consumed specific foods in the day or night preceding the interview, by breastfeeding status and age, Turkey 2008

Age in months	Infant formula	Other milk/ cheese/ yoghurt	Other liquids[1]	Food made from grains	Fruits/ vegetables	Meat/ fish/ shellfish/ poultry/ eggs	Number of children
BREASTFEEDING CHILDREN							
<2	21.3	4.1	18.3	0.0	0.0	0.0	84
2-3	18.4	11.8	49.2	0.5	1.6	0.3	130
4-5	34.7	33.1	67.3	8.3	19.1	3.3	129
6-7	46.0	76.2	96.9	63.7	52.4	30.5	88
8-9	21.8	79.6	95.5	76.5	71.3	48.1	69
10-11	29.4	81.1	100.0	75.0	68.4	56.8	94
12-15	17.0	84.3	100.0	91.5	79.0	70.9	154
16-19	12.7	81.0	100.0	90.9	82.8	66.1	106
20-23	(2.2)	(76.2)	(100.0)	(93.7)	(81.5)	(74.4)	39
24-35	(3.5)	(79.0)	(98.8)	(98.8)	(65.8)	(62.0)	40
<6	25.2	17.9	48.5	3.3	7.8	1.4	343
6-9	35.3	77.7	96.3	69.4	60.8	38.3	157
NONBREASTFEEDING CHILDREN							
<2	*	*	*	*	*	*	5
2-3	*	*	*	*	*	*	4
4-5	*	*	*	*	*	*	14
6-7	*	*	*	*	*	*	18
8-9	(66.5)	(90.6)	(90.6)	(69.4)	(48.3)	(50.2)	24
10-11	(54.7)	(90.8)	(98.6)	(85.9)	(73.9)	(58.7)	46
12-15	41.2	88.8	92.6	88.9	74.2	67.0	84
16-19	28.1	90.1	98.8	93.7	75.6	76.1	163
20-23	10.1	89.8	95.9	92.5	82.3	70.6	169
24-35	5.0	90.5	98.0	96.0	85.7	81.1	642
<6	*	*	*	*	*	*	23
6-9	(70.2)	(83.8)	(92.0)	(68.7)	(60.8)	(42.1)	42

Note: Breastfeeding status and food consumed refer to a "24-hour" period (yesterday and last night). An asterisk indicates a figure is based on fewer than 25 unweighted cases. Parentheses indicate a figure is based on 25-49 unweighted cases.
[1] Does not include plain water

In summary, although breastfeeding is widespread in Turkey, exclusive breastfeeding is not widely practiced as recommended. In the first sixth months, only one child out of four is exclusively breastfed. Early introduction of infant formula and other liquids is common, and bottle-feeding is a comparatively popular feeding practice. Efforts to increase the proportions of breastfeeding have been successful in the recent years but must continue in the future.

12.5 Iodization of Household Salt

Iodine deficiency is one of the main causes of children's mental retardation and psycho-motor growth. In addition, iodine deficiency has been shown to increase the probability of stillbirth and miscarriage during pregnancy. It also results in low level of school success and insufficiency in working performance because of its negative effects on mental growth. International efforts to address the problems associated with iodine deficiency have focused on fortifying salt with iodine.

About half of the sampled households in the TDHS-2008 were asked questions about the use of salt for cooking. A small sample of the salt was taken and first tested to find out whether salt was iodated. In the situations that there was no iodate in the salt, it was examined for iodide. Changes in color after the salt was dropped into the test solution were recorded. It is important to note that the order of tests was different in the TDHS-2003. The test results are presented in Table 12.5.

Table 12.5 Iodization of household salt

Percent distribution of households with salt tested for iodine content by level of iodine in salt (parts per million), percentage of households tested, and percentage of households with no salt, according to background characteristics, Turkey 2008

	Result of salt test					Result of salt test					
Background characteristic	Salt was not tested	Salt was tested	Missing	Total-percent	Total	Not iodized	Iodized (potassium iodure test)	< 15 ppm (potassium iodide)	>= 15 ppm	Total - percent	Total
Residence											
Urban	2.5	95.6	1.9	100.0	3,938	10.1	6.8	7.1	76.0	100.0	3,764
Rural	3.2	95.1	1.6	100.0	1,321	28.5	12.0	12.0	47.6	100.0	1,257
Region											
West	2.8	95.6	1.6	100.0	2,420	6.5	4.3	5.2	84.0	100.0	2,313
South	3.4	94.8	1.8	100.0	632	21.4	11.1	7.5	60.0	100.0	599
Central	2.5	95.6	1.9	100.0	1,149	14.9	10.4	8.8	66.0	100.0	1,098
North	2.6	95.4	2.0	100.0	360	10.5	10.1	14.5	64.8	100.0	343
East	2.0	95.6	2.4	100.0	700	38.6	13.8	15.9	31.7	100.0	669
Region (NUTS 1)											
İstanbul	3.0	94.5	2.5	100.0	1,065	2.6	3.5	1.9	92.0	100.0	1,006
West Marmara	3.3	95.2	1.6	100.0	274	13.6	1.2	6.6	78.6	100.0	261
Aegean	2.8	96.8	0.4	100.0	817	12.0	5.7	8.0	74.3	100.0	791
East Marmara	2.1	96.9	1.0	100.0	520	7.3	7.6	8.6	76.5	100.0	504
West Anatolia	2.4	96.9	0.7	100.0	520	7.5	10.9	6.2	75.5	100.0	504
Mediterranean	3.4	94.8	1.8	100.0	632	21.4	11.1	7.5	60.0	100.0	599
Central Anatolia	3.1	92.0	4.9	100.0	261	25.3	11.8	8.2	54.8	100.0	240
West Black Sea	1.4	95.7	2.9	100.0	333	15.3	9.9	15.5	59.3	100.0	319
East Black Sea	4.3	94.0	1.8	100.0	147	11.8	9.5	17.9	60.8	100.0	138
Northeast A.	0.4	97.6	2.0	100.0	123	19.8	20.9	22.1	37.3	100.0	120
Central East A.	2.6	96.3	1.0	100.0	190	42.1	16.8	14.2	26.9	100.0	183
Southeast A.	2.3	94.4	3.3	100.0	378	42.1	10.3	14.4	33.1	100.0	357
Total	2.7	95.5	1.8	100.0	5,260	14.7	8.1	8.3	68.9	100.0	5,022

In the TDHS-2008, the salt test was completed successfully in 96 percent of the households eligible for the test. In 15 percent of the households where test was done, the salt was not iodized, i.e., it did not include iodide or iodate. In 8 percent of the households, the household was observed to have salt with potassium iodide while in 69 percent of the households the salt contained an adequate level of potassium iodate (>=15 ppm).

There are differences by residence and region in terms of the availability of iodized salt. Nine in 10 households in urban areas were using iodized salt compared with 7 in 10 households in rural areas. Use of iodized salt was most common in the West. More than half of the households in Central East and Southeast Anatolia did not use iodized salt or used salt that did not have an adequate level of potassium iodate.

12.6 Nutritional Status of Children

One of the major contributions of the TDHS to the study of child health status is the anthropometric data collected for all children under five years of age. Both weight and height (length) measurements were obtained for each child. Employing this information, standard indices are used to describe the nutritional status of the children: height-for-age, weight-for-height, and weight-for-age.

In any large population, there is obviously a natural variation in height and weight. This variation approximates a normal distribution. For purposes of analyzing anthropometric data, it is standard practice, thus, to use a reference population. The reference population serves as a point of comparison, facilitating the examination of differences in the anthropometric status of subgroups in a population and of changes in nutritional status over time. For the TDHS-2008 the nutritional status of children in the survey population is compared against an international reference population defined by the U.S. National Center for Health Statistics (NCHS) and accepted by the U.S. Centers for Disease Control (CDC) and the World Health Organization (WHO). The use of the international reference population is based on the finding that well-nourished young children of all population groups (for which data exist) follow very similar growth patterns before puberty. In addition to this, tables based on WHO Child Growth Standards, 2006 are presented in Appendix E.

As recommended by the World Health Organization (WHO) the evaluation of nutritional status involves three basic indices. The height-for-age index provides an indicator of linear growth retardation among children. Children who are more than two standard deviations below the median of the reference population in terms of height-for-age may be considered stunted (short for their age), or chronically malnourished. Children who are below minus three standard deviations (-3 SD) from the median of the reference population are considered severely stunted. Stunting reflects the outcome of a failure to receive adequate balanced nutrition over a long period of time and is also affected by recurrent and chronic illness. Thus, height-for-age represents a measure of the long-term effects of malnutrition in a population and does not vary appreciably according to the season of data collection. Stunted children are not immediately obvious in a population; a stunted three-year-old child could look like a well-fed two-year-old.

The weight-for-height index measures body mass in relation to body length. Children who are more than two standard deviations below the median of the reference population in terms of their weight-for-height may be considered too thin ("wasted") or acutely malnourished. Severe wasting represents the failure to receive adequate balanced nutrition in a short period before the survey and may be the result of recent illness episodes, especially diarrhea, or of seasonal variations in food supply.

The weight-for-age index takes into account both acute and chronic malnutrition and often is used to monitor nutritional status on a longitudinal basis. It is a useful tool in clinical settings for continuous assessment of nutritional progress and growth. Children whose weight-for-age is below minus two standard deviations from the median of the reference population are classified as "underweight".

In the TDHS-2008, all children under five years of age whose mother was interviewed are included in the anthropometric data collection. However, not all eligible children are included in the results presented here; height or weight measurements are missing for 26 percent of eligible children (see Table D.3 in Appendix D). In addition, since two of the indices (height-for-age and weight-for-age) are influenced by the accuracy of the reporting of the child's age, one percent of children were excluded from the calculation because the month and year of birth was not known. Hence, height and weight data are shown for 73 percent of the eligible children.

Table 12.6 shows how the percentage of children under five years of age classified as malnourished according to the height-for-age, weight-for-height, and weight-for-age indices varies with the child's age and selected other characteristics. For purposes of comparison, in the reference population, only 2.3 percent of children fall below minus two (-2 SD) for each of the three indices.

Table 12.6 shows that one in 10 children under age five is stunted (i.e., short for their age), with around one-third of these children classified as severely stunted. On the other hand comparatively few children are wasted; less than one percent of children under age five have a weight-for-height z-score below -2SDs. Looking at the weight-for-age index, 3 percent of children under age 5 are underweight.

Figure 12.1 and Table 12.6 shows the percentages of children under five years of age classified as malnourished according to three anthropometric indices of nutritional status of children by child's age in months. Plotted values in the figure are smoothed by a five-month moving average.

The youngest children show little evidence of malnutrition. However, the proportion classified as stunted exhibits a steady increase starting in the first year of life. Among children 24-59 months of age, around 12 percent are classified as stunted. Severe stunting peaks in the 24-35 month age range. Among children age 48-59 months, around 3 percent are still considered severely stunted. These patterns reflect inadequate, unbalanced feeding practices and/or the presence of recurrent and chronic infections.

The proportion of underweight increases to around 4 percent in the 24-35 month age range and then declines to below two percent at age 48 months. Finally, as the figure shows, the percentages of children who are wasted are at very low levels across all ages.

Table 12.6 Nutritional Status by children's characteristics

Among children under five years, the percentage classified as undernourished according to the three indices of anthropometric status: height-for-age , weight-for-age and weight-for-height by background characteristics, Turkey 2008

	Height-for age			Weight-for height		Weight-for-age			
Background characteristic	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score	Percentage below -2 SD[1]	Mean Z-score	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score	Number of children
Age in months									
<6	0.4	3.6	0.5	1.2	0.5	0.4	0.5	0.9	175
6-9	0.4	2.4	0.1	1.7	0.2	0.0	2.8	0.2	149
10-11	1.3	8.3	0.1	3.2	0.2	0.4	3.1	0.0	108
12-23	2.9	12.0	0.6	1.5	0.6	0.2	3.7	0.1	528
24-35	5.1	12.4	0.5	0.3	0.4	0.4	3.8	0.0	506
36-47	3.7	9.8	0.5	0.7	0.3	0.2	2.7	0.2	476
48-59	3.3	12.0	0.6	0.1	0.5	0.3	1.9	0.0	532
Sex									
Male	2.5	9.9	0.4	1.5	0.4	0.3	2.3	0.0	1,299
Female	4.0	10.8	0.4	0.2	0.4	0.2	3.4	0.0	1,175
Birth order									
1	1.5	6.7	0.2	1.0	0.4	0.2	1.2	0.2	862
2-3	2.7	10.3	0.4	0.5	0.4	0.2	2.3	0.0	1,154
4-5	6.4	14.4	0.7	1.6	0.4	0.5	7.0	0.2	295
6+	9.7	22.5	1.1	1.0	0.5	1.1	7.6	0.3	162
Birth interval in months									
First birth	1.6	6.6	0.2	1.1	0.4	0.2	1.2	0.2	874
<24	9.3	22.2	0.9	1.2	0.4	0.5	5.8	0.3	319
24-47	4.4	13.8	0.7	0.8	0.4	0.3	4.0	0.1	562
48+	1.5	6.9	0.3	0.5	0.4	0.3	2.6	0.1	719
Size at birth									
Very small	8.2	19.3	0.9	1.0	0.1	1.3	6.7	0.5	284
Small	5.2	16.0	0.8	0.9	0.3	0.3	6.7	0.3	321
Average or larger	2.1	8.0	0.3	0.8	0.5	0.1	1.6	0.2	1,863
Total	3.2	10.3	0.4	0.9	0.4	0.3	2.8	0.0	2,474

Note: Figures are for children born in the period 0-59 months preceding the survey. Each index is expressed in terms of the number of standard deviation (SD) units from the median of the NCHS/CDC/WHO international reference population. Children are classified as malnourished if their z-scores are below minus two or minus three standard deviations (-2 SD or -3 SD) from the median of the reference population.

Tables based on WHO Child Growth Standards, 2006 are presented in Appendix E

[1]Includes children who are below -3 SD

12.7 Nutritional Status by mother's characteristics

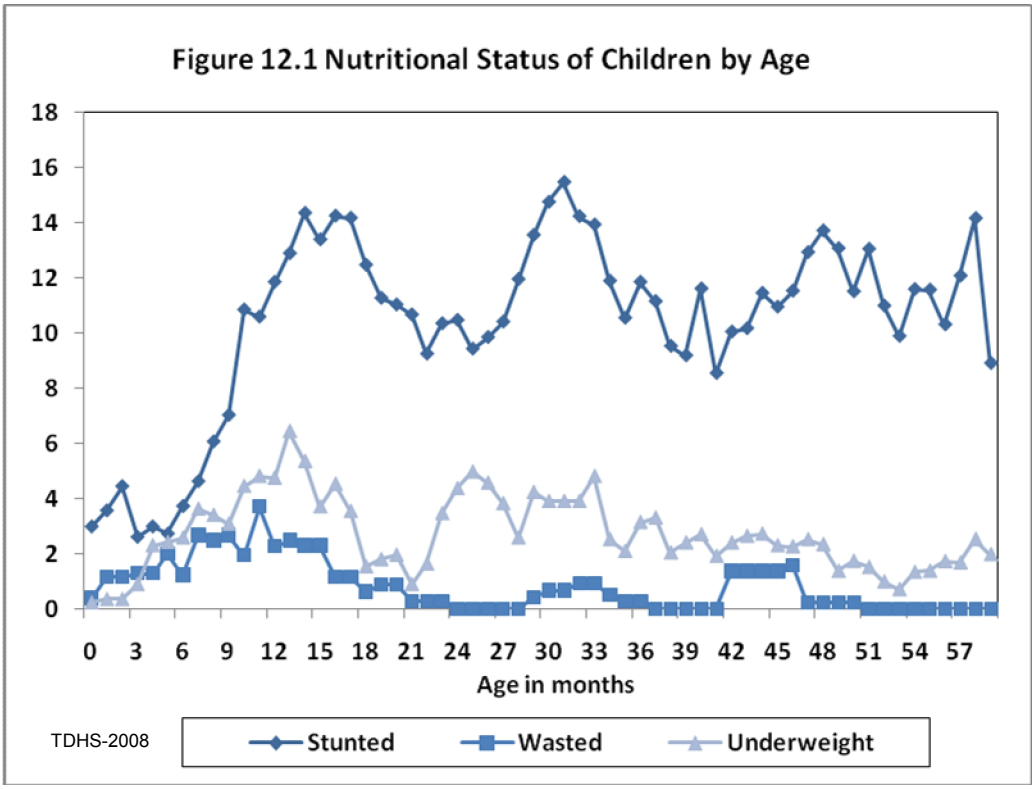
Among children under five years, the percentage classified as undernourished according to the three indices of anthropometric status: height-for-age , weight-for-age and weight-for-height by mother's background characteristics, Turkey 2008

	Height-for age			Weight-for height		Weight-for-age			
Background characteristic	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score	Percentage below -2 SD[1]	Mean Z-score	Percentage below -3 SD	Percentage below -2 SD[1]	Mean Z-score	Number of children
Residence									
Urban	2.1	7.6	0.3	0.8	0.5	0.2	2.1	0.1	1,781
Rural	5.9	17.4	0.8	0.9	0.4	0.5	4.8	0.2	692
Region									
West	1.4	7.6	0.2	0.9	0.5	0.0	1.0	0.2	848
South	2.7	7.6	0.4	0.0	0.5	0.3	3.0	0.1	339
Central	0.9	4.5	0.2	0.5	0.5	0.0	2.1	0.2	533
North	1.4	7.0	0.3	1.5	0.5	0.4	2.8	0.2	124
East	8.3	21.0	0.9	1.5	0.3	0.8	5.8	0.4	631
Region (NUTS 1)									
İstanbul	0.7	7.5	0.2	1.5	0.6	0.0	1.5	0.3	396
West Marmara	1.0	4.6	0.2	1.0	0.4	0.0	1.0	0.2	66
Aegean	2.7	6.4	0.3	0.0	0.2	0.0	1.2	0.0	289
East Marmara	0.6	7.2	0.1	1.0	0.4	0.0	2.3	0.2	218
West Anatolia	0.6	3.3	0.2	0.2	0.5	0.0	1.5	0.2	246
Mediterranean	2.7	7.6	0.4	0.0	0.5	0.3	3.0	0.1	339
Central Anatolia	1.4	9.4	0.4	0.5	0.6	0.0	1.2	0.2	123
West Black Sea	0.8	4.1	0.3	1.6	0.6	0.4	1.2	0.3	119
East Black Sea	(1.5)	(11.0)	(0.3)	(0.0)	(0.5)	(0.0)	(4.2)	(0.2)	48
Northeast Anatolia	10.6	22.2	1.1	1.3	0.5	1.1	7.2	0.3	90
Central East Anatolia	7.4	18.0	0.9	1.1	0.1	1.7	7.9	0.5	159
Southeast Anatolia	8.1	22.1	0.9	1.7	0.3	0.4	4.6	0.3	382
Education									
No educ./Prim.incomp.	9.9	22.6	1.0	1.4	0.3	0.8	7.2	0.3	541
First level primary	1.9	8.0	0.4	0.5	0.4	0.2	2.1	0.0	1,236
Second level primary	0.6	6.4	0.2	0.4	0.5	0.0	1.0	0.2	228
High school and	0.2	4.2	0.0	1.5	0.5	0.0	0.6	0.4	469
Wealth quintile									
Lowest	8.9	22.0	1.0	1.0	0.3	0.7	6.9	0.4	612
Second	1.8	10.8	0.5	0.7	0.5	0.3	1.9	0.0	575
Middle	2.1	7.9	0.3	0.6	0.4	0.2	1.8	0.2	525
Fourth	0.8	2.5	0.0	1.1	0.4	0.0	1.4	0.3	407
Highest	0.0	2.1	0.1	1.1	0.6	0.0	0.6	0.5	355
Total	3.2	10.3	0.4	0.9	0.4	0.3	2.8	0.0	2,474

Note: Figures are for children born in the period 0-59 months preceding the survey. Each index is expressed in terms of the number of standard deviation (SD) units from the median of the NCHS/CDC/WHO international reference population. Children are classified as malnourished if their z-scores are below minus two or minus three standard deviations (-2 SD or -3 SD) from the median of the reference population.
Tables based on WHO Child Growth Standards, 2006 are presented in Appendix E.

[1]Includes children who are below -3 SD

Note: Parentheses indicate a figure is based on 25-49 unweighted cases.



The fact that the under-nutrition increases with increasing birth order is important. For example, about 23 percent of children of birth order six or above are stunted (H/A below -2 SD). Birth interval also is related to the prevalence of stunting. Children who are born with an interval of less than two years are much more prone to be stunted. Of these children, 22 (-2 SD) percent are stunted and 9 (-3SD) percent are severely stunted.

Table 12.7 also shows the percentage of children under five years of age classified as malnourished according to the three anthropometric indices by selected socio-economic characteristics. There are particularly striking differences in the percentage classified as stunted according to the mother's level of education. The percentage of children whose mothers have a high school education or higher who are below the -2 SD cut-off point (4 percent) is significantly lower than the percentage of children whose mothers have no education or not completed primary school (23 percent). There are also notable residential and regional differences. Stunting is more common in rural (17 percent) than in urban residences (8 percent). The highest level of stunting is seen in the East region (21 percent) and the lowest levels are in the Central and North regions (5 and 7 percent, respectively). In North East and Southeast Anatolia, 22 percent of children under five are stunted. Similar patterns are observed for the weight-for-height and weight-for-age indices.

There has been an improvement in the nutritional status of children in Turkey during the five-year period between the surveys. For example a comparison of the TDHS-2008 findings with the results of the TDHS-2003 indicates that, the proportion stunted in the TDHS-2008 survey is 2 percentage points lower than the level observed in TDHS-2003 (12 percent). Further

improvements in the nutritional status of Turkish children are dependent upon reducing the numbers of children exposed to the key risk factors, especially short birth intervals and high parity. An intersectoral and interdiscipliner approach is necessary to discourage mothers from introducing supplementary food too early, to train mothers on the timely introduction of appropriate supplementation, and to assist couples to keep the number of children within their desired limits and ensure optimal birth spacing through effective family planning.

12.7 Nutritional Status of Mothers

In order to assess women's nutritional status, women who had given birth in the five-year period before the interview were weighed and their heights measured using the same equipment used to obtain children's measurements (i.e., an electronic scale and wooden height board).

For all women with a birth in the five-year period before the survey, Table 12.8 presents the distributions as well as the means and standard deviations for three anthropometric indicators for eligible women: height, weight, and the body mass index. The weight and BMI distributions exclude pregnant women and women with a birth within the 2 months prior to the measurement. The table shows that anthropometric measures are available for most of the eligible women, with height or weight measurements missing for 7 percent of respondents.

Balanced nutrition during childhood and the adolescent period has a positive impact on linear growth, whereas poor nutrition and experience of a severe illness, particularly in early childhood, can affect growth negatively. In turn, maternal height is useful in predicting the risk of delivery complications since short stature is frequently associated with a small pelvis size. The height below which women are considered to be at risk of such complications is in the range of 140-150 centimeters, with 145 centimeters being the widely accepted cutoff for identifying maternal malnutrition.

According to the TDHS-2008 results (Table 12.8), the mean height for mothers was 157 centimeters, almost the same reported in the TDHS-2003. Two percent of mothers were shorter than 145 centimeters and 10 percent were below 150 centimeters. The mean maternal weight was 66 kilograms. Nearly one-third (32 percent) of mothers weighed more than 70 kilograms.

The body mass index (BMI) assesses the relation between height and weight and is calculated by dividing the weight in kilograms by the squared height in meters. A body mass index of less than 18.5 is used to identify cases of chronic malnutrition, according to the WHO definition, BMI higher than 25.0 is often used to identify overweight women with problems of overweight and BMI over than 30.0 with obesity. In the TDHS-2008, the mean BMI of non-pregnant mothers was 26.7. The mothers' BMI fell below 18.5 in less than 2 percent of cases. Fifty-eight percent of the mothers had a BMI above 25.0, including 24 percent who had a BMI of at least 30.

Table 12.8 Anthropometric indicators of maternal nutritional status

Percent distribution and mean and standard deviation for women who had a birth in the five years preceding the survey, by selected anthropometric indicators (height, weight, and body mass index (BMI)), Turkey 2008

	Total	Distribution Including Missing
Respondent height's in cm		
Mean	156.9	-
Standard deviation	5.7	-
130.0-134.9	0.0	0.0
135.0-139.9	0.3	0.2
140.0-144.9	1.5	1.4
145.0-149.9	8.3	7.8
150.0-154.9	26.5	24.7
155.0-159.9	34.0	31.6
160.0-164.9	21.2	19.7
165.0-169.9	6.9	6.4
170.0-174.9	1.1	1.0
175.0-179.9	0.0	0.0
>= 180.0	0.0	0.0
Missing	-	7.0
Number of women	2,574	2,768
Respondent's weight in Kg		
Mean	65.5	-
Standard deviation	13.1	-
35.0-39.9	0.2	0.2
40.0-49.9	9.2	8.6
50.0-59.9	27.2	25.4
60.0-69.9	31.8	29.6
>= 70.0	31.6	29.4
Missing	-	6.9
Number of women	2,323	2,495
Respondent's BMI in Kg/m²		
Mean	26.7	-
Standard deviation	5.2	-
12.0-15.9 (Severe)	0.0	0.0
16.0-16.9 (Moderate)	0.4	0.3
17.0-18.4 (Mild)	1.3	1.2
18.5-20.4 (Normal)	8.5	7.8
20.5-22.9 (Normal)	17.1	15.8
23.0-24.9 (Normal)	14.4	13.4
25.0-26.9 (Overwt.)	16.7	15.5
27.0-28.9 (Overwt.)	12.5	11.6
29.0-29.9 (Overwt.)	5.2	4.8
>= 30.0 (Obese)	23.9	22.2
Missing	-	7.2
Number of women	2,315	2,495

Note: The weight and BMI measures exclude pregnant women and those who are less than 3 months postpartum.

Table 12.9 Nutritional status of women by background characteristics

Among ever-married women age 15-49 who had a birth in the five years preceding the survey, mean height, percentage under 145 cm, mean body mass index (BMI), and percentage with specific BMI levels, by background characteristics, Turkey 2008

	Height			BMI (kg/m2)									
Background characteristic	Mean height in cm	Percentage below 145 cm	Number of women	Mean BMI	18.5-24.9 (normal)	<18.5 (thin)	17.0-18.4 (mildly thin)	16.0-16.9 (moderately thin)	<16.0 (severely thin)	>=25.0 (overweight or obese)	25.0-29.9 (overweight)	>=30.0 (obese)	Number of women
Age													
15-19	157.9	0.8	71	24.3	62.0	1.1	1.1	0.0	0.0	36.9	28.3	8.6	58
20-24	157.2	1.4	567	24.8	53.7	2.3	1.7	0.6	0.0	44.0	30.7	13.3	494
25-29	157.2	0.8	854	26.1	44.7	2.1	1.6	0.5	0.0	53.2	32.1	21.1	763
30-34	157.0	2.0	633	27.3	32.0	1.2	1.0	0.2	0.0	66.8	42.2	24.6	578
35-39	156.0	3.1	321	29.1	24.5	0.4	0.4	0.0	0.0	75.1	32.7	42.4	300
40-44	153.9	7.8	104	29.8	21.4	0.9	0.9	0.0	0.0	77.7	33.2	44.5	99
45-49	(154.7)	(2.8)	(23)	(30.4)	(10.7)	(1.1)	(1.1)	(0.0)	(0.0)	(88.3)	(47.2)	(41.1)	23
Residence													
Urban	157.1	1.3	1,888	26.8	39.0	1.3	1.1	0.2	0.0	59.7	35.2	24.5	1,713
Rural	156.3	3.2	686	26.4	42.5	2.6	1.6	0.9	0.0	54.9	32.5	22.4	601
Region													
West	157.0	2.2	932	26.5	41.1	1.5	1.3	0.2	0.0	57.4	33.3	24.1	850
South	157.2	1.1	341	27.2	34.6	1.3	1.3	0.0	0.0	64.1	39.1	25.0	316
Central	157.0	1.7	579	26.6	39.9	1.9	1.0	0.9	0.0	58.1	35.8	22.4	529
North	156.1	1.3	150	26.2	44.9	3.0	2.0	1.0	0.0	52.1	29.7	22.4	142
East	156.5	1.8	571	26.7	39.8	1.4	1.1	0.2	0.1	58.8	33.7	25.2	478
Region (NUTS1)													
İstanbul	156.4	2.8	437	26.6	41.3	0.7	0.7	0.0	0.0	57.9	32.4	25.5	391
West Marmara	157.6	0.9	73	26.3	42.5	5.2	5.2	0.0	0.0	52.3	25.7	26.6	68
Aegean	157.3	1.9	326	27.0	38.0	1.6	0.8	0.8	0.0	60.5	37.5	23.0	296
East Marmara	156.7	2.3	234	25.9	43.9	1.8	1.1	0.6	0.0	54.3	34.0	20.4	214
West Anatolia	157.8	0.3	259	26.7	36.3	2.4	1.4	1.0	0.0	61.3	38.7	22.6	239
Mediterranean	157.2	1.1	341	27.2	34.6	1.3	1.3	0.0	0.0	64.1	39.1	25.0	316
Central Anatolia	157.4	1.6	135	26.2	48.7	1.0	1.0	0.0	0.0	50.3	27.6	22.8	127
West Black Sea	156.1	2.9	141	26.6	41.7	3.2	2.9	0.3	0.0	55.1	32.1	22.9	131
East Black Sea	155.9	1.9	57	26.4	44.6	1.7	0.0	1.7	0.0	53.7	30.3	23.4	55
Northeast Anatolia	157.3	1.4	86	25.8	49.5	4.2	3.2	0.6	0.3	46.3	23.3	23.0	74
Central East Anatolia	156.7	2.1	160	26.6	39.5	0.9	0.9	0.0	0.0	59.6	38.3	21.3	138
Southeast Anatolia	156.2	1.8	325	26.9	37.3	0.8	0.6	0.2	0.0	61.9	34.1	27.8	266
Education													
No/Primary inc.	155.7	3.2	501	27.2	37.6	1.0	0.9	0.1	0.0	61.4	32.7	28.7	421
First level prim.	156.2	2.0	1,282	27.4	34.6	1.2	0.9	0.4	0.0	64.2	36.0	28.2	1,159
Sec. level prim.	157.8	1.5	251	25.1	55.2	1.0	0.6	0.3	0.1	43.9	28.6	15.2	228
High and high.	158.9	0.2	540	25.4	47.2	3.3	2.7	0.6	0.0	49.4	35.2	14.2	507
Wealth quintile													
Lowest	156.1	3.3	546	26.8	42.6	1.2	1.1	0.1	0.0	56.2	32.2	24.1	463
Second	156.2	2.2	600	26.7	35.9	2.5	1.6	0.8	0.0	61.7	38.3	23.4	527
Middle	156.1	2.6	552	27.0	38.9	0.7	0.1	0.6	0.0	60.4	32.1	28.2	510
Fourth	158.1	0.1	459	26.1	43.3	2.4	2.3	0.1	0.1	54.2	31.9	22.3	419
Highest	158.3	0.2	417	26.7	40.0	1.3	1.3	0.0	0.0	58.7	38.0	20.7	396
Total	156.9	1.8	2,574	26.7	39.9	1.6	1.3	0.4	0.0	58.4	34.5	23.9	2,315

[1] Excludes pregnant women and women with a birth in the preceding 2 months
Note: Parentheses indicate a figure is based on 25-49 unweighted cases.

Table 12.9 shows the nutritional status of mothers by selected background characteristics. Younger women appear to be taller than women age 35 and over. More educated women are taller compared to less educated women. Mothers who have had no education or did not

complete primary education are, on the average, 3.4 centimeters shorter than those with high school education or more.

BMI increases rapidly with age, exceeding 25.0 for the majority of women age 25 and older. Residential variations in the BMI are comparatively small; the mean BMI is highest in the South (27.2) and lowest in the North (26.2). In İstanbul, the percentage of women with a BMI of 25 and higher is 58, which is almost the same as the percentage for all women in Turkey. Body mass index also appears to be related with the educational levels. Mothers with no education had an average BMI of 27 while mothers with high school education or more had an average BMI of 25.

WOMEN'S STATUS 13

İlknur Yüksel, Banu Akadlı Ergöçmen and Pelin Çağatay

This chapter highlights information on a range of factors that influence women's status. First of all, basic data collected on the husband's age and education during the interviews with TDHS-2008 respondents provide insights into interspousal differences and these indicators can be important in determining familial roles. Information on child care arrangements among women who work and the reasons women have for not working provide insights into the factors that influence women's employment opportunities. Finally, data on attitudes towards physical violence, controlling behaviors of husbands, and household decision-making roles further contribute to an understanding of the factors determining women's status.

13.1 Interspousal Differences in Age and Education

Large differences in age and education levels between spouses may be associated with differences in relative power. Table 13.1 presents data from the TDHS-2008 on differences in age and education levels between spouses. With regard to interspousal age differences, only five percent of women are two or more years older than their husband. One in every four women is about the same age, i.e., no more than one year older or younger than their spouse. Forty-three percent of currently married women are married to men who are at least five years older than they are and, in the case of 9 percent of the women, the husband is 10 or more years older. Currently married women are, on average, 4.2 years younger than their husband

Considering the variation in interspousal ages across subgroups, the mean difference is greatest among young women, particularly among those under age 20 (6.6 years). This group represents a comparatively small proportion of all married women since the overall age at marriage has been rising in Turkey however, it is important to be aware of the age gap in planning programs to further discourage early marriage. Considering regional differences, Northeast Anatolia is well above the national average with a mean age difference between spouses of 5.3 years.

Since men typically are better educated than women (see Chapter 2), it is not surprising that the results in Table 13.1 show that husbands have attained, on average, higher educational levels than their wives. Forty-six percent of women are married to men who have more education than they have, and only 13 percent of women are more highly educated than their spouse. Overall, the mean difference in educational attainment between women and their spouses is 1.6 years.

Table 13.1 Differences in age and education between spouses

Percent distribution of currently married women by interspousal age and education differences and mean difference in age and education by background characteristics, Turkey 2008

Background characteristic	Interspousal age difference					Mean difference in age (husband–wife)	Number	Interspousal education differential				Mean difference in education (husband–wife)	Number
	Wife older by 2+ years	About the same age	Husband older 2–4 years	Husband older 5–9 years	Husband older 10+ years			Husband better educated	Wife better educated	Both have equal education	Neither educated		
Age													
15–19	0.0	7.6	16.9	59.6	16.0	6.6	180	46.0	31.9	20.0	2.2	0.8	178
20–24	1.2	11.7	31.3	44.2	11.7	5.3	820	50.4	16.2	32.5	0.8	1.6	815
25–29	3.0	23.6	29.9	35.7	7.9	4.3	1,314	43.4	15.7	39.6	1.3	1.4	1,309
30–34	5.3	23.7	28.2	33.9	8.8	4.1	1,326	43.3	12.5	42.2	2.0	1.4	1,323
35–39	5.5	22.0	29.9	33.5	9.2	4.1	1,262	46.2	9.7	42.2	1.9	1.8	1,258
40–44	7.5	24.1	30.6	28.7	9.1	3.7	1,093	47.8	10.7	38.8	2.7	1.9	1,095
45–49	7.7	24.0	32.9	28.2	7.3	3.6	1,002	49.0	10.2	37.2	3.6	1.9	1,001
Employment													
Not employed	4.6	21.0	28.6	36.0	9.9	4.4	4,423	49.5	12.4	35.7	2.4	1.9	4,413
Employed	5.7	22.8	32.2	31.7	7.6	3.9	2,572	40.7	13.8	44.1	1.4	1.3	2,567
Number of living children													
0	7.5	25.7	26.5	32.5	7.9	3.8	636	40.8	23.3	34.8	1.0	1.0	635
1–2	4.7	20.9	31.5	34.4	8.4	4.2	3,836	43.1	15.2	41.2	0.5	1.3	3,825
3–4	4.7	20.7	29.4	35.7	9.6	4.4	1,936	49.6	7.3	40.9	2.2	2.1	1,935
5+	4.9	24.9	25.5	32.2	12.4	4.4	588	62.1	5.5	20.0	12.4	3.0	585
Residence													
Urban	4.7	21.1	30.1	35.0	9.1	4.3	5,283	45.9	14.3	38.1	1.7	1.6	5,268
Rural	5.9	23.4	29.4	32.6	8.7	4.0	1,712	47.4	8.7	40.7	3.2	1.9	1,711
Region													
West	4.4	20.9	30.9	35.6	8.1	4.2	3,047	41.6	15.2	42.3	0.8	1.3	3,043
South	5.0	19.2	28.6	36.7	10.6	4.7	849	43.4	12.4	41.7	2.5	1.5	847
Central	5.5	23.5	31.4	32.4	7.2	3.8	1,542	44.5	12.1	43.0	0.5	1.4	1,540
North	5.8	26.7	29.4	29.6	8.6	3.7	455	47.8	13.2	38.3	0.6	1.9	453
East	5.7	20.9	26.3	33.9	13.1	4.7	1,103	63.2	8.1	20.9	7.8	3.0	1,097
Region (NUTS1)													
İstanbul	4.5	22.6	30.7	34.0	8.2	4.0	1,379	39.5	16.2	43.5	0.8	1.2	1,379
West Marmara	4.3	21.4	34.4	32.6	7.4	3.9	308	38.4	14.1	47.0	0.6	1.1	308
Aegean	3.2	18.0	30.1	40.2	8.4	4.6	1,008	42.0	11.9	44.8	1.2	1.3	1,006
East Marmara	5.9	22.7	33.8	30.6	7.0	3.7	722	47.5	14.2	38.3	0.0	1.6	719
West Anatolia	6.5	24.8	31.1	30.7	7.0	3.6	679	41.6	16.3	41.6	0.4	1.1	679
Mediterranean	5.0	19.2	28.6	36.7	10.6	4.7	849	43.4	12.4	41.7	2.5	1.5	847
Central Anatolia	4.3	22.3	28.2	37.3	7.9	4.2	356	49.9	8.9	40.2	1.0	2.0	356
West Black Sea	5.8	26.6	29.0	30.3	8.3	3.7	416	45.8	13.4	40.1	0.7	1.5	412
East Black Sea	5.5	22.5	29.3	33.0	9.7	4.2	180	52.1	12.3	35.0	0.5	2.3	179
Northeast A.	3.5	16.0	26.1	39.1	15.3	5.3	188	60.1	10.7	23.0	6.3	2.6	187
Central East A.	6.5	19.8	23.8	34.3	15.6	4.9	317	64.5	7.1	18.8	9.6	3.3	315
Southeast A.	6.0	23.0	27.6	32.2	11.2	4.3	594	63.8	7.7	21.1	7.4	3.0	591
Education													
No /prim.inc.	6.7	23.9	26.3	31.3	11.8	4.3	1,270	84.8	2.5	1.4	11.2	4.4	1,265
First level primary	4.9	21.2	30.2	34.7	9.1	4.2	3,671	41.9	4.0	54.0	0.0	1.8	3,664
Sec. and higher	4.2	21.1	31.7	35.8	7.3	4.1	2,054	30.2	35.2	34.5	0.0	(0.4)	2,051
Wealth quintile													
Lowest	7.4	22.4	27.6	31.7	10.9	4.1	1,092	48.3	8.0	37.0	6.7	2.0	1,090
Second	5.1	23.7	29.4	32.4	9.4	4.1	1,366	45.1	8.5	42.7	3.7	1.8	1,361
Middle	4.3	21.8	31.4	33.9	8.5	4.2	1,473	47.9	12.1	39.0	1.0	1.8	1,470
Fourth	5.0	20.2	29.7	36.2	8.9	4.3	1,512	45.5	13.9	40.3	0.3	1.7	1,507
Highest	3.7	20.5	30.9	36.8	8.1	4.3	1,553	45.1	20.1	34.8	0.0	1.1	1,551
Total	5.0	21.6	29.9	34.4	9.0	4.2	6,996	46.3	12.9	38.8	2.0	1.6	6,980

As regards the variation in interspousal education differences, the gap tends to rise with age and especially parity; 62 percent of women with at least five children are less educated than their spouse compared to 41 percent among women with no children. Regional variations in interspousal education differences are also observed. For instance, women living

in South East and Central East Anatolia are most likely to be less educated than their spouses (64 and 65 percent, respectively) while women in West Marmara and Istanbul are most likely to have equal or more education than their husband (61 and 60 percent, respectively).

Not surprisingly, the interspousal gap in education is greatest among women with the least education. Eighty-five percent of women who have never attended school or have not completed the primary level are married to men who better educated than themselves. On the other hand, 70 percent of women with at least second level primary education have attained the same or more years of schooling than their husbands. As the wealth level increases, women are also more likely to have attained the same or more education than their husbands.

13.2 Factors Influencing Women's Employment

In TDHS-2008, data were collected on a number of aspects of women's work history. The information obtained about the level of women's employment and about their occupations is presented in detail in Chapter 3. This chapter focuses on the data obtained in the TDHS-2008 that help to better understand the factors that shape women's employment opportunities, which in turn can be an important influence on her status.

13.2.1 Reasons for Not Working and Quitting the Job

Table 13.2 presents the percent distribution of women who were not employed in the 12 months prior to the survey by the main reason that they did not work during the period. Thirty-one percent of women reported child care as the reason for not working, followed by their role as a housewife (22 percent). A fifth of women indicated that the husband or family would not allow them to work. Eight percent of women reported that they did not need work.

As expected, the proportion of women who report their main reason for not working as child care is higher among women age 20-34 years than their younger and older counterparts. Regarding regions, child care was most often cited as the reason for not working in the West (35 percent) and least often in the East region (24 percent). The proportion of women citing their role as a housewife as the reason was highest in rural areas and in the East and it decreased with increased education and wealth. The highest proportions of women saying that they were not allowed to work were observed for women age 15-19 and women with no children (32 percent and 29 percent, respectively). In TDHS-2008, additional information was obtained about the work situation from all women for at least six months after age 12. Table 13.3 shows the percent distribution of women who had worked at some time after age 12 and were not working at the time of the survey by the main reason that they had for quitting their last job. The findings indicate that 27 percent of women quit their jobs when they married. As expected, the proportion citing marriage as the main reason they quit a job is higher for younger women and women who are in the lowest education level and wealth quintile than for other women. The results show that the proportion of women who quit their jobs because of pregnancy or to provide child care (11 percent) is the same as the proportion who quit for work-related reasons such as low salary, working without social security, or a shutdown of workplace (11 percent). Ten percent of women who quit their job reported that they left their job because they no longer wanted to work.

Table 13.2. Main reason for not working

Percent distribution of ever-married women who were not employed during the 12 months preceding the survey by the main reason for not working, according to background characteristics, Turkey 2008

	Main reason for not working																		
Background characteristic	Just about to start working	Student	House-wife	Retired	Income recipient	Family worker	Disabled/ Sick	Caring for elderly	Caring for children	Get married	Just graduated	Does not allow to work	Just migrated/ left	Does not need to work	No job	Does not want to work	Other	Missing	Number of women
Age																			
15-19	0.0	0.2	18.0	0.0	0.0	0.0	2.4	0.0	27.0	1.2	0.0	32.3	0.0	11.2	4.2	2.7	0.8	0.0	165
20-24	1.0	0.7	13.4	0.0	0.0	0.2	0.3	0.6	43.3	0.7	0.3	25.4	0.8	6.7	3.4	1.5	1.0	0.6	694
25-29	0.5	0.2	14.8	0.1	0.0	0.0	2.1	0.3	48.6	0.1	0.0	20.5	0.0	6.7	3.4	1.1	1.5	0.1	965
30-34	0.4	0.0	18.5	0.2	0.2	0.2	3.8	0.2	42.9	0.0	0.0	17.2	0.4	7.4	6.3	0.5	1.9	0.0	906
35-39	0.1	0.0	26.5	0.2	0.0	0.1	7.6	1.0	28.1	0.3	0.0	18.6	0.1	7.9	6.6	0.4	1.9	0.6	860
40-44	0.3	0.0	30.6	2.8	0.0	0.2	11.4	1.9	14.3	0.0	0.0	18.4	0.1	8.6	7.6	0.9	2.4	0.4	776
45-49	0.1	0.0	32.6	7.8	0.0	0.3	15.6	1.0	6.0	0.0	0.0	15.6	0.1	9.7	7.6	0.8	2.7	0.1	755
Employment																			
Not employed	0.2	0.1	23.0	1.6	0.0	0.1	6.3	0.7	31.2	0.1	0.1	20.2	0.2	8.1	5.3	0.9	1.6	0.3	4,622
Employed	2.0	0.0	16.1	2.0	0.0	0.8	8.2	1.5	31.3	1.0	0.0	14.4	0.5	6.5	9.9	0.8	4.6	0.2	499
Marital status																			
Married or living together	0.3	0.1	22.8	1.4	0.0	0.1	5.7	0.6	32.1	0.2	0.0	20.1	0.2	8.0	5.4	0.9	1.8	0.3	4,878
Formerly married	1.5	0.0	14.2	5.9	0.0	0.5	22.0	5.0	14.2	1.2	0.0	10.5	1.0	7.1	13.2	0.7	2.7	0.2	242
Number of LC																			
0	2.3	1.4	18.4	1.6	0.0	0.2	5.3	0.9	7.8	1.3	0.5	28.9	0.4	13.5	11.3	2.4	2.7	1.0	480
1-2	0.3	0.0	17.2	2.3	0.0	0.1	4.5	0.7	38.5	0.2	0.0	19.4	0.3	8.1	5.5	0.7	1.9	0.2	2,737
3-4	0.0	0.0	29.3	1.0	0.1	0.1	8.6	0.5	26.8	0.0	0.0	19.0	0.2	6.6	5.0	1.1	1.4	0.3	1,454
5+	0.0	0.0	35.3	0.0	0.0	0.3	12.6	1.6	26.1	0.0	0.0	12.9	0.0	5.4	3.3	0.1	2.2	0.1	449
Residence																			
Urban	0.5	0.2	21.1	1.9	0.0	0.0	6.1	0.7	31.4	0.2	0.1	20.7	0.3	8.3	5.4	1.0	1.9	0.2	4,203
Rural	0.1	0.0	27.9	0.4	0.0	0.8	8.2	0.9	30.5	0.3	0.0	14.7	0.1	6.2	7.2	0.6	1.6	0.5	917
Region																			
West	0.5	0.2	16.5	2.1	0.0	0.1	7.4	0.7	35.4	0.3	0.0	19.3	0.2	8.0	6.3	1.0	1.7	0.3	2,187
South	0.1	0.0	28.5	1.2	0.0	0.0	8.4	0.9	29.0	0.1	0.0	17.9	0.3	5.5	5.5	0.7	1.7	0.3	633
Central	0.5	0.2	22.6	2.4	0.2	0.4	5.0	1.0	30.1	0.0	0.2	19.1	0.4	10.7	4.3	0.9	1.7	0.2	1,156
North	0.7	0.0	15.7	0.8	0.0	0.7	6.3	0.9	32.8	0.6	0.2	16.1	0.2	8.7	13.0	0.8	2.5	0.0	223
East	0.0	0.0	33.4	0.1	0.0	0.1	4.9	0.4	23.9	0.2	0.0	22.9	0.1	5.6	4.6	1.0	2.3	0.3	921
Region (NUTS 1)																			
İstanbul	0.5	0.3	22.0	2.1	0.0	0.0	6.8	0.8	33.7	0.5	0.0	18.5	0.3	7.5	5.2	0.5	1.0	0.3	1,120
West Marmara	0.3	0.0	18.7	2.5	0.0	0.0	9.5	1.3	32.3	0.0	0.0	18.3	0.0	3.0	11.3	0.0	2.7	0.0	211
Aegean	0.0	0.0	8.3	2.3	0.0	0.0	8.2	0.9	40.5	0.0	0.0	19.8	0.3	8.0	7.1	1.1	2.9	0.6	602
East Marmara	1.1	0.4	11.2	1.1	0.0	0.3	6.7	1.1	34.0	0.0	0.0	23.6	0.4	11.0	5.4	2.0	1.9	0.0	448
West Anatolia	0.8	0.3	26.7	4.1	0.4	0.1	3.8	0.5	30.1	0.0	0.4	15.4	0.4	11.6	2.6	1.0	1.5	0.1	559
Mediterranean	0.1	0.0	28.5	1.2	0.0	0.0	8.4	0.9	29.0	0.1	0.0	17.9	0.3	5.5	5.5	0.7	1.7	0.3	633
Central Anatolia	0.2	0.0	19.5	0.9	0.0	1.1	4.2	0.5	29.8	0.0	0.0	22.5	0.3	13.1	6.1	0.6	0.9	0.2	295
West Black Sea	0.3	0.0	20.7	0.8	0.0	0.0	7.4	1.6	27.5	0.6	0.0	17.6	0.2	7.7	10.8	1.5	2.9	0.3	263
East Black Sea	2.4	0.0	12.5	0.5	0.0	2.4	9.2	0.0	36.6	0.0	0.5	15.4	0.0	10.1	7.9	0.5	2.1	0.0	70
Northeast Anatolia	0.0	0.2	22.4	0.2	0.0	0.0	3.9	0.3	27.5	0.2	0.0	23.4	0.4	8.9	8.9	0.5	2.8	0.5	141
Central East Anatolia	0.0	0.0	48.6	0.0	0.0	0.2	3.4	0.6	13.0	0.2	0.0	23.2	0.0	2.7	5.0	0.9	2.1	0.2	283
Southeast Anatolia	0.1	0.0	28.0	0.2	0.0	0.0	5.7	0.3	29.2	0.3	0.0	22.6	0.1	6.3	3.3	1.2	2.3	0.4	496
Education																			
No	0.0	0.0	33.0	0.1	0.0	0.3	10.2	0.7	22.2	0.1	0.0	21.5	0.0	4.2	4.3	0.5	2.3	0.5	1,010
First level primary	0.1	0.0	23.0	0.8	0.0	0.2	7.2	0.8	31.7	0.3	0.0	20.4	0.4	7.1	5.4	0.9	1.6	0.1	2,659
Sec.level prim. and higher	1.2	0.5	13.8	4.4	0.1	0.0	2.5	0.7	36.7	0.1	0.2	16.7	0.1	12.1	7.3	1.1	2.1	0.4	1,451
Wealth quintile																			
Lowest	0.0	0.0	29.4	0.3	0.0	0.6	11.0	1.0	33.4	0.2	0.0	14.4	0.1	2.2	5.2	0.3	1.6	0.3	696
Second	0.1	0.0	25.8	0.3	0.0	0.2	7.0	0.7	31.9	0.1	0.0	21.6	0.6	4.2	5.5	0.8	1.0	0.3	985
Middle	0.2	0.0	21.6	0.9	0.0	0.1	8.1	0.9	33.1	0.2	0.0	20.0	0.4	5.5	5.3	1.2	2.4	0.2	1,155
Fourth	0.3	0.2	20.0	1.5	0.0	0.0	5.3	1.0	30.1	0.5	0.2	23.9	0.0	8.4	5.8	0.9	1.7	0.3	1,216
Highest	1.3	0.4	18.1	4.9	0.2	0.1	2.7	0.3	28.5	0.0	0.0	15.8	0.1	17.2	6.6	1.0	2.5	0.2	1,068
Total	0.4	0.1	22.4	1.7	0.0	0.2	6.5	0.8	31.2	0.2	0.0	19.6	0.2	7.9	5.7	0.9	1.9	0.3	5,120

Note: Row total is 100

Table 13.3. Main reason for quitting job

Percent distribution of women who worked for at least 6 months after age 12 and were not working at the time of the survey according to the main reason for quitting the last job by background characteristics Turkey 2008

Background characteristic	Main reason for quitting job																		Number of women
	Pregnant/ child care	House-work	Sick/ disabled	Appoint-ment of partner	Just moved/ migrated	Opposition of partner/ elderly	Not need to work	Did not want to work	Worked unpaid	Dis-missed	Sick/ elderly care in family	Work related problems	Marriage	Retire-ment	To find a better job	Sea-sonal/ Tempo-rary	Other	Missing	
Age																			
15-19	1.7	0.0	1.0	0.0	3.9	3.1	0.6	9.2	0.0	1.6	2.5	5.2	56.6	0.0	2.8	1.5	10.2	0.0	69
20-24	10.1	0.1	1.1	0.0	4.2	7.8	0.8	11.2	0.9	0.6	3.1	8.2	36.9	0.0	8.6	2.0	4.4	0.0	417
25-29	10.3	1.1	2.5	0.3	2.6	3.4	2.1	11.7	0.0	4.5	2.0	13.2	28.0	0.0	12.1	1.3	4.7	0.3	876
30-34	15.0	1.1	2.3	0.7	4.5	2.4	0.7	11.1	0.4	2.6	2.2	12.1	26.3	0.1	12.1	1.8	4.5	0.2	806
35-39	11.0	0.2	5.8	1.4	7.1	2.5	0.6	12.6	0.4	3.9	2.0	11.0	25.8	0.0	8.4	3.1	3.8	0.4	653
40-44	9.7	1.3	7.2	0.5	8.7	2.2	1.5	7.3	0.0	3.7	3.0	11.4	22.2	2.9	11.9	1.7	4.6	0.3	695
45-49	8.1	1.4	8.8	0.9	8.7	2.8	1.5	7.3	0.2	3.8	3.3	7.9	21.2	8.4	7.4	2.0	6.2	0.3	667
Employment																			
Not employed	11.3	1.0	5.2	0.3	5.7	3.5	1.6	11.8	0.3	2.7	2.9	8.5	29.8	2.4	6.0	1.5	5.3	0.4	2,577
Employed	9.7	0.8	3.6	1.2	6.2	2.6	0.8	7.8	0.1	4.4	1.9	14.6	21.5	1.0	17.1	2.6	4.1	0.1	1,607
Marital status																			
Married or living together	11.1	1.0	4.3	0.6	5.8	3.2	1.3	10.5	0.3	3.2	2.6	10.3	27.5	1.6	9.8	1.9	4.7	0.2	3,856
Formerly married	6.4	0.0	7.6	0.9	6.0	2.7	1.3	7.2	0.0	4.6	1.7	17.6	15.9	4.0	15.8	1.9	6.1	0.5	328
Number of living children																			
0	0.9	0.5	2.5	0.4	4.7	3.2	0.9	12.9	0.0	3.9	2.3	14.0	26.2	1.5	18.9	1.5	5.8	0.1	494
1-2	12.0	0.5	3.0	0.7	4.3	3.1	1.3	10.7	0.3	3.6	2.5	11.9	26.2	1.9	10.9	2.2	4.7	0.2	2,633
3-4	12.5	2.1	8.2	0.5	9.0	3.6	0.9	8.9	0.3	2.9	2.7	7.9	27.1	1.8	5.1	1.5	4.3	0.6	880
5+	9.7	1.7	15.2	0.0	16.0	2.7	3.6	2.8	0.0	0.3	2.3	2.1	31.4	1.6	2.0	1.9	6.1	0.5	177
Residence																			
Urban	10.7	1.0	4.1	0.7	5.9	3.3	1.2	10.9	0.2	3.6	2.5	11.7	24.7	2.1	10.5	1.7	4.9	0.3	3,542
Rural	10.7	0.6	7.2	0.0	5.4	2.4	1.8	6.2	0.4	1.7	2.5	6.3	37.5	0.4	8.9	3.2	4.4	0.3	641
Region																			
West	12.4	1.0	4.1	0.7	6.0	3.6	0.8	10.9	0.3	4.1	2.3	12.7	22.7	1.8	10.5	1.6	4.4	0.2	2,435
South	9.8	0.5	6.3	0.5	4.8	3.6	1.0	10.0	0.6	1.2	3.2	7.4	35.5	1.3	8.2	2.9	3.3	0.0	454
Central	8.2	0.9	3.7	0.7	6.3	1.8	2.0	11.7	0.0	3.9	1.8	10.0	24.3	3.1	12.1	2.3	7.2	0.2	672
North	7.5	0.2	4.8	0.3	8.0	1.6	0.7	5.3	0.4	1.9	2.8	7.4	41.7	1.1	11.5	0.5	4.0	0.4	329
East	7.6	1.4	7.5	0.6	3.2	4.3	4.3	7.2	0.0	1.1	4.5	7.4	33.7	0.5	5.3	4.3	6.2	1.0	294
Region (NUTS 1)																			
Istanbul	14.9	0.2	3.4	0.5	5.1	3.8	0.5	9.3	0.2	3.6	2.4	13.4	23.9	1.7	10.5	1.4	5.2	0.0	1,231
West Marmara	10.0	0.3	6.5	0.0	5.8	2.4	1.3	9.0	0.0	6.7	3.1	11.2	24.5	2.1	7.4	5.1	4.4	0.3	225
Aegean	10.9	2.2	5.0	1.2	7.5	3.5	1.4	13.1	0.6	3.5	2.5	10.3	18.6	2.3	11.5	1.1	4.1	0.6	598
East Marmara	9.3	1.6	3.9	0.6	6.7	2.9	0.8	14.0	0.0	3.7	1.4	13.1	24.5	1.3	10.4	1.9	3.6	0.3	577
West Anatolia	5.8	0.8	3.2	0.8	3.9	0.8	2.6	10.1	0.0	6.6	0.9	9.8	22.7	5.3	16.0	1.5	8.8	0.2	307
Mediterranean	9.8	0.5	6.3	0.5	4.8	3.6	1.0	10.0	0.6	1.2	3.2	7.4	35.5	1.3	8.2	2.9	3.3	0.0	454
Central Anatolia	6.8	1.4	4.1	1.2	8.6	5.8	3.3	10.7	0.0	2.7	3.3	10.7	22.6	2.5	8.2	2.7	4.9	0.6	103
West Black Sea	8.0	0.3	4.7	0.6	10.0	1.0	0.3	6.2	0.2	1.3	3.3	9.3	39.2	0.8	9.6	0.6	4.2	0.3	275
East Black Sea	7.7	0.6	5.5	0.0	5.1	2.8	1.2	6.0	0.6	2.2	2.2	5.0	40.9	1.2	13.0	1.4	4.4	0.3	122
Northeast Anatolia	4.7	0.0	12.4	0.0	6.1	4.1	4.0	4.0	0.0	1.3	2.7	11.3	36.5	0.7	2.0	1.4	8.8	0.0	36
Central East Anatolia	5.6	0.8	5.2	2.4	4.1	7.6	2.3	7.8	0.0	0.6	3.1	9.5	31.8	0.8	9.4	1.4	7.6	0.0	77
Southeast Anatolia	9.2	1.9	7.0	0.0	2.3	3.0	5.3	7.7	0.0	1.3	5.6	5.9	34.6	0.3	4.3	5.0	5.2	1.6	177
Education																			
No edu./Prim.incomplete	10.3	2.6	10.6	0.1	7.8	3.6	2.1	4.2	0.0	1.9	2.4	4.1	36.5	0.4	5.1	2.8	4.6	0.9	430
First level p.	10.2	1.1	5.5	0.5	8.0	4.0	1.0	9.6	0.5	2.3	3.2	9.0	30.8	1.0	7.1	2.4	3.4	0.3	1,982
Sec.level prim. and higher	11.3	0.3	2.1	0.9	3.0	2.2	1.4	12.3	0.0	4.9	1.7	14.6	19.5	3.0	14.9	1.2	6.4	0.1	1,772
Wealth quintile																			
Lowest	10.7	0.6	11.5	0.0	7.6	3.1	1.3	3.8	0.3	0.5	3.6	4.4	37.2	0.0	8.0	3.6	3.8	0.0	354
Second	7.5	1.9	4.3	0.2	6.8	3.8	1.1	9.4	0.5	2.3	3.5	8.4	36.9	0.3	6.5	2.4	4.1	0.3	610
Middle	11.4	0.5	6.7	0.1	5.8	3.2	1.1	12.5	0.5	3.5	2.6	7.0	31.1	1.7	5.9	2.3	3.4	0.5	810
Fourth	9.6	1.1	4.6	0.6	6.9	3.8	1.7	9.3	0.1	3.3	1.7	16.0	23.5	1.2	10.1	1.4	4.6	0.4	1,120
Highest	12.8	0.6	1.4	1.4	4.0	2.3	1.0	11.8	0.1	4.6	2.3	11.8	18.7	3.7	15.4	1.5	6.5	0.0	1,290
Total	10.7	0.9	4.6	0.6	5.8	3.2	1.3	10.2	0.3	3.3	2.5	10.9	26.6	1.8	10.2	1.9	4.8	0.3	4,184

Note: Row total is 100

13.3 Child Care while Working

Of women who worked in the 12 months prior to the survey, 67 percent had no children under 6 years of age. For the 33 percent of women who have one or more children under age 6, child care is an important issue in participating in the labor force. Table 13.4 focuses on the primary child care provider for children under six years of age that these women rely on when they are working. The persons women rely on to provide this care both reflect the presence of intra-family solidarity in childrearing and underline the patriarchal structure of Turkish society. Relatives provide child care for the majority of the children. In one-fourth of the cases, it is the husband's mother who takes care of the children under 6 years of age while their mother is at work, 11 percent are cared for by the woman's own mother, and 7 percent by other adult relatives including the husband. A similar percentage is cared for by another child within the household; in almost all of these cases, the caregiver is a girl. In 30 percent of the cases, the mother takes care of children indicating that she is either taking the child with her to work or she is working at home. The proportions of children in kindergarten or cared for by a baby sitter are very small (7 percent and 5 percent, respectively).

The proportion of working women saying that they themselves care for their child while working is higher among women with no or incomplete primary education, women in the East, women in Northeast Anatolia, women working in the agriculture and service sectors, and women in the middle or lower wealth quintiles than among women in other subgroups. Urban women, women with a high school or higher education, women from Istanbul and East Marmara, and women in the highest wealth quintiles are most likely to rely on babysitters or to say the child is enrolled in kindergarten.

13.4 Child care while working

Percent distribution of working women who have a child under age 6 according to the person who cares for the youngest child under age 6 while mother is at work by background characteristics, Turkey 2008

Background characteristic	No children under 6 years	One or more children	Person looks after youngest child when respondent at work: Herself	Husband	Female children	Respondent's mother	Mother in law	Male children	Other relatives	Baby-sitter	Kinder-garden	Not worked since last birth	Other	Missing	Total	Number of women
Residence																
Urban	68.8	31.2	29.4	3.6	3.8	16.1	16.8	0.4	3.3	8.3	10.1	2.6	3.9	1.9	100.0	1,405
Rural	65.1	34.9	31.8	1.0	10.2	3.8	36.7	0.7	6.5	0.7	1.8	0.7	4.2	1.8	100.0	870
Education																
No .	67.2	32.8	44.0	1.4	14.8	0.5	26.7	1.2	5.8	0.0	0.0	0.0	4.1	1.6	100.0	348
First level p.	70.7	29.3	35.5	2.9	8.3	4.4	30.7	0.7	5.9	1.8	1.6	1.0	5.0	2.2	100.0	1,172
Sec. level p.	73.4	26.6	35.0	2.7	4.4	15.5	23.0	0.0	2.6	0.0	7.5	4.2	3.8	1.3	100.0	137
Higher	60.0	40.0	16.3	2.4	0.1	24.4	16.5	0.0	2.6	13.2	16.7	3.6	2.7	1.5	100.0	619
Region																
West	73.7	26.3	23.5	2.9	5.0	16.1	21.3	0.5	4.0	6.6	10.2	1.4	5.4	3.1	100.0	1,060
South	66.2	33.8	36.5	1.2	6.5	9.1	24.8	0.0	6.9	5.5	6.2	0.0	2.1	1.2	100.0	258
Central	64.4	35.6	24.0	1.7	4.9	12.2	33.0	1.2	2.3	3.7	5.8	5.3	5.1	0.9	100.0	475
North	64.7	35.3	35.9	5.4	3.3	5.8	26.2	0.4	10.4	6.4	4.5	0.4	0.9	0.5	100.0	253
East	48.9	51.1	47.2	1.4	14.0	2.9	21.0	0.0	3.4	3.1	1.6	0.6	3.0	1.8	100.0	229
Region (NUTS 1)																
İstanbul	74.5	25.5	18.6	6.2	3.1	21.7	12.4	0.0	6.2	9.3	9.3	0.0	6.2	6.9	100.0	368
West Marmara	81.4	18.6	25.5	0.0	0.0	12.3	38.7	0.0	8.1	0.0	9.2	3.1	3.1	0.0	100.0	116
Aegean	70.4	29.6	20.5	1.7	5.8	18.0	37.5	0.0	1.7	3.4	5.6	2.8	1.5	1.5	100.0	462
East Marmara	68.3	31.7	28.1	0.0	5.1	8.4	20.1	1.4	3.7	6.6	13.5	1.6	11.5	0.0	100.0	309
West Anatolia	67.0	33.0	41.6	0.0	0.0	5.3	16.7	1.2	1.4	7.4	8.6	11.5	5.3	1.2	100.0	159
Mediterranean	66.2	33.8	36.5	1.2	6.5	9.1	24.8	0.0	6.9	5.5	6.2	0.0	2.1	1.2	100.0	258
Central A.	66.0	34.0	12.2	7.4	8.9	13.8	33.2	5.7	3.2	0.0	4.9	2.5	4.9	3.2	100.0	76
West Black A.	64.2	35.8	27.3	4.2	9.3	9.5	30.7	0.0	8.1	4.7	4.9	0.0	0.7	0.7	100.0	185
East Black Sea	62.9	37.1	38.8	6.9	2.5	4.7	23.5	0.8	9.1	8.0	3.9	0.8	0.8	0.0	100.0	116
Northeast A.	52.2	47.8	53.8	1.0	4.0	4.2	19.0	0.0	1.0	0.0	2.1	1.0	5.0	8.9	100.0	50
Central East A	48.9	51.1	43.7	0.0	15.5	0.0	18.4	0.0	9.8	7.8	2.0	0.0	2.9	0.0	100.0	44
Southeast A.	46.3	53.7	46.1	2.0	16.9	3.4	22.6	0.0	2.1	2.7	1.3	0.6	2.4	0.0	100.0	132
Economic sector																
Agriculture	66.3	33.7	31.8	0.9	10.8	2.8	38.3	0.8	6.2	0.0	1.0	0.7	4.1	2.6	100.0	976
Industry	75.2	24.8	17.9	0.0	3.6	29.0	30.3	0.0	2.2	0.0	9.2	3.9	3.7	0.0	100.0	156
Service	67.3	32.7	30.4	4.2	2.8	16.4	12.7	0.3	3.5	10.3	11.4	2.7	4.0	1.4	100.0	1,143
Wealth quintile																
Lowest	57.7	42.3	39.7	1.0	15.4	1.3	33.8	0.4	3.4	0.0	0.4	0.0	3.2	1.4	100.0	456
Second	66.1	33.9	35.3	1.9	5.7	6.2	33.0	1.8	8.1	0.0	1.7	1.5	2.8	2.1	100.0	443
Middle	71.3	28.7	38.2	0.6	6.7	10.2	21.0	0.3	4.4	3.4	2.4	1.9	9.4	1.4	100.0	402
Fourth	75.4	24.6	27.1	3.3	1.0	17.8	18.5	0.0	6.1	5.8	10.9	0.6	2.9	5.9	100.0	400
Highest	67.8	32.2	13.5	5.4	0.2	22.1	14.9	0.0	2.5	15.7	17.6	4.7	3.1	0.1	100.0	574
Total	67.4	32.6	30.4	2.5	6.4	11.0	24.9	0.5	4.6	5.2	6.7	1.9	4.0	1.8	100.0	2,275

13.4 Women's Attitudes towards Being Subject to Physical Violence and Controlling Behaviors

Domestic violence is one form of violation of human rights of women. Tolerance as well as the experience of domestic violence form significant barriers to the empowerment of women and women's autonomy in all spheres of social life and have adverse consequences for women's health, health-seeking behavior, and the health of their children. In TDHS-2008, women were asked whether a husband would be justified in beating his wife in each of the following situations: "if she burns the food", "if she argues with him", "if she neglects the children", "if she refuses to have sex with him", "if she does not cook food", "if she neglects the housework" and "if she wastes money". Table 13.5 presents differences by background characteristics in the percentages of ever-married women who agreed that wife beating would be justified in each of these circumstances. Overall, 25 percent women accepted at least one of the situations as a justification for physical violence. This represent a decrease from the TDHS-2003 when 39 percent agreed that physical violence was justified in at least one of the situations. With regard to the specific situations, women most often agree that physical violence is justified if woman wastes money or neglects the children (15 percent each) and are least likely to say that violence is justified if a wife burns the food.

There are notable differences in the proportions agreeing that physical violence may be justified by background characteristics. For example, while 36 percent of women in rural areas think that physical violence would be justified in at least one of the circumstances specified, the proportion drops to 21 percent for urban women. For both urban and rural women, "wastes money" is the most often agreed reason for violence.

Forty percent of women in the East agree that physical violence is justified in at least one of the circumstance compared with 18 percent in the West. Regarding the NUTS 1 regions, the highest proportion agreeing that physical violence may sometimes be justified is observed in Central East Anatolia (45 percent) and the lowest proportion in West Marmara region (12 percent). The percentage agreeing that physical violence is justified in at least one of the circumstances decreases with over 40 percent in the lowest education and wealth categories to less than 10 percent in highest categories.

Table 13.5 Attitude toward physical violence

Percentage of ever-women age 15-49 who agree that a husband is justified physical violence for specific reasons by background characteristics, Turkey 2008

Background characteristic	Husband is justified physical violence if she: Burns the food	Argues with him	Neglects the children	Refuses to have sexual intercourse with him	Does not cook food	Neglects the housework	Wastes money	Percentage who agree with at least one specified reason	Number of women
Age									
15-19	5.3	17.4	15.9	6.4	4.1	11.5	16.7	29.6	183
20-24	1.2	11.3	11.6	4.2	3.5	8.9	13.1	23.5	836
25-29	1.8	9.5	13.5	3.6	3.3	8.7	12.4	20.7	1,353
30-34	1.8	8.6	13.1	4.2	3.6	8.2	13.5	21.7	1,379
35-39	2.2	10.7	14.4	5.3	4.4	10.1	15.1	25.0	1,336
40-44	3.4	12.0	16.9	7.7	6.6	13.9	19.5	28.3	1,202
45-49	4.1	14.0	17.0	7.2	8.5	13.0	18.6	29.0	1,115
Employment (last 12 months)									
Not employed	2.5	10.6	14.5	5.4	4.7	10.8	15.6	24.4	4,629
Employed	2.4	11.7	14.6	5.3	5.3	9.9	15.0	25.1	2,776
Marital status									
Married or living together	2.5	11.0	14.6	5.4	4.8	10.5	15.4	24.7	6,999
Divorced/separated/widowed	1.4	10.8	14.2	4.7	6.8	8.9	14.1	23.7	406
Number of living children									
0	1.9	7.6	12.4	3.2	2.1	7.9	11.3	18.9	698
1-2	1.1	7.5	10.4	3.2	2.3	6.8	10.6	18.1	4,062
3-4	2.7	14.6	18.4	6.7	7.0	13.5	21.1	32.8	2,023
5+	11.3	26.3	30.9	17.9	18.0	27.2	32.7	47.7	621
Residence									
Urban	1.5	8.8	12.1	4.2	3.4	8.3	12.9	20.9	5,615
Rural	5.5	18.1	22.1	9.1	9.8	17.1	23.0	36.4	1,790
Region									
West	1.1	7.3	11.1	3.8	2.9	6.9	10.9	18.3	3,252
South	2.5	11.8	16.3	5.8	7.0	12.7	16.7	25.5	894
Central	1.7	10.5	10.3	3.9	2.9	7.7	16.4	24.5	1,631
North	1.8	14.1	19.1	6.1	6.0	12.3	19.8	31.1	477
East	7.7	20.4	26.9	11.4	11.4	21.8	23.7	39.5	1,151
Region (NUTS 1)									
İstanbul	1.0	7.8	11.3	4.4	3.2	7.2	11.9	18.4	1,491
West Marmara	1.1	4.8	7.0	2.1	1.6	5.6	7.8	11.7	327
Aegean	1.0	8.9	10.1	3.2	3.4	6.7	11.3	20.4	1,065
East Marmara	1.8	6.5	11.2	2.7	2.0	6.1	10.7	19.2	759
West Anatolia	0.7	7.7	8.5	2.7	1.4	5.6	12.9	19.3	717
Mediterranean	2.5	11.8	16.3	5.8	7.0	12.7	16.7	25.5	894
Central Anatolia	2.7	13.7	14.5	4.9	3.9	9.2	19.6	31.2	371
West Black Sea	2.8	15.4	20.8	9.0	7.5	15.6	25.6	37.0	448
East Black Sea	1.5	14.3	16.2	5.9	4.8	12.2	17.0	27.1	186
Northeast Anatolia	8.5	20.2	25.6	11.0	11.7	23.3	24.1	36.8	191
Central East Anatolia	9.4	20.7	32.4	12.9	15.8	25.2	27.3	45.3	327
Southeast Anatolia	6.6	20.3	24.5	10.8	9.1	19.5	21.7	37.4	628
Education									
No education/Prim. Incomp.	8.6	25.1	29.8	13.9	14.9	24.3	30.3	46.9	1,358
First level primary	1.6	10.8	14.8	4.9	3.9	10.4	16.5	26.6	3,840
Second level primary	0.7	6.8	6.9	1.7	1.1	4.0	7.4	13.8	643
High school and higher	0.0	1.3	3.7	0.6	0.3	1.2	2.8	5.3	1,564
Wealth quintile									
Lowest	8.0	23.6	28.2	13.4	14.3	23.6	27.6	42.9	1,154
Second	4.2	16.0	19.7	7.4	7.1	14.7	22.0	34.6	1,429
Middle	1.4	11.5	15.2	4.6	3.1	10.3	16.7	27.8	1,559
Fourth	0.4	6.0	10.9	2.8	2.1	6.5	10.3	17.9	1,618
Highest	0.2	2.4	3.5	1.3	0.9	1.6	4.7	7.1	1,645
Total	2.5	11.0	14.5	5.4	4.9	10.4	15.4	24.7	7,405

In TDHS-2008, women were also asked about selected controlling behaviors that they had experienced in their relations with their (last) husbands. The behaviors about which they were asked included: "preventing the woman from seeing female friends", "limiting her contact with her family", "insisting on knowing where she is", "distrusting her with money" and "accusing her being unfaithful". They were asked to categorize the frequency with which they experienced each behavior (i.e., "often", "sometimes" and "never"). Table 13.6 shows that the controlling behavior women most often experienced involved the husband insisting on knowing where the woman is and preventing the woman from seeing female friends (37 percent and 11 percent, respectively).

Table 13.7 presents variations across subgroups in the percentages of women reporting that their husband had often or sometimes exhibited the five controlling behaviors. Almost one in four women reported that they are faced with at least one controlling behavior by their husbands. The percentage of women reporting that they experienced the various controlling behaviors generally decreases with the women's age. The percentages experiencing the behaviors are uniformly higher for the divorced/separated women than their married counterparts. Regarding the regional differentials, the percentages experiencing the specific controlling behaviors were highest in the East, except for "accusing her of being unfaithful".

Table 13.6. Frequency of some controlling behaviors

Percentage of ever-married women age 15-49 as regards some controlling behaviors, Turkey 2008

	Often	Sometimes	Never	Not appl./Not suitable	Missing	Number of women
Preventing her from seeing female friends	3.8	6.7	89.2	0.1	0.1	7,405
Limiting her contact with her family	3.0	3.8	93.0	0.2	0.1	7,405
Insisting on knowing where she is	24.9	12.5	62.3	0.3	0.1	7,405
Distrusting her with money	2.6	3.5	93.5	0.3	0.1	7,405
Accusing her of being unfaithful	1.3	2.5	95.8	0.1	0.4	7,405

Table 13.7. Controlling behaviors

Percentage of ever-married women age 15-49 who experienced some controlling behaviors from their husband by background characteristics, Turkey 2008

Background characteristic	Prevent from seeing female friends	Limit to contact with her family	Insist on knowing	Distrust with money	Accuse of being unfaithful	Number of women
Age						
15-19	18.2	5.9	44.1	5.6	4.0	183
20-24	16.3	9.3	53.1	6.7	5.1	836
25-29	11.6	7.1	38.7	5.2	4.9	1,353
30-34	9.1	6.9	36.4	6.2	2.5	1,379
35-39	10.9	6.4	33.1	6.7	3.4	1,336
40-44	8.7	7.2	32.7	6.2	3.4	1,202
45-49	7.2	4.6	34.2	5.6	3.6	1,115
Employment (last 12 months)						
Not employed	10.9	6.9	38.2	6.4	3.9	4,629
Employed	10.0	6.7	36.0	5.5	3.5	2,776
Marital status						
Married or living together	9.5	5.6	36.5	5.4	3.2	6,999
Divorced/separated/widowed	29.2	27.1	51.9	17.1	13.8	406
Number of living children						
0	12.8	7.5	45.9	7.0	3.7	698
1-2	10.0	5.6	34.8	5.7	4.2	4,062
3-4	10.3	8.0	38.2	6.5	2.9	2,023
5+	12.7	9.8	41.5	6.3	3.5	621
Residence						
Urban	11.2	7.0	37.7	6.3	4.2	5,615
Rural	8.7	6.0	36.4	5.4	2.3	1,790
Region						
West	10.7	6.0	34.6	6.0	4.1	3,252
South	7.1	5.9	37.0	4.7	2.4	894
Central	10.6	6.8	37.9	6.4	3.8	1,631
North	9.9	5.5	37.5	5.4	3.6	477
East	13.1	10.2	44.7	7.1	3.9	1,151
Region (NUTS 1)						
İstanbul	13.2	7.1	35.7	6.6	5.1	1,491
West Marmara	6.5	3.6	29.9	6.0	4.4	327
Aegean	7.3	5.3	33.4	3.9	2.6	1,065
East Marmara	10.6	5.1	33.0	6.1	3.2	759
West Anatolia	11.1	6.9	37.4	7.4	4.4	717
Mediterranean	7.1	5.9	37.0	4.7	2.4	894
Central Anatolia	12.5	6.4	43.3	8.3	4.3	371
West Black Sea	9.6	8.0	42.2	5.7	2.9	448
East Black Sea	12.3	5.2	36.5	5.9	4.0	186
Northeast Anatolia	14.1	8.9	47.1	6.2	3.5	191
Central East Anatolia	13.2	11.0	40.5	7.0	3.4	327
Southeast Anatolia	12.9	10.3	46.2	7.4	4.2	628
Education						
No education/Prim.incomp.	13.8	9.6	40.8	8.4	4.6	1,358
First level primary	10.6	6.8	36.7	5.7	3.6	3,840
Second level primary	12.3	7.3	40.0	7.0	4.0	643
High school and higher	7.1	4.0	34.9	4.4	3.2	1,564
Wealth quintile						
Lowest	12.0	9.3	42.2	7.4	3.7	49.2
Second	12.2	7.6	41.0	6.4	4.3	47.9
Middle	10.9	5.8	37.5	6.4	3.7	42.4
Fourth	10.3	6.4	35.3	5.7	3.6	41.8
Highest	8.1	5.6	32.7	4.7	3.3	37.0
Total	10.6	6.8	37.4	6.1	3.7	7,405

13.5 Attitudes towards Gender Roles

In order to better understand attitudes towards gender roles, women were asked in the TDHS-2008 whether they agreed or disagreed with a series of nine statements about women's roles in the household, society and political life and about the education of male and female children. The statements for which they were asked if they agreed included: "the important decisions in the family should be made only by men of the family", "a woman shouldn't argue with her partner even if she disagrees with him", "it is better to educate a son than a daughter", "men are wiser" and "women should be virgin when they get married". The statements with which they were asked if they disagreed included: "men should also do the housework like cooking, washing, ironing, and cleaning", "a married woman should work outside the home if she wants to", "a woman may go anywhere she wants without her partner's permission" and "women should be more involved in politics".

Table 13.8 presents the percentages of women who agreed or disagreed with the various statements by background characteristics of women. Higher levels of agreement with the first set of five statements and higher levels of disagreement with the second set of four statements are assumed to reflect a greater tendency to defer to men and to traditional roles for women. Overall, looking at the first set of statements, women were most likely to agree with the statements "women should be virgin when they get married" (80 percent) and "a woman shouldn't argue with her partner even if she disagrees with him" (41 percent) and least likely to agree with the statement that "it is better to educate a son than a daughter" (12 percent). Considering the second set of statements, women were most likely to disagree with that a woman may go anywhere she wants without her partner's permission" (69 percent) and least likely to disagree that "a married woman should work outside the home if she wants to" (8 percent).

Although the variations are not uniform, the proportions agreeing with the first five statements or disagreeing with the second four statements, i.e., showing the greatest deference to male roles and traditional values, tended to be highest among women with five or more children, rural women, women in the East region, women with no or incomplete primary education, and women in the lowest wealth quintile.

Table 13.8. Attitude towards gender roles

Percentage of ever-married women age 15-49 who agree and disagree with the specific statements about gender roles by background characteristics, Turkey 2008

	Agree					Disagree				
Background characteristic	Important family decisions should be made only by men	Women should not argue with husband even if she disagrees	Better to educate son rather than daughter	Men are wiser	Women should be virgin when they get married	Men should also do housework	Married women should work outside if she wants to	Women may go anywhere without husbands permission	Women should be more involved in politics	Number of women
Age										
15-19	20.4	47.1	19.3	16.3	82.2	51.0	20.8	80.6	30.0	183
20-24	17.5	47.1	10.6	13.6	79.0	36.5	10.9	73.2	30.1	836
25-29	13.0	36.9	8.1	9.7	77.0	31.1	7.8	70.2	22.9	1,353
30-34	13.6	35.2	9.0	13.1	75.5	29.7	5.5	65.5	18.9	1,379
35-39	16.7	43.4	12.7	14.6	83.1	30.7	7.2	70.1	17.6	1,336
40-44	20.1	40.8	14.9	18.6	82.8	33.9	8.5	69.2	19.3	1,202
45-49	23.0	44.9	18.2	23.6	84.7	33.5	8.1	68.3	14.9	1,115
Employment (last 12 months)										
Not employed	17.1	41.9	13.1	15.2	81.7	35.2	9.0	69.7	21.1	4,629
Employed	17.2	39.5	11.0	15.5	77.9	28.5	6.6	69.1	19.3	2,776
Marital status										
Married or living together	17.1	41.0	12.2	15.1	80.8	33.0	8.2	69.5	20.4	6,999
Formerly married	17.8	42.1	12.9	20.3	71.1	28.1	5.6	69.1	19.7	406
Number of living children										
0	12.1	39.8	9.9	12.2	70.3	29.4	9.5	68.6	22.5	698
1-2	12.1	35.6	9.2	11.2	76.0	28.5	5.7	66.1	20.7	4,062
3-4	23.3	47.4	15.4	18.8	89.1	36.8	9.3	73.9	19.0	2,023
5+	36.1	57.4	25.2	34.8	90.3	50.2	18.3	77.5	20.7	621
Residence										
Urban	13.5	38.8	11.1	12.9	78.6	29.8	6.8	67.1	20.0	5,615
Rural	28.5	47.9	16.0	23.2	85.4	41.8	12.3	76.8	21.7	1,790
Region										
West	12.2	36.7	11.9	12.3	76.4	28.9	5.4	66.0	20.1	3,252
South	20.1	48.9	13.7	17.1	84.0	32.7	8.1	71.9	22.3	894
Central	16.0	37.3	10.6	14.4	81.2	33.8	7.6	72.5	21.0	1,631
North	20.1	46.9	10.8	15.6	83.4	28.7	8.1	72.4	17.8	477
East	29.2	50.0	15.2	23.8	85.7	43.6	16.3	71.7	19.9	1,151
Region (NUTS 1)										
İstanbul	12.2	35.3	12.5	11.3	72.9	27.2	5.9	63.2	22.4	1,491
West Marmara	15.0	36.8	11.3	12.5	79.1	28.9	3.7	61.6	12.7	327
Aegean	12.8	36.8	12.3	13.9	77.9	31.2	6.0	69.5	19.0	1,065
East Marmara	9.1	39.3	7.4	13.1	82.0	30.7	5.4	72.3	20.3	759
West Anatolia	11.9	34.2	8.9	10.5	77.3	29.3	6.3	68.0	19.4	717
Mediterranean	20.1	48.9	13.7	17.1	84.0	32.7	8.1	71.9	22.3	894
Central Anatolia	21.7	39.9	15.9	17.8	86.0	37.3	9.8	76.5	22.9	371
West Black Sea	27.2	50.5	12.9	17.9	85.3	37.9	8.3	76.9	20.9	448
East Black Sea	17.0	39.3	11.5	17.5	84.3	25.4	8.0	69.3	16.9	186
Northeast Anatolia	30.0	49.2	16.3	23.1	85.8	47.4	16.0	71.7	14.2	191
Central East Anatolia	28.4	54.3	11.9	25.1	86.3	43.8	15.7	73.0	19.2	327
Southeast Anatolia	29.3	47.8	16.5	23.3	85.2	41.9	16.8	70.8	22.2	628
Education										
No educ./Prim. Inc.	36.9	54.5	24.8	32.7	87.2	46.1	17.0	76.9	21.3	1,358
First level primary	18.2	44.1	12.9	15.7	85.9	35.2	7.9	71.7	21.6	3,840
Sec. level primary/higher	3.2	27.3	3.4	4.1	66.2	20.0	3.0	60.9	17.8	2,207
Wealth quintiles										
Lowest	37.8	52.6	20.9	30.1	86.0	47.8	14.8	78.4	20.2	1,154
Second	24.3	48.3	17.3	20.3	85.9	41.0	12.2	77.7	22.0	1,429
Middle	16.7	47.0	11.8	14.8	86.0	33.9	8.7	73.9	23.2	1,559
Fourth	10.1	38.4	9.7	11.4	79.8	27.8	4.9	65.8	21.1	1,618
Highest	3.9	23.6	4.9	5.1	66.3	18.5	2.3	55.4	15.8	1,645
Total	17.2	41.0	12.3	15.3	80.3	32.7	8.1	69.4	20.4	7,405

13.6 Women's Roles in Reproductive Decisions

The decisions taken by women themselves about important social and demographic events such as marriage, divorce, contraceptive use and induced abortion are related to women's status. Table 13.9 shows the person that TDHS respondents reported were responsible for these decisions in their own lives.

All TDHS respondents were asked the marriage to their spouse was arranged. Forty-two percent of women reported that they and their husbands decided by themselves to marry. If marriages arranged by families but with the consent of women are included, the proportion of women who have a say who they married rises to 87 percent. Table 13.9 shows that the decision about divorce was most often taken by women (57 percent) or jointly with their former spouse (26 percent). When contraception and induced abortion are considered, the decisions are most often jointly taken by couples (62 percent and 48 percent respectively).

Table 13.9 Decision making

Percent distribution of ever-married women age 15-49 according to the person they perceived as responsible for decision relating to marriage, divorce, contraceptive use and induced abortion, Turkey 2008

	Percentage
Decision about marriage	
Families- with consent	44.4
Families- without consent	6.8
Ourselves	42.3
Eloped	5.5
Abducted	0.6
Other	0.3
Total percent	100.0
Number of women	
Decision about divorce	
Herself	56.0
Husband	12.0
Both	26.4
Other	0.9
Missing	4.6
Total percent	100.0
Number of women	
Decision about contraceptive use	
Respondent	25.5
Husband	12.5
Joint	61.9
Missing	0.2
Total percent	100.0
Number of women	
Decision about induced abortion	
Doctor	21.8
Herself	23.9
Husband	4.2
Herself and husband/partner	48.0
Other	0.4
Missing	1.7
Total	100.0

13.7 Women's Status and Reproductive Health Outcomes

Table 13.10 considers how key reproductive health indicators vary with one of the measures of women's status for which data was collected in the TDHS-2008, according to attitudes towards physical violence. As described earlier in the chapter, TDHS respondents were asked about seven circumstances which might justify a husband's use of physical violence. Women are categorized into four groups in Table 13.10 according to the number of reasons with which the women agreed and the proportions who utilized maternal health care services and who were using family planning were calculated for each of the groups. The results in the table show that the likelihood of utilizing maternal health services or contraception tends to decline as the number of circumstances with which women agreed physical violence was justified increases. For example, the percentage using any family planning method declined from 74 percent among women who did not agree that physical violence was justified in any of the circumstances to 57 percent among women who believed that violence was justified in five or more of the circumstances.

Table 13.10 Justification of physical violence and health outcomes

Percentage of ever-married women age 15-49 who justify physical violence by reproductive health care (for women with last birth in 5 years) and contraception indicators, Turkey 2008

	Number of reasons for physical violence is justified				
	0	1-2	3-4	5+	Total
Reproductive health care					
Received antenatal care from health personnel	94.2	89.0	83.0	75.4	92.0
Received delivery assistance from health personnel	95.8	90.8	90.4	74.0	93.9
Received postnatal care from health personnel within the first two days since delivery	79.8	74.9	75.0	49.5	77.5
Current use of contraception					
Any method	74.4	73.5	63.8	56.8	73.0
Any modern method	47.8	45.2	35.5	30.6	46.0
Female sterilization	8.0	8.4	11.1	10.2	8.3
Temporary modern female methods	23.7	24.6	18.8	16.3	23.2
Male condom	16.1	11.8	5.6	4.1	14.3
Any traditional method	26.6	28.3	28.3	26.2	27.0
Not currently using	25.5	26.3	36.1	43.1	27.0

REFERENCES

Gwatkin, D.R., S. Rutstein, K. Johnson, R.P. Pande, and A. Wagstaff. (2000). *Socio-economic differencesin health, nutrition and poverty*. HNP/Poverty Thematic Group of The World Bank. Washington, D.C.: The World Bank.

Hacettepe University Institute of Population Studies (1980), *Turkish Fertility Survey, 1978*, HUIPS, Ankara.

Hacettepe University Institute of Population Studies (1987), *1983 Turkish Population and Health Survey,* HUIPS, Ankara.

Hacettepe University Institute of Population Studies (1987), *1988 Turkish Population and Health Survey,* HUIPS, Ankara.

Hacettepe University Institute of Population Studies and Macro International Inc. (1999). *Turkey Demographic and Health Survey 1998*, HUIPS, Ankara.

Koç, İ. (2004). *Türkiye'de çocukların nüfusa kayıt olmamasını etkileyen değişkenler ve nüfusa kayıt olmaya geçiş süreci [Factors affecting birth registration of children and transtion to birth registration in Turkey]*. Nüfusbilim Dergisi, Vol. 24: 35-44.

Ministry of Foreign Affairs. (2004). *Turkish Economy*, Website: http://www.mfa.gov.tr/grupd/default.htm, September 7, 2004.

Ministry of Health, Hacettepe University Institute of Population Studies, and Macro International Inc. (1994). *Turkey Demographic and Health Survey 1993*, HUIPS, Ankara.

Ministry of Health, Hacettepe University Institute of Population Studies, and Macro International Inc. (2004). *Turkey Demographic and Health Survey 2003*, HUIPS, Ankara.

Population Reference Bureau. (2008). *2008 World Population Data Sheet.* Web Site: http://www.prb.org/Publications/Datasheets/2008/2008wpds.aspx, June 4, 2009

Rutstein, S.O. (1984). Infant and child mortality: Levels, trends, and demographic differentials. Revised edition. *WFS Comparative Studies* No. 43. Voorburg. Netherland.

Rutstein, S. (1999). *Wealth versus expenditure: Comparison between the DHS Wealth Index and household expenditures in four departments of Guatemala*. Unpublished.

Rutstein S., K. Johnson, and D. Gwatkin. (2000). *Poverty, health inequality, and its health and demographic effects.* Paper presented at the 2000 Annual Meeting of the Population Association of America, Los Angeles, California.

State Planning Organization (SPO). (2003). *Türkiye'nin Avrupa Birliğine Katılım Sürecine İlişkin 2003 Yılı İlerleme Raporu [2003 Regular Report on Turkey's Progress Towards Accession]*. SPO, General Directorate of the Relations with the European Union, Ankara.

State Planning Organization (SPO). (2007). *Ninth Development Plan 2007-2013*. SPO, Ankara

Turkey Statistical Institute (TURKSTAT). (2003). *2000 Census of Population: Social and Economic Characteristics of Population*. Ankara: SIS.

Turkey Statistical Institute (TURKSTAT). (2006). *Population and Development Indicators*. Web site: http://nkg.tuik.gov.tr/, June 6, 2009.

Turkey Statistical Institute (TURKSTAT). (2008). *Population and Development Indicators*. Web site: http://nkg.tuik.gov.tr/, June 6, 2009.

UNICEF (2005) Child Protection: Birth Registration, http://www.unicef.org/protection/index_birthregistration.html

World Health Organisation (WHO) and United Nations Children's Fund (UNICEF) Joint Monitoring Programme for Water Supply and Sanitation. (2004). *Meeting on the MDG drinking water and sanitation target: A mid-term assessment of progress*. New York: World Health Organization and United Nations Children's Fund.

World Health Organisation (WHO) and United Nations Children's Fund (UNICEF) Joint Monitoring Programme for Water Supply and Sanitation. (2005). *Water for life: making it happen*. Geneva: World Health Organization and United Nations Children's Fund.

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SURVEY DESIGN APPENDIX B

A. Sinan Türkyılmaz, İsmet Koç and Elif Yiğit

The major features of sample design and implementation for the Turkish Demographic and Health Survey, 2008 (TDHS-2008) are described in this section. Sample design features that are discussed include: target sample size, choice of domains, sampling stages, stratification, degree of clustering, and the relationship of design decisions to the nature of the sample frame[1]. Aspects of the sample implementation include the cartographic and listing work that was needed to update, improve, or generate the ultimate sample lists of households or individuals, as well as the procedures for the final household selection.

This section also presents information on fieldwork, including descriptions of the recruitment and training of interviewers, the composition of interviewing teams, quality control procedures, and various practical problems encountered. Response rates[2] for urban and rural areas and regions are presented. An account is also given of the data processing and analysis, including a description of the calculation of the final weighting factors (design and non-response weights).

B.1 Sample Design and Implementation

A weighted, multistage, stratified cluster sampling approach was used in the selection of the TDHS-2008 sample. The sample was designed in this fashion because of the need to provide estimates for a variety of characteristics for various domains. These domains, which are frequently employed in the tabulation of major indicators from the survey, are:

- Turkey as a whole;
- Urban and rural areas (each as a separate domain);
- Each of the conventional major five regions of the country, namely the West, South, Central, North, and East regions
- The 12 NUTS 1[3] regions, for selected indicators which are based on sufficient number of observations
- The seven metropolitan cities which are larger than one million population (İstanbul, Ankara, İzmir, Bursa, Adana, Konya, Gaziantep)

The major objective of the TDHS-2008 sample design was to ensure that the survey would provide estimates with acceptable precision for these domains for most of the important demographic characteristics, such as fertility, infant and child mortality, and contraceptive

[1] For an additional description of these aspects of sample designs for DHS surveys, see the DHS *Sampling Manual,* Basic Documentation Series, No. 8, pp. 59-66, 1996.

[2] For a more complete discussion of the calculation of response rates, see the DHS *Sampling Manual,* Basic Documentation Series, No. 8, pp. 55-57, 1996.

[3] Information is provided on NUTS regions in the sections that follow.

prevalence, as well as for the health indicators. The different populations targeted by the TDHS-2008 survey included the total population for the Household Questionnaire and all ever married women younger than age 50 for the Individual Questionnaire. The aim was to survey these populations by selecting a representative sample of households. An adult member in every household was interviewed in order to collect information on household members. In addition, some information was collected for households in a sub-sample of one-half of all households. All ever-married women age 15-49 in the household who were identified as eligible in the household schedule were interviewed.

B.2 Sample Frame

Different criteria have been used to describe "urban" and "rural" settlements in Turkey. In the demographic surveys of the 1970s, a population size of 2,000 was used to differentiate between urban and rural settlements. In the 1980s, the cut-off point was increased to 10,000 and, in some surveys in the 1990s, to 20,000. A number of surveys used information on the administrative status of settlements in combination with population size to differentiate settlement types. The urban frame of the TDHS-2008 consisted of a list of provincial centers, district centers, and other settlements with populations larger than 10,000, regardless of administrative status. The rural frame consisted of all district centers, sub-districts and villages not included in the urban frame. The urban-rural definitions of the TDHS-2008 are identical with those in the TDHS-1998 and TDHS-2003.

Initial information on all settlements in Turkey was obtained from the 2007 Address-Based Population Registration System (ABPRS-2007). The results of ABPRS-2007 provided a computerized list of all settlements (provincial and district centers, sub-districts and villages) and their populations.

The Address Based Population Registration System (ABPRS) is a newly developed system which registers each person who has a citizen ID number (or a special number for resident aliens) at a specific address. For this system, the National Address Data Base which is a new address data base was also developed by municipalities in collaboration with Turkey Statistical Institute (TURKSTAT).

B.3 Stratification

Currently Turkey is divided administratively into 81 provinces. For purposes of selection in prior surveys in Turkey, these provinces have been grouped into five regions. This regional breakdown has been shown to be as a powerful variable for understanding the demographic, social, cultural, and economic differences between different parts of the country. The five regions-West, South, Central, North, and East -include varying numbers of provinces. A list of the provinces in each of the regions is provided in Table B.1.

In addition to the conventional five geographic regions, a new system of regional breakdown was adopted in late 2002. In accordance with the accession process of Turkey to the European Union, the State Planning Office and the Turkish Statistical Institute constructed three

levels of NUTS regions, which have since become official (Law No. 2002/4720). The NUTS stands for "*The Nomenclature of Territorial Units for Statistics*". The NUTS is a statistical classification that is used by member countries of European Union (EU). For purposes of the system, Turkey`s 81 provinces were designated as regions of NUTS 3 level; these were further aggregated into 26 regions to form the NUTS 2 regions. NUTS 1 regions were formed by aggregating NUTS 2 regions into 12 regions.

Table B.1 List of strata by region, NUTS 1 region, residence, type and province, Turkey 2008

Stratum	Region	NUTS 1 Region	Type	Province
1	West	İstanbul	Urban/Metropol	İstanbul
2	West	İstanbul	Rural	İstanbul
3	West	West Marmara	Urban	Edirne, Kırklareli, Tekirdağ, Balıkesir, Çanakkale
4	West	West Marmara	Rural	Edirne, Kırklareli, Tekirdağ, Balıkesir, Çanakkale
5	West	Aegean	Urban/Metropol	İzmir
6	West	Aegean	Urban	İzmir, Aydın, Denizli, Muğla, Manisa
7	West	Aegean	Rural	İzmir, Aydın, Denizli, Muğla, Manisa
8	Central	Aegean	Urban	Afyon, Kütahya, Uşak
9	Central	Aegean	Rural	Afyon, Kütahya, Uşak
10	West	East Marmara	Urban/Metropol	Bursa
11	West	East Marmara	Urban	Bursa, Kocaeli, Sakarya, Yalova
12	West	East Marmara	Rural	Bursa, Kocaeli, Sakarya, Yalova
13	Central	East Marmara	Urban	Bilecik, Eskişehir, Bolu, Düzce
14	Central	East Marmara	Rural	Bilecik, Eskişehir, Bolu, Düzce
15	Central	West Anatolia	Urban/Metropol	Ankara
16	Central	West Anatolia	Urban/Metropol	Konya
17	Central	West Anatolia	Urban	Ankara, Konya, Karaman
18	Central	West Anatolia	Rural	Ankara, Konya, Karaman
19	South	Mediterranean	Urban/Metropol	Adana
20	South	Mediterranean	Urban	Antalya, Burdur, Isparta, Adana, İçel, Hatay, K. Maraş, Osmaniye
21	South	Mediterranean	Rural	Antalya, Burdur, Isparta, Adana, İçel, Hatay, K. Maraş, Osmaniye
22	Central	Central Anatolia	Urban	Kırşehir, Nevşehir, Niğde, Aksaray, Kırıkkale, Kayseri, Sivas, Yozgat
23	Central	Central Anatolia	Rural	Kırşehir, Nevşehir, Niğde, Aksaray, Kırıkkale, Kayseri, Sivas, Yozgat
24	North	West Black Sea	Urban	Zonguldak, Bartın, Karabük, Kastamonu, Sinop, Samsun
25	North	West Black Sea	Rural	Zonguldak, Bartın, Karabük, Kastamonu, Sinop, Samsun
26	Central	West Black Sea	Urban	Çankırı, Amasya, Çorum, Tokat
27	Central	West Black Sea	Rural	Çankırı, Amasya, Çorum, Tokat
28	North	East Black Sea	Urban	Artvin, Giresun, Gümüşhane, Ordu, Rize, Trabzon
29	North	East Black Sea	Rural	Artvin, Giresun, Gümüşhane, Ordu, Rize, Trabzon
30	East	Northeast Anatolia	Urban	Erzincan, Erzurum, Bayburt, Ağrı, Kars, Ardahan, Iğdır
31	East	Northeast Anatolia	Rural	Erzincan, Erzurum, Bayburt, Ağrı, Kars, Ardahan, Iğdır
32	East	Central East Anatolia	Urban	Bingöl, Elazığ, Malatya, Tunceli, Bitlis, Hakkari, Muş, Van
33	East	Central East Anatolia	Rural	Bingöl, Elazığ, Malatya, Tunceli, Bitlis, Hakkari, Muş, Van
34	East	Southeast Anatolia	Urban/Metropol	Gaziantep
35	East	Southeast Anatolia	Urban	Adıyaman, Gaziantep, Kilis, Diyarbakır, Şanlıurfa, Mardin, Siirt, Batman, Şırnak
36	East	Southeast Anatolia	Rural	Adıyaman, Gaziantep, Kilis, Diyarbakır, Şanlıurfa, Mardin, Siirt, Batman, Şırnak

One of the priorities of the TDHS-2008 was to produce a sample design that was methodologically and conceptually consistent with the designs of previous demographic surveys carried out by the Hacettepe Institute of Population Studies. In surveys prior to the TDHS-1993, the five-region breakdown of the country was used for stratification. In TDHS-1993, a more detailed stratification taking into account sub-regions was employed to obtain a better dispersion of the sample. The criteria for subdividing the five major regions into sub-regions were the infant mortality rates of each province, estimated from the 1990 Population Census using indirect techniques.[4] Using the infant mortality estimates as well as geographic proximity, the provinces in each region were grouped into 14 sub-regions at the time of the TDHS-1993. The sub-regional division developed during the TDHS-1993 was used in TDHS-1998.

However, the new NUTS regions necessitated further steps for sample design, namely that the sample design of the TDHS would allow using the conventional five regions as well as the NUTS 1 regions as sample domains. The conventional five regions cannot be obtained by aggregating the 12 NUTS 1 regions. To ensure both regional breakdowns were served by the sample design, 20 mutually exclusive strata had to be created, which, when appropriately aggregated, would produce the five conventional regions or the NUTS 1 regions. It became clear during this exercise, however, that if slight modifications were made to the boundaries of the 5 regions a smaller number of strata would be sufficient for reflecting both breakdowns in the sample design. More specifically, changing the regions to which only 6 provinces out of 81 were included would make it possible to construct 15 strata and serve the same purpose. This exercise was undertaken; also, a series of statistical tests were carried out to make sure that the modification to the regional boundaries would not make any difference in terms of regional indicators. This stratification approach was used during the sample design of TDHS-2003 and repeated for the sample design of TDHS-2008.

Two of the NUTS 1 regions, İstanbul and the Southeastern Anatolia, were given special attention in the sample design process and a comparatively larger share of the total sample was allocated to these regions to ensure that statistically sound estimates for a larger number of indicators would be obtained than would be the case for the remaining 10 NUTS 1 regions. Policymakers, researchers and other stakeholders had voiced interest in information on demographic and health indicators for İstanbul and the Southeastern Anatolian regions in the past.

Finally as it was in the sample design of TDHS-2003, the seven metropolitan cities with one million plus populations were also considered as separate stratum. Thus, in total, 36 separate strata were created for the sample design of the TDHS-2008. This included the 15 "divisions" by urban and rural stratum, and the seven metropolitan cities as mutually exclusive strata.

[4] See Hancioğlu, A. 1991. *Indirect estimation of mortality from information on the survival status of a close relative: Turkey 1970-1985,* Unpublished Doctoral Dissertation, Hacettepe Institute of Population Studies, Ankara.

B.4 Sample Allocation

The target sample size of the TDHS-2008 was set at 13,510 households which was 35 percent larger than that of the TDHS-1998 and 400 households larger than TDHS-2003. The increased sample size was mainly related with the designation of new strata, the special attention given to İstanbul, North and Southeast Anatolia region, and adjustments to ensure optimum allocation among the NUTS 1 regions. It also reflected a concern to allocate at least 900 households for each NUTS 1 region (Table B.2).

Table B.2 Allocation of sample households

Number of targeted households by region for the last four TDHS surveys in Turkey

Regional categories	TDHS 1993	TDHS 1998	TDHS 2003	TDHS 2008
Region				
West	2,700	2,800	4,330	3,860
South	1,700	1,800	1,840	1,900
Central	2,100	2,100	2,450	2,690
North	1,500	1,500	1,580	1,910
East	2,000	1,800	2,960	3,150
NUTS 1 Regions				
İstanbul	-	-	2,080	1,210
West Marmara	-	-	740	940
Aegean	-	-	1,000	1,050
East Marmara	-	-	1,040	1,030
West Anatolia	-	-	890	1900
Mediterranean	-	-	1,840	1,110
Central Anatolia	-	-	740	920
West Black Sea	-	-	1,030	1,230
East Black Sea	-	-	840	970
Northeast Anatolia	-	-	740	900
Central East Anatolia	-	-	740	900
Southeast Anatolia	-	-	1,480	1,350
Total	10,000	10,000	13,160	13,510

Note: The number of households for TDHS-1993 and TDHS-1998 are not shown since NUTS 1 regions have been used only since 2002.

To have an adequate representation of clusters within each of the five major regions, it was decided to select 25 households per standard urban segment (under the assumption of each cluster consisting of 100 households) and 15 households per standard rural segment. On this basis, the total number of selected standard segments by regions is shown in Table B.3.

Table B.3 Distribution of sample clusters

Number of clusters by region, NUTS 1 Regions and urban-rural residence, Turkey 2003

Regional categories	Urban segments (Population > 10,000) (Cluster size= 25 HHs)	Rural segments (Population < 10,000) (Cluster size= 15 HHs)	Number of segments
Region			
West	128	44	172
South	52	40	92
Central	80	46	126
North	56	34	90
East	84	70	154
NUTS 1 Regions			
İstanbul	46	4	50
West Marmara	28	16	44
Aegean	30	20	50
East Marmara	34	12	46
West Anatolia	36	14	50
Mediterranean	52	40	92
Central Anatolia	26	18	44
West Black Sea	36	22	58
East Black Sea	28	18	46
Northeast Anatolia	24	20	44
Central East Anatolia	24	20	44
Southeast Anatolia	36	30	66
Total	400	234	634

B.5 Sample Selection

Selection Procedures

For the first-stage sample selection, settlements were grouped within each of the 36 strata, and a systematic random sample of settlements with probability proportional to size (PPS) based on the 2007 Address Based Population Registration System was selected from the settlement lists. The output from this first stage of the selection was a list of all of the settlements included in the TDHS-2008 sample along with the number of clusters to be drawn from each settlement.

In Turkey, settlements are not divided into small area units with well-defined boundaries (e.g., census enumeration areas) that can be used for conducting surveys. For settlements in which 502 clusters were to be selected, however, household lists were available from the National Address Data Base that was prepared in 2007 by municipalities in collaboration with the TURKSTAT. For those settlements, the household lists were subdivided into segments of approximately 100. The list of these segments constituted the frame for the selection of the 502 clusters. For each of the selected clusters, TURKSTAT provided a list of the dwellings units with their full addresses (quarter, area, avenue/street, building and door number).

TURKSTAT was not able to provide household lists from the National Address Data Base for settlements without municipalities from which 132 clusters were to be drawn for the TDHS-2008. For these settlements, the list of households had to be prepared in the field. In the case of small settlements (less than 250 households), the entire settlement was listed. In the case of the small number of settlements in which there were more than 250 households, an estimate of the total number of households in the settlement was obtained through a quick count, and 250 households were listed.

Listing and Mapping Activities

Although the TURKSTAT had dwelling lists for many clusters, they did not have the maps correspond to the clusters. For this reason, the selected clusters had to be formed with streets that were not always adjacent to each other. Moreover, the lists provided by the TURKSTAT did not reflect changes that may have occurred during the period between when they were formed and the survey date. Two types of changes were possible: those that could be updated during listing, such as the construction of a new building on the street, a change in the use of a building (e.g., a flat can be used as an office instead of a dwelling), or changes in the names of streets, and those that were more problematic, e.g., the appearance of new quarters in urban centers.

In an effort to develop strategies for dealing with these as well as other possible problems that might arise, a pilot listing activity was undertaken in the capital, Ankara, before the actual listing activity began. The final listing forms, sketch map formats, and listing and mapping manuals were developed based on this pilot activity.

Forty-four university students/graduates trained during a five-day training program. Seventeen listing teams were then formed each including one mapper and one lister. Each team was provided with maps describing the location of the settlements they were expected to visit, as well as other materials needed for the listing. The listing operation started in mid-June 2008 and it was carried under the supervision of the research assistants and regional coordinators from the Hacettepe Institute of Population Studies.

The cluster (standard segment) size was around 100 households for the clusters in urban areas. Some of the selected villages did not include 100 households. In these cases, the village that was nearest to the selected village was included in the sample, and the names of these villages were provided to the listing teams; the lists of 100 households were completed from the two neighboring villages.

The listing operation was completed on the last week of July 2008. Overall, the quality of the listing work produced by the listers was good although it varied somewhat largely in response to problems the listing teams experienced in working in some geographic areas. Only one cluster was not listed due to problems of accessibility.

Spatial data were also collected for the cluster level by using GPS tools. For this purpose each listing team were given a hand computer with a GPS feature which was used to collect altitude, latitude and longitude information for the beginning and ending points of each cluster.

These machines were also used for navigation during the TDHS-2008 fieldwork and helped teams to find the location of clusters as well as individual addresses.

Free satellite photos and maps from "Google earth" and "Google map" were also used frequently by listing teams. They also were used to prepare maps for interviewing teams for use during the field activity.

B.6 Questionnaire Development and Pre-test

Questionnaires

Two main types of questionnaires were used to collect the TDHS-2008 data: the Household Questionnaire and the Individual Questionnaire for ever-married women of reproductive ages. The contents of these questionnaires were based on the DHS Model "A" Questionnaire, which was designed for the DHS program for use in countries with high contraceptive prevalence. Additions, deletions and modifications were made to the DHS model questionnaire in order to collect information particularly relevant to Turkey. Attention also was paid to ensuring the comparability of the TDHS-2008 findings with previous demographic surveys carried out by the Hacettepe Institute of Population Studies. In the process of designing the TDHS-2008 questionnaires, national and international population and health agencies were consulted for their comments.

All TDHS-2008 questionnaires were developed in Turkish and translated into English. English versions of the Household and Individual questionnaires are reproduced in Appendix E.

The Household Questionnaire was used to enumerate all usual members of and visitors to the selected households and to collect information relating to the socioeconomic position of the households. The Household Questionnaire included four sections. In the first section of the Household Questionnaire, basic information was collected on the age, sex, educational attainment, recent migration and residential mobility, employment, marital status, and relationship to the head of household of each person listed as a household member or visitor. The key objective of the first section of the Household Questionnaire was to obtain the information needed to identify women who were eligible for the individual interview as well as to provide basic demographic data for Turkish households. The second section of the Household Questionnaire included questions on never married women age 15-49, with the objective of collecting information on basic background characteristics of this group of women. The third section was used to collect information on the welfare of the elderly people. The final section of the Household Questionnaire was used to collect information on housing characteristics, such as the number of rooms, the flooring material, the heating system, the source of water, and the type of toilet facilities, and on the household's ownership of a variety of consumer goods. This section also incorporated a module that was used to collect information, from one-half of households, on salt iodization. In households where salt was present, test kits were used to test whether the salt used in the household was fortified with potassium iodine or potassium iodate, i.e. whether salt was iodized.

The Individual Questionnaire for ever-married women age 15-49 obtained information on the following subjects:

- Background characteristics
- Migration history
- Marriage history and information on marriage
- Pregnancy, birth history and fertility preferences
- Assisted reproductive techniques
- Knowledge and use of contraceptive methods
- Antenatal and postnatal care
- Breastfeeding, nutrition and diarrhea
- Immunization
- Women's work history and status
- Maternal and child anthropometry.

The Individual Questionnaire also included a monthly calendar, which was used to record fertility, contraception, and marriage for a period of approximately 6 years (depending on the month of interview) beginning in January 2003 up to the survey month. In addition, fieldwork teams measured the heights and weights of children under age five and ever-married women at ages 15-49.

Pre-test

In addition to initial pre-tests conducted during the period of questionnaire preparation, four-day pre-test was conducted in April 2008 to ensure that the questions in the TDHS-2008 questionnaires were in a logical sequence, that the wording of the questions was comprehensible, appropriate and meaningful, and that the pre-coded answers were adequate.

For this pretest, 20 interviewers were trained at the Hacettepe Institute of Population Studies for a period of ten days. The training period included both classroom training and interviews in the field. The interviewers were all university students and graduates. In addition to the interviewers, research assistants, who would later become supervisors and regional coordinators, also received training.

Fieldwork for the pre-test was carried out in one district in central Ankara, one district in squatter housing areas of Ankara, and one village in Ankara province. A total of 212 households and 198 ever-married women interviews were completed during the pre-test. Frequency distributions and cross tabulations were obtained shortly after the completion of the interviews. Based on the evaluation of these results and on the feedback obtained from the interviewers, as well as from the Ministry of Health, several minor changes were made to the TDHS-2008 questionnaires.

B.7 Data Collection Activities

Staff Recruitment and Training

Candidates for the positions of interviewers, field editors, supervisors and measurers were solicited in announcements sent to all universities in Ankara. All candidates for the field staff positions were interviewed in four groups by the staff of the Institute of Population Studies using interview guidelines prepared for this purpose. Individuals who met a number of the requirements and had the necessary qualifications were accepted into the training program.

All candidates accepted into the training program for the field staff positions were university students or university graduates. Previous survey experience was not among the qualifications for the candidates for the position of interviewers in order to ensure that the trainees had no biases that might result from their previous experience. Among 555 candidates, 240 applicants were selected during the interviews, and accepted for the training program.

Training of the candidates for the fieldwork positions was conducted in September 2008 for three weeks at the Hacettepe Institute of Population Studies. The training program included general lectures related to the demographic situation in Turkey, family planning and mother and child health; questionnaire training; role playing and mock interviews; field practice in areas not covered in the survey; and quizzes to test the progress and capabilities of the candidates. A variety of materials were used during the training sessions, including manuals for supervisors and editors, and for interviewers.

All trainees received the same classroom training during the first two weeks of the training period; at the end of the third week, supervisors, field editors, and measurers were selected from among the candidates, and a number of unsuccessful candidates were eliminated at this stage. Separate classroom training sessions were organized for supervisors, field editors, and measurers.

After the completion of classroom training, a four-day pilot study was conducted in the urban and rural areas of Ankara to complement the training program. Based on the performance of candidates during the training and pilot study, 152 individuals were selected for the main fieldwork and the data entry activities.

Fieldwork

Fieldwork for the TDHS-2008, including initial interviews, call-backs and re-interviews began in the first week of October 2008, and was completed at the first week of December 2008. The fieldwork of TDHS-2008 was carried out by 19 teams, each consisting of a supervisor, a field editor, a measurer, and 5 female interviewers. Fieldwork teams visited all 81 provinces in Turkey. All fieldwork activities were completed in one stage.

Senior academic staff of the Institute was responsible for visiting the fieldwork teams in turn, checking the quality of data collected, and reporting periodically to the field director in Ankara.

A total of 634 clusters were selected for the TDHS-2008 sample. Of these, interviews were successfully completed in 633 clusters. Due to problems of access, one cluster had not been listed and, consequently, was not visited by the fieldwork teams.

B.8 Data Processing and Analysis

TDHS-2008 questionnaires were returned to the Hacettepe Institute of Population Studies by the fieldwork teams for data processing as soon as interviews were completed in a province. The office editing staff checked that the questionnaires for all selected households and eligible respondents were returned from the field. A total of 25 data entry staff worked in data entry activities of the TDHS-2008. The data entry of the TDHS-2008 began in the beginning of November 2008, and was completed at the second week of the January 2009.

The data were entered and edited on microcomputers using the Census and Survey Processing System (CSPro) software. CSPro is designed to fulfill the census and survey data processing needs of data-producing organizations worldwide. CSPro is developed by MEASURE partners, the U.S. Bureau of the Census, ICF Macro's MEASURE DHS+ project, and SerPro S.A. CSPro allows range, skip, and consistency errors to be detected and corrected at the data entry stage. The machine entry and editing activities were initiated within two weeks after the beginning of the fieldwork, and were completed a week after the completion of the fieldwork. During data entry process, full verification was reached by entering each questionnaire to the computers twice by different data editors.

B.9 Calculation of Sample Weights

As mentioned earlier, the TDHS-2008 sample is not a self-weighted one. In particular, a disproportionate number of sample units were chosen from some of the strata, since there would have been inadequate numbers of observations for these areas if the target number of households had been proportionally allocated across regions. The following describes the procedure for calculating the weights to be used in the analysis of the TDHS-2008 results. Since the final selection was not implemented proportionally in strata, and since there was some variation in urban and rural non-response rates, separate weights are calculated for each of the 36 strata.

The major component of the weight is the reciprocal of the sampling fraction employed in calculating the number of units in that particular stratum:

$$W_h = 1 / f_h$$

The term f (h), the sampling fraction at the hth stratum, is the product of the probabilities of selection at every stage in a stratum:

$$f_h = P_{1h} * P_{2h} * P_{3h}$$

where P_{ih} is the probability of the sample unit in the i-th sample stage for the h-th strata.

A second component taken into account in the calculation of the weights is the level of nonresponse for the household and the individual interviews. The adjustment for household nonresponse is equal to the inverse value of:

R_{hh} = Completed households/Eligible households.

Eligible households include households where interviews were completed, households where there were no competent respondents, households where interviews were postponed and eventually not completed, refusals, and those dwellings that were not found by the fieldwork teams.

Similarly, the adjustment for non-response in the women's survey is equal to the inverse value of:

R_{ww} = Completed women questionnaires/Eligible women.

Approximately half of the households were selected for interview with special modules included in the household questionnaire. The rule for the selection of a household for a half-sample was very simple. If the cluster was even-numbered, then the households whose number was even were selected for the half-sample and vice versa in odd numbered. A separate set of sampling weights was calculated for the half-sample by following procedures similar to those described above. For the half samples, the adjustment for nonresponse is defined as:

R_{hs} = Completed questionnaires for half-sample/Eligible households for half-sample

The weights for the regions and the factors compensating for nonresponse are shown in Table B.4.1 for women and Table B.4.2 for half sample.

The weights for the TDHS-2008 also include an adjustment for the missing cluster. The unadjusted weights for the households were calculated by multiplying the above factors for each stratum; they were then standardized by multiplying these weights by the ratio of the number of completed interviewed households to the total unadjusted weighted number of households. A similar standardization procedure was followed in obtaining the weights for the individual women's and half sample data. The final weights for households and individual women are shown in Table B.5.

Table B.4.1. Design weights and nonresponse factors

Design weights and nonresponse factors by strata for the entire TDHS-2008 sample, Turkey 2008

Strata	Region	NUTS 1 Region	Residence	Inverse of sampling fraction	Household level	Women level
1	West	İstanbul	Urban/Metropol	3425414/1150	1078/789	594/506
2	West	İstanbul	Rural	55728/60	47/41	28/26
3	West	West Marmara	Urban	583440/700	615/519	346/314
4	West	West Marmara	Rural	392548/240	211/198	112/109
5	West	Aegean	Urban/Metropol	811628/400	367/318	215/201
6	West	Aegean	Urban	831914/250	217/194	147/140
7	West	Aegean	Rural	713302/240	212/205	117/109
8	Central	Aegean	Urban	242227/100	95/79	54/51
9	Central	Aegean	Rural	203272/60	56/55	52/48
10	West	East Marmara	Urban/Metropol	429416/400	366/307	243/221
11	West	East Marmara	Urban	673644/300	268/246	190/178
12	West	East Marmara	Rural	238686/120	115/112	85/76
13	Central	East Marmara	Urban	291593/150	127/114	91/85
14	Central	East Marmara	Rural	154023/60	50/48	37/34
15	Central	West Anatolia	Urban/Metropol	1123155/500	455/352	251/222
16	Central	West Anatolia	Urban/Metropol	244714/300	271/246	197/179
17	Central	West Anatolia	Urban	238708/100	78/62	44/43
18	Central	West Anatolia	Rural	240887/210	166/156	114/113
19	South	Mediterranean	Urban/Metropol	364155/400	348/327	247/232
20	South	Mediterranean	Urban	1244297/900	778/663	500/477
21	South	Mediterranean	Rural	712548/600	513/484	331/304
22	Central	Central Anatolia	Urban	593588/650	557/500	393/382
23	Central	Central Anatolia	Rural	346764/270	237/227	156/152
24	North	West Black Sea	Urban	403285/700	624/532	378/348
25	North	West Black Sea	Rural	340479/240	213/196	144/135
26	Central	West Black Sea	Urban	236382/200	186/162	115/107
27	Central	West Black Sea	Rural	192401/90	75/74	47/44
28	North	East Black Sea	Urban	308048/700	553/466	340/303
29	North	East Black Sea	Rural	336903/270	187/161	88/82
30	East	Northeast Anatolia	Urban	217599/600	555/526	439/413
31	East	Northeast Anatolia	Rural	216966/300	259/256	199/189
32	East	Central East Anatolia	Urban	390823/600	552/512	455/426
33	East	Central East Anatolia	Rural	273865/300	259/246	236/213
34	East	Southeast Anatolia	Urban/Metropol	261066/400	366/340	292/275
35	East	Southeast Anatolia	Urban	646905/500	453/418	360/326
36	East	Southeast Anatolia	Rural	362757/450	402/394	366/342

Table B.4.2 Design weights and nonresponse factors: Half sample

Design weights and nonresponse factors by strata for the half samples, Turkey 2008

Strata	Region	NUTS 1 Region	Residence	Inverse of sampling fraction	Household level
1	West	İstanbul	Urban/Metropol	2 * 3425414/1150	537/400
2	West	İstanbul	Rural	2 * 55728/60	25/22
3	West	West Marmara	Urban	2 * 583440/700	304/254
4	West	West Marmara	Rural	2 * 392548/240	107/100
5	West	Aegean	Urban/Metropol	2 * 811628/400	189/166
6	West	Aegean	Urban	2 * 831914/250	105/96
7	West	Aegean	Rural	2 * 713302/240	108/104
8	Central	Aegean	Urban	2 * 242227/100	48/36
9	Central	Aegean	Rural	2 * 203272/60	28/28
10	West	East Marmara	Urban/Metropol	2 * 429416/400	187/160
11	West	East Marmara	Urban	2 * 673644/300	136/125
12	West	East Marmara	Rural	2 * 238686/120	59/56
13	Central	East Marmara	Urban	2 * 291593/150	65/57
14	Central	East Marmara	Rural	2 * 154023/60	24/22
15	Central	West Anatolia	Urban/Metropol	2 * 1123155/500	230/173
16	Central	West Anatolia	Urban/Metropol	2 * 244714/300	136/126
17	Central	West Anatolia	Urban	2 * 238708/100	40/32
18	Central	West Anatolia	Rural	2 * 240887/210	82/78
19	South	Mediterranean	Urban/Metropol	2 * 364155/400	176/163
20	South	Mediterranean	Urban	2 * 1244297/900	381/322
21	South	Mediterranean	Rural	2 * 712548/600	252/238
22	Central	Central Anatolia	Urban	2 * 593588/650	281/249
23	Central	Central Anatolia	Rural	2 * 346764/270	117/113
24	North	West Black Sea	Urban	2 * 403285/700	310/256
25	North	West Black Sea	Rural	2 * 340479/240	109/102
26	Central	West Black Sea	Urban	2 * 236382/200	93/80
27	Central	West Black Sea	Rural	2 * 192401/90	37/36
28	North	East Black Sea	Urban	2 * 308048/700	269/231
29	North	East Black Sea	Rural	2 * 336903/270	86/74
30	East	Northeast Anatolia	Urban	2 * 217599/600	271/260
31	East	Northeast Anatolia	Rural	2 * 216966/300	126/124
32	East	Central East Anatolia	Urban	2 * 390823/600	279/262
33	East	Central East Anatolia	Rural	2 * 273865/300	128/121
34	East	Southeast Anatolia	Urban/Metropol	2 * 261066/400	186/172
35	East	Southeast Anatolia	Urban	2 * 646905/500	225/209
36	East	Southeast Anatolia	Rural	2 * 362757/450	201/196

Table B.5. Final sample weights

Final weights by strata, Turkey 2008

Strata	Region	NUTS 1 Region	Residence	Household weight in entire sample	Women weight in entire sample	Household weight in half sample
1	West	İstanbul	Urban/Metropol	2,62369	2,91133	2,57124
2	West	İstanbul	Rural	0,68643	0,69875	0,67866
3	West	West Marmara	Urban	0,63674	0,66321	0,64143
4	West	West Marmara	Rural	1,12371	1,09141	1,12533
5	West	Aegean	Urban/Metropol	1,50971	1,52643	1,48547
6	West	Aegean	Urban	2,39968	2,38169	2,34029
7	West	Aegean	Rural	1,98153	2,01049	1,98457
8	Central	Aegean	Urban	1,87791	1,87950	2,07671
9	Central	Aegean	Rural	2,22387	2,27727	2,17842
10	West	East Marmara	Urban/Metropol	0,82512	0,85758	0,80678
11	West	East Marmara	Urban	1,57712	1,59126	1,57091
12	West	East Marmara	Rural	1,31668	1,39197	1,34748
13	Central	East Marmara	Urban	1,39618	1,41289	1,42541
14	Central	East Marmara	Rural	1,72393	1,77331	1,80068
15	Central	West Anatolia	Urban/Metropol	1,87195	2,00059	1,92028
16	Central	West Anatolia	Urban/Metropol	0,57933	0,60268	0,56614
17	Central	West Anatolia	Urban	1,93609	1,87263	1,91863
18	Central	West Anatolia	Rural	0,78693	0,75042	0,77540
19	South	Mediterranean	Urban/Metropol	0,62462	0,62859	0,63207
20	South	Mediterranean	Urban	1,04593	1,03633	1,05188
21	South	Mediterranean	Rural	0,81151	0,83520	0,80854
22	Central	Central Anatolia	Urban	0,65586	0,63780	0,66266
23	Central	Central Anatolia	Rural	0,86447	0,83864	0,85505
24	North	West Black Sea	Urban	0,43566	0,44730	0,44859
25	North	West Black Sea	Rural	0,99394	1,00215	0,97481
26	Central	West Black Sea	Urban	0,87486	0,88878	0,88347
27	Central	West Black Sea	Rural	1,39685	1,41039	1,41279
28	North	East Black Sea	Urban	0,33668	0,35710	0,32952
29	North	East Black Sea	Rural	0,93436	0,94782	0,93244
30	East	Northeast Anatolia	Urban	0,24670	0,24787	0,24306
31	East	Northeast Anatolia	Rural	0,47172	0,46948	0,47253
32	East	Central East Anatolia	Urban	0,45275	0,45709	0,44601
33	East	Central East Anatolia	Rural	0,61964	0,64895	0,62095
34	East	Southeast Anatolia	Urban/Metropol	0,45295	0,45461	0,45383
35	East	Southeast Anatolia	Urban	0,90396	0,94357	0,89561
36	East	Southeast Anatolia	Rural	0,54855	0,55490	0,54990

B.10 Coverage of the Sample

The results of sample implementation for the household and the individual interviews for the country as a whole, for urban and rural areas, and for the five regions of Turkey are shown in Tables B.6.1 and for NUTS 1 regions in Table B.6.2 The results indicate that, of the 13,521 households selected, the TDHS fieldwork teams successfully completed interviews with 10,525 (78 percent). The main reasons that eligible households were not interviewed were that some of the listed dwelling units were found to be vacant at the time of the interview or the household was away for an extended period. A total of 11,911 households were located and visited, of which 10,525 households were successfully interviewed. Overall, the household response rate was calculated as 88 percent.

The household response rate was higher in rural areas than in urban areas, and highest in the East region (95 percent). Among NUTS 1 regions, the household response rate was the lowest in İstanbul (74 percent) and highest in Northeast Anatolia (96 percent).

In the interviewed households, 8,003 eligible women were identified, of whom 93 percent were interviewed. Among the number of eligible women not interviewed in the survey, the principal reason for non-response was the failure to find the woman at home after repeated visits to the household.

The eligible woman response rate was similar in urban and rural areas, and it varied across the five regions from 91 to 94 percent. The response rate for eligible women in İstanbul (86 percent) was the lowest among the NUTS 1 regions. The response rates of 12 NUTS 1 ranged between 86 and 97 percent. The highest response rate was in Central Anatolia (97 percent).

The overall response rate for women in the TDHS-2008 was calculated as 82 percent. It ranged from 76 percent in the Central region to 88 percent in the East region. In terms of NUTS 1 regions, the overall response rates ranged from 63 percent in İstanbul to 91 percent in Northeast Anatolia.

Table B.6.1 Sample implementation according to residence and region

Percent distribution of households and eligible women by results of the household and individual interviews, and household, eligible women and overall response rates, according to urban-rural residence and region, Turkey 2008

	Residence		Region					
Result	Urban	Rural	West	South	Central	North	East	Total
Selected households								
Completed (C)	76.6	81.4	75.5	77.5	77.1	70.9	85.7	77.8
None of household members or no eligible member at home during visit (HP)	5.7	2.4	7.4	2.8	5.0	5.9	2.2	4.8
Postponed (P)	0.3	0.0	0.6	0.0	0.2	0.2	0.0	0.2
Refused (R)	5.4	1.1	6.0	5.3	4.2	4.0	1.7	4.3
Dwelling not found (DNF)	0.8	0.5	0.5	0.2	0.7	1.3	1.0	0.7
Household absent (HA)	5.1	7.1	3.5	7.4	6.4	9.8	4.0	5.6
Dwelling vacant/address not a dwelling (DV)	5.6	6.6	5.8	5.6	5.8	7.5	5.2	5.9
Dwelling destroy (DD)	0.0	0.2	0.0	0.2	0.1	0.0	0.1	0.1
Partly Completed (PC)	0.2	0.2	0.2	0.3	0.2	0.3	0.0	0.2
Other (O)	0.3	0.4	0.4	0.6	0.3	0.1	0.2	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	10,017	3,504	3,858	1,902	2,691	1,910	3,160	13,521
Household response rate (HRR[1])	86.1	95.0	83.7	89.9	88.2	85.9	94.6	88.4
Eligible women								
Completed (EWC)	92.2	93.6	90.5	94.0	94.1	91.4	93.1	92.5
Not at home (EWNH)	5.0	4.7	5.7	4.3	3.6	6.5	4.7	4.9
Postponed (EWP)	0.2	0.0	0.4	0.0	0.3	0.0	0.1	0.2
Refused (EWR)	1.6	0.4	2.3	0.5	1.4	1.3	0.8	1.3
Partly completed (EWPC)	0.5	0.5	0.6	0.7	0.1	0.3	0.6	0.5
Incapacitated (EWI)	0.2	0.3	0.3	0.3	0.1	0.2	0.1	0.2
Other (EWO)	0.3	0.5	0.2	0.3	0.3	0.3	0.6	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	5,891	2,112	2,073	1,078	1,551	950	2,351	8,003
Eligible women response rate (EWRR[2])	92.2	93.6	90.5	94.0	94.1	91.4	93.1	92.5
Overall response rate (ORR[3])	79.4	88.9	75.8	84.5	83.0	78.5	88.1	81.8

Note: The household response rate is calculated for completed households as a proportion of completed, no competent respondent, postponed, refused, dwelling not found and partly completed. The eligible woman response rate is calculated for completed interviews as a proportion of completed, not at home, postponed, refused, partially completed and "other." The overall response rate is the product of the household and woman response rates.

[1] Using the number of households falling into specific response categories, the household response rate (HRR) is calculated as:

$$\frac{C}{C + HP + P + R + DNF + PC}$$

[2] Using the number of eligible women falling into specific response categories, the eligible woman response rate (EWRR) is calculated as:

$$\frac{EWC}{EWC + EWNH + EWP + EWR + EWPC + EWI + EWO}$$

[3] The overall response rate (ORR) is calculated as:

$$ORR = HRR * EWRR$$

Table B.6.2 Sample implementation according to NUTS 1 regions

Percent distribution of households and eligible women by results of the household and individual interviews, and household, eligible women and overall response rates, according to NUTS 1 regions, Turkey 2008

	Region of residence (NUTS 1)												
Result	İstanbul	West Marmara	Aegean	East Marmara	West Anatolia	Mediter-ranean	Central Anatolia	West Black Sea	East Black Sea	North-east A.	Central East A.	South-east A.	Total
Selected households													
Completed (C)	68.7	75.3	81.0	80.3	73.5	77.5	79.1	78.3	64.6	86.8	83.5	86.2	77.8
None of household members or no eligible member at home during visit (HP)	12.3	5.8	5.4	3.4	7.7	2.8	3.4	5.8	4.9	1.6	1.6	3.0	4.8
Postponed (P)	1.9	0.0	0.1	0.1	0.1	0.0	0.0	0.4	0.2	0.0	0.0	0.0	0.2
Refused (R)	9.4	5.1	3.1	4.9	5.3	5.3	3.5	3.1	4.8	1.6	1.7	1.9	4.3
Dwelling not found (DNF)	0.5	0.5	0.1	1.0	0.6	0.2	0.3	1.4	1.4	0.4	2.5	0.4	0.7
Household absent (HA)	0.8	6.7	3.4	3.7	5.4	7.4	8.7	5.7	14.0	4.8	2.8	4.3	5.6
Dwelling vacant/address not a dwelling (DV)	4.8	6.4	6.4	6.3	6.6	5.6	4.9	5.1	9.6	4.6	7.4	4.2	5.9
Dwelling destroy (DD)	0.0	0.1	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.1	0.2	0.1	0.1
Partly Completed (PC)	0.3	0.0	0.4	0.3	0.2	0.3	0.1	0.2	0.2	0.0	0.1	0.0	0.2
Other (O)	1.3	0.0	0.1	0.1	0.5	0.6	0.1	0.0	0.1	0.2	0.3	0.0	0.3
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of sampled households	1,206	953	1,049	1,029	1,110	1,902	922	1,229	970	901	896	1,347	13,521
Household response rate (HRR)	73.8	86.8	89.9	89.3	84.1	89.9	91.6	87.8	84.7	96.1	93.5	94.3	88.4
Eligible women													
Completed (EWC)	85.7	92.4	93.8	92.0	91.9	94.0	97.3	92.7	90.0	94.4	92.4	92.7	92.5
Not at home (EWNH)	7.9	4.4	4.3	5.6	4.8	4.3	2.0	4.8	7.7	3.9	4.3	5.6	4.9
Postponed (EWP)	1.0	0.4	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.2	0.0	0.1	0.2
Refused (EWR)	3.5	2.6	1.4	1.2	2.5	0.5	0.4	1.5	0.9	0.2	1.3	0.9	1.3
Partly completed (EWPC)	1.3	0.0	0.3	0.5	0.0	0.7	0.2	0.3	0.5	0.6	0.7	0.5	0.5
Incapacitated (EWI)	0.0	0.2	0.2	0.8	0.2	0.3	0.0	0.1	0.2	0.0	0.0	0.2	0.2
Other (EWO)	0.6	0.0	0.0	0.0	0.7	0.3	0.2	0.0	0.7	0.8	1.3	0.1	0.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	622	458	585	646	606	1,078	549	684	428	638	682	1,026	8,003
Eligible women response rate (EWRR)	85.7	92.4	93.8	92.0	91.9	94.0	97.3	92.7	90.0	94.4	92.4	92.7	92.5
Overall response rate (ORR)	63.2	80.2	84.4	82.1	77.3	84.5	89.1	81.4	76.2	90.6	86.4	87.4	81.8

SAMPLING ERRORS

APPENDIX C

A. Sinan Türkyılmaz and Tuğba Adalı

The estimates from a sample survey are affected by two types of errors: (1) nonsampling errors, and (2) sampling errors. Nonsampling errors are the results of mistakes made in implementing data collection and data processing, such as failure to locate and interview the correct household, misunderstanding of the questions on the part of either the interviewer or the respondent, and data entry errors. Although numerous efforts were made during the implementation of the TDHS-2008 to minimize this type of error, nonsampling errors are impossible to avoid and difficult to evaluate statistically.

Sampling errors, on the other hand, can be evaluated statistically. The sample of respondents selected in the TDHS-2008 is only one of many samples that could have been selected from the same population, using the same design and expected size. Each of these samples would yield results that differ somewhat from the results of the actual sample selected. Sampling errors are a measure of the variability between all possible samples. Although the degree of variability is not known exactly, it can be estimated from the survey results.

A sampling error is usually measured in terms of the *standard error* for a particular statistic (mean, percentage, etc.), which is the square root of the variance. The standard error can be used to calculate confidence intervals within which the true value for the population can reasonably be assumed to fall. For example, for any given statistic calculated from a sample survey, the value of that statistic will fall within a range of plus or minus two times the standard error of that statistic in 95 percent of all possible samples of identical size and design.

If the sample of respondents had been selected as a simple random sample, it would have been possible to use straightforward formulas for calculating sampling errors. However, the TDHS-2008 sample is the result of a three-stage stratified design, and, consequently, it was necessary to use more complex formulae. The computer software used to calculate sampling errors for the TDHS-2008 is the ISSA Sampling Error Module (SAMPERR). This module used the Taylor linearization method of variance estimation for survey estimates that are means or proportions. The Jackknife repeated replication method is used for variance estimation of more complex statistics such as fertility and mortality rates.

The Taylor linearization method treats any percentage or average as a ratio estimate, $r = y/x$, where y represents the total sample value for variable y, and x represents the total number of cases in the group or subgroup under consideration. The variance of r is computed using the formula given below, with the standard error being the square root of the variance in which:

$$var(r) = \frac{1 - f}{x^2} \sum_{h=1}^{H} \left[\frac{m_h}{m_h - 1} \left(\sum_{i=1}^{m_h} z_{hi}^2 - \frac{z_h^2}{m_h} \right) \right]$$

in which

$$z_{hi} = y_{hi} - r.x_{hi}\,, and \quad z_h = y_h - r.x_h$$

where h represents the stratum which varies from 1 to H,
m_h is the total number of enumeration areas selected in the hth stratum,
y_{hi} is the sum of the weighted values of variable y in ith cluster in the hth stratum,
x_{hi} is the sum of the weighted number of cases in ith cluster in the hth stratum, and
f is the overall sampling fraction, which is so small that it is ignored.

The Jackknife repeated replication method derives estimates of complex rates from each of several replications of the parent sample, and calculates standard errors for these estimates using simple formulae. Each replication considers *all but one* cluster in the calculation of the estimates. Pseudo-independent replications are thus created. In the TDHS, there were 633 non-empty clusters. Hence, 633 replications were created. The variance of a rate r is calculated as follows:

$$var(r) = \frac{1}{k(k-1)} \sum_{i=1}^{k} (r_i - r)^2$$

in which

$$r_i = k\,r - (k-1)\,r_{(i)}$$

where r is the estimate computed from the full sample of 633 clusters,
$r_{(i)}$ is the estimate computed from the reduced sample of 632 clusters (ith cluster excluded), and
k is the total number of clusters.

In addition to the standard error, SAMPERR computes the design effect (DEFT) for each estimate, which is defined as the ratio between the standard error using the given sample design and the standard error that would result if a simple random sample had been used. A DEFT value of 1.0 indicates that the sample design is as efficient as a simple random sample, while a value greater than 1.0 indicates the increase in the sampling error due to the use of a more complex and less statistically efficient design. SAMPERR also computes the relative error and confidence limits for the estimates.

Sampling errors for the TDHS-2008 are calculated for a number of variables considered to be of primary interest. Results for women are presented in this appendix for the country as a whole, for urban and rural areas, for each of the five regions, and for the twelve NUTS1 regions. For each variable, the type of statistic (mean, proportion, or rate) and the base population are given in Table C.1. Tables C.2-C.21 present the value of the statistic (R), its standard error (SE), the number of unweighted (N) and weighted (WN) cases, the design effect (DEFT), the relative

standard error (SE/R), and the 95 percent confidence limits (R±2SE), for each variable. The DEFT is considered undefined when the standard error considering simple random sample is zero (when the estimate is close to 0 or 1).

In general, the relative standard errors for most estimates for the country as a whole are small, except for estimates of very small proportions. There are some differentials in the relative standard errors for the estimates for sub-populations. For example, for the contraceptive prevalence rate (CPR), i.e. the proportion of currently married women aged 15-49 who were using any method of contraception at the time of the interview, the relative standard error for the country as a whole, for urban areas, and for rural areas are 0.9 percent, 1.1 percent, and 1.8 percent, respectively.

To obtain the 95 percent confidence limits for the CPR, one adds and subtracts twice the standard error to the sample estimate, i.e. $0.730 \pm 2x0.007$. The results indicate that there is a high probability (95 percent) that the true value of the CPR for the country as a whole lies between 71.6 percent and 74.4 percent.

Table C.1 List of selected variables for sampling errors, Turkey 2008

Variable	Estimate	Base population
Urban residence	Proportion	Ever married women 15-49
No education	Proportion	Ever married women 15-49
With secondary education or higher	Proportion	Ever married women 15-49
Currently married (in union)	Proportion	Ever married women 15-49
Currently pregnant	Proportion	All women 15-49
Children ever born	Mean	All women 15-49
Children surviving	Mean	All women 15-49
Children ever born to women 40-49	Mean	All women 15-49
Knowing any contraceptive method	Proportion	Currently married women 15-49
Knowing any modern contraceptive method	Proportion	Currently married women 15-49
Ever used any contraceptive method	Proportion	Currently married women 15-49
Currently using any contraceptive method	Proportion	Currently married women 15-49
Currently using a modern method	Proportion	Currently married women 15-49
Currently using pill	Proportion	Currently married women 15-49
Currently using IUD	Proportion	Currently married women 15-49
Currently using condom	Proportion	Currently married women 15-49
Currently using injectables	Proportion	Currently married women 15-49
Currently using female sterilization	Proportion	Currently married women 15-49
Currently using periodic abstinence	Proportion	Currently married women 15-49
Currently using withdrawal	Proportion	Currently married women 15-49
Obtained method from public sector source	Proportion	Currently married women 15-49
Want no more children	Proportion	Currently married women 15-49
Want to delay birth at least 2 years	Proportion	Currently married women 15-49
Ideal number of children	Mean	Ever married women 15-49
Mothers received medical care at delivery	Proportion	Births in last 5 years
Child having health card, seen	Proportion	Children 15-26 months
Child received BCG vaccination	Proportion	Children 15-26 months
Child received DPT vaccination (3 doses)	Proportion	Children 15-26 months
Child received polio vaccination (3 doses)	Proportion	Children 15-26 months
Child received measles vaccination	Proportion	Children 15-26 months
Child fully immunized	Proportion	Children 15-26 months
Height-for-age (-2SD)	Proportion	Children 0-59 months
Weight-for-height (-2SD)	Proportion	Children 0-59 months
Weight-for-age (-2SD)	Proportion	Children 0-59 months
BMI < 18.5	Proportion	Women15-49 who gave birth in 5 years
Total fertility rate (last 3 years)	Rate	Women-years of exposure to child-bearing
Neonatal mortality (last 5 years)	Rate	Number of births exposed to death
Post-neonatal mortality (last 5 years)	Rate	Number of births exposed to death
Infant mortality (last 5 years)	Rate	Number of births exposed to death
Child mortality (last 5 years)	Rate	Number of births exposed to death
Under-five mortality (last 5 years)	Rate	Number of births exposed to death

Table C.2 Sampling errors: National Sample, Turkey 2008

Variable	Value R	Standard error SE	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.758	0.006	7405	7405	1.306	0.009	0.745	0.771
No education	0.183	0.008	7405	7405	1.796	0.044	0.167	0.200
With secondary education or higher	0.298	0.011	7405	7405	2.103	0.038	0.276	0.320
Currently married (in union)	0.945	0.004	7405	7405	1.463	0.004	0.937	0.953
Currently pregnant	0.039	0.002	11184	10738	1.182	0.061	0.035	0.044
Children ever born	1.704	0.042	11184	10738	0.938	0.025	1.620	1.789
Children surviving	1.596	0.040	11184	10738	0.944	0.025	1.517	1.675
Children ever born to women 40-49	3.313	0.059	2231	2339	1.320	0.018	3.195	3.432
Knowing any contraceptive method	0.998	0.000	7042	6999	0.880	0.000	0.997	0.999
Knowing any modern contraceptive method	0.996	0.001	7042	6999	1.024	0.001	0.994	0.997
Ever used any contraceptive method	0.913	0.004	7042	6999	1.196	0.004	0.905	0.921
Currently using any contraceptive method	0.730	0.007	7042	6999	1.291	0.009	0.716	0.744
Currently using a modern method	0.460	0.007	7042	6999	1.258	0.016	0.445	0.475
Currently using pill	0.053	0.003	7042	6999	1.273	0.064	0.047	0.060
Currently using IUD	0.169	0.006	7042	6999	1.293	0.034	0.157	0.180
Currently using condom	0.143	0.006	7042	6999	1.459	0.043	0.131	0.155
Currently using injectables	0.009	0.001	7042	6999	1.228	0.157	0.006	0.011
Currently using female sterilization	0.083	0.004	7042	6999	1.239	0.049	0.075	0.091
Currently using periodic abstinence	0.006	0.001	7042	6999	1.303	0.205	0.003	0.008
Currently using withdrawal	0.262	0.007	7042	6999	1.407	0.028	0.247	0.277
Obtained method from public sector source	0.600	0.012	3162	3243	1.321	0.019	0.577	0.623
Want no more children	0.588	0.007	7039	6993	1.234	0.012	0.573	0.602
Want to delay birth at least 2 years	0.143	0.006	7039	6993	1.367	0.040	0.132	0.155
Ideal number of children	2.520	0.021	7261	7282	1.499	0.008	2.478	2.562
Mothers received medical care at delivery	0.913	0.008	3857	3463	1.306	0.009	0.897	0.929
Child having health card, seen	0.726	0.021	774	711	1.233	0.029	0.684	0.768
Child received BCG vaccination	0.959	0.006	774	711	0.788	0.006	0.948	0.971
Child received DPT vaccination (3 doses)	0.893	0.012	774	711	0.988	0.013	0.870	0.917
Child received polio vaccination (3 doses)	0.888	0.013	774	711	1.076	0.015	0.863	0.914
Child received measles vaccination	0.893	0.015	774	711	1.321	0.017	0.862	0.923
Child fully immunized	0.805	0.018	774	711	1.192	0.022	0.769	0.841
Height-for-age (-2SD)	0.103	0.007	2733	2474	1.119	0.072	0.089	0.118
Weight-for-height (-2SD)	0.009	0.002	2733	2474	1.159	0.249	0.004	0.013
Weight-for-age (-2SD)	0.028	0.004	2733	2474	1.063	0.128	0.021	0.036
BMI < 18.5	0.016	0.003	2465	2315	1.117	0.180	0.010	0.022
Total fertility rate (last 3 years)	2.156	0.059	na	30944	1.369	0.027	2.038	2.273
Neonatal mortality (last 5 years)	13.237	2.289	3912	3511	1.107	0.173	8.658	17.816
Post-neonatal mortality (last 5 years)	4.164	1.021	3914	3512	0.933	0.245	2.121	6.206
Infant mortality (last 5 years)	17.400	2.527	3914	3512	1.080	0.145	12.347	22.454
Child mortality (last 5 years)	6.351	1.550	3923	3523	1.265	0.244	3.252	9.450
Under-five mortality (last 5 years)	23.641	2.864	3925	3524	1.103	0.121	17.914	29.368
Neonatal mortality (last 10 years)	15.041	1.519	8117	7289	1.010	0.101	12.003	18.080
Post-neonatal mortality (last 10 years)	10.431	1.320	8122	7295	1.115	0.127	7.790	13.071
Infant mortality (last 10 years)	25.472	2.158	8122	7295	1.103	0.085	21.156	29.788
Child mortality (last 10 years)	7.679	1.273	8129	7299	1.208	0.166	5.132	10.225
Under-five mortality (last 10 years)	32.955	2.511	8134	7305	1.135	0.076	27.934	37.976

NA = Not applicable

Table C.3 Sampling errors: Urban Areas, Turkey 2008

Variable	Value R	Standard error SE	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	1.000	0.000	5429	5615	na	0.000	1.000	1.000
No education	0.152	0.010	5429	5615	2.027	0.065	0.133	0.172
With secondary education or higher	0.348	0.015	5429	5615	2.267	0.042	0.318	0.377
Currently married (in union)	0.941	0.005	5429	5615	1.532	0.005	0.931	0.951
Currently pregnant	0.037	0.003	8457	8203	1.047	0.082	0.031	0.043
Children ever born	1.590	0.067	8457	8203	0.727	0.042	1.457	1.723
Children surviving	1.502	0.063	8457	8203	0.727	0.042	1.376	1.627
Children ever born to women 40-49	3.100	0.070	1628	1757	1.467	0.022	2.960	3.239
Knowing any contraceptive method	0.999	0.000	5141	5284	0.931	0.000	0.998	1.000
Knowing any modern contraceptive method	0.998	0.001	5141	5284	1.125	0.001	0.996	0.999
Ever used any contraceptive method	0.926	0.004	5141	5284	1.201	0.005	0.917	0.935
Currently using any contraceptive method	0.743	0.008	5141	5284	1.331	0.011	0.727	0.759
Currently using a modern method	0.478	0.009	5141	5284	1.226	0.018	0.461	0.495
Currently using pill	0.056	0.004	5141	5284	1.304	0.075	0.048	0.064
Currently using IUD	0.175	0.007	5141	5284	1.262	0.038	0.162	0.189
Currently using condom	0.154	0.007	5141	5284	1.476	0.048	0.139	0.169
Currently using injectables	0.008	0.002	5141	5284	1.287	0.202	0.005	0.011
Currently using female sterilization	0.083	0.005	5141	5284	1.246	0.058	0.073	0.092
Currently using periodic abstinence	0.007	0.001	5141	5284	1.289	0.216	0.004	0.010
Currently using withdrawal	0.256	0.008	5141	5284	1.372	0.033	0.239	0.273
Obtained method from public sector source	0.580	0.013	2445	2550	1.277	0.022	0.554	0.605
Want no more children	0.583	0.008	5138	5277	1.210	0.014	0.566	0.600
Want to delay birth at least 2 years	0.146	0.007	5138	5277	1.442	0.049	0.132	0.161
Ideal number of children	2.466	0.025	5355	5541	1.593	0.010	2.416	2.515
Mothers received medical care at delivery	0.957	0.006	2589	2475	1.275	0.006	0.945	0.969
Child having health card, seen	0.758	0.026	524	515	1.339	0.035	0.705	0.810
Child received BCG vaccination	0.965	0.006	524	515	0.733	0.006	0.953	0.977
Child received DPT vaccination (3 doses)	0.921	0.013	524	515	1.078	0.014	0.894	0.947
Child received polio vaccination (3 doses)	0.917	0.016	524	515	1.258	0.017	0.886	0.948
Child received measles vaccination	0.903	0.020	524	515	1.532	0.023	0.862	0.944
Child fully immunized	0.842	0.023	524	515	1.384	0.027	0.796	0.887
Height-for-age (-2SD)	0.076	0.007	1846	1781	1.109	0.097	0.061	0.091
Weight-for-height (-2SD)	0.008	0.003	1846	1781	1.286	0.338	0.003	0.014
Weight-for-age (-2SD)	0.021	0.004	1846	1781	1.145	0.188	0.013	0.029
BMI < 18.5	0.013	0.003	1742	1713	1.141	0.244	0.007	0.019
Total fertility rate (last 3 years)	2.005	0.065	na	23502	1.343	0.033	1.875	2.135
Neonatal mortality (last 10 years)	13.146	1.748	5432	5185	1.029	0.133	9.650	16.642
Post-neonatal mortality (last 10 years)	9.072	1.590	5433	5188	1.204	0.175	5.892	12.251
Infant mortality (last 10 years)	22.218	2.556	5433	5188	1.148	0.115	17.105	27.330
Child mortality (last 10 years)	6.646	1.531	5438	5190	1.321	0.230	3.585	9.707
Under-five mortality (last 10 years)	28.716	2.862	5439	5193	1.150	0.100	22.993	34.439

NA = Not applicable

Table C.4 Sampling errors: Rural Areas, Turkey 2008

Variable	Value R	Standard error SE	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.000	0.000	1976	1790	na	na	0.000	0.000
No education	0.281	0.013	1976	1790	1.310	0.047	0.254	0.307
With secondary education or higher	0.142	0.013	1976	1790	1.647	0.091	0.116	0.168
Currently married (in union)	0.959	0.005	1976	1790	1.051	0.005	0.949	0.968
Currently pregnant	0.047	0.004	2871	2533	0.983	0.085	0.039	0.055
Children ever born	2.076	0.077	2871	2533	0.989	0.037	1.923	2.230
Children surviving	1.900	0.069	2871	2533	0.991	0.037	1.761	2.039
Children ever born to women 40-49	3.932	0.111	607	586	1.080	0.028	3.709	4.154
Knowing any contraceptive method	0.995	0.001	1901	1716	0.852	0.001	0.993	0.998
Knowing any modern contraceptive method	0.990	0.002	1901	1716	0.972	0.002	0.985	0.994
Ever used any contraceptive method	0.872	0.009	1901	1716	1.190	0.010	0.854	0.890
Currently using any contraceptive method	0.689	0.012	1901	1716	1.146	0.018	0.665	0.714
Currently using a modern method	0.404	0.016	1901	1716	1.382	0.039	0.373	0.435
Currently using pill	0.046	0.005	1901	1716	1.094	0.115	0.035	0.056
Currently using IUD	0.150	0.011	1901	1716	1.400	0.077	0.127	0.172
Currently using condom	0.110	0.010	1901	1716	1.419	0.093	0.089	0.130
Currently using injectables	0.011	0.003	1901	1716	1.091	0.236	0.006	0.016
Currently using female sterilization	0.085	0.008	1901	1716	1.209	0.091	0.069	0.100
Currently using periodic abstinence	0.002	0.001	1901	1716	1.290	0.640	0.000	0.005
Currently using withdrawal	0.280	0.016	1901	1716	1.525	0.056	0.249	0.312
Obtained method from public sector source	0.675	0.027	717	692	1.549	0.040	0.621	0.729
Want no more children	0.603	0.015	1901	1716	1.309	0.024	0.574	0.632
Want to delay birth at least 2 years	0.134	0.008	1901	1716	1.008	0.059	0.118	0.150
Ideal number of children	2.692	0.040	1906	1741	1.288	0.015	2.611	2.772
Mothers received medical care at delivery	0.802	0.021	1268	988	1.341	0.026	0.760	0.844
Child having health card, seen	0.644	0.031	250	196	0.938	0.048	0.582	0.706
Child received BCG vaccination	0.943	0.014	250	196	0.876	0.015	0.915	0.970
Child received DPT vaccination (3 doses)	0.822	0.025	250	196	0.904	0.030	0.773	0.871
Child received polio vaccination (3 doses)	0.814	0.023	250	196	0.840	0.028	0.768	0.859
Child received measles vaccination	0.865	0.017	250	196	0.714	0.019	0.832	0.899
Child fully immunized	0.710	0.026	250	196	0.818	0.037	0.658	0.762
Height-for-age (-2SD)	0.174	0.018	887	692	1.156	0.101	0.139	0.209
Weight-for-height (-2SD)	0.009	0.003	887	692	0.740	0.273	0.004	0.015
Weight-for-age (-2SD)	0.048	0.008	887	692	0.954	0.161	0.032	0.063
BMI < 18.5	0.026	0.007	723	601	1.094	0.262	0.012	0.039
Total fertility rate (last 3 years)	2.676	0.130	na	7258	1.438	0.049	2.416	2.935
Neonatal mortality (last 10 years)	19.698	2.958	2685	2104	0.973	0.150	13.783	25.614
Post-neonatal mortality (last 10 years)	13.773	2.399	2689	2107	0.978	0.174	8.975	18.570
Infant mortality (last 10 years)	33.471	3.970	2689	2107	1.022	0.119	25.531	41.411
Child mortality (last 10 years)	10.213	2.307	2691	2109	1.034	0.226	5.599	14.827
Under-five mortality (last 10 years)	43.342	5.019	2695	2112	1.124	0.116	33.303	53.381

NA = Not applicable

Table C.5 Sampling errors: West, Turkey 2008

Variable	Value R	Standard error SE	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.859	0.008	1876	3252	1.018	0.010	0.843	0.876
No education	0.119	0.015	1876	3252	1.969	0.124	0.090	0.149
With secondary education or higher	0.338	0.023	1876	3252	2.101	0.068	0.292	0.384
Currently married (in union)	0.938	0.007	1876	3252	1.333	0.008	0.923	0.952
Currently pregnant	0.036	0.004	2645	4628	1.150	0.124	0.027	0.044
Children ever born	1.497	0.072	2645	4628	0.946	0.048	1.353	1.640
Children surviving	1.411	0.067	2645	4628	0.939	0.047	1.278	1.544
Children ever born to women 40-49	2.805	0.092	653	1124	1.368	0.033	2.621	2.989
Knowing any contraceptive method	0.999	0.001	1763	3049	0.898	0.001	0.998	1.000
Knowing any modern contraceptive method	0.998	0.001	1763	3049	1.101	0.001	0.995	1.000
Ever used any contraceptive method	0.940	0.006	1763	3049	1.095	0.007	0.927	0.952
Currently using any contraceptive method	0.763	0.012	1763	3049	1.196	0.016	0.739	0.787
Currently using a modern method	0.482	0.012	1763	3049	0.999	0.025	0.458	0.506
Currently using pill	0.058	0.006	1763	3049	1.163	0.111	0.045	0.071
Currently using IUD	0.174	0.011	1763	3049	1.198	0.062	0.153	0.196
Currently using condom	0.155	0.011	1763	3049	1.272	0.071	0.134	0.177
Currently using injectables	0.008	0.003	1763	3049	1.194	0.320	0.003	0.013
Currently using female sterilization	0.084	0.008	1763	3049	1.155	0.091	0.068	0.099
Currently using periodic abstinence	0.005	0.002	1763	3049	1.052	0.338	0.002	0.009
Currently using withdrawal	0.271	0.013	1763	3049	1.229	0.048	0.245	0.298
Obtained method from public sector source	0.536	0.021	859	1483	1.209	0.038	0.494	0.577
Want no more children	0.587	0.012	1761	3044	1.055	0.021	0.562	0.611
Want to delay birth at least 2 years	0.138	0.011	1761	3044	1.307	0.078	0.117	0.160
Ideal number of children	2.342	0.039	1865	3237	1.570	0.017	2.264	2.420
Mothers received medical care at delivery	0.980	0.007	651	1174	1.337	0.007	0.965	0.994
Child having health card, seen	0.797	0.041	139	256	1.200	0.052	0.714	0.880
Child received BCG vaccination	0.973	0.005	139	256	0.367	0.005	0.963	0.983
Child received DPT vaccination (3 doses)	0.937	0.022	139	256	1.081	0.023	0.894	0.980
Child received polio vaccination (3 doses)	0.917	0.029	139	256	1.263	0.031	0.860	0.974
Child received measles vaccination	0.904	0.037	139	256	1.536	0.041	0.830	0.979
Child fully immunized	0.846	0.041	139	256	1.374	0.048	0.764	0.928
Height-for-age (-2SD)	0.076	0.012	481	848	0.985	0.161	0.052	0.100
Weight-for-height (-2SD)	0.009	0.005	481	848	1.223	0.592	0.000	0.019
Weight-for-age (-2SD)	0.010	0.005	481	848	1.142	0.501	0.000	0.021
BMI < 18.5	0.015	0.006	484	850	1.057	0.389	0.003	0.026
Total fertility rate (last 3 years)	1.734	0.099	na	13276	1.188	0.057	1.536	1.932
Neonatal mortality (last 10 years)	9.040	2.739	1419	2565	1.003	0.303	3.561	14.519
Post-neonatal mortality (last 10 years)	7.225	2.551	1420	2568	1.195	0.353	2.123	12.326
Infant mortality (last 10 years)	16.265	4.351	1420	2568	1.156	0.268	7.562	24.968
Child mortality (last 10 years)	9.817	2.915	1422	2570	1.133	0.297	3.986	15.648
Under-five mortality (last 10 years)	25.923	5.133	1423	2573	1.121	0.198	15.656	36.189

NA = Not applicable

Table C.6 Sampling errors: South, Turkey 2008

Variable	Value R	Standard error SE	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.716	0.018	1013	894	1.300	0.026	0.679	0.753
No education	0.197	0.019	1013	894	1.516	0.096	0.159	0.235
With secondary education or higher	0.248	0.018	1013	894	1.352	0.074	0.211	0.285
Currently married (in union)	0.950	0.007	1013	894	1.000	0.007	0.936	0.963
Currently pregnant	0.037	0.006	1534	1338	1.096	0.152	0.026	0.049
Children ever born	1.689	0.106	1534	1338	0.946	0.063	1.476	1.902
Children surviving	1.590	0.099	1534	1338	0.941	0.062	1.392	1.788
Children ever born to women 40-49	3.259	0.121	331	293	1.148	0.037	3.017	3.500
Knowing any contraceptive method	0.995	0.002	962	849	0.989	0.002	0.990	0.999
Knowing any modern contraceptive method	0.991	0.003	962	849	1.087	0.003	0.984	0.997
Ever used any contraceptive method	0.881	0.013	962	849	1.246	0.015	0.855	0.907
Currently using any contraceptive method	0.704	0.018	962	849	1.229	0.026	0.668	0.740
Currently using a modern method	0.458	0.021	962	849	1.309	0.046	0.416	0.500
Currently using pill	0.041	0.007	962	849	1.096	0.172	0.027	0.055
Currently using IUD	0.183	0.015	962	849	1.216	0.083	0.152	0.213
Currently using condom	0.129	0.013	962	849	1.218	0.102	0.103	0.156
Currently using injectables	0.005	0.002	962	849	0.784	0.361	0.001	0.008
Currently using female sterilization	0.100	0.010	962	849	0.985	0.095	0.081	0.119
Currently using periodic abstinence	0.006	0.003	962	849	1.297	0.556	0.000	0.012
Currently using withdrawal	0.241	0.016	962	849	1.159	0.066	0.209	0.273
Obtained method from public sector source	0.719	0.024	441	392	1.128	0.034	0.670	0.767
Want no more children	0.573	0.016	962	849	0.990	0.028	0.541	0.604
Want to delay birth at least 2 years	0.121	0.011	962	849	1.059	0.092	0.099	0.144
Ideal number of children	2.799	0.049	989	873	1.241	0.017	2.701	2.897
Mothers received medical care at delivery	0.940	0.009	497	441	0.820	0.010	0.922	0.959
Child having health card, seen	0.626	0.048	108	95	1.013	0.076	0.531	0.721
Child received BCG vaccination	0.961	0.020	108	95	1.043	0.020	0.922	1.000
Child received DPT vaccination (3 doses)	0.881	0.028	108	95	0.905	0.032	0.825	0.938
Child received polio vaccination (3 doses)	0.877	0.029	108	95	0.915	0.033	0.819	0.935
Child received measles vaccination	0.939	0.022	108	95	0.950	0.023	0.895	0.983
Child fully immunized	0.818	0.034	108	95	0.915	0.042	0.750	0.886
Height-for-age (-2SD)	0.076	0.015	382	339	1.111	0.198	0.046	0.106
Weight-for-height (-2SD)	0.000	0.000	382	339	na	na	0.000	0.000
Weight-for-age (-2SD)	0.030	0.010	382	339	1.053	0.329	0.010	0.049
BMI < 18.5	0.013	0.006	357	316	1.019	0.466	0.001	0.025
Total fertility rate (last 3 years)	2.092	0.115	na	3773	1.160	0.055	1.862	2.322
Neonatal mortality (last 10 years)	17.274	4.003	1018	902	0.938	0.232	9.267	25.280
Post-neonatal mortality (last 10 years)	12.699	3.906	1018	902	1.041	0.308	4.887	20.511
Infant mortality (last 10 years)	29.973	5.519	1018	902	0.960	0.184	18.935	41.011
Child mortality (last 10 years)	5.642	2.269	1018	902	0.995	0.402	1.103	10.181
Under-five mortality (last 10 years)	35.446	5.665	1018	902	0.888	0.160	24.116	46.776

NA = Not applicable

Table C.7 Sampling errors: Central, Turkey 2008

Variable	Value R	Standard error SE	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.728	0.015	1460	1631	1.311	0.021	0.697	0.758
No education	0.072	0.009	1460	1631	1.331	0.125	0.054	0.090
With secondary education or higher	0.360	0.019	1460	1631	1.500	0.052	0.323	0.398
Currently married (in union)	0.945	0.008	1460	1631	1.288	0.008	0.930	0.961
Currently pregnant	0.033	0.005	2034	2222	1.175	0.141	0.023	0.042
Children ever born	1.703	0.057	2034	2222	0.974	0.034	1.589	1.818
Children surviving	1.591	0.054	2034	2222	0.994	0.034	1.484	1.698
Children ever born to women 40-49	3.219	0.110	425	477	1.427	0.034	2.999	3.439
Knowing any contraceptive method	1.000	0.000	1386	1542	0.757	0.000	0.999	1.000
Knowing any modern contraceptive method	0.998	0.001	1386	1542	0.784	0.001	0.996	1.000
Ever used any contraceptive method	0.942	0.006	1386	1542	0.903	0.006	0.930	0.953
Currently using any contraceptive method	0.755	0.012	1386	1542	1.019	0.016	0.732	0.779
Currently using a modern method	0.488	0.018	1386	1542	1.340	0.037	0.452	0.524
Currently using pill	0.049	0.006	1386	1542	1.057	0.125	0.037	0.061
Currently using IUD	0.184	0.010	1386	1542	0.994	0.056	0.163	0.205
Currently using condom	0.178	0.014	1386	1542	1.406	0.081	0.149	0.207
Currently using injectables	0.009	0.003	1386	1542	1.117	0.313	0.003	0.015
Currently using female sterilization	0.064	0.007	1386	1542	1.083	0.111	0.050	0.078
Currently using periodic abstinence	0.009	0.003	1386	1542	1.309	0.370	0.002	0.016
Currently using withdrawal	0.257	0.016	1386	1542	1.347	0.061	0.226	0.289
Obtained method from public sector source	0.596	0.024	679	757	1.267	0.040	0.549	0.644
Want no more children	0.616	0.016	1385	1540	1.229	0.026	0.584	0.649
Want to delay birth at least 2 years	0.149	0.010	1385	1540	1.056	0.068	0.129	0.169
Ideal number of children	2.339	0.031	1437	1594	1.200	0.013	2.276	2.401
Mothers received medical care at delivery	0.985	0.005	666	741	1.037	0.005	0.975	0.995
Child having health card, seen	0.709	0.050	142	149	1.266	0.071	0.609	0.810
Child received BCG vaccination	0.964	0.015	142	149	0.933	0.016	0.934	0.994
Child received DPT vaccination (3 doses)	0.943	0.017	142	149	0.836	0.018	0.909	0.976
Child received polio vaccination (3 doses)	0.945	0.013	142	149	0.635	0.013	0.920	0.970
Child received measles vaccination	0.948	0.015	142	149	0.802	0.016	0.918	0.979
Child fully immunized	0.900	0.023	142	149	0.866	0.025	0.855	0.945
Height-for-age (-2SD)	0.045	0.010	472	533	1.033	0.223	0.025	0.065
Weight-for-height (-2SD)	0.005	0.003	472	533	0.976	0.631	0.000	0.011
Weight-for-age (-2SD)	0.021	0.008	472	533	1.269	0.395	0.004	0.038
BMI < 18.5	0.019	0.007	470	529	1.046	0.343	0.006	0.033
Total fertility rate (last 3 years)	2.198	0.122	na	6513	1.286	0.055	1.955	2.442
Neonatal mortality (last 10 years)	12.491	3.259	1358	1483	1.042	0.261	5.974	19.008
Post-neonatal mortality (last 10 years)	9.312	2.819	1360	1484	1.115	0.303	3.674	14.949
Infant mortality (last 10 years)	21.803	4.026	1360	1484	1.021	0.185	13.751	29.855
Child mortality (last 10 years)	1.414	1.077	1358	1483	1.025	0.762	0.000	3.567
Under-five mortality (last 10 years)	23.186	4.090	1360	1484	1.007	0.176	15.005	31.366

NA = Not applicable

Table C.8 Sampling errors: North, Turkey 2008

Variable	Value R	Standard error SE	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.553	0.024	868	477	1.402	0.043	0.506	0.601
No education	0.156	0.023	868	477	1.866	0.148	0.110	0.201
With secondary education or higher	0.305	0.023	868	477	1.463	0.075	0.259	0.351
Currently married (in union)	0.954	0.007	868	477	1.042	0.008	0.939	0.968
Currently pregnant	0.025	0.005	1209	684	1.116	0.200	0.015	0.035
Children ever born	1.648	0.151	1209	684	1.367	0.092	1.346	1.951
Children surviving	1.560	0.141	1209	684	1.358	0.091	1.277	1.842
Children ever born to women 40-49	3.112	0.129	293	162	1.257	0.041	2.853	3.370
Knowing any contraceptive method	1.000	0.000	827	455	na	0.000	1.000	1.000
Knowing any modern contraceptive method	0.998	0.002	827	455	1.295	0.002	0.994	1.000
Ever used any contraceptive method	0.928	0.009	827	455	1.054	0.010	0.909	0.947
Currently using any contraceptive method	0.756	0.016	827	455	1.077	0.021	0.724	0.788
Currently using a modern method	0.414	0.026	827	455	1.512	0.063	0.362	0.466
Currently using pill	0.052	0.008	827	455	1.085	0.161	0.035	0.069
Currently using IUD	0.098	0.014	827	455	1.331	0.140	0.071	0.126
Currently using condom	0.120	0.013	827	455	1.187	0.112	0.093	0.147
Currently using injectables	0.009	0.004	827	455	1.171	0.418	0.002	0.017
Currently using female sterilization	0.129	0.014	827	455	1.213	0.110	0.101	0.158
Currently using periodic abstinence	0.004	0.002	827	455	0.833	0.450	0.000	0.008
Currently using withdrawal	0.336	0.024	827	455	1.442	0.071	0.288	0.383
Obtained method from public sector source	0.600	0.031	361	191	1.187	0.051	0.539	0.661
Want no more children	0.568	0.022	827	455	1.260	0.038	0.525	0.612
Want to delay birth at least 2 years	0.124	0.013	827	455	1.098	0.101	0.099	0.149
Ideal number of children	2.386	0.045	858	470	1.474	0.019	2.296	2.475
Mothers received medical care at delivery	0.960	0.009	352	197	0.696	0.010	0.941	0.979
Child having health card, seen	0.746	0.062	68	43	1.180	0.083	0.622	0.869
Child received BCG vaccination	1.000	0.000	68	43	na	0.000	1.000	1.000
Child received DPT vaccination (3 doses)	0.881	0.053	68	43	1.249	0.060	0.776	0.986
Child received polio vaccination (3 doses)	0.858	0.048	68	43	1.077	0.056	0.762	0.953
Child received measles vaccination	0.978	0.021	68	43	1.277	0.022	0.936	1.000
Child fully immunized	0.836	0.049	68	43	1.057	0.059	0.738	0.934
Height-for-age (-2SD)	0.070	0.023	224	124	1.382	0.332	0.024	0.117
Weight-for-height (-2SD)	0.015	0.010	224	124	1.182	0.628	0.000	0.035
Weight-for-age (-2SD)	0.028	0.013	224	124	1.160	0.456	0.002	0.054
BMI < 18.5	0.030	0.013	251	142	1.186	0.418	0.005	0.055
Total fertility rate (last 3 years)	2.082	0.117	na	1945	0.988	0.056	1.848	2.316
Neonatal mortality (last 10 years)	16.084	5.796	771	432	1.311	0.360	4.492	27.676
Post-neonatal mortality (last 10 years)	7.925	3.477	772	432	1.113	0.439	0.970	14.880
Infant mortality (last 10 years)	24.009	6.417	772	432	1.204	0.267	11.175	36.842
Child mortality (last 10 years)	3.461	2.562	772	433	1.216	0.740	0.000	8.586
Under-five mortality (last 10 years)	27.387	7.917	773	433	1.288	0.289	11.553	43.222

NA = Not applicable

Table C.9 Sampling errors: East, Turkey 2008

Variable	Value R	Standard error SE	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.634	0.013	2188	1151	1.235	0.020	0.609	0.660
No education	0.524	0.021	2188	1151	1.989	0.041	0.481	0.566
With secondary education or higher	0.133	0.013	2188	1151	1.777	0.097	0.107	0.159
Currently married (in union)	0.960	0.005	2188	1151	1.196	0.005	0.950	0.970
Currently pregnant	0.063	0.005	3683	1892	1.019	0.080	0.053	0.073
Children ever born	2.222	0.116	3683	1892	0.970	0.052	1.989	2.454
Children surviving	2.048	0.107	3683	1892	0.975	0.052	1.834	2.263
Children ever born to women 40-49	5.578	0.173	539	288	1.331	0.031	5.232	5.924
Knowing any contraceptive method	0.993	0.002	2104	1105	0.950	0.002	0.990	0.997
Knowing any modern contraceptive method	0.990	0.002	2104	1105	0.897	0.002	0.986	0.994
Ever used any contraceptive method	0.818	0.013	2104	1105	1.540	0.016	0.792	0.844
Currently using any contraceptive method	0.614	0.015	2104	1105	1.439	0.025	0.583	0.644
Currently using a modern method	0.378	0.013	2104	1105	1.274	0.036	0.351	0.405
Currently using pill	0.056	0.006	2104	1105	1.103	0.099	0.045	0.067
Currently using IUD	0.151	0.008	2104	1105	1.084	0.056	0.134	0.168
Currently using condom	0.081	0.007	2104	1105	1.192	0.088	0.067	0.095
Currently using injectables	0.013	0.002	2104	1105	0.929	0.180	0.008	0.017
Currently using female sterilization	0.077	0.006	2104	1105	1.012	0.076	0.065	0.089
Currently using periodic abstinence	0.003	0.001	2104	1105	1.071	0.452	0.000	0.005
Currently using withdrawal	0.229	0.013	2104	1105	1.406	0.056	0.203	0.255
Obtained method from public sector source	0.723	0.020	822	420	1.279	0.028	0.683	0.763
Want no more children	0.571	0.015	2104	1105	1.355	0.026	0.542	0.601
Want to delay birth at least 2 years	0.174	0.011	2104	1105	1.389	0.066	0.151	0.197
Ideal number of children	3.137	0.053	2112	1108	1.521	0.017	3.031	3.242
Mothers received medical care at delivery	0.744	0.022	1691	911	1.674	0.030	0.700	0.789
Child having health card, seen	0.685	0.029	317	167	1.116	0.043	0.626	0.743
Child received BCG vaccination	0.922	0.015	317	167	0.993	0.016	0.893	0.952
Child received DPT vaccination (3 doses)	0.792	0.025	317	167	1.095	0.032	0.741	0.843
Child received polio vaccination (3 doses)	0.808	0.023	317	167	1.017	0.028	0.763	0.854
Child received measles vaccination	0.777	0.024	317	167	1.000	0.030	0.730	0.824
Child fully immunized	0.643	0.027	317	167	0.998	0.042	0.589	0.698
Height-for-age (-2SD)	0.210	0.018	1174	631	1.382	0.086	0.174	0.247
Weight-for-height (-2SD)	0.015	0.004	1174	631	1.035	0.240	0.008	0.022
Weight-for-age (-2SD)	0.058	0.008	1174	631	1.125	0.133	0.043	0.073
BMI < 18.5	0.014	0.003	903	478	0.902	0.255	0.007	0.020
Total fertility rate (last 3 years)	3.274	0.142	na	5222	1.405	0.043	2.990	3.557
Neonatal mortality (last 10 years)	23.791	2.690	3551	1908	1.015	0.113	18.411	29.172
Post-neonatal mortality (last 10 years)	15.094	2.331	3552	1908	1.107	0.154	10.431	19.756
Infant mortality (last 10 years)	38.885	3.751	3552	1908	1.105	0.096	31.383	46.387
Child mortality (last 10 years)	11.434	2.240	3559	1912	1.169	0.196	6.954	15.914
Under-five mortality (last 10 years)	49.874	4.670	3560	1912	1.224	0.094	40.535	59.214

NA = Not applicable

Table C.10 Sampling errors: İstanbul, Turkey 2008

Variable	Value R	Standard error SE	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.988	0.003	532	1491	0.703	0.003	0.981	0.995
No education	0.122	0.023	532	1491	1.607	0.187	0.077	0.168
With secondary education or higher	0.352	0.041	532	1491	1.996	0.117	0.270	0.435
Currently married (in union)	0.925	0.015	532	1491	1.326	0.016	0.895	0.955
Currently pregnant	0.035	0.007	756	2131	0.944	0.200	0.021	0.049
Children ever born	1.564	0.129	756	2131	0.773	0.083	1.305	1.823
Children surviving	1.471	0.118	756	2131	0.755	0.080	1.234	1.707
Children ever born to women 40-49	3.010	0.147	183	515	1.058	0.049	2.716	3.304
Knowing any contraceptive method	1.000	0.000	492	1379	na	0.000	1.000	1.000
Knowing any modern contraceptive method	0.998	0.002	492	1379	1.002	0.002	0.994	1.000
Ever used any contraceptive method	0.931	0.009	492	1379	0.785	0.010	0.914	0.949
Currently using any contraceptive method	0.743	0.020	492	1379	1.005	0.027	0.704	0.783
Currently using a modern method	0.454	0.017	492	1379	0.774	0.038	0.419	0.489
Currently using pill	0.049	0.012	492	1379	1.265	0.251	0.024	0.074
Currently using IUD	0.184	0.018	492	1379	1.042	0.099	0.147	0.220
Currently using condom	0.122	0.018	492	1379	1.250	0.151	0.085	0.159
Currently using injectables	0.013	0.005	492	1379	0.966	0.385	0.003	0.022
Currently using female sterilization	0.085	0.014	492	1379	1.131	0.168	0.056	0.113
Currently using periodic abstinence	0.004	0.003	492	1379	0.996	0.690	0.000	0.010
Currently using withdrawal	0.283	0.022	492	1379	1.058	0.076	0.240	0.326
Obtained method from public sector source	0.507	0.031	224	632	0.930	0.061	0.445	0.570
Want no more children	0.559	0.018	491	1376	0.790	0.032	0.524	0.595
Want to delay birth at least 2 years	0.158	0.017	491	1376	1.035	0.108	0.124	0.192
Ideal number of children	2.379	0.067	531	1488	1.431	0.028	2.245	2.513
Mothers received medical care at delivery	0.979	0.012	192	548	1.204	0.013	0.954	1.000
Height-for-age (-2SD)	0.075	0.019	139	396	0.875	0.254	0.037	0.114
Weight-for-height (-2SD)	0.015	0.011	139	396	1.067	0.737	0.000	0.036
Weight-for-age (-2SD)	0.015	0.010	139	396	1.000	0.685	0.000	0.035
BMI < 18.5	0.007	0.007	138	391	1.018	0.996	0.000	0.022
Total fertility rate (last 3 years)	1.780	0.159	na	6006	0.998	0.089	1.462	2.099
Neonatal mortality (last 10 years)	2.441	2.460	422	1200	1.028	1.008	0.000	7.361
Post-neonatal mortality (last 10 years)	6.083	3.508	423	1203	0.986	0.577	0.000	13.099
Infant mortality (last 10 years)	8.524	4.185	423	1203	0.980	0.491	0.154	16.893
Child mortality (last 10 years)	14.203	5.315	423	1203	0.921	0.374	3.573	24.833
Under-five mortality (last 10 years)	22.606	7.348	424	1206	0.988	0.325	7.911	37.301

NA = Not applicable

Table C.11 Sampling errors: West Marmara, Turkey 2008

Variable	Value R	Standard error SE	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.636	0.028	423	327	1.208	0.044	0.580	0.693
No education	0.092	0.021	423	327	1.505	0.230	0.050	0.134
With secondary education or higher	0.292	0.027	423	327	1.219	0.092	0.238	0.346
Currently married (in union)	0.942	0.009	423	327	0.820	0.010	0.923	0.961
Currently pregnant	0.024	0.008	575	445	1.207	0.320	0.009	0.039
Children ever born	1.372	0.079	575	445	1.013	0.058	1.214	1.530
Children surviving	1.286	0.073	575	445	1.016	0.057	1.140	1.432
Children ever born to women 40-49	2.459	0.149	157	124	1.328	0.061	2.160	2.757
Knowing any contraceptive method	0.996	0.004	397	308	1.189	0.004	0.989	1.000
Knowing any modern contraceptive method	0.996	0.004	397	308	1.189	0.004	0.989	1.000
Ever used any contraceptive method	0.934	0.011	397	308	0.867	0.012	0.912	0.955
Currently using any contraceptive method	0.762	0.023	397	308	1.064	0.030	0.716	0.807
Currently using a modern method	0.464	0.024	397	308	0.972	0.052	0.415	0.513
Currently using pill	0.056	0.011	397	308	0.995	0.206	0.033	0.079
Currently using IUD	0.171	0.026	397	308	1.387	0.154	0.118	0.223
Currently using condom	0.156	0.017	397	308	0.908	0.106	0.123	0.190
Currently using injectables	0.004	0.004	397	308	1.180	0.995	0.000	0.011
Currently using female sterilization	0.074	0.015	397	308	1.139	0.202	0.044	0.104
Currently using periodic abstinence	0.006	0.004	397	308	1.128	0.749	0.000	0.014
Currently using withdrawal	0.292	0.025	397	308	1.091	0.085	0.242	0.342
Obtained method from public sector source	0.536	0.050	187	144	1.368	0.093	0.436	0.636
Want no more children	0.619	0.028	397	308	1.147	0.045	0.563	0.675
Want to delay birth at least 2 years	0.117	0.021	397	308	1.287	0.178	0.076	0.159
Ideal number of children	2.098	0.043	417	322	1.244	0.020	2.013	2.183
Mothers received medical care at delivery	0.985	0.010	119	88	0.878	0.010	0.965	1.000
Height-for-age (-2SD)	0.046	0.025	89	66	1.095	0.529	0.000	0.096
Weight-for-height (-2SD)	0.010	0.010	89	66	0.910	0.969	0.000	0.029
Weight-for-age (-2SD)	0.010	0.010	89	66	0.910	0.969	0.000	0.029
BMI < 18.5	0.052	0.027	92	68	1.148	0.525	0.000	0.106
Total fertility rate (last 3 years)	1.382	0.131	na	1338	1.063	0.095	1.120	1.644

NA = Not applicable

Table C.12 Sampling errors: Aegean, Turkey 2008

Variable	Value R	Standard error SE	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.691	0.024	549	1065	1.205	0.034	0.644	0.739
No education	0.107	0.030	549	1065	2.258	0.278	0.048	0.167
With secondary education or higher	0.317	0.035	549	1065	1.783	0.112	0.246	0.388
Currently married (in union)	0.948	0.008	549	1065	0.880	0.009	0.932	0.965
Currently pregnant	0.034	0.008	730	1436	1.256	0.236	0.018	0.050
Children ever born	1.571	0.059	730	1436	0.782	0.038	1.452	1.690
Children surviving	1.483	0.058	730	1436	0.825	0.039	1.366	1.600
Children ever born to women 40-49	2.749	0.190	165	319	1.495	0.069	2.368	3.129
Knowing any contraceptive method	1.000	0.000	519	1010	na	0.000	1.000	1.000
Knowing any modern contraceptive method	0.998	0.002	519	1010	1.014	0.002	0.994	1.000
Ever used any contraceptive method	0.955	0.012	519	1010	1.347	0.013	0.930	0.980
Currently using any contraceptive method	0.800	0.022	519	1010	1.233	0.027	0.757	0.843
Currently using a modern method	0.531	0.027	519	1010	1.219	0.050	0.478	0.585
Currently using pill	0.060	0.009	519	1010	0.829	0.145	0.042	0.077
Currently using IUD	0.178	0.020	519	1010	1.199	0.113	0.138	0.219
Currently using condom	0.216	0.019	519	1010	1.042	0.087	0.178	0.254
Currently using injectables	0.006	0.003	519	1010	1.006	0.577	0.000	0.013
Currently using female sterilization	0.070	0.010	519	1010	0.851	0.137	0.051	0.089
Currently using periodic abstinence	0.007	0.003	519	1010	0.924	0.488	0.000	0.014
Currently using withdrawal	0.255	0.025	519	1010	1.296	0.097	0.206	0.305
Obtained method from public sector source	0.577	0.041	277	542	1.364	0.070	0.496	0.658
Want no more children	0.630	0.023	518	1008	1.094	0.037	0.583	0.676
Want to delay birth at least 2 years	0.122	0.020	518	1008	1.414	0.167	0.081	0.162
Ideal number of children	2.362	0.065	546	1058	1.279	0.027	2.233	2.492
Mothers received medical care at delivery	0.982	0.011	215	427	1.189	0.011	0.961	1.000
Height-for-age (-2SD)	0.064	0.022	148	289	0.987	0.338	0.021	0.108
Weight-for-height (-2SD)	0.000	0.000	148	289	na	na	0.000	0.000
Weight-for-age (-2SD)	0.012	0.008	148	289	0.931	0.700	0.000	0.028
BMI < 18.5	0.016	0.012	152	296	1.210	0.775	0.000	0.040
Total fertility rate (last 3 years)	1.912	0.199	na	4261	1.300	0.104	1.514	2.310

NA = Not applicable

Table C.13 Sampling errors: East Marmara, Turkey 2008

Variable	Value R	Standard error SE	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.781	0.014	594	759	0.801	0.017	0.754	0.808
No education	0.096	0.013	594	759	1.105	0.139	0.070	0.123
With secondary education or higher	0.323	0.027	594	759	1.411	0.084	0.268	0.377
Currently married (in union)	0.951	0.007	594	759	0.808	0.008	0.937	0.965
Currently pregnant	0.042	0.009	877	1126	1.187	0.214	0.024	0.061
Children ever born	1.397	0.156	877	1126	1.068	0.112	1.084	1.710
Children surviving	1.309	0.147	877	1126	1.077	0.112	1.016	1.603
Children ever born to women 40-49	2.726	0.153	203	263	1.379	0.056	2.420	3.031
Knowing any contraceptive method	0.998	0.002	565	722	1.125	0.002	0.993	1.000
Knowing any modern contraceptive method	0.998	0.002	565	722	1.125	0.002	0.993	1.000
Ever used any contraceptive method	0.953	0.011	565	722	1.236	0.012	0.931	0.975
Currently using any contraceptive method	0.768	0.016	565	722	0.878	0.020	0.737	0.800
Currently using a modern method	0.459	0.021	565	722	0.988	0.045	0.418	0.501
Currently using pill	0.064	0.008	565	722	0.793	0.128	0.048	0.080
Currently using IUD	0.140	0.012	565	722	0.789	0.082	0.117	0.163
Currently using condom	0.159	0.015	565	722	0.992	0.096	0.129	0.190
Currently using injectables	0.004	0.003	565	722	1.065	0.718	0.000	0.009
Currently using female sterilization	0.088	0.012	565	722	1.004	0.136	0.064	0.112
Currently using periodic abstinence	0.010	0.005	565	722	1.234	0.530	0.000	0.020
Currently using withdrawal	0.297	0.022	565	722	1.168	0.076	0.252	0.342
Obtained method from public sector source	0.555	0.037	267	333	1.212	0.067	0.481	0.629
Want no more children	0.594	0.030	565	722	1.474	0.051	0.533	0.655
Want to delay birth at least 2 years	0.138	0.021	565	722	1.430	0.150	0.097	0.180
Ideal number of children	2.304	0.052	592	756	1.375	0.023	2.200	2.409
Mothers received medical care at delivery	0.984	0.009	216	275	1.071	0.009	0.965	1.000
Height-for-age (-2SD)	0.072	0.020	173	218	0.957	0.282	0.031	0.113
Weight-for-height (-2SD)	0.010	0.008	173	218	0.977	0.730	0.000	0.026
Weight-for-age (-2SD)	0.023	0.015	173	218	1.296	0.643	0.000	0.054
BMI < 18.5	0.018	0.011	169	214	1.024	0.586	0.000	0.039
Total fertility rate (last 3 years)	1.799	0.131	na	3168	0.975	0.073	1.537	2.060

NA = Not applicable

Table C.14 Sampling errors: West Anatolia, Turkey 2008

Variable	Value R	Standard error SE	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.882	0.014	557	717	1.030	0.016	0.854	0.910
No education	0.037	0.008	557	717	1.042	0.225	0.020	0.054
With secondary education or higher	0.462	0.035	557	717	1.675	0.077	0.391	0.532
Currently married (in union)	0.947	0.015	557	717	1.529	0.015	0.917	0.976
Currently pregnant	0.036	0.007	742	932	1.086	0.204	0.021	0.051
Children ever born	1.665	0.056	742	932	0.765	0.034	1.553	1.776
Children surviving	1.591	0.054	742	932	0.786	0.034	1.483	1.699
Children ever born to women 40-49	2.844	0.164	158	213	1.539	0.057	2.517	3.171
Knowing any contraceptive method	1.000	0.000	531	679	na	0.000	1.000	1.000
Knowing any modern contraceptive method	0.999	0.001	531	679	0.682	0.001	0.997	1.000
Ever used any contraceptive method	0.942	0.009	531	679	0.909	0.010	0.924	0.961
Currently using any contraceptive method	0.757	0.019	531	679	1.033	0.025	0.719	0.796
Currently using a modern method	0.516	0.030	531	679	1.360	0.057	0.457	0.575
Currently using pill	0.051	0.011	531	679	1.129	0.212	0.029	0.073
Currently using IUD	0.192	0.015	531	679	0.905	0.081	0.161	0.223
Currently using condom	0.197	0.025	531	679	1.448	0.127	0.147	0.247
Currently using injectables	0.008	0.004	531	679	1.143	0.549	0.000	0.017
Currently using female sterilization	0.061	0.011	531	679	1.062	0.181	0.039	0.083
Currently using periodic abstinence	0.009	0.005	531	679	1.303	0.606	0.000	0.019
Currently using withdrawal	0.233	0.024	531	679	1.311	0.103	0.185	0.281
Obtained method from public sector source	0.551	0.027	274	352	0.901	0.049	0.497	0.606
Want no more children	0.593	0.021	530	677	0.972	0.035	0.551	0.634
Want to delay birth at least 2 years	0.157	0.013	530	677	0.828	0.083	0.131	0.183
Ideal number of children	2.340	0.059	540	686	1.352	0.025	2.222	2.458
Mothers received medical care at delivery	0.984	0.009	271	345	1.131	0.009	0.967	1.000
Height-for-age (-2SD)	0.033	0.015	187	246	1.083	0.457	0.003	0.064
Weight-for-height (-2SD)	0.002	0.002	187	246	0.692	1.009	0.000	0.007
Weight-for-age (-2SD)	0.015	0.010	187	246	1.123	0.662	0.000	0.034
BMI < 18.5	0.024	0.010	179	239	0.899	0.420	0.004	0.044
Total fertility rate (last 3 years)	2.402	0.208	na	2789	1.272	0.087	1.986	2.817

NA = Not applicable

Table C.15 Sampling errors: Mediterranean, Turkey 2008

Variable	Value R	Standard error SE	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.716	0.018	1013	894	1.300	0.026	0.679	0.753
No education	0.197	0.019	1013	894	1.516	0.096	0.159	0.235
With secondary education or higher	0.248	0.018	1013	894	1.352	0.074	0.211	0.285
Currently married (in union)	0.950	0.007	1013	894	1.000	0.007	0.936	0.963
Currently pregnant	0.037	0.006	1534	1338	1.096	0.152	0.026	0.049
Children ever born	1.689	0.106	1534	1338	0.946	0.063	1.476	1.902
Children surviving	1.590	0.099	1534	1338	0.941	0.062	1.392	1.788
Children ever born to women 40-49	3.259	0.121	331	293	1.148	0.037	3.017	3.500
Knowing any contraceptive method	0.995	0.002	962	849	0.989	0.002	0.990	0.999
Knowing any modern contraceptive method	0.991	0.003	962	849	1.087	0.003	0.984	0.997
Ever used any contraceptive method	0.881	0.013	962	849	1.246	0.015	0.855	0.907
Currently using any contraceptive method	0.704	0.018	962	849	1.229	0.026	0.668	0.740
Currently using a modern method	0.458	0.021	962	849	1.309	0.046	0.416	0.500
Currently using pill	0.041	0.007	962	849	1.096	0.172	0.027	0.055
Currently using IUD	0.183	0.015	962	849	1.216	0.083	0.152	0.213
Currently using condom	0.129	0.013	962	849	1.218	0.102	0.103	0.156
Currently using injectables	0.005	0.002	962	849	0.784	0.361	0.001	0.008
Currently using female sterilization	0.100	0.010	962	849	0.985	0.095	0.081	0.119
Currently using periodic abstinence	0.006	0.003	962	849	1.297	0.556	0.000	0.012
Currently using withdrawal	0.241	0.016	962	849	1.159	0.066	0.209	0.273
Obtained method from public sector source	0.719	0.024	441	392	1.128	0.034	0.670	0.767
Want no more children	0.573	0.016	962	849	0.990	0.028	0.541	0.604
Want to delay birth at least 2 years	0.121	0.011	962	849	1.059	0.092	0.099	0.144
Ideal number of children	2.799	0.049	989	873	1.241	0.017	2.701	2.897
Mothers received medical care at delivery	0.940	0.009	497	441	0.820	0.010	0.922	0.959
Height-for-age (-2SD)	0.076	0.015	382	339	1.111	0.198	0.046	0.106
Weight-for-height (-2SD)	0.000	0.000	382	339	na	na	0.000	0.000
Weight-for-age (-2SD)	0.030	0.010	382	339	1.053	0.329	0.010	0.049
BMI < 18.5	0.013	0.006	357	316	1.019	0.466	0.001	0.025
Total fertility rate (last 3 years)	2.092	0.115	na	3773	1.160	0.055	1.862	2.322

NA = Not applicable

Table C.16 Sampling errors: Central Anatolia, Turkey 2008

Variable	Value R	Standard error SE	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.657	0.028	534	371	1.349	0.042	0.601	0.712
No education	0.151	0.024	534	371	1.551	0.159	0.103	0.199
With secondary education or higher	0.301	0.029	534	371	1.439	0.095	0.244	0.358
Currently married (in union)	0.959	0.006	534	371	0.713	0.006	0.947	0.972
Currently pregnant	0.030	0.006	797	561	1.069	0.213	0.017	0.042
Children ever born	1.753	0.135	797	561	1.123	0.077	1.483	2.023
Children surviving	1.610	0.127	797	561	1.170	0.079	1.356	1.864
Children ever born to women 40-49	3.919	0.179	158	111	1.267	0.046	3.561	4.277
Knowing any contraceptive method	0.998	0.002	512	356	0.957	0.002	0.995	1.000
Knowing any modern contraceptive method	0.994	0.003	512	356	0.996	0.003	0.987	1.000
Ever used any contraceptive method	0.919	0.012	512	356	1.015	0.013	0.895	0.944
Currently using any contraceptive method	0.722	0.025	512	356	1.282	0.035	0.671	0.773
Currently using a modern method	0.478	0.020	512	356	0.897	0.041	0.439	0.518
Currently using pill	0.061	0.011	512	356	1.039	0.180	0.039	0.083
Currently using IUD	0.207	0.021	512	356	1.152	0.100	0.166	0.249
Currently using condom	0.118	0.016	512	356	1.109	0.134	0.086	0.149
Currently using injectables	0.006	0.003	512	356	0.984	0.563	0.000	0.013
Currently using female sterilization	0.084	0.010	512	356	0.855	0.125	0.063	0.105
Currently using periodic abstinence	0.009	0.005	512	356	1.098	0.511	0.000	0.018
Currently using withdrawal	0.232	0.016	512	356	0.866	0.070	0.200	0.265
Obtained method from public sector source	0.642	0.050	246	170	1.624	0.077	0.543	0.742
Want no more children	0.632	0.021	512	356	0.983	0.033	0.590	0.674
Want to delay birth at least 2 years	0.138	0.008	512	356	0.528	0.058	0.122	0.155
Ideal number of children	2.425	0.046	529	368	0.926	0.019	2.334	2.516
Mothers received medical care at delivery	0.976	0.011	252	177	0.999	0.011	0.954	0.998
Height-for-age (-2SD)	0.094	0.019	176	123	0.885	0.202	0.056	0.132
Weight-for-height (-2SD)	0.005	0.005	176	123	0.944	0.984	0.000	0.015
Weight-for-age (-2SD)	0.012	0.008	176	123	1.044	0.709	0.000	0.029
BMI < 18.5	0.010	0.001	183	127	0.125	0.092	0.008	0.012
Total fertility rate (last 3 years)	2.094	0.172	na	1585	1.172	0.082	1.749	2.438

NA = Not applicable

Table C.17 Sampling errors: West Black Sea, Turkey 2008

Variable	Value R	Standard error SE	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.560	0.019	634	448	0.948	0.033	0.522	0.597
No education	0.134	0.024	634	448	1.742	0.176	0.087	0.181
With secondary education or higher	0.270	0.027	634	448	1.520	0.099	0.217	0.324
Currently married (in union)	0.928	0.010	634	448	0.961	0.011	0.909	0.948
Currently pregnant	0.028	0.005	825	602	0.892	0.179	0.018	0.038
Children ever born	1.809	0.107	825	602	1.125	0.059	1.596	2.022
Children surviving	1.684	0.100	825	602	1.159	0.059	1.483	1.884
Children ever born to women 40-49	3.204	0.146	218	157	1.221	0.046	2.912	3.496
Knowing any contraceptive method	1.000	0.000	593	416	na	0.000	1.000	1.000
Knowing any modern contraceptive method	1.000	0.000	593	416	na	0.000	1.000	1.000
Ever used any contraceptive method	0.931	0.010	593	416	0.946	0.011	0.912	0.951
Currently using any contraceptive method	0.775	0.020	593	416	1.149	0.025	0.735	0.814
Currently using a modern method	0.460	0.027	593	416	1.300	0.058	0.407	0.513
Currently using pill	0.056	0.010	593	416	1.010	0.171	0.037	0.075
Currently using IUD	0.130	0.015	593	416	1.082	0.115	0.100	0.160
Currently using condom	0.150	0.013	593	416	0.899	0.088	0.124	0.176
Currently using injectables	0.012	0.006	593	416	1.224	0.452	0.001	0.023
Currently using female sterilization	0.108	0.017	593	416	1.323	0.157	0.074	0.141
Currently using periodic abstinence	0.001	0.001	593	416	0.801	1.004	0.000	0.003
Currently using withdrawal	0.311	0.028	593	416	1.479	0.090	0.255	0.368
Obtained method from public sector source	0.619	0.035	282	194	1.193	0.056	0.550	0.688
Want no more children	0.611	0.025	593	416	1.259	0.041	0.560	0.661
Want to delay birth at least 2 years	0.129	0.014	593	416	0.997	0.107	0.101	0.156
Ideal number of children	2.251	0.036	633	448	1.092	0.016	2.179	2.322
Mothers received medical care at delivery	0.965	0.003	245	172	0.155	0.003	0.960	0.970
Height-for-age (-2SD)	0.041	0.019	165	119	1.239	0.457	0.004	0.078
Weight-for-height (-2SD)	0.016	0.010	165	119	1.046	0.630	0.000	0.036
Weight-for-age (-2SD)	0.012	0.009	165	119	1.113	0.774	0.000	0.031
BMI < 18.5	0.032	0.014	183	131	1.047	0.421	0.005	0.060
Total fertility rate (last 3 years)	1.905	0.126	na	1778	1.262	0.066	1.654	2.156

NA = Not applicable

Table C.18 Sampling errors: East Black Sea, Turkey 2008

Variable	Value R	Standard error SE	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.582	0.051	385	186	2.024	0.088	0.480	0.684
No education	0.201	0.046	385	186	2.252	0.229	0.109	0.293
With secondary education or higher	0.349	0.042	385	186	1.739	0.121	0.265	0.434
Currently married (in union)	0.967	0.010	385	186	1.073	0.010	0.947	0.986
Currently pregnant	0.018	0.007	589	305	1.226	0.358	0.005	0.031
Children ever born	1.473	0.278	589	305	1.471	0.189	0.916	2.030
Children surviving	1.406	0.263	589	305	1.460	0.187	0.880	1.932
Children ever born to women 40-49	3.200	0.182	131	64	1.333	0.057	2.835	3.565
Knowing any contraceptive method	1.000	0.000	371	180	na	0.000	1.000	1.000
Knowing any modern contraceptive method	0.995	0.005	371	180	1.354	0.005	0.985	1.000
Ever used any contraceptive method	0.911	0.017	371	180	1.127	0.018	0.878	0.944
Currently using any contraceptive method	0.682	0.024	371	180	0.985	0.035	0.634	0.729
Currently using a modern method	0.354	0.026	371	180	1.027	0.072	0.303	0.405
Currently using pill	0.034	0.011	371	180	1.136	0.313	0.013	0.056
Currently using IUD	0.080	0.017	371	180	1.223	0.216	0.046	0.114
Currently using condom	0.089	0.021	371	180	1.394	0.231	0.048	0.131
Currently using injectables	0.013	0.007	371	180	1.136	0.510	0.000	0.027
Currently using female sterilization	0.130	0.018	371	180	1.033	0.139	0.094	0.166
Currently using periodic abstinence	0.008	0.004	371	180	0.861	0.500	0.000	0.016
Currently using withdrawal	0.319	0.023	371	180	0.944	0.072	0.274	0.365
Obtained method from public sector source	0.653	0.046	143	64	1.141	0.070	0.562	0.744
Want no more children	0.510	0.040	371	180	1.531	0.078	0.431	0.590
Want to delay birth at least 2 years	0.120	0.020	371	180	1.201	0.169	0.079	0.160
Ideal number of children	2.667	0.073	376	179	1.499	0.028	2.520	2.814
Mothers received medical care at delivery	0.976	0.023	159	79	1.936	0.024	0.930	1.000
Height-for-age (-2SD)	0.110	0.047	100	48	1.480	0.428	0.016	0.204
Weight-for-height (-2SD)	0.000	0.000	100	48	na	na	0.000	0.000
Weight-for-age (-2SD)	0.042	0.022	100	48	1.089	0.520	0.000	0.087
BMI < 18.5	0.017	0.016	109	55	1.323	0.937	0.000	0.050
Total fertility rate (last 3 years)	2.103	0.200	na	806	0.971	0.095	1.704	2.502

NA = Not applicable

Table C.19 Sampling errors: Northeast Anatolia, Turkey 2008

Variable	Value R	Standard error SE	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.536	0.021	602	191	1.016	0.039	0.494	0.577
No education	0.414	0.038	602	191	1.882	0.091	0.338	0.489
With secondary education or higher	0.205	0.031	602	191	1.864	0.150	0.143	0.266
Currently married (in union)	0.982	0.006	602	191	1.028	0.006	0.971	0.993
Currently pregnant	0.045	0.008	1022	329	0.990	0.174	0.030	0.061
Children ever born	1.994	0.242	1022	329	1.048	0.121	1.511	2.478
Children surviving	1.815	0.219	1022	329	1.050	0.121	1.377	2.253
Children ever born to women 40-49	5.266	0.327	142	45	1.288	0.062	4.612	5.920
Knowing any contraceptive method	1.000	0.000	591	188	na	0.000	1.000	1.000
Knowing any modern contraceptive method	0.997	0.002	591	188	1.214	0.003	0.993	1.000
Ever used any contraceptive method	0.856	0.018	591	188	1.241	0.021	0.820	0.892
Currently using any contraceptive method	0.704	0.026	591	188	1.361	0.036	0.653	0.755
Currently using a modern method	0.446	0.030	591	188	1.458	0.067	0.386	0.505
Currently using pill	0.072	0.014	591	188	1.302	0.193	0.044	0.100
Currently using IUD	0.236	0.021	591	188	1.178	0.087	0.195	0.278
Currently using condom	0.069	0.011	591	188	1.016	0.154	0.048	0.090
Currently using injectables	0.020	0.006	591	188	1.101	0.315	0.008	0.033
Currently using female sterilization	0.047	0.007	591	188	0.790	0.146	0.033	0.061
Currently using periodic abstinence	0.005	0.003	591	188	1.093	0.618	0.000	0.012
Currently using withdrawal	0.242	0.030	591	188	1.676	0.122	0.183	0.301
Obtained method from public sector source	0.697	0.047	274	84	1.679	0.067	0.604	0.791
Want no more children	0.645	0.022	591	188	1.101	0.034	0.601	0.688
Want to delay birth at least 2 years	0.130	0.012	591	188	0.877	0.093	0.106	0.155
Ideal number of children	2.647	0.072	590	187	1.259	0.027	2.504	2.791
Mothers received medical care at delivery	0.755	0.044	400	128	1.649	0.058	0.668	0.842
Height-for-age (-2SD)	0.222	0.039	288	90	1.485	0.175	0.144	0.300
Weight-for-height (-2SD)	0.013	0.008	288	90	1.138	0.584	0.000	0.029
Weight-for-age (-2SD)	0.072	0.016	288	90	1.038	0.216	0.041	0.103
BMI < 18.5	0.042	0.011	233	74	0.836	0.261	0.020	0.064
Total fertility rate (last 3 years)	2.590	0.176	na	872	1.067	0.068	2.237	2.943

NA = Not applicable

Table C.20 Sampling errors: Central East Anatolia, Turkey 2008

Variable	Value R	Standard error SE	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.595	0.028	630	327	1.427	0.047	0.539	0.651
No education	0.582	0.029	630	327	1.483	0.050	0.523	0.640
With secondary education or higher	0.118	0.013	630	327	1.041	0.113	0.091	0.145
Currently married (in union)	0.973	0.004	630	327	0.671	0.004	0.964	0.982
Currently pregnant	0.062	0.008	952	497	1.065	0.130	0.046	0.078
Children ever born	2.400	0.125	952	497	0.957	0.052	2.149	2.651
Children surviving	2.164	0.112	952	497	0.964	0.052	1.941	2.388
Children ever born to women 40-49	5.690	0.360	161	83	1.262	0.063	4.970	6.411
Knowing any contraceptive method	0.987	0.004	611	318	0.829	0.004	0.979	0.994
Knowing any modern contraceptive method	0.979	0.004	611	318	0.761	0.004	0.970	0.988
Ever used any contraceptive method	0.815	0.016	611	318	1.025	0.020	0.783	0.847
Currently using any contraceptive method	0.623	0.022	611	318	1.113	0.035	0.579	0.666
Currently using a modern method	0.340	0.027	611	318	1.382	0.078	0.287	0.393
Currently using pill	0.053	0.012	611	318	1.325	0.228	0.029	0.077
Currently using IUD	0.132	0.016	611	318	1.182	0.122	0.100	0.165
Currently using condom	0.066	0.011	611	318	1.131	0.172	0.043	0.089
Currently using injectables	0.005	0.003	611	318	0.987	0.569	0.000	0.010
Currently using female sterilization	0.084	0.013	611	318	1.139	0.153	0.058	0.109
Currently using periodic abstinence	0.001	0.001	611	318	0.922	0.984	0.000	0.004
Currently using withdrawal	0.276	0.024	611	318	1.315	0.086	0.229	0.324
Obtained method from public sector source	0.738	0.036	215	109	1.203	0.049	0.666	0.810
Want no more children	0.566	0.025	611	318	1.254	0.044	0.516	0.616
Want to delay birth at least 2 years	0.184	0.018	611	318	1.166	0.099	0.148	0.221
Ideal number of children	3.059	0.063	605	313	0.992	0.021	2.932	3.186
Mothers received medical care at delivery	0.660	0.046	468	250	1.711	0.070	0.568	0.753
Height-for-age (-2SD)	0.180	0.035	300	159	1.492	0.193	0.110	0.249
Weight-for-height (-2SD)	0.011	0.006	300	159	1.059	0.573	0.000	0.024
Weight-for-age (-2SD)	0.079	0.023	300	159	1.401	0.287	0.034	0.125
BMI < 18.5	0.009	0.006	262	138	1.061	0.668	0.000	0.022
Total fertility rate (last 3 years)	3.334	0.214	na	1464	1.128	0.064	2.905	3.762

NA = Not applicable

Table C.21 Sampling errors: Southeast Anatolia, Turkey 2008

Variable	Value R	Standard error SE	Number of cases Un-weighted (N)	Number of cases Weighted (WN)	Design effect (DEFT)	Relative error (SE/R)	Confidence limits R-2SE	Confidence limits R+2SE
Urban residence	0.689	0.017	952	628	1.139	0.025	0.654	0.723
No education	0.529	0.034	952	628	2.073	0.063	0.462	0.596
With secondary education or higher	0.119	0.020	952	628	1.934	0.170	0.079	0.160
Currently married (in union)	0.946	0.009	952	628	1.181	0.009	0.929	0.963
Currently pregnant	0.069	0.008	1705	1062	0.939	0.114	0.053	0.085
Children ever born	2.211	0.180	1705	1062	0.908	0.082	1.850	2.572
Children surviving	2.068	0.169	1705	1062	0.911	0.082	1.730	2.406
Children ever born to women 40-49	5.672	0.228	234	157	1.329	0.040	5.216	6.127
Knowing any contraceptive method	0.995	0.002	898	594	0.988	0.002	0.990	1.000
Knowing any modern contraceptive method	0.993	0.003	898	594	0.960	0.003	0.988	0.998
Ever used any contraceptive method	0.806	0.022	898	594	1.632	0.027	0.762	0.849
Currently using any contraceptive method	0.578	0.024	898	594	1.456	0.042	0.530	0.626
Currently using a modern method	0.379	0.018	898	594	1.133	0.048	0.342	0.415
Currently using pill	0.054	0.007	898	594	0.904	0.127	0.040	0.067
Currently using IUD	0.135	0.011	898	594	0.978	0.083	0.113	0.158
Currently using condom	0.093	0.011	898	594	1.158	0.121	0.071	0.116
Currently using injectables	0.014	0.003	898	594	0.846	0.235	0.008	0.021
Currently using female sterilization	0.081	0.008	898	594	0.901	0.101	0.065	0.098
Currently using periodic abstinence	0.003	0.002	898	594	1.102	0.732	0.000	0.006
Currently using withdrawal	0.196	0.017	898	594	1.297	0.088	0.161	0.230
Obtained method from public sector source	0.723	0.028	332	226	1.139	0.039	0.667	0.779
Want no more children	0.550	0.023	898	594	1.361	0.041	0.505	0.595
Want to delay birth at least 2 years	0.184	0.019	898	594	1.435	0.101	0.147	0.221
Ideal number of children	3.333	0.086	913	603	1.593	0.026	3.162	3.505
Mothers received medical care at delivery	0.781	0.028	823	533	1.514	0.036	0.724	0.838
Height-for-age (-2SD)	0.221	0.025	586	382	1.261	0.113	0.171	0.270
Weight-for-height (-2SD)	0.017	0.005	586	382	0.947	0.296	0.007	0.028
Weight-for-age (-2SD)	0.046	0.007	586	382	0.851	0.162	0.031	0.061
BMI < 18.5	0.008	0.004	408	266	1.028	0.581	0.000	0.017
Total fertility rate (last 3 years)	3.471	0.227	na	2873	1.427	0.065	3.017	3.925
Neonatal mortality (last 10 years)	19.634	3.410	1671	1088	0.999	0.174	12.814	26.454
Post-neonatal mortality (last 10 years)	13.199	3.459	1672	1088	1.107	0.262	6.281	20.117
Infant mortality (last 10 years)	32.832	5.160	1672	1088	1.122	0.157	22.513	43.151
Child mortality (last 10 years)	12.343	3.092	1675	1090	1.068	0.251	6.158	18.528
Under-five mortality (last 10 years)	44.771	6.528	1676	1090	1.236	0.146	31.715	57.827

NA = Not applicable

DATA QUALITY TABLES APPENDIX D

Table D.1 Age distribution of *de facto* household population

Single-year age distribution of the *de facto* household population by sex (weighted), Turkey 2008

	Males		Females			Males		Females	
Age	Number	Percent	Number	Percent	Age	Number	Percent	Number	Percent
0	335	1.7	377	1.8	37	260	1.3	262	1.3
1	375	1.9	329	1.6	38	312	1.6	310	1.5
2	336	1.7	336	1.6	39	253	1.3	296	1.4
3	347	1.8	308	1.5	40	276	1.4	292	1.4
4	355	1.8	334	1.6	41	173	0.9	167	0.8
5	366	1.9	299	1.5	42	279	1.4	292	1.4
6	411	2.1	330	1.6	43	293	1.5	253	1.2
7	415	2.1	402	2.0	44	257	1.3	300	1.5
8	417	2.1	414	2.0	45	265	1.4	281	1.4
9	372	1.9	358	1.8	46	214	1.1	236	1.2
10	396	2.0	356	1.7	47	222	1.1	185	0.9
11	401	2.0	348	1.7	48	274	1.4	289	1.4
12	381	1.9	379	1.9	49	214	1.1	187	0.9
13	365	1.9	407	2.0	50	263	1.3	288	1.4
14	357	1.8	358	1.8	51	166	0.8	209	1.0
15	339	1.7	388	1.9	52	233	1.2	228	1.1
16	385	2.0	408	2.0	53	212	1.1	266	1.3
17	392	2.0	362	1.8	54	186	0.9	187	0.9
18	359	1.8	373	1.8	55	232	1.2	259	1.3
19	298	1.5	345	1.7	56	164	0.8	163	0.8
20	271	1.4	366	1.8	57	158	0.8	134	0.7
21	241	1.2	337	1.6	58	166	0.8	169	0.8
22	315	1.6	378	1.8	59	133	0.7	96	0.5
23	315	1.6	379	1.9	60	146	0.7	179	0.9
24	330	1.7	346	1.7	61	100	0.5	77	0.4
25	352	1.8	399	2.0	62	89	0.5	129	0.6
26	329	1.7	339	1.7	63	100	0.5	114	0.6
27	354	1.8	387	1.9	64	94	0.5	89	0.4
28	326	1.7	373	1.8	65	141	0.7	159	0.8
29	330	1.7	302	1.5	66	69	0.4	88	0.4
30	337	1.7	359	1.8	67	71	0.4	81	0.4
31	284	1.4	308	1.5	68	77	0.4	92	0.5
32	319	1.6	310	1.5	69	63	0.3	72	0.4
33	285	1.5	321	1.6	70+	805	4.1	987	4.8
34	256	1.3	327	1.6	DK/missing	17	0.1	12	0.1
35	318	1.6	312	1.5					
36	264	1.3	267	1.3					
					Total	19,604	100.0	20,450	100.0

DK = Don't know

Note: The de facto population includes all residents and nonresidents who slept in the household the night before the interview.

Table D.2 Age distribution of eligible and interviewed women

De facto household population of women age 10-54, interviewed women age 15-49, and percentage of eligible women who were interviewed (weighted), by five-year age groups, Turkey 2008

Age group	Household population of women age 10-54	Ever-married women age 10-54	Interviewed women age 15-49		Percentage of eligible women interviewed
			Number	Percent	
10-14	1,847	0	NA	NA	NA
15-19	1,877	189	176	2.5	93.6
20-24	1,806	836	817	11.4	97.7
25-29	1,800	1,390	1,313	18.3	94.5
30-34	1,626	1,438	1,336	18.6	92.9
35-39	1,448	1,381	1,291	18.0	93.5
40-44	1,304	1,254	1,162	16.2	92.7
45-49	1,178	1,152	1,078	15.0	93.5
50-54	1,178	1,155	NA	NA	NA
15-49	11,038	7,640	7,172	100.0	93.9

Note: The de facto population includes all residents and nonresidents who stayed in the household the night before the interview. Weights for both household population of women and interviewed women are household weights. Age is based on the household schedule.
NA = Not applicable

Table D.3 Completeness of reporting

Percentage of observations missing information for selected demographic and health questions (weighted), Turkey 2008

Subject	Reference group	Percentage with missing information	Number of cases
Month Only	Births in the 15 years preceding the survey	1.89	10,874
Month and Year	Births in the 15 years preceding the survey	0.12	10,874
Age at Death	Births in the 15 years preceding the survey	1.04	438
Age/date at first union	Ever married women age 15-49	0.04	7,405
Respondent's education	All women age 15-49	0.00	7,405
Diarrhea in last 2 weeks	Living children 0-36 months	0.27	3,398
Height - children	Living children 0-59 months	25.56	3,398
Weight - children	Living children 0-59 months	20.31	3,398
Height or weight - children	Living children 0-59 months	25.94	3,398
Height - women	Women age 15-49 who had a live birth in the last five years	6.89	2,768
Weight - women	Women age 15-49 who had a live birth in the last five years	6.87	2,768
Height or weight - women	Women age 15-49 who had a live birth in the last five years	7.06	2,768

Table D.4 Births by calendar years

Number of births, percentage with complete birth date, sex ratio at birth, and calendar year ratio by calendar year, according to living (L), dead (D), and total (T) children (weighted), Turkey 2008

Calendar year	Number of births			Percentage with complete birth date[1]			Sex ratio at birth[2]			Calendar year ratio[3]		
	L	D	T	L	D	T	L	D	T	L	D	T
2008	600	8	608	100.0	100.0	100.0	92.1	135.3	92.6	-	-	-
2007	719	9	728	100.0	100.0	100.0	109.6	123.7	109.8	-	-	-
2006	695	10	705	100.0	100.0	100.0	97.2	193.1	98.2	103.0	80.1	102.5
2005	630	17	647	100.0	100.0	100.0	118.0	41.6	115.0	92.2	112.7	92.6
2004	672	20	692	100.0	100.0	100.0	102.1	142.5	103.1	104.8	116.9	105.1
2003	653	17	669	100.0	100.0	100.0	117.4	109.8	117.2	94.2	59.1	92.8
2002	714	37	751	97.8	83.4	97.1	135.5	172.4	137.1	96.6	146.2	98.2
2001	826	34	860	97.9	81.4	97.3	102.7	116.2	103.2	113.1	96.9	112.3
2000	747	33	780	98.7	84.8	98.1	107.3	176.9	109.6	96.2	96.6	96.2
1999	727	34	761	97.0	88.1	96.6	100.6	90.1	100.1	103.3	94.8	102.8
2004-2008	3,317	63	3,380	100.0	100.0	100.0	103.5	106.1	103.6	NA	NA	NA
1999-2003	3,666	155	3,821	98.2	86.1	97.8	111.5	130.5	112.2	NA	NA	NA
1994-1998	3,392	216	3,607	97.2	83.3	96.4	105.0	125.2	106.1	NA	NA	NA
1989-1993	3,034	240	3,274	95.2	72.7	93.5	102.3	82.3	100.7	NA	NA	NA
< 1989	3,726	493	4,219	92.7	79.4	91.1	104.9	129.8	107.5	NA	NA	NA
All	17,134	1,167	18,301	96.6	80.8	95.6	105.6	116.2	106.2	NA	NA	NA

NA = Not applicable

[1] Both year and month of birth given

[2] $(B_m/B_f)x100$, where B_m and B_f are the numbers of male and female births, respectively

[3] $[2B_x/(B_{x-1}+B_{x+1})]x100$, where B_x is the number of births in calendar year x

Table D.5 Reporting of age at death in days

Distribution of reported deaths under one month of age by age at death in days and the percentage of neonatal deaths reported to occur at ages 0-6 days, for five-year periods of birth preceding the survey (weighted), Turkey 2008

	Number of years preceding the survey				
Age at death (days)	0-4	5-9	10-14	15-19	Total 0-19
<1	14	18	32	14	77
1	15	8	16	24	62
2	5	7	7	8	27
3	5	7	8	10	30
4	1	3	4	3	12
5	1	1	4	5	11
6	0	5	0	2	7
7	1	2	6	6	15
8	1	1	1	0	2
9	1	0	2	1	4
10	1	0	2	1	4
12	0	2	0	0	3
13	0	0	0	0	0
15	1	3	2	7	12
17	0	0	1	1	3
19	0	0	1	0	1
20	1	2	5	9	17
21	0	0	3	0	3
22	0	0	0	0	0
23	0	0	0	2	2
25	0	0	0	0	0
26	0	0	1	0	1
27	0	0	0	0	0
28	0	0	0	0	0
29	0	0	0	1	1
30	0	1	3	2	7
Total 0-30	46	62	99	95	302
Percent early neonatal[1]	88	80	73	68	75

[1] ((0-6 days)/(0-30 days)) * 100

Table D.6 Reporting of age at death in months

Distribution of reported deaths under two years of age by age at death in months and the percentage of infant deaths reported to occur at age under one month, for five-year periods of birth preceding the survey, Turkey 2008

	Number of years preceding the survey				
Age at death (months)	0-4	5-9	10-14	15-19	Total 0-19
<1[a]	46	62	99	95	302
1	2	5	13	11	32
2	1	3	11	4	19
3	2	7	8	15	31
4	2	7	9	6	24
5	1	3	9	12	25
6	2	8	7	9	25
7	1	6	4	7	18
8	0	2	9	7	19
9	0	7	2	4	13
10	0	2	1	3	5
11	0	2	5	4	11
12	1	7	6	14	27
13	0	2	1	0	3
14	0	1	0	1	2
15	2	1	4	1	9
16	1	1	0	1	3
18	1	5	4	6	17
20	1	0	0	0	1
1 Year	0	0	0	1	1
Total 0-11	58	114	176	176	524
Percent neonatal[1]	79	54	56	54	58

[a] Includes deaths under one month reported in days.
[1] Under one month/under one year

THE CHILD GROWTH STANDARDS (WHO–2006)

APPENDIX E

Table E.1 Nutritional status of children, according to Child Growth Standards, WHO-2006

Percentage of children under five years classified as malnourished according to three anthropometric indices of nutritional status: height-for-age, weight-for-height, and weight-for-age, by background characteristics, Turkey 2008

	Height-for-age			Weight-for-height			Weight-for-age			
Background characterisitic	Percentage below -3 SD	Percentage below -2 SD	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD	Mean Z-score (SD)	Percentage below -3 SD	Percentage below -2 SD	Mean Z-score (SD)	Number of children
Age in months										
<6	1.1	4.9	0.5	0.6	3.2	0.3	0.5	0.5	0.5	177.0
6-11	1.0	7.6	0.7	0.5	3.2	0.7	0.2	2.0	0.7	260.0
12-23	2.7	10.7	(0.4)	0.2	0.6	0.9	0.2	1.8	0.4	531.0
24-35	6.0	17.9	(0.2)	0.0	0.3	1.5	0.4	2.1	0.8	504.0
36-47	4.6	12.0	0.4	0.2	0.3	1.7	0.3	1.7	1.1	476.0
48-59	3.5	13.8	(0.2)	0.0	0.2	1.2	0.3	1.6	0.5	532.0
Region										
West	1.5	9.8	0.8	0.1	0.2	1.8	0.0	0.4	1.4	854.0
South	2.7	9.1	(0.5)	0.0	0.0	0.7	0.3	1.8	0.2	336.0
Central	1.1	6.5	0.0	0.3	1.2	1.0	0.0	1.1	0.6	538.0
North	2.1	7.8	(0.3)	0.4	1.5	0.7	0.4	2.0	0.3	123.0
East	9.3	23.3	(0.7)	0.2	1.7	0.8	1.0	3.8	0.1	630.0
Residence										
Urban	2.4	9.5	0.3	0.2	0.7	1.3	0.2	1.3	0.9	1,788.0
Rural	6.7	19.6	(0.6)	0.2	1.3	0.8	0.5	2.7	0.2	692.0
Region (NUTS 1)										
Istanbul	0.7	10.6	0.4	0.0	0.0	1.6	0.0	0.7	1.2	399.0
West Marmara	1.0	4.6	0.7	0.0	0.0	1.7	0.0	0.0	1.3	67.0
Aegean	2.7	8.6	0.9	0.0	0.0	1.8	0.0	0.0	1.5	292.0
East Marmara	1.4	10.0	0.6	1.0	2.7	1.2	0.0	2.3	1.0	220.0
West Anatolia	0.6	4.5	0.2	0.0	0.2	1.2	0.0	0.3	0.9	247.0
Mediterranean	2.7	9.1	(0.5)	0.0	0.0	0.7	0.3	1.8	0.2	336.0
Central Anatolia	2.6	10.4	0.0	0.0	1.2	1.3	0.0	0.7	0.8	123.0
West Black Sea	0.0	4.9	(0.3)	0.4	1.6	0.8	0.4	0.4	0.4	118.0
East Black Sea	5.5	13.9	(0.4)	0.0	0.0	0.7	0.0	4.2	0.3	48.0
Northeast Anatolia	11.6	25.8	(0.6)	0.0	1.3	1.2	1.3	5.5	0.3	91.0
Central East Anatolia	8.0	22.0	(0.7)	0.3	2.5	0.6	2.0	5.6	(0.1)	159.0
Southeast Anatolia	9.2	23.2	(0.7)	0.3	1.5	0.9	0.4	2.7	0.1	381.0
Education										
No/Primary inc.	10.9	25.7	(0.2)	0.4	1.7	1.5	0.9	5.3	0.7	544.0
First level primary	1.9	9.9	(0.3)	0.2	0.8	0.8	0.2	0.9	0.4	1,239.0
Second level primary	1.4	8.7	(0.2)	0.0	0.4	0.7	0.0	0.5	0.3	226.0
High sc. and higher	0.7	5.2	1.1	0.0	0.2	2.0	0.0	0.4	1.7	472.0
Wealth index										
Poorest	9.9	25.1	(0.8)	0.3	1.1	0.9	0.7	4.2	0.1	612.0
Poorer	2.0	12.4	(0.6)	0.2	0.9	0.7	0.3	1.3	0.1	577.0
Middle	2.5	9.9	0.2	0.3	1.1	1.2	0.2	1.0	0.8	528.0
Richer	1.0	3.8	1.3	0.0	0.3	2.1	0.0	0.6	1.8	407.0
Richest	0.0	3.7	0.6	0.0	0.5	1.4	0.0	0.5	1.2	356.0
Total	3.6	12.3	0.0	0.2	0.8	1.2	0.3	1.7	0.7	2,481.0

APPENDIX F
QUESTIONNAIRES

HACETTEPE UNIVERSITY INSTITUTE OF POPULATION STUDIES
2008 TURKEY DEMOGRAPHIC AND HEALTH SURVEY
HOUSEHOLD QUESTIONNAIRE

IDENTIFICATION

CLUSTER NO..... ☐☐☐☐

HOUSEHOLD NO ..... ☐☐

5 REGIONS..... ☐

12 REGIONS ..... ☐☐

PLACE OF RESIDENCE-URBAN(1)-RURAL(2) ..... ☐

PROVINCE _____ ☐☐

DISTRICT_____ ☐☐

SUB-DISTRICT_____ ☐

VILLAGE _____ ☐☐☐

QUARTER_____

STREET _____ NO_____

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE (DAY-MONTH)	___ ___	___ ___	___ ___	☐☐
NAME-SURNAME OF INTERWIEVER	_____	_____	_____	☐☐☐
RESULT (*)	___	___	___	☐☐
NEXT VISIT DATE	___ ___	___ ___		TOTAL NUMBER OF VISITS ☐
NEXT VISIT TIME	___ ___	___ ___		

(*) RESULT CODES

01 COMPLETED
02 NONE OF THE HOUSEHOLD MEMBERS OR NO ELIGIBLE MEMBER PRESENT AT HOME DURING VISITS
03 NONE OF THE HOUSEHOLD MEMBERS PRESENT AT HOME DURING THE SURVEY PERIOD
04 POSTPONED
05 REFUSED
06 DWELLING VACANT/ADDRESS NOT A DWELLING
07 DWELLING DESTROYED
08 DWELLING NOT FOUND
09 PARTLY COMPLETED

96 OTHER_____
(SPECIFY)

NUMBER OF PERSONS

TOTAL NO. OF PERSONS IN HOUSEHOLD LIST..... ☐☐

TOTAL USUAL RESIDENTS OF HOUSEHOLD..... ☐☐

TOTAL EVER MARRIED 15-49 WOMEN..... ☐☐

SUPERVISOR	FIELD EDITOR	KEYER - 1	KEYER - 2
_____ ☐☐☐	_____ ☐☐☐	_____ ☐☐☐	_____ ☐☐☐
DAY-MONTH ☐☐ ☐☐	DAY-MONTH ☐☐ ☐☐	DAY-MONTH ☐☐ ☐☐	DAY-MONTH ☐☐ ☐☐

CONSENT PAGE

Hello, my name is _____. I am coming from Ankara, Hacettepe University Institute of Population Studies. We are conducting a survey with Ministry of Health on population and health. I want to talk to you and ask you some questions about these subjects.

You are selected to this survey randomly. All your answers are confidential. Participation in the survey is completely voluntary but attending to this survey and sharing your experiences with us is going to be helpful for the other women in Turkey, and contribute to the planning and development of the services for mother and child health.

First of all, I am going to ask questions about your household. Interview will take about 15 minutes to complete.

Do you agree to interview?

RESPONDENT AGREES TO BE INTERVIEWED 1	RESPONDENT DOES NOT AGREE TO BE INTERVIEWED....2
ASK THE PERSON WHO IS GOING TO ANSWER THE HOUSEHOLD QUESTIONNAIRE WHETHER HE/SHE HAS QUESTIONS ABOUT THE SURVEY. MAKE THE NECESSARY EXPLANATIONS AND START THE INTERVIEW.	*THANK TO THE PERSON WHOM YOU TALKED TO FOR SPENDING HIS/HER TIME AND FINISH THE INTERVIEW.*

Signature of the interviewer:.....

Date: _ _ / _ _ / _ _ _ _

HOUR ☐☐ MINUTE ☐☐

SECTION 1 – HOUSEHOLD LIST

Now I would like to get some information about people in this household, such as age and education.

HH LINE NO	HOUSEHOLD LIST *CONTINUE BY ASKING A-B-C-D-E.*	RELATION-SHIP TO HEAD OF HH	HOUSEHOLD MEMBERSHIP		SEX	AGE
	A. Would you please tell me the names of the persons living in this household beginning with the household head? B. Is there anyone who usually lives in this house but is absent at present? C. Additionally, are there persons who do not live here but who have stayed here last night? D. Are there any other persons such as small children or infants? E. Are there any others who are not members of your family but live here, such as lodgers, friends, or servants?	What is the relationship of ..... to the household head? *USE CODE LIST.*	Does ..... usually live here? YES.....1 NO.....2	Did ..... sleep here last night? YES.....1 NO.....2	Is ..... male or female? MALE.....1 FEMALE...2	How old is .....? (what age has ……. completed?) *OBTAIN AGE IN COMPLETED YEARS. IF OLDER THAN 95, WRITE "95".*
(1)	**(2)**	**(3)**	**(4)**	**(5)**	**(6)**	**(7)**
01		0 1	1 2	1 2	1 2	☐☐
02		☐☐	1 2	1 2	1 2	☐☐
03		☐☐	1 2	1 2	1 2	☐☐
04		☐☐	1 2	1 2	1 2	☐☐
05		☐☐	1 2	1 2	1 2	☐☐
06		☐☐	1 2	1 2	1 2	☐☐
07		☐☐	1 2	1 2	1 2	☐☐
08		☐☐	1 2	1 2	1 2	☐☐
09		☐☐	1 2	1 2	1 2	☐☐
10		☐☐	1 2	1 2	1 2	☐☐

TICK HERE IF AN ADDITIONAL QUESTIONNAIRE IS USED AND PROCEED WITH THE REST OF THE INTERVIEW ON THE ADDITIONAL QUESTIONNAIRE. ☐

(3) CODES FOR RELATIONSHIP TO HOUSEHOLD HEAD

01 HEAD
02 WIFE/HUSBAND
03 SON/DAUGHTER
04 SON/DAUGHTER- IN -LAW
05 GRANDCHILD
06 PARENT
07 PARENT -IN -LAW
08 SIBLING
09 SIBLING'S PARTNER
10 SIBLING'S CHILD
11 FATHER'S SIBLING
12 MOTHER'S SIBLING
13 STEP CHILD
14 COUSIN
15 GRAND PARENT
16 GRAND PARENT –IN- LAW
17 SIBLING –IN- LAW
18 SIBLING –IN- LAW'S PARTNER
19 SIBLING -IN-LAW'S CHILD
20 FATHER –IN-LAW'S SIBLING
21 MOTHER-IN-LAW'S SIBLING
22 SECOND WIFE
23 HUSBAND'S SECOND WIFE
24 STEP MOTHER/FATHER
25 ADOPTED CHILD
88 NOT RELATED
96 OTHER RELATIVE

HH LINE NO	PLACE OF BIRTH		PLACE OF RESIDENCE FOR VISITORS		MATERNAL SURVIVAL		PATERNAL SURVIVAL	
	In which province was ..... born? Was it then a province centre, district centre, sub-district or village, or was it abroad? *RECORD THE PRESENT PROVINCE OF PLACE OF BIRTH. PROVINCE TRAFFIC CODES.* *RECORD "90" FOR ABROAD.*		*CHECK QUESTION 4. IF USUALLY LIVES IN THIS HOUSEHOLD, SKIP TO 10.* *IF NOT, ASK.* Where does ..... live currently? Is this a province centre, district centre, sub-district or village, or is it abroad?		Is.....'s natural mother alive? ALIVE.....1 DEAD .....2 DK.. 8	*RECORD LINE NO. IF LISTED IN THE HOUSE. RECORD "96" IF LIVING ELSEWHERE.*	Is.....'s natural father alive? ALIVE ..... 1 DEAD ..... 2 DK..... 8	*RECORD LINE NO. IF LISTED IN THE HOUSE. RECORD "96" IF LIVING ELSEWHERE.*
(1)	(8A) PROVINCE	(8B) P.O.R.	(9A) PROVINCE	(9B) P.O.R.	(10)	(11)	(12)	(13)
01					1 2 8 → 12		1 2 8 → 14	
02					1 2 8 → 12		1 2 8 → 14	
03					1 2 8 → 12		1 2 8 → 14	
04					1 2 8 → 12		1 2 8 → 14	
05					1 2 8 → 12		1 2 8 → 14	
06					1 2 8 → 12		1 2 8 → 14	
07					1 2 8 → 12		1 2 8 → 14	
08					1 2 8 → 12		1 2 8 → 14	
09					1 2 8 → 12		1 2 8 → 14	
10					1 2 8 → 12		1 2 8 → 14	

(8B–9B) CODES FOR TYPE OF PLACE OF RESIDENCE
1 PROVINCE CENTER
2 DISTRICT CENTER
3 SUB-DISTRICT/VILLAGE
4 ABROAD

HH LINE NO	LITERACY AND EDUCATION STATUS AGES 6 AND OVER				SCHOOL ATTENDANCE AGE 6-24	
	Is ..... literate? YES.....1 NO.....2 DK.....8	Has ..... ever attended school? YES.....1 NO.....2 DK.....8	What is the highest level of school ..... attended? What is the highest grade ….. completed at that level? *USE CODE LIST.* LEVEL GRADE	Did ..... graduate from this school? (Did …… receive a diploma?) YES ..... 1 NO ..... 2 DK 8	Is ..... attending school this educational year? YES ..... 1 NO ..... 2 DK 8	Which level of school and grade is ..... attending? *USE CODE LIST.* LEVEL GRADE
(1)	**(14)**	**(15)**	**(16A) (16B)**	**(17)**	**(18)**	**(19A) (19B)**
01	1 2 8	1 2 8 → 22		1 2 8	1 2 8 → 20	
02	1 2 8	1 2 8 → 22		1 2 8	1 2 8 → 20	
03	1 2 8	1 2 8 → 22		1 2 8	1 2 8 → 20	
04	1 2 8	1 2 8 → 22		1 2 8	1 2 8 → 20	
05	1 2 8	1 2 8 → 22		1 2 8	1 2 8 → 20	
06	1 2 8	1 2 8 → 22		1 2 8	1 2 8 → 20	
07	1 2 8	1 2 8 → 22		1 2 8	1 2 8 → 20	
08	1 2 8	1 2 8 → 22		1 2 8	1 2 8 → 20	
09	1 2 8	1 2 8 → 22		1 2 8	1 2 8 → 20	
10	1 2 8	1 2 8 → 22		1 2 8	1 2 8 → 20	

(16A-19A-21A) LEVEL CODES
1 PRIMARY SCHOOL **2** SECONDARY SCHOOL **3** PRIMARY EDUCATION **4** HIGH SCHOOL **5** UNIVERSITY **6** MASTER'S DEGREE **7** Ph.D. **8** DK

(16B-19B-21B) GRADE CODES
00 LESS THAN ONE YEAR/PREPARATORY LEVEL **66** MASTER'S/Ph.D. **98** DK

HH LINE NO	SCHOOL ATTENDANCE AGE 6-24		MARITAL STATUS AGE 12 AND OVER		
	Did ..... attend school last year? (2007-2008) YES ..... 1 NO ..... 2 DK 8	Which level of school and grade did..... attend? *USE CODE LIST.* LEVEL GRADE	Has ..... ever married? YES ..... 1 NO 2	What is.....'s marital status? CURRENTLY MARRIED ..... 1 WIDOWED ..... 2 DIVORCED ..... 3 SEPARATED ..... 4 DK 8	*RECORD HH LINE NO OF HUSBAND AND SKIP TO 25.* *IF HUSBAND IS NOT IN THE HOUSEHOLD LIST, RECORD "96".*
(1)	**(20)**	**(21A) (21B)**	**(22)**	**(23)**	**(24)**
01	1 2 8 → 22		1 2 → 26	1 2 3 4 8 → 25	
02	1 2 8 → 22		1 2 → 26	1 2 3 4 8 → 25	
03	1 2 8 → 22		1 2 → 26	1 2 3 4 8 → 25	
04	1 2 8 → 22		1 2 → 26	1 2 3 4 8 → 25	
05	1 2 8 → 22		1 2 → 26	1 2 3 4 8 → 25	
06	1 2 8 → 22		1 2 → 26	1 2 3 4 8 → 25	
07	1 2 8 → 22		1 2 → 26	1 2 3 4 8 → 25	
08	1 2 8 → 22		1 2 → 26	1 2 3 4 8 → 25	
09	1 2 8 → 22		1 2 → 26	1 2 3 4 8 → 25	
10	1 2 8 → 22		1 2 → 26	1 2 3 4 8 → 25	

HH LINE NO	ELIGIBILITY FOR INDIVIDUAL INTERVIEW WOMEN AGED 15-49	ELIGIBILITY FOR NEVER MARRIED WOMEN MODULE WOMEN AGED 15-49	ELIGIBILITY TO THE WELFARE OF THE ELDERLY MODULE AGES 60 AND OVER
	CIRCLE LINE NUMBER IF ***EVER MARRIED WOMAN AGE 15-49*** *AND SKIP TO NEXT PERSON.* *IF NOT, SKIP TO 27.*	*CIRCLE LINE NUMBER IF* ***NEVER MARRIED WOMAN AGE 15-49*** *AND SKIP TO NEXT PERSON.* *IF NOT, SKIP TO 27.*	*CIRCLE LINE NUMBER IF* ***PERSON AGE 60 AND OVER*** *AND SKIP TO NEXT PERSON.*
(1)	**(25)**	**(26)**	**(27)**
01	**01**	**01**	**01**
02	**02**	**02**	**02**
03	**03**	**03**	**03**
04	**04**	**04**	**04**
05	**05**	**05**	**05**
06	**06**	**06**	**06**
07	**07**	**07**	**07**
08	**08**	**08**	**08**
09	**09**	**09**	**09**
10	**10**	**10**	**10**

AFTER DETERMINING THE ELIGIBLE PERSONS, GO BACK TO THE COVER PAGE AND COMPLETE THE NUMBER OF PERSONS SECTION.

SECTION 2. NEVER MARRIED WOMAN INFORMATION FORM

50 *CHECK 26 IN THE HOUSEHOLD LIST:*

AT LEAST ONE PERSON WAS RECORDED ☐ → (continue)

NOBODY WAS RECORDED ☐ → 70

51 TOTAL NUMBER OF NEVER MARRIED WOMEN..... ☐

RECORD THE NAMES AND THE LINE NUMBERS OF NEVER MARRIED WOMEN FROM THE HOUSEHOLD LIST. ASK THE QUESTIONS SEPARATELY FOR EACH RECORDED WOMAN. IF THERE ARE MORE THAN ONE NEVER MARRIED WOMAN, BEGIN WITH THE WOMAN AT THE TOP OF LIST. IF THERE ARE MORE THAN TWO NEVER MARREID WOMEN, USE AN ADDITIONAL QUESTIONNAIRE.

	FROM 2 *FROM 1*	NAME _____ LINE NO …… ☐☐		NAME _____ LINE NO …… ☐☐
53	For most of the time until ..... was 12 years old, in which province did she live? *RECORD THE NAME AND CODE OF THE PROVINCE.*	PROVINCE NAME _____ PROVINCE CODE ☐☐		PROVINCE NAME _____ PROVINCE CODE ☐☐
53A	Was this place then a province centre, a district centre, a sub-district or a village ? Or was it abroad?	PROVINCE CENTER ..... 1 DISTRICT CENTER ..... 2 SUBDSITRICT/VILLAGE ..... 3 ABROAD ..... 4 DON'T KNOW 8		PROVINCE CENTER ..... 1 DISTRICT CENTER ..... 2 SUBDSITRICT/VILLAGE ..... 3 ABROAD ..... 4 DON'T KNOW 8
54	How long has she been living continuously in …….. ((NAME OF CURRENT PLACE OF INTERVIEW OR USUAL RESIDENCE)?	YEAR ..... ☐☐ SINCE SHE WAS BORN..... 95 → 57 DON'T KNOW..... 98		YEAR ..... ☐☐ SINCE SHE WAS BORN..... 95 → 57 DON'T KNOW..... 98
55	Where did she live before she moved here (there)? *RECORD THE NAME AND CODE OF THE PROVINCE.*	PROVINCE NAME _____ PROVINCE CODE ☐☐		PROVINCE NAME _____ PROVINCE CODE ☐☐
56	Was this place then a province centre, a district centre, a sub-district or a village ? Or was it abroad?	PROVINCE CENTER ..... 1 DISTRICT CENTER ..... 2 SUBDSITRICT/VILLAGE ..... 3 ABROAD ..... 4 DON'T KNOW 8		PROVINCE CENTER ..... 1 DISTRICT CENTER ..... 2 SUBDSITRICT/VILLAGE ..... 3 ABROAD ..... 4 DON'T KNOW 8

	FROM 2 *FROM 1*	NAME _____ LINE NO …….....……		NAME _____ LINE NO ……	
57	What is .....'s mother tongue? *RECORD ONE LANGUAGE ONLY.*	TURKISH .....1 KURDISH .....2 ARABIC .....3 OTHER _____7 (SPECIFY) DON'T KNOW .....8 →	59	TURKISH .....1 KURDISH .....2 ARABIC .....3 OTHER _____7 (SPECIFY) DON'T KNOW .....8 →	59
57A	Which languages besides her mother tongue can ..... speak? *RECORD ALL LANGUAGES MENTIONED.*	TURKISH .....A KURDISH .....B ARABIC .....C OTHER _____U (SPECIFY) NO OTHER LANGUAGE..... Y DON'T KNOW.....X		TURKISH .....A KURDISH .....B ARABIC .....C OTHER _____U (SPECIFY) NO OTHER LANGUAGE..... Y DON'T KNOW.....X	
59	Is ..... currently engaged or promised, or does show have a boyfriend whom she plans to marry?	YES .....1 NO.....2		YES .....1 NO.....2	
60	Did ..... work in a regular or an irregular job whether paid or unpaid in the past week?	YES .....1 → NO.....2 DON'T KNOW.....8	63	YES .....1 → NO.....2 DON'T KNOW.....8	63
61	As you know some women sell small things, sell goods at the market place, work on the family farm or business paid or unpaid, look after children, work as housemaids etc. Did …….. do any of these or any other work of similar nature in the last week?	YES.....1 → NO..... 2 DON'T KNOW.....8	63	YES.....1 → NO..... 2 DON'T KNOW.....8	63
62	Does ..... have a job she normally works at?	YES .....1 NO..... 2 DON'T KNOW.....8 →	67	YES .....1 NO..... 2 DON'T KNOW.....8 →	67

	FROM 2 *FROM 1*	NAME _____ LINE NO…… ☐☐		NAME _____ LINE NO …… ☐☐	
63	What is .....'s occupation? What kind of job does she have? *RECORD THE JOB IN DETAIL AND CIRCLE THE APPROPRIATE SECTOR IN THE NEXT COLUMN* _____ ***(1st WOMAN)*** _____ ***(2nd WOMAN)***	AGRICULTURE.....1 INDUSTRY.....2 SERVICES.....3 DON'T KNOW.....8		AGRICULTURE.....1 INDUSTRY.....2 SERVICES.....3 DON'T KNOW.....8	
64	Does ..... work for public or private sector?	PUBLIC.....1 PRIVATE.....2 DON'T KNOW.....8		PUBLIC.....1 PRIVATE.....2 DON'T KNOW.....8	
65	What is .....'s status/position in her job?	EMPLOYER.....01 WAGED, WORKER (REGULAR).02 SALARIED, GOVERNMENT OFFICAL.....03 DAILY WAGED (SEASONAL/TEMPORAL).....04 SELF EMPLOYED (REGULAR)...05 SELF EMPLOYED (IRREGULAR).....06 UNPAID FAMILY WORKER.....07 OTHER_____96 (SPECIFY) DON'T KNOW.....98		EMPLOYER.....01 WAGED, WORKER (REGULAR)..02 SALARIED, GOVERNMENT OFFICAL.....03 DAILY WAGED (SEASONAL/TEMPORAL).....04 SELF EMPLOYED (REGULAR).....05 SELF EMPLOYED (IRREGULAR).....06 UNPAID FAMILY WORKER.....07 OTHER_____96 (SPECIFY) DON'T KNOW.....98	
66	Does ……. pay social security when doing this job? *(IF YES)* According to which schedule?	NO..... 0 SSK .....1 EMEKLİ SANDIĞI .....2 BAĞ-KUR .....3 PRIVATE.....4 YEŞİL KART .....5 OTHER _____7 (SPECIFY) DON'T KNOW.....8		NO..... 0 SSK .....1 EMEKLİ SANDIĞI .....2 BAĞ-KUR .....3 PRIVATE.....4 YEŞİL KART .....5 OTHER _____7 (SPECIFY) DON'T KNOW.....8	
67	Is ……. covered by any health insurance? *(IF YES)* According to which schedule?	NO..... 0 SSK .....1 EMEKLİ SANDIĞI .....2 BAĞ-KUR .....3 PRIVATE HEALTH INSURANCE.4 YEŞİL KART .....5 OTHER _____7 (SPECIFY) DON'T KNOW.....8		NO..... 0 SSK .....1 EMEKLİ SANDIĞI .....2 BAĞ-KUR .....3 PRIVATE HEALTH INSURANCE.....4 YEŞİL KART .....5 OTHER _____7 (SPECIFY) DON'T KNOW.....8	
68		*IF THERE IS ANOTHER NEVER MARRIED WOMAN IN THE HOUSEHOLD, RETURN TO 53. SKIP TO NEXT SECTION OTHERWISE.*		*IF THERE IS ANOTHER NEVER MARRIED WOMAN IN THE HOUSEHOLD, RETURN TO 53 IN THE 1ST COLUMN IN THE ADDITIONAL QUESTIONNAIRE. SKIP TO NEXT SECTION OTHERWISE.*	

SECTION 3. WELFARE OF ELDERLY

70	*CHECK 27; IN HOUSEHOLD LIST:* THERE IS AT LEAST ONE PERSON AGE 60 AND OVER RECORDED ☐ NOBODY IS RECORDED ☐ → 123			
71	TOTAL NUMBER OF ELDERLY PERSONS IN THE HOUSEHOLD LIST..... ☐☐			
	ENTER THE NAME AND LINE NUMBER OF EACH PERSON 60 AND OVER LISTED IN THE HOUSEHOLD SCHEDULE. ASK QUESTIONS ABOUT EACH OF THE LISTED PERSONS SEPARATELY. BEGIN WITH THE FIRST ELDERLY ON THE HOUSEHOLD LIST. IF THERE ARE MORE THAN 2 ELDERLY, USE ADDITIONAL QUESTIONNAIRE.			
	FROM 2 *FROM 1*	NAME _____ LINE NO ..... ☐☐		NAME _____ LINE NO ..... ☐☐
72	Does …… have any living own children? *(IF YES)* How many?	NO LIVING CHILD.....00 → 74 NO. OF OWN CHILDREN .... ☐☐		NO LIVING CHILD.....00 → 74 NO. OF OWN CHILDREN .... ☐☐
73	Where do……'s own children live of his/her own? *FOR ALL CHILDREN, CIRCLE MORE THAN ONE IF NECESSARY.*	SAME HOUSE.....A SAME BUILDING/STREET OR QUARTER.....B SAME CITY/VILLAGE.....C CLOSE CITY/VILLAGE…….....D DISTANT CITY/VILLAGE.....E OTHER COUNTRY.....F DK.....X		SAME HOUSE.....A SAME BUILDING/STREET OR QUARTER.....B SAME CITY/VILLAGE.....C CLOSE CITY/VILLAGE…….....D DISTANT CITY/VILLAGE.....E OTHER COUNTRY.....F DK.....X
74	Does …… have any living step children? *IF YES*: How many?	NO LIVING STEP CHILD.....00 → 76 NO. OF STEP CHILDREN .... ☐☐		NO LIVING STEP CHILD.....00 → 76 NO. OF STEP CHILDREN .... ☐☐
75	Where do……'s step children live? *FOR ALL CHILDREN, CIRCLE MORE THAN ONE IF NECESSARY.*	SAME HOUSE.....A SAME BUILDING/STREET OR QUARTER.....B SAME CITY/VILLAGE.....C CLOSE CITY/VILLAGE…….....D DISTANT CITY/VILLAGE.....E OTHER COUNTRY.....F DK.....X		SAME HOUSE.....A SAME BUILDING/STREET OR QUARTER.....B SAME CITY/VILLAGE.....C CLOSE CITY/VILLAGE…….....D DISTANT CITY/VILLAGE.....E OTHER COUNTRY.....F DK.....X

	FROM 2 *FROM 1*	NAME _____ LINE NO …… ☐☐		NAME _____ LINE NO …… ☐☐	
76	Who takes the main responsibility for ……'s needs, health and welfare?	HIMSELF/HERSELF.....01 HUSBAND/WIFE.....02 OWN DAUGHTER.....03 OWN SON.....04 STEP DAUGHTER.....05 STEP SON.....06 CHILDREN IN LAW.....07 SIBLING.....08 GRANDCHILD.....09 SIBLING'S CHILD.....10 OTHER CLOSE RELATIVE.....11 DISTANT RELATIVE.....12 NEIGHBOUR.....13 PAID CARETAKER.....14 OTHER _____96 (SPECIFY)		HIMSELF/HERSELF.....01 HUSBAND/WIFE.....02 OWN DAUGHTER.....03 OWN SON.....04 STEP DAUGHTER.....05 STEP SON.....06 CHILDREN IN LAW.....07 SIBLING.....08 GRANDCHILD.....09 SIBLING'S CHILD.....10 OTHER CLOSE RELATIVE.....11 DISTANT RELATIVE.....12 NEIGHBOUR.....13 PAID CARETAKER.....14 OTHER _____96 (SPECIFY)	
77	Does ..... have any income?	YES .....1 NO .....2 →	79	YES .....1 NO .....2 →	79
78	What are the source(s) of this income? *RECORD ALL MENTIONED.*	PENSION (SELF)……....A PENSION (INDIRECT)…….... B OLD AGE PENSION.....C RENT/INTEREST…….... D FROM RELATIVE IN TURKEY..... E FROM RELATIVE ABROAD.....F SALARY/WAGE…….....G OTHER _____U (SPECIFY)		PENSION (SELF)……....A PENSION (INDIRECT)…….... B OLD AGE PENSION.....C RENT/INTEREST…….... D FROM RELATIVE HERE..... E FROM RELATIVE ABROAD.....F SALARY/WAGE…….....G OTHER _____U (SPECIFY)	
79	Is he/she covered by any health insurance? *(IF YES)* According to which schedule?	NO ..... 0 SSK .....1 EMEKLİ SANDIĞI .....2 BAĞ-KUR .....3 PRIVATE HEALTH INSURANCE.....4 YEŞİL CARD .....5 OTHER _____7 (SPECIFY) DK 8		NO .....0 SSK .....1 EMEKLİ SANDIĞI .....2 BAĞ-KUR .....3 PRIVATE HEALTH INSURANCE....4 YEŞİL CARD .....5 OTHER _____7 (SPECIFY) DK 8	
80	Does ….. have a continuous health problem or disability that handicaps her/his daily life activities?	YES.....1 NO.. .....2 →	82	YES.....1 NO.. .....2 →	82
81	For how long has this health problem handicapped ...'s daily activities?	SINCE BIRTH .....000 MONTH.....1 ☐☐ YEAR .....2 ☐☐ DON'T KNOW.....998		SINCE BIRTH .....000 MONTH.....1 ☐☐ YEAR .....2 ☐☐ DON'T KNOW.....998	

	FROM 2 *FROM 1*	NAME _____ LINE NO …… ☐☐		NAME _____ LINE NO …… ☐☐
82	Is……. continuously confined to bed?	YES .....1 → 85 NO 2		YES .....1 → 85 NO 2
83	Is ……. confined to chair/armchair all day long?	YES .....1 NO 2		YES .....1 NO 2
84	Is ……'s daily life limited to house/flat or garden?	YES .....1 NO 2		YES .....1 NO. 2
85	Does ……. do the things I will list now easily, with difficulty or only with the assistance of another person?	EASY / WITH DIFF. / WITH ASSISTANCE / IMPOSSIBLE		EASY / WITH DIFF. / WITH ASSISTANCE / IMPOSSIBLE
	Getting into/out of bed?	1 2 3 4		1 2 3 4
	Dressing-undressing?	1 2 3 4		1 2 3 4
	Eating?	1 2 3 4		1 2 3 4
	Going to and using the toilet?	1 2 3 4		1 2 3 4
	Taking a bath?	1 2 3 4		1 2 3 4
	Shopping?	1 2 3 4		1 2 3 4
	Cooking?	1 2 3 4		1 2 3 4
	Daily housework?	1 2 3 4		1 2 3 4
	Outside errands (paying bills, going to a bank/hospital, etc.)?	1 2 3 4		1 2 3 4
	Travelling outside the city?	1 2 3 4		1 2 3 4
86		*IF THERE IS ANOTHER ELDERLY IN THE HOUSE RETURN TO QUESTION 72; OTHERWISE, SKIP TO NEXT SECTION*		*IF THERE IS ANOTHER ELDERLY RETURN TO QUESTION 72 IN FIRST COLUMN IN ADDITIONAL QUESTIONNAIRE; OTHERWISE, SKIP TO NEXT SECTION*

SECTION 4. HOUSING CHARACTERISTICS

123	Now I will ask some questions about the dwelling that you usually live in. Does the house you live in belong to a household member, is it rented from someone else, is it a lodging, or do you just live here without having to pay anything?	OWNED BY A HOUSEHOLD MEMBER.....1 RENTED.....2 LODGING.....3 NO RENT PAID.....4 OTHER_____ 7 (SPECIFY)	
125	Does anyone from this household own a house other than this one elsewhere?	YES.....1 NO.....2	
129	What is the source of drinking water for members of your household?	PIPED WATER PIPED WATER IN HOUSE/GARDEN.....11 ——► 133 PUB. PIPED WATER OUTSIDE HOUSE/GARDEN.12 WELL WATER WELL IN HOUSE/GARDEN.....21 ——► 133 PUBLIC WELL.....22 SURFACE WATER PIPED SURFACE WATER IN HOUSE/GARDEN.....31 ——► 133 SPRING/PUBLIC FOUNTAIN.....32 RIVER/STREAM/POND/LAKE/DAM.....33 RAINWATER.....41 ——► 133 TANKER TRUCK.....51 BOTTLED WATER/DEMI JOHN/PET WATER.....61 ——► 133 OTHER_____ 96 (SPECIFY)	
130	How long does it take you go there, get water, and come back?	MINUTE..... ☐☐☐ ON PREMISES.....996	

133	What is the source of daily use water for hand washing, dishwashing, and laundry in this house?	PIPED WATER PIPED WATER IN HOUSE/GARDEN....11 PUB. PIPED WATER OUTSIDE HOUSE/GARDEN..12 WELL WATER WELL IN HOUSE/GARDEN....21 PUBLIC WELL....22 SURFACE WATER PIPED SURFACE WATER IN HOUSE/GARDEN....31 SPRING/PUBLIC FOUNTAIN....32 RIVER/STREAM/POND/LAKE/DAM....33 RAIN WATER....41 TANKER TRUCK....51 BOTTLED WATER/DEMI JOHN/PET WATER....61 WATER STATION....71 OTHER_____96 (SPECIFY)	
137	Is the toilet inside the house or outside?	NO FACILITY/BUSH/FIELD/PUBLIC TOILET....0 ——► 141 INSIDE....1 OUTSIDE....2 INSIDE AND OUTSIDE....3 OTHER_____7 (SPECIFY)	
138	Is your toilet connected to the sewerage system? *IF MORE THAN ONE TOILET IS USED, RECORD ACCORDING TO THE ONE INSIDE OR CLOSEST TO THE HOUSE.* *(IF NO)* Is your toilet connected to open pit or closed pit?	CONNECTED TO SEWERAGE....1 OPEN PIT....2 CLOSED PIT....3 OTHER_____7 (SPECIFY)	
139	Do only the members of your household use the toilet or is it shared with other household(s)?	ONLY HOUSEHOLD MEMBERS....1 WITH OTHER HOSEHOLD(S)....2	
141	How is your house heated in the winter?	CENTRAL HEATING NATURAL GAS....11 DIESEL OIL/GASOIL....12 WOOD/COAL....13 OTHER....14 FLAT HEATING/COMBI BOILER NATURAL GAS....21 DIESEL OIL/GASOIL....22 OTHER....23 STOVE NATURAL GAS....31 DIESEL OIL/GASOIL....32 WOOD/COAL....33 DRIED COW DUNG....34 OTHER....35 ELECTRIC HEATER....40 OTHER_____96 (SPECIFY)	

142A	How many rooms are there in your house? Would you please include bedrooms, living rooms, sitting rooms and studying rooms?	NO OF ROOMS ..... ☐☐	
142B	From all you listed, how many rooms in your house are generally used for sleeping?	ROOMS USED FOR SLEEPING ..... ☐☐	
142C	Is there a separate kitchen?	NO ..... 0 YES 1	
142D	Is there a separate bathroom?	NO ..... 0 YES 1	
143	What is the main material of the floor?	NATURAL FLOOR EARTH ..... 11 RUDIMENTARY WOOD BLANKS ..... 21 FINISHED FLOOR PARQUET/POLISHED WOOD/LAMINA ..... 31 KARO ..... 32 CEMENT ..... 34 CARPET/WALL-TO-WALL CARPETS ..... 35 MARLEY ..... 36 MOZAIC ..... 37 LAMINATED ..... 38 OTHER _____ 96 (SPECIFY)	

144	In order to get information about your household wealth, I want to learn whether you have some of the household assets. Do you have the following in the household?		NO	YES
	Refrigerator	REFRIGATOR	0	1
	Gas or Electric oven	GAS/ELECTRIC OVEN	0	1
	Microwave oven	MICROWAVE OVEN	0	1
	Food processor/Mixer/Blender	FOOD PROCESSOR/MIXER/BLENDER	0	1
	Dishwasher	DISHWASHER	0	1
	Garbage dispenser	GARBAGE DISPENSER	0	1
	Washing machine	WASHING MACHINE	0	1
	Drying machine	DRYING MACHINE	0	1
	Iron	IRON	0	1
	Vacuum Cleaner	VACUUM CLEANER	0	1
	LCD/Plasma TV	LCD - PLASMA TELEVISION	0	1
	Television	TELEVISION	0	1
	Paid TV services	PAID TV SERVICES	0	1
	Satellite TV	SATELLITE TV	0	1
	Video camera	VİDEO CAMERA	0	1
	DVD/VCD Player	DVD/VCD PLAYER	0	1
	Camera	CAMERA	0	1
	Cell phone *(IF YES)* How many members have cell phones?	CELL PHONE	0	☐
	Telephone	TELEPHONE	0	1
	Laptop computer	LAPTOP COMPUTER	0	1
	Desktop computer	DESKTOP COMPUTER	0	1
	Internet connection	İNTERNET CONNECTION	0	1
	Indoors sporting equipment (Treadmill, stationary bicycle, etc.)	INDOORS SPORTS EQUIPMENT	0	1
	Air conditioner	AIR CONDITIONER	0	1
	Private car *(IF YES)* How many?	PRIVATE CAR	0	☐
	Taxi/Minibus/Bus/other commercial vehicles	TAXI/MINIBUS/BUS	0	1
	Tractor	TRACTOR	0	1
	Motorcycle	MOTOCYCLE	0	1

146	Has there been any difficulty in covering the following expenditures in the last 12 months in your household?		

		YES	NO	NOT APPLICABLE
Food expenditures?	FOOD	1	2	3
Health expenditures?	HEALTH	1	2	3
Education expenditures?	EDUCATON	1	2	3
Rent?	RENT	1	2	3
Bills (Electricity, water, etc.)?	BILLS	1	2	3
Mortgage payments?	MORTGAGE	1	2	3

160	*CHECK COVER PAGE:* CLUSTER NO EVEN AND HH NO EVEN ☐ CLUSTER NO ODD AND HH NO ODD	CLUSTER NO EVEN , HH NO ODD OR CLUSTER NO ODD, HH NO EVEN ☐ →	161
160A	Now I want to test whether the salt that you use in your house is iodized or not. Can you please bring me a sample of the salt you use in your house? *IF BOTH PRESERVING POT AND PACKAGE ARE AVALIABLE, APPLY POTASSIUM IODADE TEST BY TAKING A SAMPLE FROM PRESERVING POT AND RECORD THE RESULT.*	POTASSIUM IODADE TEST NOT IODIZED - 0 PPM (NO COLOUR) ..... 11 LESS THAN 15 PPM (LIGHT COLOUR) ..... 12 15 PPM OR MORE (DARK COLOUR) ..... 13 NOT TESTED _____ 00 → 161 (SPECIFY)	
160B	*APPLY POTASIUM IODURE TEST AND RECORD THE RESULT.*	POTASSIUM IODURE TEST NOT IODIZED - 0 PPM (NO COLOUR) ..... 21 IODIZED (HAS COLOUR) ..... 22 NOT TESTED _____ 00 (SPECIFY)	
161	LINE NO. OF THE RESPONDENT IN THE HOUSEHOLD SCHEDULE	HOUSEHOLD LINE NO ..... ☐☐	
162	LANGUAGE USED FOR CONDUCTING THE HOUSEHOLD QUESTIONNAIRE	TURKISH ..... 1 → 164S KURDISH ..... 2 ARABIC ..... 3 OTHER _____ 7 (SPECIFY)	
163	WAS AN INTERPRETER USED?	YES ..... 1 NO 2	
164S	RECORD THE TIME	HOUR-MINUTE ..... ☐☐ ☐☐	

AGE – YEAR OF BIRTH TABLE

AGE	YEAR OF BIRTH	
	HAS NOT CELEBRATED BIRTHDAY IN 2008	CELEBRATED BIRTHDAY IN 2008
	DOES NOT KNOW	
0	2007	--
1	2006	2007
2	2005	2006
3	2004	2005
4	2003	2004
5	2002	2003
6	2001	2002
7	2000	2001
8	1999	2000
9	1998	1999
10	1997	1998
11	1996	1997
12	1995	1996
13	1994	1995
14	1993	1994
15	1992	1993
16	1991	1992
17	1990	1991
18	1989	1990
19	1988	1989
20	1987	1988
21	1986	1987
22	1985	1986
23	1984	1985
24	1983	1984
25	1982	1983
26	1981	1982
27	1980	1981
28	1979	1980
29	1978	1979
30	1977	1978
31	1976	1977
32	1975	1976
33	1974	1975
34	1973	1974
35	1972	1973
36	1971	1972
37	1970	1971
38	1969	1970
39	1968	1969
40	1967	1968
41	1966	1967
42	1965	1966
43	1964	1965
44	1963	1964
45	1962	1963
46	1961	1962
47	1960	1961
48	1959	1960
49	1958	1959

AGE	YEAR OF BIRTH	
	HAS NOT CELEBRATED BIRTHDAY IN 2008	CELEBRATED BIRTHDAY IN 2008
	DOES NOT KNOW	
50	1957	1958
51	1956	1957
52	1955	1956
53	1954	1955
54	1953	1954
55	1952	1953
56	1951	1952
57	1950	1951
58	1949	1950
59	1948	1949
60	1947	1948
61	1946	1947
62	1945	1946
63	1944	1945
64	1943	1944
65	1942	1943
66	1941	1942
67	1940	1941
68	1939	1940
69	1938	1939
70	1937	1938
71	1936	1937
72	1935	1936
73	1934	1935
74	1933	1934
75	1932	1933
76	1931	1932
77	1930	1931
78	1929	1930
79	1928	1929
80	1927	1928
81	1926	1927
82	1925	1926
83	1924	1925
84	1923	1924
85	1922	1923
86	1921	1922
87	1920	1921
88	1919	1920
89	1918	1919
90	1917	1918
91	1916	1917
92	1915	1916
93	1914	1915
94	1913	1914

PROVINCE TRAFFIC CODES

01 ADANA	21 DİYARBAKIR	41 KOCAELİ	61 TRABZON
02 ADIYAMAN	22 EDİRNE	42 KONYA	62 TUNCELİ
03 AFYON	23 ELAZIĞ	43 KÜTAHYA	63 ŞANLIURFA
04 AĞRI	24 ERZİNCAN	44 MALATYA	64 UŞAK
05 AMASYA	25 ERZURUM	45 MANİSA	65 VAN
06 ANKARA	26 ESKİŞEHİR	46 K.MARAŞ	66 YOZGAT
07 ANTALYA	27 GAZİANTEP	47 MARDİN	67 ZONGULDAK
08 ARTVİN	28 GİRESUN	48 MUĞLA	68 AKSARAY
09 AYDIN	29 GÜMÜŞHANE	49 MUŞ	69 BAYBURT
10 BALIKESİR	30 HAKKARİ	50 NEVŞEHİR	70 KARAMAN
11 BİLECİK	31 HATAY	51 NİĞDE	71 KIRIKKALE
12 BİNGÖL	32 ISPARTA	52 ORDU	72 BATMAN
13 BİTLİS	33 İÇEL	53 RİZE	73 ŞIRNAK
14 BOLU	34 İSTANBUL	54 SAKARYA	74 BARTIN
15 BURDUR	35 İZMİR	55 SAMSUN	75 ARDAHAN
16 BURSA	36 KARS	56 SİİRT	76 IĞDIR
17 ÇANAKKALE	37 KASTAMONU	57 SİNOP	77 YALOVA
18 ÇANKIRI	38 KAYSERİ	58 SİVAS	78 KARABÜK
19 ÇORUM	39 KIRKLARELİ	59 TEKİRDAĞ	79 KİLİS
20 DENİZLİ	40 KIRŞEHİR	60 TOKAT	80 OSMANİYE
			81 DÜZCE
90 ABROAD			

CONVERSION OF YEARS OF BIRTH FROM RUMI CALENDAR TO GREGORIAN CALENDAR YEARS

RUMI YEARS + 584 = GREGORIAN YEAR

HACETTEPE UNIVERSITY INSTITUTE OF POPULATION STUDIES
2008 TURKEY DEMOGRAPHIC AND HEALTH SURVEY
EVER MARRIED WOMEN'S QUESTIONNAIRE

IDENTIFICATION

CLUSTER NO. ☐☐☐☐

HOUSEHOLD NO ☐☐

5 REGIONS ☐

12 REGIONS ☐☐

PLACE OF RESIDENCE-URBAN(1)-RURAL(2) ☐

PROVINCE _____ ☐☐

DISTRICT _____ ☐☐

SUB-DISTRICT _____ ☐

VILLAGE _____ ☐☐☐

QUARTER _____

STREET _____ NO_____

NAME-SURNAME OF WOMAN_____ LINE NUMBER OF WOMAN ☐☐

IF CURRENTLY MARRIED
NAME SURNAME OF HUSBAND_____ LINE NUMBER OF HUSBAND ☐☐

INTERVIEWER VISITS

	1	2	3	FINAL VISIT
DATE (DAY-MONTH)	___ ___	___ ___	___ ___	☐☐ ☐☐
INTERVIEWER'S NAME-SURNAME	_____	_____	_____	☐☐☐
RESULT (*)	___	___	___	☐☐
NEXT VISIT DAY-MONTH	___ ___	___ ___		TOTAL NO OF VISITS ☐
NEXT VISIT HOUR	___ ___	___ ___		

(*) RESULT CODES

01 COMPLETED
02 WOMAN IS NOT AT HOME DURING VISITS
03 WOMAN IS NOT AT HOME DURING SURVEY DATE
04 POSTPONED
05 REFUSED
09 PARTLY COMPLETED
96 OTHER _____ (SPECIFY)

SUPERVISOR	FIELD EDITOR	KEYER - 1	KEYER - 2
_____ ☐☐☐	_____ ☐☐☐	_____ ☐☐☐	_____ ☐☐☐
DAY-MONTH ☐☐ ☐☐	DAY-MONTH ☐☐ ☐☐	DAY-MONTH ☐☐ ☐☐	DAY-MONTH ☐☐ ☐☐

CONSENT PAGE

Hello, my name is _____. I am coming from Ankara, Hacettepe University Institute of Population Studies. We are conducting a survey with Ministry of Health on population and health. I want to talk to you and ask you some questions about these subjects.

You are selected to this survey randomly. All your answers are confidential. Participation in the survey is completely voluntary but attending to this survey and sharing your experiences with us is going to be helpful for the other women in Turkey, and contribute to the planning and development of the services for mother and child health.

Now I am going to ask questions about health and daily life. Interview will take about 40 minutes to complete.

Do you agree to interview?

RESPONDENT AGREES TO BE INTERVIEWED 1	RESPONDENT DOES NOT AGREE TO BE INTERVIEWED....2
ASK THE SELECTED PERSON TO INTERVIEW WHETHER HE/SHE HAS QUESTIONS ABOUT THE SURVEY. MAKE THE NECESSARY EXPLANATIONS AND START THE INTERVIEW.	*THANK THE SELECTED PERSON TO INTERVIEW FOR SPENDING HIS/HER TIME AND FINISH THE INTERVIEW.*

Signature of the interviewer:.....

Date: _ _ / _ _ / _ _ _ _

SECTION 1A. RESPONDENT'S BACKGROUND

101S	*RECORD THE TIME*	HOUR-MINUTE..... ☐☐ ☐☐	
105	First I would like to ask some questions about your age and educational status. In what year and month were you born?	MONTH ..... ☐☐ DOESN'T KNOW MONTH.....98 YEAR ..... 1 9 ☐☐ DOESN'T KNOW YEAR 9998	
106	How old are you exactly? What age have you completed? *CHECK ANSWERS TO 105 AND 106 USING AGE-YEAR OF BIRTH TABLE. IF INCONSISTENT PROBE AND CORRECT.* *AGE MUST BE DETERMINED!*	AGE IN COMPLETED YEARS..... ☐☐	
107	Have you ever attended school?	YES.....1 NO.....2 →	114
108	What is the highest level you attended?	PRIMARY SCHOOL.....11 GENERAL SECONDARY SCHOOL.....12 VOCATIONAL SECONDARY SCHOOL.....13 PRIMARY EDUCATİON.....14 GENERAL HIGH SCHOOL.....15 VOCATIONAL HIGH SCHOOL.....16 UNIVERSITY.....17 MASTER'S DEGREE.....18 Ph.D. 19	
109A	What is the highest level you have completed at that level? *RECORD "00" IF THE RESPONDENT COMPLETED PREPARATORY CLASS OR SHE DID NOT COMPLETE ANY GRADE, AND "66" FOR MASTER'S/Ph. D.*	GRADE ..... ☐☐	
109B	Did you graduate (receive diploma) from this school?	YES.....1 NO.....2	
113	*CHECK 108 AND 109A:* ATTENDED SCHOOL FOR 5 OR LESS YEARS ☐ ↓ ATTENDED SCHOOL FOR 6 OR MORE YEARS ☐ →		115B
114	Can you read a letter or newspaper easily, with difficulty, or not at all?	NOT AT ALL .....0 WITH DIFFICULTY .....1 EASILY 2	

115B	Aside from formal education; Have you ever attended a literacy course? Have you ever attended Koran course? Have you ever attended any foreign language course? Have you ever attended computer course? Have you ever attended any occupation/skill training course?	YES NO LITERACY..... 1 2 KORAN..... 1 2 FOREIGN LANGUAGE..... 1 2 COMPUTER..... 1 2 OTHER..... 1 2	
115C	Have you ever smoked cigarettes regularly?	YES.....1 NO.....2 → 115G	
115D	How old were you when you started to smoke regularly?	AGE STARTED TO SMOKE ..... ☐☐	
115E	Do you currently smoke?	YES.....1 NO.....2	
115E	What is the average number of cigarettes you smoke/smoked?	DAY.....1 ☐☐ WEEK.....2 ☐☐ MONTH.....3 ☐☐	
115G	Does anybody smoke in the kitchen, lounge or rooms in your house?	YES.....1 NO.....2	
116A	What is your mother tongue?	TURKISH.....1 KURDISH .....2 ARABIC .....3 OTHER _____ 7 (SPECIFY)	
116B	In addition to your mother tongue, which language(s) can you speak? *(IF YES)* Which language(s)? *RECORD ALL MENTIONED.*	TURKISH.....A KURDIS ..... B ARABIC ..... C OTHER _____ U (SPECIFY) NO OTHER LANGUAGE..... Y	
116C	What is (was) your mother's mother tongue? What is (was) your father's mother tongue? *USE THE CODES IN 116A.*	MOTHER ..... ☐ FATHER ..... ☐	

117A	Is (was) your mother literate?	YES ..... 1 NO 2	
117B	Did your mother ever attend to school? (*IF YES*) Which school did she complete?	DID NOT ATTEND SCHOOL ..... 0 ATTENDED PRIMARY SCHOOL, DID NOT FINISH ..... 1 PRIMARY SCHOOL GRADUATE ..... 2 SECONDARY SCHOOL GRADUATE ..... 3 HIGH SCHOOL GRADUATE ..... 4 COLLEGE UNIVERSITY GRADUATE / GRADUATE EDUCATION ..... 5 DON'T KNOW 8	
117C	How many children born to your mother are alive today, including yourself? How many of them are male, how many of them are female?	NUMBER OF MALE CHILDREN ALIVE ..... ☐☐ NUMBER OF FEMALE CHILDREN ALIVE ..... ☐☐ TOTAL NUMBER OF LIVING CHILDREN ..... ☐☐	
117D	Did she have any other male or female children, who died later? *(IF NO)* He/she could die just after the birth or when he/she was a young baby.	YES ..... 1 NO ..... 2 →	118A
117E	How many children born to your mother have died? How many of them were female and how many male?	NUMBER OF DECEASED MALE CHILDREN ..... ☐☐ NUMBER OF DECEASED FEMALE CHILDREN ..... ☐☐ SEX UNKNOWN ..... ☐☐	
118A	Is (was) your father literate?	YES ..... 1 NO 2	
118B	Did your father ever attend school? *(IF YES)* Which school did he complete?	DID NOT ATTEND SCHOOL ..... 0 ATTENDED PRIMARY SCHOOL, DID NOT FINISH ..... 1 PRIMARY SCHOOL GRADUATE ..... 2 SECONDARY SCHOOL GRADUATE ..... 3 HIGH SCHOOL GRADUATE ..... 4 COLLEGE UNIVERSITY GRADUATE / GRADUATE EDUCATION ..... 5 DON'T KNOW 8	
118C	Are (were) your parents related?	YES ..... 1 NO ..... 2 →	119A
118D	In what way is (was) your father related to your mother?	SON OF FATHER'S BROTHER ..... 1 SON OF FATHER'S SISTER ..... 2 SON OF MOTHER'S SISTER ..... 3 SON OF MOTHER'S BROTHER ..... 4 OTHER PATERNAL BLOOD RELATIVE ..... 5 OTHER MATERNAL BLOOD RELATIVE ..... 6 OTHER _____ 7 (SPECIFY) DON'T KNOW 8	

SECTION 1B. MIGRATION HISTORY

119A	Now I would like to talk to you about your place of birth and migrations. In which province were you born? *RECORD THE NAME AND CODE OF THE PROVINCE.*	NAME OF PROVINCE _____ PROVINCE CODE ☐☐	
119B	Was this place then a province centre, a district centre, a sub-district or a village ? Or was it abroad?	PROVINCE CENTRE ..... 1 DISTRICT CENTRE ..... 2 SUBDISTRICT OR VILLAGE ..... 3 ABROAD 4	
119C	For most of the time until you were 12 years old, where did you live? *RECORD THE NAME AND CODE OF THE PROVINCE.*	NAME OF PROVINCE _____ PROVINCE CODE ☐☐	
119D	Was this place then a province centre, a district centre, a sub-district or a village ? Or was it abroad?	PROVINCE CENTRE ..... 1 DISTRICT CENTRE ..... 2 SUBDISTRICT OR VILLAGE ..... 3 ABROAD 4	
119E	After you have completed age 12, have you ever changed your place of residence at least for 6 months?	YES ..... 1 NO ..... 2 → 160	

119F Now I wish to talk about all the different places of residences you have lived in for at least 6 months after you have completed age 12. Can you tell me the places you have lived in since then, starting from the one you were living at the age of 12?

RECORD THE PLACE OF RESIDENCE AT AGE 12 ON THE FIRST LINE IN THE LIST, AND RECORD ALL MIGRATION MOVES IN ORDER. ASK THE QUESTIONS FOR EACH MOVEMENT SEPERATELY AND WRITE THE TOTAL NUMBER OF LINES TO THE BOX BELOW.

ASK ONLY 119G AND 119H FOR CURRENT PLACE OF RESIDENCE.

WARNING: USE ADDITIONAL QUESTIONNAIRE IF THERE ARE MORE THAN 6 MIGRATIONS. CONTINUE THE INTERVIEW IN THE ADDITIONAL QUESTIONNAIRE.

TOTAL NO. OF LINES

	119G In which province were you living? Next? *RECORD THE NAME AND PROVINCE CODE OF THE PLACE OF RESIDENCE (PROVINCE, DISTRICT, SUB-DISTICT, VILLAGE).*	**119H** When you were living there was this place a province centre, a district centre, a sub-district or village? Or was it abroad?	**119I** For how long did you live in .....? *RECORD IN MONTHS IF LESS THAN 2 YEARS.*	**119J** At which month and year did you migrate from ..... to ..... ?	**119K** What was the main reason of migration from .....?
01	PROVINCE CODE ____ (PLACE OF RESIDENCE)	PROVINCE CENTRE .....1 DISTRICT CENTRE .....2 SUBDISTRICT/VILLAGE .3 ABROAD.....4	MONTH...1 ____ YEAR.....2 ____	MONTH..... ____ YEAR.. ____	____ (SPECIFY IF OTHER)
02	PROVINCE CODE ____ (PLACE OF RESIDENCE)	PROVINCE CENTRE .....1 DISTRICT CENTRE .....2 SUBDISTRICT/VILLAGE .3 ABROAD.....4	MONTH...1 ____ YEAR.....2 ____	MONTH..... ____ YEAR.. ____	____ (SPECIFY IF OTHER)
03	PROVINCE CODE ____ (PLACE OF RESIDENCE)	PROVINCE CENTRE .....1 DISTRICT CENTRE .....2 SUBDISTRICT/VILLAGE .3 ABROAD.....4	MONTH...1 ____ YEAR.....2 ____	MONTH..... ____ YEAR.. ____	____ (SPECIFY IF OTHER)
04	PROVINCE CODE ____ (PLACE OF RESIDENCE)	PROVINCE CENTRE .....1 DISTRICT CENTRE .....2 SUBDISTRICT/VILLAGE .3 ABROAD.....4	MONTH...1 ____ YEAR.....2 ____	MONTH..... ____ YEAR.. ____	____ (SPECIFY IF OTHER)
05	PROVINCE CODE ____ (PLACE OF RESIDENCE)	PROVINCE CENTRE .....1 DISTRICT CENTRE .....2 SUBDISTRICT/VILLAGE .3 ABROAD.....4	MONTH...1 ____ YEAR.....2 ____	MONTH..... ____ YEAR.. ____	____ (SPECIFY IF OTHER)
06	PROVINCE CODE ____ (PLACE OF RESIDENCE)	PROVINCE CENTRE .....1 DISTRICT CENTRE .....2 SUBDISTRICT/VILLAGE .3 ABROAD.....4	MONTH...1 ____ YEAR.....2 ____	MONTH..... ____ YEAR.. ____	____ (SPECIFY IF OTHER)

ADD. QUES. ____

(119K) REASONS OF MIGRATION

PERSONAL REASONS
- **11** MARRIAGE
- **12** EDUCATION
- **13** LOOKING FOR A JOB
- **14** CHANGE OF JOB
- **15** APPOINTMENT
- **16** RETURNING HOMELAND
- **17** OTHER

HUSBAND RELATED REASONS
- **21** MOVING TO WHERE HUSBAND LIVES
- **22** HUSBAND'S JOB CHANGE
- **23** APPOINMENT OF HUSBAND
- **24** HUSBAND'S LOOKING FOR A JOB
- **25** HUSBAND DEAD /DIVORCED
- **26** OTHER

FAMILY RELATED REASONS
- **31** MOVING TO WHERE PARENTS LIVE
- **32** PARENT'S JOB CHANGE
- **33** APPOINTMENT OF PARENTS
- **34** PARENTS' LOOKING FOR A JOB
- **35** GOING NEAR CHILDREN
- **36** PARENT DEAD/DIVORCE
- **37** OTHER

- **41** HEALTH RELATED REASONS
- **51** SECURITY REASONS
- **96** OTHER

SECTION 1C. MARRIAGE HISTORY

160	Now I want to ask some questions about your marriage(s). Are you currently married? *ACCEPT THOSE LIVING TOGETHER AS BEING MARRIED.*	YES, CURRENTLY MARRIED.....1 NO, CURRENTLY NOT MARRIED.....2
160A	Did you marry only once or more than once in your lifetime? *(IF MORE THAN ONCE)* How many times? *IF MARRIED ONLY ONCE, USE COLUMN 1.* *IF MARRIED MORE THAN ONCE, USE COLUMN 1 FOR FIRST HUSBAND, USE THE OTHER COLUMNS FOR RESPECTIVE HUSBANDS.*	NO. OF MARRIAGES..... ☐

	161 What was your (first, second) husband's name? *RECORD THE NAMES OF HUSBAND(S) BY STARTING WITH THE FIRST HUSBAND.*	**162** In which month and year did you start living with ..... ?	**163** How old was your husband when you started to live together?	**164** Did you have a civil marriage ceremony with .....? Did you have a religious ceremony with .....?	**165** Which marriage ceremony took place earlier?	**166** How much time elapsed between two ceremonies? *RECORD "00" DAYS IF BOTH TOOK PLACE ON THE SAME DAY.* *RECORD IN DAYS IF LESS THAN ONE MONTH, RECORD IN MONTHS IF LESS THAN TWO YEARS, RECORD IN YEARS. OTHERWISE.*
01	_____ (NAME)	MONTH..... ☐☐ YEAR ☐☐☐☐	☐☐	CIVIL AND RELI..1 CIVIL ONLY.....2 RELI. ONLY.....3 167 ← NO CEREMONY...4	CIVIL.....1 RELIGIOUS....2	DAY.....1 ☐☐ MONTH....2 ☐☐ YEAR.....3 ☐☐
02	_____ (NAME)	MONTH..... ☐☐ YEAR ☐☐☐☐	☐☐	CIVIL AND RELI..1 CIVIL ONLY.....2 RELI. ONLY.....3 167 ← NO CEREMONY...4	CIVIL.....1 RELIGIOUS....2	DAY.....1 ☐☐ MONTH....2 ☐☐ YEAR.....3 ☐☐
03	_____ (NAME)	MONTH..... ☐☐ YEAR ☐☐☐☐	☐☐	CIVIL AND RELI..1 CIVIL ONLY.....2 RELI. ONLY.....3 167 ← NO CEREMONY...4	CIVIL.....1 RELIGIOUS....2	DAY.....1 ☐☐ MONTH....2 ☐☐ YEAR.....3 ☐☐
04	_____ (NAME)	MONTH..... ☐☐ YEAR ☐☐☐☐	☐☐	CIVIL AND RELI..1 CIVIL ONLY.....2 RELI. ONLY.....3 167 ← NO CEREMONY...4	CIVIL.....1 RELIGIOUS....2	DAY.....1 ☐☐ MONTH....2 ☐☐ YEAR.....3 ☐☐

167 How was your marriage with ..... arranged? Did you decide together or was it arranged by your families?	**168** Did you family take your consent when your marriage with ..... was arranged?	**169** Did ..... or his family pays bridesmoney? *(IF YES)* Was it given in cash or in kind?	**170** When you first started to live with ..... was there anyone else living with you in your household at that time?	**171** Are (were) you related to .....? *(IF YES)* What is (was) his relationship to you?	**172** IS THIS MARRIAGE STILL GOING ON?
BY FAMILIES.....1 BY OURSELVES.....2 ELOPED.....3 ABDUCTED.....4 169 ◄ OTHER_____7	YES.....1 NO.....2	NO.....1 IN CASH/GOLD.....2 IN KIND.....3 BOTH.....4 OTHER_____7 (SPECIFY)	YES.....1 NO.....2	NO.....0 SON.OF.FATHER'S BRO.....1 SON.OF.FATHER'S SIS.....2 SON.OF.MOTHER'S SIS.....3 SON.OF.MOTHER'S BRO.....4 OTHER PAR. BL. REL.....5 OTHER MAT. BL. REL.....6 OTHER _____7 (SPECIFY)	YES.....1 177 ◄ NO.....2
BY FAMILIES.....1 BY OURSELVES.....2 ELOPED.....3 ABDUCTED.....4 169 ◄ OTHER_____7	YES.....1 NO.....2	NO.....1 IN CASH/GOLD.....2 IN KIND.....3 BOTH.....4 OTHER_____7 (SPECIFY)	YES.....1 NO.....2	NO.....0 SON.OF.FATHER'S BRO.....1 SON.OF.FATHER'S SIS.....2 SON.OF.MOTHER'S SIS.....3 SON.OF.MOTHER'S BRO.....4 OTHER PAR. BL. REL.....5 OTHER MAT. BL. REL.....6 OTHER _____7 (SPECIFY)	YES.....1 177 ◄ NO.....2
BY FAMILIES.....1 BY OURSELVES.....2 ELOPED.....3 ABDUCTED.....4 169 ◄ OTHER_____7	YES.....1 NO.....2	NO.....1 IN CASH/GOLD.....2 IN KIND.....3 BOTH.....4 OTHER_____7 (SPECIFY)	YES.....1 NO.....2	NO.....0 SON.OF.FATHER'S BRO.....1 SON.OF.FATHER'S SIS.....2 SON.OF.MOTHER'S SIS.....3 SON.OF.MOTHER'S BRO.....4 OTHER PAR. BL. REL.....5 OTHER MAT. BL. REL.....6 OTHER _____7 (SPECIFY)	YES.....1 177 ◄ NO.....2
BY FAMILIES.....1 BY OURSELVES.....2 ELOPED.....3 ABDUCTED.....4 169 ◄ OTHER_____7	YES.....1 NO.....2	NO.....1 IN CASH/GOLD.....2 IN KIND.....3 BOTH.....4 OTHER_____7 (SPECIFY)	YES.....1 NO.....2	NO.....0 SON.OF.FATHER'S BRO.....1 SON.OF.FATHER'S SIS.....2 SON.OF.MOTHER'S SIS.....3 SON.OF.MOTHER'S BRO.....4 OTHER PAR. BL. REL.....5 OTHER MAT. BL. REL.....6 OTHER _____7 (SPECIFY)	YES.....1 177 ◄ NO.....2

173 *CHECK 161: RECORD THE NAMES OF HUSBAND(S) BY STARTING WITH THE FIRST HUSBAND.*	174 In which month and year did your marriage with ..... end?	175 How did your marriage with ..... end? Did you get divorced, did ..... die or did you start to live separated?	176 Was it your decision to get divorced/live separated or was it your husband's, or did you decide on it together?	177 DOES THE WOMAN HAVE ANOTHER MARRIAGE?
01 _____ (NAME)	MONTH..... ☐☐ YEAR ☐☐☐☐	WIDOWED.....1 177 ← DIVORCED.....2 STARTED LIVING SEPARATED.....3	HERSELF.....1 HER HUSBAND.....2 TOGETHER.....3 OTHER _____7 (SPECIFY)	YES.....1 GO TO 162 ← NO.....2 178 ←
02 _____ (NAME)	MONTH..... ☐☐ YEAR ☐☐☐☐	WIDOWED.....1 177 ← DIVORCED.....2 STARTED LIVING SEPARATED.....3	HERSELF.....1 HER HUSBAND.....2 TOGETHER.....3 OTHER _____7 (SPECIFY)	YES.....1 GO TO 162 ← NO.....2 178 ←
03 _____ (NAME)	MONTH..... ☐☐ YEAR ☐☐☐☐	WIDOWED.....1 177 ← DIVORCED.....2 STARTED LIVING SEPARATED.....3	HERSELF.....1 HER HUSBAND.....2 TOGETHER.....3 OTHER _____7 (SPECIFY)	YES.....1 GO TO 162 ← NO.....2 178 ←
04 _____ (NAME)	MONTH..... ☐☐ YEAR ☐☐☐☐	WIDOWED.....1 177 ← DIVORCED.....2 STARTED LIVING SEPARATED.....3	HERSELF.....1 HER HUSBAND.....2 TOGETHER.....3 OTHER _____7 (SPECIFY)	YES.....1 GO TO 162 ← NO.....2 178 ←

178 **C** *ENTER "X" IN THE MONTH OF INTERVIEW IN THE 1ST COLUMN OF CALENDAR. IF CURRENTLY MARRIED THEN, DETERMINE MONTHS MARRIED OR IN UNION SINCE JANUARY 2003. ENTER "X FOR EACH MONTH MARRIED OR IN UNION, AND ENTER "O" FOR EACH MONTH NOT MARRIED/NOT IN UNION.*
NOTE: AFTER YOU HAVE COMPLETED THESE, ALL THE BOXES IN THE 1ST COLUMN FROM JANUARY 2003 TO INTERVIEW MONTH SHOULD BE FULL .

179 For your (first) marriage with ..... which of these following ceremonies did you have ?

	YES	NO
Asking family consent?	FAMILY CONSENT.....1	2
Promise ceremony to marriage?	PROMISE CEREMONY 1	2
Engagement ceremony?	ENGAGEMENT.....1	2
Dower exhibition ceremony?	DOWER EXHIBITION 1	2
Henna night?	HENNA NIGHT 1	2
Marriage ceremony?	MARRIAGE CEREMONY 1	2
Wedding?	WEDDING.....1	2

SECTION 2. PREGNANCY AND FERTILITY

200S	*RECORD THE TIME.*	HOUR – MINUTE..... ☐☐ ☐☐
201	Now I would like to ask about all the births you have had during your life. Have you ever given a live birth?	YES..... 1 NO..... 2 → 206
202	Do you have any sons or daughters to whom you have given birth who are living with you?	YES ..... 1 NO ..... 2 → 204
203	How many sons live with you? How many daughters live with you? *IF NONE, RECORD "00".*	SONS..... ☐☐ DAUGHTERS..... ☐☐
204	Do you have any sons or daughters to whom you have given birth who are alive but do not live with you?	YES ..... 1 NO ..... 2 → 206
205	How many sons are alive but do not live with you? How many daughters are alive but do not live with you? *IF NONE, RECORD "00".*	SONS ELSEWHERE ..... ☐☐ DAUGHTERS ELSEWHERE ..... ☐☐
206	Have you ever given birth to a boy or a girl who was born alive but died later? *IF NO, PROBE BEFORE RECORDING:* Any baby who cried or showed signs of life but only survived a few hours or days?	YES ..... 1 NO ..... 2 → 208
207	In all, how many boys have died? In all, how many girls have died? *IF NONE, RECORD "00".*	BOYS DECEASED..... ☐☐ GIRLS DECEASED..... ☐☐
208	*SUM ANSWERS TO 203, 205, AND 207, AND ENTER TOTAL* *IF NONE, RECORD "00".*	TOTAL..... ☐☐
209	*CHECK 208:* Just to make sure that I have this right: You have had in TOTAL _____ live births during your life. Is this true? YES ☐ ↓ NO ☐ → *PROBE AND CORRECT 201-208.*	
210	*CHECK 208.* HAS AT LEAST ONE LIVE BIRTH ☐ ↓ 211 HAS NO LIVE BIRTHS ☐ → 227	

211 Now I would like to talk to you about all of your births. It is very important to learn about all of your births, whether still alive or not. Please let's start with the first one you had

RECORD NAMES OF ALL THE BIRTHS IN 212. RECORD TWINS AND TRIPLETS ON SEPARATE LINES MAKE SURE TO RECORD DECEASED CHILDREN FROM MULTIPLE BIRTHS BEFORE THOSE SURVIVING.

	212 What name was given to your (first/next) baby? *WRITE "BABY" IF THE BABY DIED BEFORE A NAME GIVEN.*	**213** *RECORD SINGLE OR MULTIPLE BIRTH STATUS*	**214** Is ….. a boy or a girl?	**215** In what month and year….. born? *PROBE:* In what season was s/he born? *NOTE: FOR ALL CHILDREN, THE YEAR OF BIRTH; FOR CHILDREN BORN AFTER 2003, THE MONTH OF THE YEAR OF BIRTH MUST BE DETERMINED.*	**216** Is …… still alive?	**217** How old was …. at his/her last birthday? *RECORD AGE IN COMPLETED YEARS. MAKE CALCULATIONS FOR CONSISTENCY.*
01	_____ (NAME)	SINGLE.....1 MULTIPLE.....2	MALE.....1 FEMALE....2	MONTH..... ☐☐ YEAR..... ☐☐☐☐	YES.....1 NO.....2 → 219	AGE (IN YEARS) ☐☐
02	_____ (NAME)	SINGLE.....1 MULTIPLE.....2	MALE.....1 FEMALE....2	MONTH..... ☐☐ YEAR..... ☐☐☐☐	YES.....1 NO.....2 → 219	AGE (IN YEARS) ☐☐
03	_____ (NAME)	SINGLE.....1 MULTIPLE.....2	MALE.....1 FEMALE....2	MONTH..... ☐☐ YEAR..... ☐☐☐☐	YES.....1 NO.....2 → 219	AGE (IN YEARS) ☐☐
04	_____ (NAME)	SINGLE.....1 MULTIPLE.....2	MALE.....1 FEMALE....2	MONTH..... ☐☐ YEAR..... ☐☐☐☐	YES.....1 NO.....2 → 219	AGE (IN YEARS) ☐☐
05	_____ (NAME)	SINGLE.....1 MULTIPLE.....2	MALE.....1 FEMALE....2	MONTH..... ☐☐ YEAR..... ☐☐☐☐	YES.....1 NO.....2 → 219	AGE (IN YEARS) ☐☐
06	_____ (NAME)	SINGLE.....1 MULTIPLE.....2	MALE.....1 FEMALE....2	MONTH..... ☐☐ YEAR..... ☐☐☐☐	YES.....1 NO.....2 → 219	AGE (IN YEARS) ☐☐

218 Is..... living with you?	**218A** *RECORD THE LINE NUMBER OF CHILD IN THE HH LIST. IF S/HE WASN'T RECORDED IN HH LIST, RECORD "00".*	**219** *IF DEAD:* How old was ..... when he/she died? *IF "1" YEAR., PROBE:* How many months old was .....? *RECORD DAYS IF LESS THAN 1 MONTH, MONTHS IF LESS THAN 2 YEARS OR YEARS OTHERWISE.*	**BORN IN 1998 OR AFTER**		
			220 Is ..... recorded in the population registry?	**220A** How much. time elapsed between .....'s birth and registration? *RECORD IN MONTHS IF LESS THAN 1 YEAR, "00" IF LESS THAN 1 MONTH*	**221** Were there any other live births between previous birth and .....'s birth? *IF YES.GO BACK AND CORRECT.*
YES .....1 NO 2	*GO TO 220*	DAY ..... 1 MONTH..... 2 YEAR 3	YES.....1 NO.....2 → 221	MONTH....1 YEAR 2	
YES .....1 NO 2	*GO TO 220*	DAY ..... 1 MONTH..... 2 YEAR 3	YES.....1 NO.....2 → 221	MONTH....1 YEAR 2	YES.....1 NO.....2
YES .....1 NO 2	*GO TO 220*	DAY ..... 1 MONTH..... 2 YEAR 3	YES.....1 NO.....2 → 221	MONTH....1 YEAR 2	YES.....1 NO.....2
YES .....1 NO 2	*GO TO 220*	DAY ..... 1 MONTH..... 2 YEAR 3	YES.....1 NO.....2 → 221	MONTH....1 YEAR 2	YES.....1 NO.....2
YES .....1 NO 2	*GO TO 220*	DAY ..... 1 MONTH..... 2 YEAR 3	YES.....1 NO.....2 → 221	MONTH....1 YEAR 2	YES.....1 NO.....2
YES .....1 NO 2	*GO TO 220*	DAY ..... 1 MONTH..... 2 YEAR 3	YES.....1 NO.....2 → 221	MONTH....1 YEAR 2	YES.....1 NO.....2

212 What name was given to your (first/next) baby? *WRITE "BABY" IF THE BABY DIED BEFORE A NAME GIVEN.*	**213** *RECORD SINGLE OR MULTIPLE BIRTH STATUS*	**214** Is ….. a boy or a girl?	**215** In what month and year..... born? *PROBE:* In what season was s/he born? *NOTE: FOR ALL CHILDREN, THE YEAR OF BIRTH; FOR CHILDREN BORN AFTER 2003, THE MONTH OF THE YEAR OF BIRTH MUST BE DETERMINED.*	**216** Is …… still alive?	**217** How old was .... at his/her last birthday? *RECORD AGE IN COMPLETED YEARS. MAKE CALCULATIONS FOR CONSISTENCY.*
07 _____ (NAME)	SINGLE.....1 MULTIPLE.....2	MALE.....1 FEMALE....2 ..	MONTH..... ☐☐ YEAR..... ☐☐☐☐	YES.....1 NO.....2 219 ←	AGE (IN YEARS) ☐☐
08 _____ (NAME)	SINGLE.....1 MULTIPLE.....2	MALE.....1 FEMALE....2 ..	MONTH..... ☐☐ YEAR..... ☐☐☐☐	YES.....1 NO.....2 219 ←	AGE (IN YEARS) ☐☐
09 _____ (NAME)	SINGLE.....1 MULTIPLE.....2	MALE.....1 FEMALE....2 ..	MONTH..... ☐☐ YEAR..... ☐☐☐☐	YES.....1 NO.....2 219 ←	AGE (IN YEARS) ☐☐
10 _____ (NAME)	SINGLE.....1 MULTIPLE.....2	MALE.....1 FEMALE....2 ..	MONTH..... ☐☐ YEAR..... ☐☐☐☐	YES.....1 NO.....2 219 ←	AGE (IN YEARS) ☐☐
11 _____ (NAME)	SINGLE.....1 MULTIPLE.....2	MALE.....1 FEMALE....2 ..	MONTH..... ☐☐ YEAR..... ☐☐☐☐	YES.....1 NO.....2 219 ←	AGE (IN YEARS) ☐☐
12 _____ (NAME)	SINGLE.....1 MULTIPLE.....2	MALE.....1 FEMALE....2 ..	MONTH..... ☐☐ YEAR..... ☐☐☐☐	YES.....1 NO.....2 219 ←	AGE (IN YEARS) ☐☐

TICK HERE IF NUMBER OF LIVE BIRTHS IS MORE THAN 12 AND CONTINUE IN ANOTHER QUESTIONNAIRE FORM ☐

.

218 Is..... living with you?	**218A** *RECORD THE LINE NUMBER OF CHILD IN THE HH LIST. IF S/HE WASN'T RECORDED IN HH LIST, RECORD "00".*	**219** *IF DEAD:* How old was ..... when he/she died? *IF "1" YEAR., PROBE:* How many months old was .....? *RECORD DAYS IF LESS THAN 1 MONTH, MONTHS IF LESS THAN TWO YEARS OR YEARS OTHERWISE.*	**BORN IN 1998 OR AFTER**		
			220 Is ..... recorded in the population registry?	**220A** How much. time elapsed between .....'s birth and registration? *RECORD IN MONTHS IF LESS THAN 1 YEAR, "00" IF LESS THAN 1 MONTH*	**221** Were there any other live births between previous birth and .....'s birth? *GO BACK AND CORRECT IF YES.*
YES .....1 NO 2	*GO TO 220*	DAY ..... 1 MONTH..... 2 YEAR 3	YES.....1 NO.....2 → 221	MONTH....1 YEAR 2	YES.....1 NO.....2
YES .....1 NO 2	*GO TO 220*	DAY ..... 1 MONTH..... 2 YEAR 3	YES.....1 NO.....2 → 221	MONTH....1 YEAR 2	YES.....1 NO.....2
YES .....1 NO 2	*GO TO 220*	DAY ..... 1 MONTH..... 2 YEAR 3	YES.....1 NO.....2 → 221	MONTH....1 YEAR 2	YES.....1 NO.....2
YES .....1 NO 2	*GO TO 220*	DAY ..... 1 MONTH..... 2 YEAR 3	YES.....1 NO.....2 → 221	MONTH....1 YEAR 2	YES.....1 NO.....2
YES .....1 NO 2	*GO TO 220*	DAY ..... 1 MONTH..... 2 YEAR 3	YES.....1 NO.....2 → 221	MONTH....1 YEAR 2	YES.....1 NO.....2
YES .....1 NO 2	*GO TO 220*	DAY ..... 1 MONTH..... 2 YEAR 3	YES.....1 NO.....2 → 221	MONTH....1 YEAR 2	YES.....1 NO.....2

GO BACK AND CORRECT IF YES.

223A	Have you had any live births since the birth of (NAME OF LAST BIRTH)?	YES ..... 1 NO ..... 2 →	224
223B	*GO BACK AND MAKE THE NECESSARY CORRECTIONS.*		
224	*COMPARE THE NUMBER IN 208 WITH NUMBER OF BIRTHS IN BIRTH HISTORY ABOVE:* NUMBERS ARE SAME ☐ → *CHECK AND TICK:* NUMBERS ARE DIFFERENT ☐ → *(PROBE, RECONCILE AND MAKE NECESSARY CORRECTIONS)* YEAR OF BIRTH IS RECORDED FOR EACH BIRTH (215)..... ☐ MONTH OF BIRTH IS RECORDED FOR EACH BIRTH AFTER 2003 (215)..... ☐ *(IF ANY)* CURRENT AGE IS RECORDED FOR EACH LIVING CHILD: (217)..... ☐ *(IF ANY)* FOR EACH DEAD CHILD: AGE AT DEATH IS RECORDED (219)..... ☐ FOR AGE AT DEATH 12 MONTHS OR 1 YR.: PROBED TO DETERMINE EXACT AGE IN MONTHS…..... ☐ FOR THOSE BORN IN AND AFTER 1998: POPULATION REGISTRY QUESTIONS ARE ASKED (220-220A)..... ☐		
225	*CHECK 215 AND ENTER THE NUMBER OF BIRTHS SINCE JANUARY 2003* ☐ *IF NONE, RECORD "0".*		
226	**C** *FOR EACH BIRTH SINCE JANUARY 2003 ENTER "D" IN THE MONTH OF BIRTH IN THE 2ND COLUMN OF THE CALENDAR. LEARN THE MONTHS IN PREGNANCIES FOR EACH BIRTHS AND RECORD "H" IN EACH OF THE PRECEDING MONTHS.(NUMBER OF "H" MUST BE LESS THAN PREGNANCY MONTHS) WRITE NAME OF CHILD TO THE LEFT OF THE "D" CODE.*		
227	Are you currently pregnant?	YES ..... 1 NO ..... 2 → UNSURE ..... 8 →	230A
228	How many months pregnant are you? **C** *RECORD NUMBER OF COMPLETED MONTHS. ENTER "H"s IN COLUMN 2 OF THE CALENDAR BEGINNING WITH THE MONTH OF INTERVIEW AND FOR TOTAL NUMBER OF COMPLETED MONTHS.*	MONTHS..... ☐☐	

229	At the time you became pregnant, did you want to become pregnant then, did you want to wait until later, or did you not want to have any more children at all?	THEN.....1 LATER.....2 DID NOT WANT MORE CHILDREN.....3	
229A	At the time you became pregnant, did your husband want you to get pregnant then, did he want to wait until later, or did he not want to have any more children at all?	THEN.....1 LATER.....2 DID NOT WANT MORE CHILDREN.....3	
230A	Have you ever had a pregnancy that ended in a miscarriage?	YES .....1 NO .....2 →	230C
230B	In all, how many miscarriages have you had?	NUMBER OF MISCARRIAGES.....	
230C	Have you ever had a pregnancy that ended in an induced abortion?	YES .....1 NO .....2 →	230E
230D	In all, how many induced abortions have you had?	NO. OF INDUCED ABORTION	
230E	Have you ever had a pregnancy that ended in a stillbirth?	YES .....1 NO .....2 →	230G
230F	In all, how many still births have you had?	NUMBER OF STILL BIRTHS	
230G	*CALCULATE THE TOTAL NUMBER OF COMPLETED PREGNANCIES.* *TOTAL NUMBER OF PREGNANCIES ENDING IN MISCARRIAGES, INDUCED ABORTIONS OR STILL BIRTHS:* *SUM THE ANSWERS TO 230B, 230D AND 230F* _____ *TOTAL NUMBER OF PREGNANCIES ENDING IN LIVE BIRTHS:* *SUM THE NUMBER OF SINGLE BIRTHS IN THE BIRTH HISTORY* + _____ *ADD TO THAT SUM THE NUMBER OF MULTIPLE BIRTHS* + _____ TOTAL NUMBER OF COMPLETED PREGNANCIES: = _____	TOTAL NUMBER OF COMPLETED PREGNANCIES.....	

230H *CHECK 230G:*
Just to make sure that I have this right. You have had in total _____ completed pregnancies. Is that correct?

YES ☐ NO ☐ → *PROBE AND CORRECT 201-230G IF NECESSARY.*

230I *CHECK 230B, 230D AND 230F:*

HAD AT LEAST ONE INDUCED ABORTION, MISCARRIAGE OR STILLBIRTH ☐

HAD NO INDUCED ABORTIONS MISCARRIAGES OR STILLBIRTHS ☐ → 234

231A Now I would like to ask about your recent induced abortions, miscarriages or stillbirths. When did the last such pregnancy end?

MONTH ..... ☐☐

YEAR..... ☐☐☐☐

231B Was this an induced abortion, a miscarriage or a stillbirth?

INDUCED ABORTION.....1
MISCARRIAGE.....2
STILLBIRTH.....3

232 *CHECK 231A:*

LAST INDUCED ABORTION/MISCARRIAGE/ STILLBIRTH ENDED AFTER JANUARY 2003 ☐

LAST INDUCED ABORTION/MISCARRIAGE/ STILLBIRTH ENDED BEFORE JANUARY 2003 ☐ → 234

233 How many months pregnant were you when the last pregnancy ended?

MONTHS ..... ☐☐

C *RECORD ALL INDUCED ABORTIONS, MISCARRIAGES AND STILLBIRTHS SINCE JANUARY 2003 IN COLUMN 2.*

PROBE TO DETERMINE HOW THE PREGNANCY ENDED (INDUCED ABORTION, MISCARRIAGE, STILL BIRTH).
- How did this pregnancy end? (Was it an induced abortion, miscarriage, or stillbirth etc.)

RECORD THE APPROPRIATE CODE AT THE MONTH AND YEAR WHERE THE PREGNANCY ENDED IN COLUMN 2.

THEN ASK FOR DATES OF ANY OTHER PREGNANCIES BACK TO JANUARY 2003. REPEAT THE PROCEDURES AS DESCRIBED ABOVE FOR THESE PREGNANCIES.

LEARN THE DURATION OF EACH PREGNANCY AND RECORD "H"FOR THE MONTHS BEFORE THE RESULTING CODE, AS MUCH TO FILL THIS DURATION.
- What was the total duration of this pregnancy? How many months pregnant were you?

233A	*CHECK 231A, 231B AND CALENDAR:* HAD AT LEAST ONE INDUCED ABORTION AFTER 2003 ☐ HAD NO INDUCED ABORTION AFTER 2003 ☐ → 234	
233B	Who decided to end your pregnancy with an induced abortion?	DOCTOR..... 01 HERSELF..... 02 HUSBAND..... 03 HERSELF AND HUSBAND TOGETHER.. 04 OTHER _____ 96 (SPECIFY)
233C	Did you desire this (last) pregnancy which ended in an induced abortion, did you desire to get pregnant later, or did you not desire it at all?	NOT AT ALL……..... 0 DESIRED…..... 1 DESIRED IT LATER……..... 2
233D	Where did the operation of last induced abortion take place?	**PUBLIC SECTOR** GOVT./SAMPLE HOSPITAL..... 11 MATERNITY HOUSE..... 12 MCHFP CENTER..... 13 SSK HOSPITAL/DISPANSERY ..... 16 TRAINING AND RESEARCH HOSP.... 17 FAMILY HEALTH CENTER/ FAMILY DOCTOR..... 18 OTHER _____ 19 (SPECIFY) **PRIVATE SECTOR** PRIVATE HOSPITAL ..... 21 PRIVATE POLYCLINIC..... 22 PRIVATE DOCTOR ..... 23 OTHER _____ 29 (SPECIFY) UNIVERSITY HOSPITAL ..... 31 VOLUNTARY ORGANIZATION/ FOUNDATION HOSPITAL/CLINIC ... 41 OTHER_____ 96 (SPECIFY)
233E	Did you receive any counseling about contraception usage after induced abortion at the health facility where the (last) induced abortion was performed?	YES..... 1 NO..... 2
234	Did you ever make use of assisted reproductive techniques such as conventional invitro fertilization, intrauterine insemination or intracytoplasmic sperm injection to get pregnant?	YES..... 1 NO..... 2 → 235
234A	Did you ever get pregnant with the assistance of these techniques?	YES..... 1 NO..... 2 → 235
234B	When did the last pregnancy that took place with the assistance of these techniques end?	MONTH..... ☐☐ YEAR..... ☐☐☐☐ STILL PREGNANT.....0000

234C *CHECK 234B:*

PREGNANCY BY ASSISTED REPRODUCTIVE TECHNIQUES ENDED AFTER 2003 OR IS STILL GOING ON ☐ ↓

NO PREGNACY BY ASSISTED REPRODUCTIVE TECHNIQUES AFTER 2003 ☐ → 235

234D *C ASK WHETHER IF ASSISTED REPRODUCTIVE TECHNIQUES WERE USED FOR ALL COMPLETED OR CURRENT PREGNANCIES SINCE JANUARY 2003. IF PREGNANCY IS COMPLETED, RECORD THE APPROPRIATE CODE IN THE MONTH IN WHICH THE PREGNANCY IS COMPLETED. RECORD THE MONTH OF INTERVIEW IF STILL PREGNANT IN THE 3RD COLUMN OF THE CALENDAR..*

ASK FOR ALL PREGNANCIES:

- *Did you make use of any assisted reproductive techniques for this pregnancy?*
- *Which medical technique was used?*

235	When did your last menstrual period start?	DAYS AGO.....1 ☐☐ WEEKS AGO.....2 ☐☐ MONTHS AGO.....3 ☐☐ YEARS AGO.....4 ☐☐ CURRENTLY PREGNANT.....991 IN MENAPAUSE.....992 HYSTEROCTOMY .....993 BEFORE LAST BIRTH.. .....994 NEVER MENSTRUATED .....995 → 237
236	How old were you when you had your first menstrual period?	AGE..... ☐☐
237	Think about the time between the beginning of a menstruation period and the beginning of the next menstruation period. Are there certain days when a woman is more likely to become pregnant if she has sexual relations?	YES.....1 NO.....2 DON'T KNOW.....8 → 239S
238	Is this time just before her period begins, during her period, right after her period has ended, or half way between two periods?	JUST BEFORE HER PERIOD BEGINS .....1 DURING HER PERIOD .....2 RIGHT AFTER HER PERIOD HAS ENDED .....3 HALF WAY BETWEEN TWO PERIODS .....4 OTHER _____ (SPECIFY) 7 DON'T KNOW 8
239S	*RECORD THE TIME.*	HOUR – MINUTE..... ☐☐ ☐☐

SECTION 3. CONTRACEPTION

301 Now I would like to talk about contraception. There are various methods that a married couple can use to avoid pregnancy.

CIRCLE CODE '1' IN Q. 301A FOR EACH METHOD MENTIONED SPONTANEOUSLY.

THEN PROCEED DOWN COLUMN 302, READING THE NAME AND DESCRIPTION OF EACH METHOD NOT MENTIONED SPONTANEOUSLY AND ASK WHETHER SHE HAS HEARD THE METHOD.

IN Q 302, CIRCLE CODE '2' IF METHOD IS RECOGNIZED AND CODE '3' IF NOT RECOGNIZED.

THEN FOR EACH METHOD WITH CODE '1' OR '2' CIRCLED IN 301A OR 302, ASK 303. AFTER ASKING ABOUT ALL METHODS PROCEED TO 304.

	301A Which ways or methods of contraception have you heard?	SPON-TANEOUS YES	**302** Have you ever heard this method? PROBED YES	NO	**303** Have you ever used this method?
01	TUBAL LIGATION Women can have an operation of tubal ligation to avoid having any more children.	1	2	3	Have you ever had such an operation to avoid having any more children? YES ..... 1 NO 2
02	MALE STERILIZATION Men can have an operation called vasectomy so that their wives would not get pregnant.	1	2	3	Has (had) your (former) husband ever had such an operation? YES ..... 1 NO 2
03	PILL Women can avoid a pregnancy by taking a pill every day.	1	2	3	YES ..... 1 NO 2
04	IUD Women can have the so called spiral or IUD placed in them by a doctor or a nurse.	1	2	3	YES ..... 1 NO 2
05	INJECTABLES Women can have an injection by a doctor or a nurse, which stops them from becoming pregnant for certain period of time.	1	2	3	YES ..... 1 NO 2
06	IMPLANT Women can have small rods placed in their arm and this can prevent pregnancy for several years.	1	2	3	YES ..... 1 NO 2
07	CONDOM Men can put a rubber sheath on their penis during sexual intercourse.	1	2	3	YES ..... 1 NO 2
08	FEMALE CONDOM Women can place a sheath in their vagina before sexual intercourse.	1	2	3	YES ..... 1 NO 2
09	DIAPHRAGM, FOAM, JELLY Women can place a sponge, suppository, diaphragm, jelly or cream inside themselves before intercourse.	1	2	3	YES ..... 1 NO 2
12	RHYTHM Some couples can avoid having sexual intercourse on certain days of the month when the woman is more likely to become pregnant.	1	2	3	YES ..... 1 NO 2
13	WITHDRAWAL Some men pull out during sexual intercourse before climax.	1	2	3	YES ..... 1 NO 2
14	EMERGENCY CONTRACEPTION Women can take pills up to three days after sexual intercourse to avoid becoming pregnant.	1	2	3	YES ..... 1 NO 2
15	Have you heard of any other method that women or men can use to avoid pregnancy?	1		3	YES ..... 1 NO 2
		_____ (SPECIFY)			YES ..... 1 NO 2
		_____ (SPECIFY)			

304 *CHECK 303:*

NOT A SINGLE "YES" (NEVER USED) ☐

AT LEAST ONE "YES" (EVER USED) ☐ → 308

305 Have you ever used anything or tried in any way to delay or avoid getting pregnant?

EVET ..... 1 → 307
HAYIR 2

306 **C** *IN COLUMN 2 RECORD "N" IN MONTHS IN WHICH WOMAN IS NOT IN A UNION, RECORD "0" IN ALL MONTHS REMAINING.* ☐ → 331

307 Which method have you used or what have you done?
CORRECT 303 AND 304, IF NECESSARY CORRECT 302.

308 Now I would like to ask you about the first time that you did something or used a method to avoid getting pregnant.

What was the first method you ever used?

TUBAL LIGATION.....01
MALE STERILIZATION.....02
PILL.....03
IUD.....04
INJECTABLES.....05
IMPLANT.....06
CONDOM.....07
FEMALE CONDOM.....08
DIAPHRAGM/FOAM/JELLY.....09
LACTATIONAL AMEN. METHOD.....11
RHYTHM.....12
WITHDRAWAL.....13
EMERGENCY CONTRACEPTION.....14

OTHER _____ 96
(SPECIFY)

308A How old were you when you first used this method?

AGE..... ☐☐

309A Did you have any children at that time? *(IF YES)* How many living children did you have at that time?

IF NONE, RECORD "00.

NUMBER OF CHILDREN..... ☐☐

310 *CHECK 303:*

NOT HAD TUBAL LIGATION ☐

HAD TUBAL LIGATION ☐ → 314A

311 *CHECK 227:*

NOT PREGNANT OR UNSURE ☐

PREGNANT ☐ → 315A

312 *CHECK 160:*

CURRENTLY MARRIED ☐

NOT MARRIED ☐ → 315

313 Are you currently doing something or using any method to delay or avoid getting pregnant?

YES 1
NO ..... 2 → 315A

314 Which method are you using?

CIRCLE ALL MENTIONED.

314A *CIRCLE "A" FOR TUBAL LIGATION.*

TUBAL LIGATION.....A
MALE STERILIZATION.....B
PILL.....C
IUD.....D
INJECTABLES.....E
IMPLANT.....F
CONDOM.....G
FEMALE CONDOM.....H
DIAPHRAGM/FOAM/JELLY.....I
LACTATIONAL AMEN. METHOD.....K
RHYTHM.....L
WITHDRAWAL.....M

OTHER _____ U
(SPECIFY)

314B *CHECK 314 AND 314A:*

HAD TUBAL LIGATION ☐ ↓

NOT HAD TUBAL LIGATION ☐ → 315

314E In which month and year was this operation performed?

MONTH..... ☐☐

YEAR ..... ☐☐☐☐

314F Before your sterilization operation, were you told that you would not able to have any (more) children because of this operation?

YES.....1
NO 2

315 **C** *ENTER METHOD CODE FROM 314 IN CURRENT MONTH IN COLUMN 2 OF CALENDAR. THEN DETERMINE WHEN SHE STARTED USING THIS METHOD. ENTER METHOD CODE IN EACH MONTH OF USE.*

ILLUSTRATIVE QUESTIONS:
When did you start using this method continuously?
How long have you been using this method continuously?

CHECK COLUMN 1 OF CALENDAR:
IN COLUMN 2 OF CALENDAR ENTER "N" FOR MONTHS WOMAN NOT MARRIED.

CHECK COLUMN 2 OF CALANDER:

THERE ARE EMPTY BOXES ☐ ↓

ALL BOXES ARE FILLED ☐ → 316

315A *START WITH THE MOST RECENT USE. USE CALENDAR TO PROBE FOR EARLIER PERIODS OF USE AND NONUSE BACK TO JANUARY 2003. USE NAMES OF CHILDREN, DATES OF BIRTH, AND STARTING AND ENDING DATES OF PREGNANCIES AS REFERENCE POINTS.*

IN COLUMN 2, ENTER CODE IN EACH MONTH OF METHOD USE OR "0" FOR NONUSE.

ILLUSTRATIVE QUESTIONS FOR COLUMN 2:

- *When was the last time you used a method? Which method was that?*
- *When did you start using that method? How long after the birth of (NAME)?*
- *How long did you use the method then?*

IN COLUMN 3, ENTER CODES FOR DISCONTINUATION NEXT TO LAST MONTH OF USE. TO DO THIS, DETERMINE THE LAST MONTH OF METHOD USE FROM COLUMN 2. IN COLUMN 3, ENTER THE CODE FOR DISCONTINUATION.

ASK WHY SHE STOPPED USING THE METHOD. IF A PREGNANCY FOLLOWED, ASK WHETHER SHE BECAME PREGNANT UNINTENTIONALLY WHILE USING THE METHOD OR DELIBERATELY STOPPED TO GET PREGNANT.

ILLUSTRATIVE QUESTIONS FOR COLUMN 3:

- *Why did you stop using the (METHOD)?*
- *Did you become pregnant while using (METHOD), or did you stop to get pregnant, or did you stop for some other reason?*

IF DELIBERATELY STOPPED TO BECOME PREGNANT, ASK: "How many months did it take you to get pregnant after you stopped using (METHOD)?" AND ENTER "0" IN EACH SUCH MONTH IN COLUMN 2.

316	*CHECK 314 AND 314A:* *CIRCLE THE CODE OF CURRENTLY USED METHOD.* *IF MORE THAN ONE METHOD WAS CIRCLED IN 314, CIRCLE CODE FOR HIGHEST METHOD IN LIST.*	NOT ASKED ..... 00 → 331 TUBAL LIGATION ..... 01 MALE STERLIZATION ..... 02 PILL ..... 03 IUD ..... 04 INJECTABLES ..... 05 IMPLANT ..... 06 CONDOM ..... 07 FEMALE CONDOM ..... 08 DIAPHRAM/FOAM/JELLY ..... 09 LACTATIONAL AMEN. METHOD ..... 11 RHYTM ..... 12 WITHDRAWAL ..... 13 → 322 OTHER METHOD 96	
319	Before you started to use the current method you are using, were you told about side effects or problems you might have by an health personnel (doctor/nurse/midwife)?	YES ..... 1 NO 2	
320	Were you told by any health personnel (doctor/nurse/midwife) about what to do if you experienced side effects or problems of the method you are currently using?	YES ..... 1 NO 2	
321	Before you started to use the current method, were you ever told by a health personnel (doctor/nurse/midwife) about other methods of contraception you could use?	YES ..... 1 NO 2	
322	Who decided to use the current method you are using? You, your husband, or together?	HERSELF ..... 1 PARTNER ..... 2 TOGETHER 3	

323	*CHECK 316:* *CIRCLE THE CODE FOR CURENTLY USED METHOD.*	NOT ASKED ..... 00 → 331 TUBAL LIGATION..... 01 MALE STERLIZATION ..... 02 → 324A PILL ..... 03 IUD ..... 04 INJECTABLES..... 05 IMPLANT ..... 06 CONDOM ..... 07 FEMALE CONDOM ..... 08 DIAPHRAM/FOAM/JELLY ..... 09 LACTATIONAL AMEN. METHOD ..... 11 RHYTM ..... 12 WITHDRAWAL ..... 13 → 326 OTHER METHOD 96	
324	Where did you obtain ..... you are currently using?	**PUBLIC SECTOR** GOVERNMENT/SAMPLE HOSPITAL..... 11 MATERNITY HOUSE ..... 12 MCHFP CENTRE..... 13 HEALTH CENTRE..... 14 HEALTH HOUSE..... 15 SSK HOSPITAL/DISPENSARY..... 16 TRAINING AND RESEARCH HOSPITAL..... 17 FAMILY HEALTH CENTRE/FAMILY DOCTOR..... 18 OTHER _____ 19 (SPECIFY) **PRIVATE SECTOR** PRIVATE HOSPITAL ..... 21 PRIVATE POLYCLINIC ..... 22 PRIVATE DOCTOR ..... 23 PRIVATE MIDWIFE/NURSE ..... 24 PHARMACY/MEDICAL STORE..... 25	
324A	Where did tubal ligation (or vasectomy) take place?	OTHER _____ 29 (SPECIFY) UNIVERSITY HOSPITAL ..... 31 VOLUNTARY ORGANIZATION/ ASSOCIATION/FOUNDATION..... 41 MARKET/SHOP ..... 52 RELATIVE/FRIEND/NEIGHBOUR..... 53 TRAD. MIDWIFE/MIDWIFE GRAN..... 54 OTHER _____ 96 (SPECIFY)	
325	Do you know another place where you could have obtained (METHOD)?	EVET ..... 1 HAYIR 2	
325A	At the time of tubal ligation operation, did you know another place where you could have the operation?		
326	Would you like to use a different method of contraception than the one you are currently using?	YES ..... 1 NO ..... 2 → 332A	

326A	Which method would you prefer to use?	TUBAL LIGATION .....01 MALE STERILIZATION .....02 PILL .....03 IUD .....04 INJECTABLES .....05 IMPLANT.....06 CONDOM ..... 07 FEMALE CONDOM .....08 DIAPHRAGM/FOAM/JELLY .....09 LACTATIONAL AMEN. METHOD .....11 RHYTHM .....12 WITHDRAWAL .....13 EMERGENCY PILL .....14 OTHER _____ 96 (SPECIFY)	
326B	What is the reason that you do not use (METHOD MENTIONED IN 326A) currently?	DOCTOR DOES NOT ADVISE.....01 EXPENSIVE.....02 NOT AVAILABLE/ACCESS PROBLEMS.....03 HARD TO FIND HERE..... 04 DON'T KNOW HOW TO OBTAIN..... 05 DON'T KNOW HOW TO USE IT.....06 HUSBAND OBJECTS ……..... 07 RELIGIOUS REASONS ……..... 08 HEALTH CONCERNS……09 SIDE EFFECTS ……10 OTHER _____ 96 (SPECIFY)	
326C	*SKIP TO 332A.*		

331 *CHECK 227:*

NOT PREGNANT OR UNSURE ☐ → CURRENTLY PREGNANT ☐ → 332B

331A *CHECK 160:*

CURRENTLY MARRIED ☐ → CURRENTLY NOT MARRIED ☐ → 332B

331B What is the main reason you are not using a method of contraception to avoid pregnancy?

FERTILITY-RELATED REASONS
- NOT HAVING SEX 11
- INFREQUENT SEX 12
- MENOPAUSAL/HYSTERECTOMY 13
- SUBFECUND/INFECUND 14
- HUSBAND IS INFECUND 15
- POSTPARTUM/BREASTFEEDING 16
- WANTS (MORE) CHILDREN 17

LACK OF KNOWLEDGE
- KNOWS NO METHOD 21
- KNOWS NO SOURCE 22

METHOD-RELATED REASONS
- HEALTH CONCERNS 31
- SIDE EFFECTS 32
- LACK OF ACCESS/TOO FAR 33
- COST TOO MUCH 34
- INCONVENIENT TO USE 35

HUSBAND OPPOSED 41
RELIGIOUS REASONS 51
FATALISTIC 61
EMBARRASSED 71

OTHER _____ 96
(SPECIFY)

331C *GO TO 332B.*

332A *CHECK 316.*

CIRCLE THE CODE OF METHOD CURRENTLY USED.

- TUBAL LIGATION 01
- MALE STERILIZATION 02
- PILL 03
- IUD 04
- INJECTABLES 05
- IMPLANT 06
- CONDOM 07
- FEMALE CONDOM 08
- DIAPHRAGM/FOAM/JELLY 09

→ 356

- LACTATIONAL AMEN. METHOD 11
- RHYTHM 12
- WITHDRAWAL 13

ANOTHER METHOD 96

332B Do you know of a place where you can obtain a method of contraception?

YES 1
NO ..... 2 → 351

332C	Where is that? Any other place? *CIRCLE ALL MENTOINED..*	**PUBLIC SECTOR** GOVERNMENT/SAMPLE HOSPITAL ..... A MATERNITY HOUSE ..... B MCHFP CENTRE..... C HEALTH CENTRE ..... D HEALTH HOUSE ..... E SSK HOSPITAL/DISPENSARY ..... F TRAINING AND RESEARCH HOSPITAL..... G FAMILY HEALTH CENTRE/FAMILY DOCTOR..... H OTHER _____ I (SPECIFY) **PRIVATE SECTOR** PRIVATE HOSPITAL ..... J PRIVATE POLYCLINIC ..... K PRIVATE DOCTOR ..... L PRIVATE MIDWIFE/NURSE ..... M PHARMACY/MEDICAL STORE ..... N OTHER _____ O (SPECIFY) UNIVERSITY HOSPITAL ..... P VOLUNTARY ORG./ASSOC./FOUND..... R MARKET/SHOP..... S RELATIVE/FRIEND/NEIGHBOUR ..... T TRAD. MIDWIFE/MIDWIFE GRAN ..... U OTHER _____ V (SPECIFY)
351	*CHECK 160:* CURRENTLY MARRIED ☐	NOT CURRENTLY MARRIED ☐ → 353
351A	*CHECK 316:* CURRENTLY NOT USING ANY METHOD ☐	CURRENTLY USING A METHOD ☐ → 356
352	Are you planning to use any contraceptive method to postpone or avoid pregnancy in the following 12 months?	YES ..... 1 → 354 NO..... 2 DON'T KNOW 8
353	Are you planning to use any contraceptive method to postpone or avoid pregnancy anytime in the future?	YES ..... 1 NO..... 2 DON'T KNOW ..... 8 → 355
354	Which method do you prefer?	TUBAL LIGATION ..... 01 MALE STERILIZATION ..... 02 PILL ..... 03 IUD ..... 04 INJECTABLES ..... 05 IMPLANT/..... 06 CONDOM ..... 07 FEMALE CONDOM ..... 08 DIAPHRAGM/FOAM/JELLY ..... 09 LACTATIONAL AMEN. METHOD ..... 11 RHYTHM ..... 12 WITHDRAWAL ..... 13 NOT SURE..... 88 OTHER _____ 96 (SPECIFY)
354A	*GO TO 356.*	

355 What is the main reason you don't want to use a method of contraception to avoid pregnancy ?

FERTILITY-RELATED REASONS
- NOT HAVING SEX 11
- INFREQUENT SEX 12
- MENOPAUSAL/HYSTERECTOMY 13
- SUBFECUND/INFECUND 14
- HUSBAND IS INFECUND 15

LACK OF KNOWLEDGE
- KNOWS NO METHOD 21
- KNOWS NO SOURCE 22

METHOD-RELATED REASONS
- HEALTH CONCERNS 31
- SIDE EFFECTS 32
- LACK OF ACCESS/TOO FAR 33
- COST TOO MUCH 34
- INCONVENIENT TO USE 35

- HUSBAND OPPOSED 41
- RELIGIOUS REASONS 51
- FATALISTIC 61
- EMBARRASSED 71

OTHER _____ 96
(SPECIFY)
DON'T KNOW 98

356 *CHECK 160:*

CURRENTLY MARRIED ☐

CURRENTLY NOT MARRIED ☐ → 359

356A *CHECK 314 AND 314A:*

WOMAN NOT HAD TUBAL LIGATION OR HUSBAND NOT STERILIZED ☐

WOMAN HAD TUBAL LIGATION OR HUSBAND STERILIZED ☐ → 359

357 *CHECK 227:*

NOT PREGNANT OR UNSURE ☐

Now I have some questions about the future.
Would you like to have(a/another) child or would you prefer not to have any (more) children?

CURRENTLY PREGNANT ☐

Now I have some questions about the future.
After the child you are expecting would you like to have another child or would you prefer not to have any more children?

- HAVE (A/ANOTHER) CHILD 1
- NO MORE/NONE 2
- SAYS SHE CAN'T GET PREGNANT ..... 3 → 359
- UNDECIDED/DON'T KNOW 8

357A *CHECK 227:*

NOT PREGNANT OR UNSURE ☐

How many more children would you like to have in the future?

CURRENTLY PREGNANT ☐

How many more children would you like to have in the future not counting the one you are currently pregnant with?

NUMBER ..... ☐☐

OTHER ANSWERS _____ 96
(SPECIFY)

358 *CHECK 227:*

NOT PREGNANT OR UNSURE ☐ → How long would you like to wait from now before the birth of (a/another) child?

CURRENTLY PREGNANT ☐ → After the child you are expecting now, how long would you like to wait before the birth of another child?

MONTH.....1 ☐☐

YEAR.....2 ☐☐

SOON/NOW..... 993
SAYS SHE CAN'T GET PREGNANT.....994

OTHER _____ 996
(SPECIFY)

DON'T KNOW 998

359 *CHECK 216:*

HAS LIVING CHILDREN ☐ → If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be?

NO LIVING CHILDREN ☐ → If you could choose exactly the number of children to have in your whole life, how many would that be?

NONE.....00 → 361A

NUMBER ..... ☐☐

OTHER _____ 96 → 361A
(SPECIFY)

360 How many of these children would you like to be boys, how many would you like to be girls and for how many would it not matter?

BOYS

NUMBER ..... ☐☐

OTHER _____ 96
(SPECIFY)

GIRLS

NUMBER ..... ☐☐

OTHER _____ 96
(SPECIFY)

EITHER

NUMBER ..... ☐☐

OTHER _____ 96
(SPECIFY)

361A	Did you experience any of the following health problems in the last 12 months?		**361B** Did you seek any treatment from any health personnel or health institution?	
			YES	NO
	Genital discharge?	YES……..1 →	1	2
		NO…..…..2		
	Genital itching?	YES…….....1 →	1	2
		NO…..…..2		
	Genital sore/ulcer?	YES…….....1 →	1	2
		NO…….....2		
	Painful urination (Dysuria)?	YES…….....1 →	1	2
		NO…….....2		
	Bleeding during intercourse ?	YES…….....1 →	1	2
		NO…….....2		
	Menstrual disorder?	YES…..…..1 →	1	2
		NO....……2		
362	*CHECK 316A AND 316B:*			
	SOUGHT TRETMENT AT LEAST ONCE ☐		NOT SOUGHT TREATMENT OR NOT EXPERIENCED A PROBLEM ☐ →	400
363	Did any health personnel inform you about your health problem(s)?	YES..... 1 NO..... 2		

SECTION 4. MOTHER AND CHILD HEALTH

400	*CHECK 225.* ONE OR MORE LIVE BIRTHS SINCE JANUARY 2003.	NO LIVE BIRTHS SINCE JANUARY 2003. → 709
401S	*RECORD THE TIME.*	HOUR – MINUTE.....
402	*ENTER THE LINE NUMBER, NAME, AND SURVIVAL STATUS OF EACH BIRTH SINCE JANUARY 2003 IN THE TABLE, BEGINNING WITH THE LAST BIRTH. ASK THE QUESTIONS FOR ALL THESE BIRTHS.* *BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 2 BIRTHS USE ADDITIONAL QUESTIONNAIRES- DO NOT USE THE LAST BIRTH COLUMN IN THE ADDITIONAL QUESTIONNAIRE. USE "NEXT TO LAST BIRTH" COLUMN AFTER CHANGING IT AS "SECOND TO LAST BIRTH").* I would like to ask you some more questions about the health of all your children born in the past five years. We will talk about one child at a time.	

		LAST BIRTH	NEXT TO LAST BIRTH
403	LINE NUMBER FROM Q212.	LINE NUMBER…….....	LINE NUMBER…….....
404	FROM 212 FROM 216	NAME_____ ALIVE DEAD	NAME_____ ALIVE DEAD
405	At the time you became pregnant with ..... did you want to become pregnant then, did you want to wait until later, or did you want no (more) children at all ?	NOT AT ALL..... 0 → 407A THEN ..... 1 LATER 2	NOT AT ALL..... 0 → 407A THEN..... 1 LATER 2
406	How much longer would you like to have waited?	MONTHS……..... 1 YEARS……..... 2 DON'T KNOW ……..... 998	MONTHS……..... 1 YEARS……..... 2 DON'T KNOW ……..... 998
407A	When you were pregnant with .....did you see anyone for antenatal care for this pregnancy? *(IF YES)* Whom did you see? Anyone else? *PROBE FOR THE TYPE OF PERSON AND RECORD ALL MENTIONED.*	**HEALTH PROFESSIONAL** DOCTOR ..... A NURSE/MIDWIFE ..... B **OTHER PERSON** TRAD. MIDWIFE/GRAN ..... D OTHER _____ U (SPECIFY) NO ONE..... Y → 409G	**HEALTH PROFESSIONAL** DOCTOR ..... A NURSE/MIDWIFE..... B **OTHER PERSON** TRAD. MIDWIFE/GRAN..... D OTHER _____ U (SPECIFY) NO ONE..... Y → 410

		LAST BIRTH NAME_____	NEXT TO LAST BIRTH NAME_____
407B	Where did you go for antenatal care? Anywhere else? *RECORD ALL MENTIONED.*	**PUBLIC SECTOR** GOVT./SAMPLE HOSPITAL .....A MATERNITY HOUSE .....B MCHFP CENTER .....C HEALTH CENTER.....D HEALTH HOUSE .....E SSK HOSPITAL/DISPANSERY .....F TRAINING AND RESEARCH HOSP..G FAMILY AND HEALTH CENTER/ FAMILY DOCTOR .....H OTHER _____ I (SPECIFY) **PRIVATE SECTOR** PRIVATE HOSPITAL.....J PRIVATE POLYCLINIC .....K PRIVATE DOCTOR.....L PRIVATE NURSE/MIDWIFE (HEALTH CABIN).....M OTHER_____ N (SPECIFY) UNIVERSITY HOSPITAL.....O VOLUNTARY ORGANIZATION/ FOUNDATION HOSPITAL/CLINIC ....P OTHER_____ U (SPECIFY)	**PUBLIC SECTOR** GOVT./SAMPLE HOSPITAL .....A MATERNITY HOUSE .....B MCHFP CENTER .....C HEALTH CENTER.....D HEALTH HOUSE .....E SSK HOSPITAL/DISPANSERY .....F TRAINING AND RESEARCH HOSP..G FAMILY AND HEALTH CENTER/ FAMILY DOCTOR .....H OTHER _____ I (SPECIFY) **PRIVATE SECTOR** PRIVATE HOSPITAL.....J PRIVATE POLYCLINIC .....K PRIVATE DOCTOR.....L PRIVATE NURSE/MIDWIFE (HEALTH CABIN).....M OTHER_____ N (SPECIFY) UNIVERSITY HOSPITAL.....O VOLUNTARY ORGANIZATION/ FOUNDATION HOSPITAL/CLINIC ....P OTHER_____ U (SPECIFY)
408	How many months pregnant were you with ..... when you first received antenatal care?	MONTH ..... [ ][ ]	MONTH ..... [ ][ ]
408A	During your pregnancy with ..... when you went for the first time for antenatal care did you go because there was a problem or was it an ordinary check-up?	THERE WAS A PROBLEM…….....…1 ORDINARY CONTROL.....…..... 2 OTHER _____ 7 (SPECIFY)	THERE WAS A PROBLEM…….....…1 ORDINARY CONTROL.....…..... 2 OTHER _____ 7 (SPECIFY)
409A	How many times did you receive antenatal care during your pregnancy with .....?	NO. OF TIMES..... [ ][ ]	NO. OF TIMES..... [ ][ ]
409B	How many months pregnant were you with ..... when you received antenatal care for the last time?	MONTH ..... [ ][ ]	MONTH ..... [ ][ ]
409C	In any of your antenatal checks: Were you weighed? Were you checked for your blood pressure? Had a blood test? Had a urine test? Had ultrasonographic check? Had abdomen control by hand?	YES NO WEIGHED.....1 2 BLOOD PRESSURE.....1 2 BLOOD TEST.....1 2 URINE TEST..... .....1 2 ULTRASOUND.....1 2 ABDOMINAL EXAMINATION.....1 2	

		LAST BIRTH NAME_____	NEXT TO LAST BIRTH NAME_____
409F	Have you been informed on the following topics in any of your antenatal checks?	YES NO	
	Nutrition during pregnancy?	NUTRITION.....1 2	
	Situations that require emergency visits to health facilities? (Bleeding, high blood pressure, edema, fever, etc.)?	EMERGENCIES.....1 2	
	Type of delivery (Caesarean section/vaginal)?	DELIVERY TYPE.....1 2	
	Breastfeeding?	BREASTFEEDING.....1 2	
	Contraception use after birth?	CONTRACEPTION USE.....1 2	
409G	Have you taken iron tablets during your pregnancy to ……?	YES ..... 1 NO ..... 2 DON'T KNOW 8	
409H	*CHECK 407A:* HAD ANTENATAL CARE?	YES → 410 NO	
409I	What was the reason for you not receiving antenatal care during your pregnancy to ……? *RECORD ALL MENTIONED.*	THERE WAS NO PROBLEM ..... A ACESSIBILITY PROBLEMS ..... B DISTRUST OF HEALTH FACILITY/PERSONNEL ..... C PROBLEMS IN USING HEALTH INSTITUTION ..... D TRADITIONS/CUSTOMS ..... E ECONOMIC LIMITATIONS ..... F POOR SERVICES ..... G DOES NOT KNOW WHERE ..... H FEAR ..... I SHAME ..... J HUSBAND DID NOT ALLOW ..... K MOTHER IN LAW DID NOT ALLOW ... L OTHER FAMILY MEMBERS DID NOT ALLOW ..... M OTHER _____ U (SPECIFY)	

		LAST BIRTH NAME_____	NEXT TO LAST BIRTH NAME_____
410	Where did you give birth to .....?	**HOME** WOMAN'S HOME..... 01 OTHER HOME..... 02 **PUBLIC SECTOR** GOVT./SAMPLE HOSPITAL..... 11 MATERNITY HOUSE..... 12 MCHFP CENTER..... 13 HEALTH CENTER..... 14 HEALTH HOUSE..... 15 SSK HOSPITAL/DISPANSERY..... 16 TRAINING AND RESEARCH HOSP.. 17 FAMILY HEALTH CENTER/ FAMILY DOCTOR..... 18 OTHER _____ 19 (SPECIFY) **PRIVATE SECTOR** PRIVATE HOSPITAL..... 21 PRIVATE POLYCLINIC..... 22 PRIVATE DOCTOR..... 23 PRIVATE NURSE/MIDWIFE (HEALTH CABIN)..... 24 OTHER _____ 29 (SPECIFY) UNIVERSITY HOSPITAL..... 31 VOLUNATRY ORGANIZATION/ FOUNDATION HOSPITAL/CLINIC.... 41 OTHER _____ 96 (SPECIFY)	**HOME** WOMAN'S HOME..... 01 OTHER HOME..... 02 **PUBLIC SECTOR** GOVT./SAMPLE HOSPITAL..... 11 MATERNITY HOUSE..... 12 MCHFP CENTER..... 13 HEALTH CENTER..... 14 HEALTH HOUSE..... 15 SSK HOSPITAL/DISPANSERY..... 16 TRAINING AND RESEARCH HOSP.. 17 FAMILY HEALTH CENTER/ FAMILY DOCTOR..... 18 OTHER _____ 19 (SPECIFY) **PRIVATE SECTOR** PRIVATE HOSPITAL..... 21 PRIVATE POLYCLINIC..... 22 PRIVATE DOCTOR..... 23 PRIVATE NURSE/MIDWIFE (HEALTH CABIN)..... 24 OTHER _____ 29 (SPECIFY) UNIVERSITY HOSPITAL..... 31 VOLUNATRY ORGANIZATION/ FOUNDATION HOSPITAL/CLINIC.... 41 OTHER _____ 96 (SPECIFY)
413	Who assisted with the delivery of .....? Anyone else? *RECORD ALL MENTIONED.*	**HEALTH PROFESSIONAL** DOCTOR..... A NURSE/MIDWIFE..... B **OTHER PERSON** TRADITIONAL MIDWIFE..... D RELATIVE/FRIENDS..... E OTHER_____ U (SPECIFY) NO ONE ..... Y	**HEALTH PROFESSIONAL** DOCTOR..... A NURSE/MIDWIFE..... B **OTHER PERSON** TRADITIONAL MIDWIFE..... D RELATIVE/FRIENDS..... E OTHER_____ U (SPECIFY) NO ONE ..... Y
414	How did .....'s birth occur? Was it vaginal birth or caesarean section?	NORMAL (VAGINAL) BIRTH ..... 1 CAESAREAN..... 2	NORMAL (VAGINAL) BIRTH ..... 1 CAESAREAN..... 2

		LAST BIRTH NAME_____	NEXT TO LAST BIRTH NAME_____
414B	*CHECK 410:* DID THE BIRTH TAKE PLACE AT A HEALTH FACILITY?	YES ☐ NO ☐ → 443	YES ☐ NO ☐ → 444
437	How long did you stay at the health facility after ....'s birth? *RECORD "00" IF LESS THAN ONE DAY. RECORD AS DAY IF LESS THAN ONE WEEK.*	DAY.....1 ☐☐ WEEK.....2 ☐☐ DON'T KNOW.....998	DAY.....1 ☐☐ WEEK.....2 ☐☐ DON'T KNOW.....998
439	Were you examined by a health professional before you returned home after birth?	YES.....1 NO.....2 → 442	YES.....1 NO.....2 → 442
440	How much time elapsed between birth and your first examination? *RECORD AS HOUR IF LESS THAN 1 DAY AND AS DAY IF LESS THAN 1 WEEK.*	HOUR.....1 ☐☐ DAY.....2 ☐☐ WEEK.....3 ☐☐ DON'T KNOW.....998	
441	Who examined you? Who else?	DOCTOR.....A MIDWIFE/NURSE.....B OTHER _____ U (SPECIFY)	
441A		*GO TO 448A.*	*GO TO 453.*
442	Were you examined by a health professional within two months following your departure from .....? (THE PLACE MENTIONED AT 410)	YES.....1 → 445 NO.....2 → 449	YES.....1 → 453 NO.....2 → 453
443	What was the main reason for not having done .....'s birth in a health institution?	NO REASON.....00 ACESSIBILITY PROBLEMS.....01 DISTRUST OF HEALTH FACILITY/PERSONNEL.....02 HAPPENED SUDDENLY.....03 PROBLEMS IN USING HEALTH INSTUTION.....04 EXPENSIVE.....05 TRADITIONS/CUSTOMS.....06 NO PROBLEM.....07 FEAR.....08 SHAME.....09 OTHER _____ 96 (SPECIFY) DON'T KNOW.....98	

		LAST BIRTH NAME_____	NEXT TO LAST BIRTH NAME_____
444	In the two months after ..... was born, did any health care provider check your health?	YES ..... 1 NO ..... 2 → 449	YES ..... 1 NO 2
445	How long after delivery did the first check take place? *RECORD IN HOURS IF LESS THAN 1 DAY, RECORD IN WEEKS IF LESS THAN 1 MONTH.*	HOUR .....1 ☐☐ DAY .....2 ☐☐ WEEK .....3 ☐☐ DON'T KNOW 998	
446	Who checked on your health at that time? Who else?	DOCTOR ..... A MIDWIFE/NURSE ..... B OTHER _____ U (SPECIFY)	
447	Where did this first check take place?	**HOUSE** OWN HOUSE ..... 01 OTHER HOUSE ..... 02 **PUBLIC SECTOR** GOVT./SAMPLE HOSPITAL..... 11 MATERNITY HOUSE……..... 12 MCHFP CENTER.……..... 13 HEALTH CENTER……..…..... 14 HEALTH HOUSE……..... 15 SSK HOSPITAL/DISPANSERY ..... 16 TRAINING AND RESEARCH HOSP . 17 FAMILY HEALTH CENTER/ FAMILY DOCTOR ..... 18 OTHER _____ 19 (BELİRTİN) **PRIVATE SECTOR** PRIVATE HOSPITAL……..... 21 PRIVATE POLYCLINIC…….... 22 PRIVATE DOCTOR…..... 23 PRIVATE NURSE/MIDWIFE (HEALTH CABIN) ..... 24 OTHER _____ 29 (SPECIFY) UNIVERSITY HOSPITAL ..... 31 VOLUNATRY ORGANIZATION/ FOUNDATION HOSPITAL/CLINIC.... 41 OTHER _____ 96 (SPECIFY)	
448A	In the two months after ..... was born, how many times did health care providers check your health?	NUMBER OF TIMES ..... ☐☐	

		LAST BIRTH NAME_____	NEXT TO LAST BIRTH NAME_____
448B	In the health checks within two months after ..... was born, have you been informed on any the following topics?	YES NO	
	Mother's nutrititon?	MOTHER'S NUTRITITON.....1 2	
	Baby's nutrition?	BABY'S NUTRITION.....1 2	
	Breastfeeding?	BREASTFEEDING.....1 2	
	Baby's immunization?	IMMUNIZATION.....1 2	
	Breast care?	BREAST CARE.....1 2	
	Postpartum contraception use?	CONTRACEPTION.....1 2	
	Situations that require emergency visits to health facilities?	EMERGENCIES.....1 2	
	Use of iron tablets?	IRON TABLETS.....1 2	
448C	In any of the health checks within two months after ..... was born:	YES NO	
	Were you checked for your blood pressure?	BLOOD PRESSURE.....1 2	
	Had a blood test?	BLOOD TEST.....1 2	
	Had a urine test?	URINE TEST.....1 2	
	Checked for body temperature?	BODY TEMPERATURE.....1 2	
	Checked for bleeding?	BLEEDING.....1 2	
449	Now I would like to ask you about the health checks (NAME OF CHILD) .... attended within the two months after he/she was born. In the two months after ..... was born, did any health care provider check her/his health?	YES ..... 1 NO ..... 2 → 453	
450	How long after delivery did the first check of ..... take place? *RECORD IN HOURS IF LESS THAN ONE DAY, RECORD IN WEEKS IF LESS THAN ONE MONTH.*	HOUR .....1 ☐☐ DAY .....2 ☐☐ WEEK .....3 ☐☐ DON'T KNOW……998	
451	Who checked on ....'s health at that time? Who else?	DOCTOR..... A MIDWIFE/NURSE..... B OTHER _____ U (SPECIFY)	

		LAST BIRTH NAME_____	NEXT TO LAST BIRTH NAME_____
452	Where did this first check of ..... take place?	**HOUSE** OWN HOUSE ..... 01 OTHER HOUSE ..... 02 **PUBLIC SECTOR** GOVT./SAMPLE HOSPITAL..... 11 MATERNITY HOUSE……..... 12 MCHFP CENTER……..... 13 HEALTH CENTER……..... 14 HEALTH HOUSE……..... 15 SSK HOSPITAL/DISPANSERY ..... 16 TRAINING AND RESEARCH HOSP . 17 FAMILY HEALTH CENTER/ FAMILY DOCTOR ..... 18 OTHR _____ 19 (BELİRTİN) **PRIVATE SECTOR** PRIVATE HOSPITAL……..... 21 PRIVATE POLYCLINIC……..... 22 PRIVATE DOCTOR…..... 23 PRIVATE NURSE/MIDWIFE (HEALTH CABIN) ..... 24 OTHER _____ 29 (SPECIFY) UNIVERSITY HOSPITAL ..... 31 VOLUNATRY ORGANIZATION/ FOUNDATION HOSPITAL/CLINIC.... 41 OTHER _____ 96 (SPECIFY)	
453	When ..... was born, was he/she very large, larger than average, average, smaller than average or very small?	VERY LARGE……..... 1 LARGER THAN AVERAGE……..... 2 AVERAGE……..... 3 SMALLER THAN AVERAGE……..... 4 VERY SMALL……..... 5 DON'T KNOW……..... 8	VERY LARGE……..... 1 LARGER THAN AVERAGE……..... 2 AVERAGE……..... 3 SMALLER THAN AVERAGE……..... 4 VERY SMALL……..... 5 DON'T KNOW……..... 8
454	Was ……weighed at birth?	YES ..... 1 NO ..... 2 → 455A	YES ..... 1 NO ..... 2 → 455A
455	How much did …… weigh? *RECORD WEIGHT FROM HEALTH CARD, IF AVAILABE.*	GRAMS FROM CARD.....1 ☐☐☐☐ FROM RECALL.....2 ☐☐☐☐ DON'T KNOW……..... 99998	GRAMS FROM CARD.....1 ☐☐☐☐ FROM RECALL.....2 ☐☐☐☐ DON'T KNOW……..... 99998
455A	Has …… been through a test for phenylketonuria?	YES ..... 1 NO ..... 2 DON'T KNOW 3	YES ..... 1 NO ..... 2 DON'T KNOW 3

		LAST BIRTH NAME_____	NEXT TO LAST BIRTH NAME_____
455B	Before, during or after the birth of ..... , did you ever pay money for the health services you have taken for yourself or for your child?	YES NO	
	While taking antenatal care?	ANC.....1 2	
	During delivery?	DELIVERY.....1 2	
	While taking the postnatal checks?	PNC.....1 2	
456	Has your period returned since the birth of ……?	YES ..... 1 → 458 NO ..... 2 → 459	
457	Did your period return between the birth of …… and your next pregnancy?		YES..... 1 NO..... 2 → 461
458	For how many months after birth of …… did you not have your period?	MONTH..... ☐☐ DON'T KNOW 98	MONTH..... ☐☐ DON'T KNOW 98
459	*CHECK 227:* RESPONDENT CURRENTLY PREGNANT?	NOT PREGNANT ☐ → PREGNANT OR UNSURE ☐ → 461	
460	Have you resumed sexual relations since the birth of ……?	YES ..... 1 NO ..... 2 → 462	
461	For how many months after the birth of …… did you not have sexual relations? *RECORD AS "DAY" IF LESS THAN 2 MONTHS.*	DAY.....1 ☐☐ MONTH.....2 ☐☐ DON'T KNOW 98	DAY.....1 ☐☐ MONTH.....2 ☐☐ DON'T KNOW 98
462	Did you ever breastfeed …..?	YES ..... 1 NO ..... 2 → 470B	YES ..... 1 NO ..... 2 → 470B
463	How long after birth did you first put …… to the breast? *RECORD "00" IF LESS THAN 1 HOUR. RECORD AS HOUR IF LESS THAN 24 HOURS, AS DAY IF MORE.*	HOUR ..... 1 ☐☐ DAY ..... 2 ☐☐	
463A	In the first three days after delivery, was ..... given anything to drink other than breast milk?	YES ..... 1 NO ..... 2 → 464	

		LAST BIRTH NAME_____	NEXT TO LAST BIRTH NAME_____
463B	What was given to ……? Anything else? *RECORD ALL MENTIONED.*	MILK (OTHER THAN BREAST MILK).. A WATER ..... B SUGAR WATER ..... C SALT-SUGAR-WATER SOLUTION ..... D FRUIT JUICE..... E BABY FORMULA ..... F TEA ..... G JUICE OF COOKED MEAL ..... H HONEY ..... I OTHER _____ U (SPECIFY)	
464	*CHECK 404:* CHILD ALIVE?	ALIVE ☐ DEAD ☐ → 466	ALIVE ☐ DEAD ☐ → 466
465	Are you still breastfeeding ……?	YES ..... 1 NO ..... 2 → 468	YES ..... 1 NO ..... 2 → 470C
466	For how many months did you breastfeed ……?	MONTH..... ☐☐ DON'T KNOW 98	MONTH..... ☐☐ DON'T KNOW 98
467		*GO TO 470A.*	*GO TO 470A.*
468	How many times did you breastfeed …… last night between sunset and sunrise? *IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER.*	NUMBER OF NIGHTTIME FEEDINGS..... ☐☐	
469	How many times did you breastfeed …… yesterday during the daylight hours? *IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER.*	NUMBER OF DAYTIME FEEDINGS..... ☐☐	
469A		*GO TO 471.*	*GO TO 471.*

		LAST BIRTH NAME_____	NEXT TO LAST BIRTH NAME_____
470A	*CHECK 466:*	BRESTFED FOR LESS THAN 6 MONTHS ☐ → BRESTFED FOR 6 MONTHS OR LONGER ☐ → 470C	BRESTFED FOR LESS THAN 6 MONTHS ☐ → BRESTFED FOR 6 MONTHS OR LONGER ☐ → 470C
470B	Why did you not breastfeed/stop breastfeeding ……?	MOTHER SICK/WEAK ..... 11 CHILD SICK/WEAK ..... 12 CHILD DEAD ..... 13 BREAST PROBLEM ..... 14 INSUFFICIENT MILK ..... 15 MOTHER WORKING ..... 16 BABY DID NOT WANT IT ..... 17 GOT PREGNANT ..... 18 OTHER _____ 96 (SPECIFY)	MOTHER SICK/WEAK ..... 11 CHILD SICK/WEAK ..... 12 CHILD DEAD ..... 13 BREAST PROBLEM ..... 14 INSUFFICIENT MILK ..... 15 MOTHER WORKING ..... 16 BABY DID NOT WANT IT ..... 17 GOT PREGNANT ..... 18 OTHER _____ 96 (SPECIFY)
470C	*CHECK 404:* CHILD ALIVE?	ALIVE ☐ → DEAD ☐ → 488	ALIVE ☐ → DEAD ☐ → 488
471	Did …… drink anything from a bottle with a nipple yesterday or last night?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
471A	Which supplementary nutrition other than breastmilk did you feed …… first?	NONE ..... 00 → 476A MILK (OTHER THAN BREASTMILK) ..... 01 WATER ..... 02 SUGAR WATER ..... 03 SALT-SUGAR-WATER SOLUTION ..... 04 FRUIT JUICE ..... 05 BABY FORMULA ..... 06 YOGHURT ..... 07 TEA ..... 08 JUICE OF COOKED MEAL ..... 09 HONEY ..... 10 OTHER _____ 96 (SPECIFY).	
471B	How many months old was ..... when you first fed him/her with supplementary food ?	MONTHS ..... ☐☐	

		LAST BIRTH NAME_____	NEXT TO LAST BIRTH NAME_____
472	At any time in last 24 hours was …… given any of the following?	Y N DK	Y N DK
	Eggs?	EGGS 1 2 8	EGGS 1 2 8
	Cheese?	CHEESE 1 2 8	CHEESE 1 2 8
	Yoghurt?	YOGHURT 1 2 8	YOGHURT 1 2 8
	Red meat?	RED MEAT 1 2 8	RED MEAT 1 2 8
	Chicken?	CHICKEN 1 2 8	CHICKEN 1 2 8
	Fish?	FISH 1 2 8	FISH 1 2 8
	Fresh vegetables/fruits?	VEGETABLES/FRUITS 1 2 8	VEGETABLES/FRUITS 1 2 8
	Water?	WATER 1 2 8	WATER 1 2 8
	Baby formula?	BABY FORMULA 1 2 8	BABY FORMULA 1 2 8
	Bottled/Boxed milk / Milk sold outside?	MILK 1 2 8	MILK 1 2 8
	Cereals or grains?	CEREALS/GRAINS 1 2 8	CEREALS/GRAINS 1 2 8
	Soup/juice of cooked meal?	SOUP/JUICE OF MEAL 1 2 8	SOUP/JUICE OF MEAL 1 2 8
	Bread?	BREAD 1 2 8	BREAD 1 2 8
476A	Has ..... had dierrahea in the last 15 days?	YES ..... 1 NO ..... 2 → 487 DON'T KNOW 8	YES ..... 1 NO ..... 2 → 487 DON'T KNOW 8
477	Was there any blood in the stools?	YES ..... 1 NO ..... 2 DON'T KNOW 8	YES ..... 1 NO ..... 2 DON'T KNOW 8
478	On the worst day of diarrhea, how many bowel movements did …… have?	NUMBER OF BOWEL MOVEMENTS ..... ☐☐ DON'T KNOW 98	NUMBER OF BOWEL MOVEMENTS ..... ☐☐ DON'T KNOW 98
478A	*CHECK 471A:* SUPPLEMENTARY NUTRITION GIVEN?	GIVEN ↓ NOT GIVEN → 488	GIVEN ↓ NOT GIVEN → 488
479	Was ..... given the same amount to drink as before the diarrhea, or more or less when he/she had diarrhea?	SAME ..... 1 MORE ..... 2 LESS ..... 3 DON'T KNOW 8	SAME ..... 1 MORE ..... 2 LESS ..... 3 DON'T KNOW 8
480	Was ..... given the same amount to eat as before the diarrhea, or more or less when he/she had diarrhea?	SAME ..... 1 MORE ..... 2 LESS ..... 3 DON'T KNOW 8	SAME ..... 1 MORE ..... 2 LESS ..... 3 DON'T KNOW 8

		LAST BIRTH NAME_____	NEXT TO LAST BIRTH NAME_____
481	When ..... had diarrhea was he/she given any of the following to eat or drink?	Y N D	Y N D
	A fluid made from a special packet called ORS?	ORS PKT.....1 2 8	ORS PKT.....1 2 8
	Home made sugar-salt-water solution?	HOME MADE ORS.....1 2 8	HOME MADE ORS.....1 2 8
	Milk or baby formula?	MILK/BABY FORMULA.....1 2 8	MILK/BABY FORMULA.....1 2 8
	Soup?	SOUP.....1 2 8	SOUP.....1 2 8
	Ayran (Yoghurt based drink)?	AYRAN.....1 2 8	AYRAN.....1 2 8
	Tea?	TEA.....1 2 8	TEA.....1 2 8
	Rice-pudding/mashed potatoes?	RICE PUDDING/POTATOES....1 2 8	RICE PUDDING/POTATOES....1 2 8
	Other liquids?	OTHER LIQUIDS.....1 2 8	OTHER LIQUIDS.....1 2 8
482	Was anything else given to treat diarrhea?	YES.....1 NO.....2 DON'T KNOW.....8	YES.....1 NO.....2 DON'T KNOW.....8
484	Did you seek advice or treatment for the diarrhea?	YES.....1 NO.....2 → 486 DON'T KNOW.....8	YES.....1 NO.....2 → 486 DON'T KNOW.....8
485	Where/from whom did you seek advice or treatment? Anywhere else? *RECORD ALL MENTIONED.*	**PUBLIC SECTOR** GOVT./SAMPLE HOSPITAL.....A MATERNITY HOUSE .....B MCHFP CENTRE .....C HEALTH CENTRE .....D HEALTH HOUSE .....E SSK HOSPITAL/DISPANSERY .....F TRAINING AND RESEARCH HOSP.....G FAMILY HEALTH CENTER/ FAMILY DOCTOR .....H OTHER _____I (SPECIFY) **PRIVATE SECTOR** PRIVATE HOSPITAL .....J PRIVATE POLYCLINIC.....K PRIVATE DOCTOR.....L PRIVATE NURSE/MIDWIFE (HEALTH CABIN) .....M PHARMACY/MEDICAL STORE .....N OTHER _____O (SPECIFY) UNIVERSITY HOSPITAL .....P VOLUNATRY ORGANIZATION/ FOUNDATION HOSPITAL/CLINIC ...R MARKET/SHOP.....S RELATIVE/FRIENDS/NEIGHBOURS.....T TRAD. MIDWIFE/GRAN.....V OTHER _____U (SPECIFY)	**PUBLIC SECTOR** GOVT./SAMPLE HOSPITAL.....A MATERNITY HOUSE .....B MCHFP CENTRE .....C HEALTH CENTRE .....D HEALTH HOUSE .....E SSK HOSPITAL/DISPANSERY .....F TRAINING AND RESEARCH HOSP.....G FAMILY HEALTH CENTER/ FAMILY DOCTOR .....H OTHER _____I (SPECIFY) **PRIVATE SECTOR** PRIVATE HOSPITAL .....J PRIVATE POLYCLINIC.....K PRIVATE DOCTOR.....L PRIVATE NURSE/MIDWIFE (HEALTH CABIN) .....M PHARMACY/MEDICAL STORE .....N OTHER _____O (SPECIFY) UNIVERSITY HOSPITAL .....P VOLUNATRY ORGANIZATION/ FOUNDATION HOSPITAL/CLINIC ...R MARKET/SHOP.....S RELATIVE/FRIENDS/NEIGHBOURS.....T TRAD. MIDWIFE/GRAN.....V OTHER _____U (SPECIFY)

		LAST BIRTH NAME_____	NEXT TO LAST BIRTH NAME_____
486	*CHECK 465:* STILL BREASTFEEDING?	YES ☐ NO ☐ → 487	
486A	Did you make any changes in the breastfeeding frequency of ..... when he/she had diarrhea?	YES.....1 NO.....2 → 487	
486B	Did you breastfeed ..... less or more, did you stop brestfeeding?	MORE.....1 LESS.....2 STOPPED BREASTFEEDING.....3	
487	Is .... currently attending daycare or kindergarten?	NOT ATTENDING.....0 DAYCARE CENTRE.....1 KINDERGARTEN.....2	NOT ATTENDING.....0 DAYCARE CENTRE.....1 KINDERGARTEN.....2
487A		*GO TO 489A.*	*GO TO 489A.*
488	Where did ……die?	**HOUSE** OWN HOUSE.....01 OTHER HOUSE.....02 **PUBLIC SECTOR** GOVT./SAMPLE HOSPITAL.....11 MATERNITY HOUSE…….....12 MCHFP CENTER.…….....13 HEALTH CENTER……..….....14 HEALTH HOUSE…….…….....15 SSK HOSPITAL/DISPANSERY.....16 TRAINING AND RESEARCH HOSP.17 FAMILY HEALTH CENTER/ FAMILY DOCTOR.....18 OTHER _____19 (BELİRTİN) **PRIVATE SECTOR** PRIVATE HOSPITAL…….....21 PRIVATE POLYCLINIC…….....22 PRIVATE 23 DOCTOR..... PRIVATE NURSE/MIDWIFE 24 (HEALTH CABIN)..... 29 OTHER _____ (SPECIFY) 31 UNIVERSITY HOSPITAL ..... 96 OTHER _____ (SPECIFY)	**HOUSE** OWN HOUSE.....01 OTHER HOUSE.....02 **PUBLIC SECTOR** GOVT./SAMPLE HOSPITAL..... 11 MATERNITY HOUSE…….....12 MCHFP CENTER.…….....13 HEALTH CENTER……..….....14 HEALTH HOUSE…….…….....15 SSK HOSPITAL/DISPANSERY.....16 TRAINING AND RESEARCH HOSP.17 FAMILY HEALTH CENTER/ FAMILY DOCTOR.....18 OTHER _____ 19 (BELİRTİN) **PRIVATE SECTOR** PRIVATE HOSPITAL…….....21 PRIVATE POLYCLINIC…….....22 PRIVATE DOCTOR…….....23 PRIVATE NURSE/MIDWIFE (HEALTH CABIN).....24 OTHER _____ 29 (SPECIFY) UNIVERSITY HOSPITAL .....31 OTHER _____96 (SPECIFY)
489A		*GO BACK TO 405 IN NEXT COLUMN IF THERE IS ANOTHER BIRTH. IF NO MORE BIRTHS, GO TO 490S.*	*GO TO 405 IN AN EXTRA QUESTIONNAIRE IF THERE IS ANOTHER BIRTH. IF NOT, GO TO 490S.*
490S	*RECORD THE TIME.*	HOUR – MINUTE..... ☐☐ ☐☐	

SECTION 5. IMMUNIZATION

500 *CHECK 225:*
ONE OR MORE LIVE BIRTHS SINCE JANUARY 2005 ☐ ↓
NO LIVE BIRTHS SINCE JANUARY 2005 ☐ → 709

501 *ENTER LINE NUMBER, NAME SURVIVAL STATUS OF EACH BIRTH SINCE JANUARY 2005 IN THE TABLE. ASK QUESTIONS ABOUT ALL OF THESE BIRTHS.*

BEGIN WITH THE LAST BIRTH. (IF THERE ARE MORE THAN 2 BIRTHS USE ADDITIONAL QUESTIONNAIRES – DO NOT USE THE LAST BIRTH COLUMN IN THE ADDITIONAL QUESTIONNAIRE, USE "NEXT TO LAST BIRTH" CLOUMN' AND WRITE "SECOND ONE BEFORE THE LAST BIRTH")

		LAST BIRTH	NEXT TO LAST BIRTH
501A	LINE NUMBER FROM 212.	LINE NO……..…….. ☐☐	LINE NO……..…….. ☐☐
502	*CHECK 212:* *CHECK 216:*	NAME_____ ALIVE ☐ ↓ DEAD ☐ ↓ *IF NO MORE BIRTHS, GO TO 510S* *IF THERE IS MORE BIRTHS GO TO 502 IN NEXT COLUMN .*	NAME_____ ALIVE ☐ ↓ DEAD ☐ ↓ *IF NO MORE BIRTHS, GO TO 510S* *IF THERE IS MORE BIRTHS GO TO 502 IN ADDITIONAL. QUESTIONNAIRE.*
503	Do you have a card where ……'s vaccination are written down? *(IF YES)* May I see it please?	YES, SEEN ..... 1 YES, NOT SEEN ..... 2 → 506 NO CARD 3	YES, SEEN ..... 1 YES, NOT SEEN ..... 2 → 506 NO CARD 3

504 (1) *COPY VACCINATION DATES FOR EACH VACCINE FROM THE CARD. PAY ATTENTION TO APPOINTMENT DAYS AND THE CONSISTENCY OF VACCINATION DATES.*

(2) *WRITE '44' IN THE DAY CLOUMN IF CARD SHOWS THAT A VACCINATION WAS GIVEN BUT NO DATE IS RECORDED.*

	LAST BIRTH DAY	LAST BIRTH MO	LAST BIRTH YEAR	NEXT TO LAST BIRTH DAY	NEXT TO LAST BIRTH MO	NEXT TO LAST BIRTH YEAR
BCG	BCG			BCG		
POLIO 1	P1.			P1.		
POLIO 2	P2.			P2.		
POLIO 3	P3.			P3.		
DPT 1	D1.			D1.		
DPT 2	D2.			D2.		
DPT 3	D3.			D3.		
MEASLES	MEA			MEA		
HEPATITUS B 1	H1.			H1.		
HEPATITUS B 2	H2.			H2.		
HEPATITUS B 3	H3.			H3.		

		LAST BIRTH LINE NO……..…….. ☐☐	NEXT TO LAST BIRTH LINE NO……..…….. ☐☐
505	Has …… received any vaccination that are not recorded on this card? *RECORD 'YES' IF ONLY RESPONDENT MENTIONS BCG, POLIO 1 – 3, DPT 1 – 3, MEASLES AND/OR HEPATITUES B 1 - 3 .*	YES…….……..... 1 NO…….....2 509 ← DON'T KNOW……...….....8	YES …….…….....1 NO ....……..... 2 509 ← DON'T KNOW ……...….....8
505A		*PROBE VACCINATIONS AT 504, RECORD '66' TO DAY SECTION OF THAT VACCINATION.* *SKIP TO 509*	*PROBE VACCINATIONS AT 504, RECORD '66' TO DAY SECTION OF THAT VACCINATION.* *SKIP TO 509*
506	Did…… ever receive any vaccinations to prevent him/her from getting infectious diseases?	YES ……..... 1 NO ....……..... 2 509 ← DON'T KNOW ……...….....8	YES ……..... 1 NO ....……..... 2 509 ← DON'T KNOW ……...….....8
508A	Please tell me if …… received any of the following vaccinations? BCG: A vaccination against tuberculosis, that is an injection in the left arm or shoulder that caused a scar?	YES ……..... 1 NO ....……..... 2 DON'T KNOW ……...….....8	YES ……..... 1 NO ....……..... 2 DON'T KNOW ……...….....8
508B	Polio vaccination: That is dropped in the mouth?	YES ……..... 1 NO ....……..... 2 508D ← DON'T KNOW……...….....8	YES ……..... 1 NO ....……..... 2 508D ← DON'T KNOW……...….....8
508C	How many times?	NUMBER OF TIMES…….....…… ☐	NUMBER OF TIMES…….....…… ☐
508D	DPT vaccination: This vaccination includes diphtheria, whooping-cough and tetanus.and it is usually given at the same time as polio drops.	YES ……..... 1 NO ....……..... 2 508F ← DON'T KNOW……...….....8	YES ……..... 1 NO ....……..... 2 508F ← DON'T KNOW……...….....8
508E	How many times?	NUMBER OF TIMES…….....…… ☐	NUMBER OF TIMES…….....…… ☐
508F	Measles vaccination?	YES ……..... 1 NO ....……..... 2 DON'T KNOW ……...….....8	YES ……..... 1 NO ....……..... 2 DON'T KNOW ……...….....8
508G	Hepatitus B vaccination?	YES ……..... 1 NO ....……..... 2 509 ← DON'T KNOW……...….....8	YES ……..... 1 NO ....……..... 2 509 ← DON'T KNOW……...….....8
508H	How many times?	NUMBER OF TIMES…….....…… ☐	NUMBER OF TIMES…….....…… ☐
509		*RETURN TO 502 IN THE NEXT COLUMN IF THERE IS ANOTHER BIRTH.* *SKIP TO 709 IF NOT.*	*RETURN TO 502 IN THE ADDITIONAL QUESTIONNAIRE IF THERE IS ANOTHER BIRTH.* *SKIP TO 709 IF NOT.*

SECTION 7A. WOMEN'S WORK

709	Now I would like to ask you questions about working. Have you worked in a job whether paid or unpaid since you were 12 for at least 6 months? As you know some women sell small things, sell goods at the market place, work on the family farm or business, look after children, work as housemaids etc. Please include these kinds of jobs as well.	YES .....1 NO ..... 2 → 718A

709A Can you list me the jobs you have worked in whether paid or unpaid, for at least 6 months, since you were 12, starting from the first one?

RECORD ALL JOBS LASTED SIX MONTHS OR LONGER THE WOMEN HAS WORKED AT FROM AGE 12 TO SURVEY DATE TO THE LIST WITH DETAILS, STARTING FROM THE FIRST ONE.

ADD THE CURRENT JOB IN THE LIST REGARDLESS OF ITS DURATION. ASK THE QUESTIONS FOR EACH JOB SEPERATELY.

CAUTION: IF THE RESPONDENT HAS WORKED AT MORE THAN 10 JOBS, USE AN ADDITIONAL QUESTIONNAIRE. CONTINUE THE INTERVIEW FROM THIS NEW QUESTIONNAIRE.

	710 What was your job? *RECORD THE JOB IN DETAIL.*	**711** In which year and month did you start working in this job?	**712** In which sector were you working?	**713** Was your job in public or private sector?	**714** What was your position at work? *USE THE CODE LIST.*	**715** Did you have any social security when doing your job? (IF YES) According to which schedule? *USE THE CODE LIST.*
01	(JOB)	MONTH..... □□ YEAR. □□□□	AGRICULTURE..1 INDUSTRY.....2 SERVICE.....3	PUBLIC.....1 PRIVATE.....2	□□	□□
02	(JOB)	MONTH..... □□ YEAR. □□□□	AGRICULTURE..1 INDUSTRY.....2 SERVICE.....3	PUBLIC.....1 PRIVATE.....2	□□	□□
03	(JOB)	MONTH..... □□ YEAR. □□□□	AGRICULTURE..1 INDUSTRY.....2 SERVICE.....3	PUBLIC.....1 PRIVATE.....2	□□	□□
04	(JOB)	MONTH..... □□ YEAR. □□□□	AGRICULTURE..1 INDUSTRY.....2 SERVICE.....3	PUBLIC.....1 PRIVATE.....2	□□	□□
05	(JOB)	MONTH..... □□ YEAR. □□□□	AGRICULTURE..1 INDUSTRY.....2 SERVICE.....3	PUBLIC.....1 PRIVATE.....2	□□	□□

(714) STATUS AT JOB	
01 EMPLOYER	**05** FOR HER OWN (REGULAR)
02 WAGED, WORKER (REGULAR)	**06** FOR HER OWN (IRREGULAR)
03 SALARIED, GOVERNMENT OFFICER (REGULAR)	**07** UNPAID FAMILY WORKER
04 DAILY WAGED (SEASONAL, TEMPORARY)	**96** OTHER

(715) SOCIAL SECURITY
00 NONE
01 SSK
02 EMEKLİ SANDIĞI
03 BAĞ-KUR
04 PRIVATE INSURANCE
96 OTHER
98 DON'T KNOW

716 Are you currently working at this job?	**716A** How long have you worked at this job? *RECORD IN MONTHS IF LESS THAN 2 YEARS.*	**716B** In which month and year did you quit this job?	**717** What was the reason of your resignment? *USE THE CODE LIST.*
YES.....1 718 ◄┘ NO.....2	MONTH.....1 ☐☐ YEAR.....2 ☐☐	MONTH..... ☐☐ YEAR.. ☐☐☐☐	☐☐ _____ (SPECIFY IF OTHER)
YES.....1 718 ◄┘ NO.....2	MONTH.....1 ☐☐ YEAR.....2 ☐☐	MONTH..... ☐☐ YEAR.. ☐☐☐☐	☐☐ _____ (SPECIFY IF OTHER)
YES.....1 718 ◄┘ NO.....2	MONTH.....1 ☐☐ YEAR.....2 ☐☐	MONTH..... ☐☐ YEAR.. ☐☐☐☐	☐☐ _____ (SPECIFY IF OTHER)
YES.....1 718 ◄┘ NO.....2	MONTH.....1 ☐☐ YEAR.....2 ☐☐	MONTH..... ☐☐ YEAR.. ☐☐☐☐	☐☐ _____ (SPECIFY IF OTHER)
YES.....1 718 ◄┘ NO.....2	MONTH.....1 ☐☐ YEAR.....2 ☐☐	MONTH..... ☐☐ YEAR.. ☐☐☐☐	☐☐ _____ (SPECIFY IF OTHER)

(717) REASON FOR RESIGNMENT

01 GOT PREGNANT/CHILD CARE
02 HOUSEWORK
03 SICK/DISABLED/HANDICAPPED
04 APPOINTMENT OF HUSBAND
05 JUST MOVED/MIGRATED
06 OPPOSITION OF HUSBAND/ELDERLY
07 DID NOT NEED TO WORK
08 DID NOT WANT TO WORK
09 WORKED UNPAID
10 DISMISSED
11 SICK/ELDERLY CARE IN FAMILY
12 WORKPLACE CLOSED
13 MARRIAGE
14 RETIREMENT
15 TO FIND/FOUND A BETTER JOB
16 SEASONAL/TEMPORARY

96 OTHER

710 What was your job? *RECORD THE JOB IN DETAIL.*	**711** In which year and month did you start working in this job?	**712** In which sector were you working?	**713** Was your job in public or private sector?	**714** What was your position at work? *USE THE CODE LIST.*	**715** Did you have any social security when doing your job? (IF YES) According to which schedule? *USE THE CODE LIST.*
06 (JOB)	MONTH..... ☐☐ YEAR.. ☐☐☐☐	AGRICULTURE..1 INDUSTRY.....2 SERVICE.....3	PUBLIC.....1 PRIVATE.....2	☐☐	☐☐
07 (JOB)	MONTH..... ☐☐ YEAR.. ☐☐☐☐	AGRICULTURE..1 INDUSTRY.....2 SERVICE.....3	PUBLIC.....1 PRIVATE.....2	☐☐	☐☐
08 (JOB)	MONTH..... ☐☐ YEAR.. ☐☐☐☐	AGRICULTURE..1 INDUSTRY.....2 SERVICE.....3	PUBLIC.....1 PRIVATE.....2	☐☐	☐☐
09 (JOB)	MONTH..... ☐☐ YEAR.. ☐☐☐☐	AGRICULTURE..1 INDUSTRY.....2 SERVICE.....3	PUBLIC.....1 PRIVATE.....2	☐☐	☐☐
10 (JOB)	MONTH..... ☐☐ YEAR.. ☐☐☐☐	AGRICULTURE..1 INDUSTRY.....2 SERVICE.....3	PUBLIC.....1 PRIVATE.....2	☐☐	☐☐

(714) STATUS AT JOB	
01 EMPLOYER	**05** FOR HER OWN (REGULAR)
02 WAGED, WORKER (REGULAR)	**06** FOR HER OWN (IRREGULAR)
03 SALARIED, GOVERNMENT OFFICER (REGULAR)	**07** UNPAID FAMILY WORKER
04 DAILY WAGED (SEASONAL, TEMPORARY)	**96** OTHER

(715) SOCIAL SECURITY
00 NONE
01 SSK
02 EMEKLİ SANDIĞI
03 BAĞ-KUR
04 PRIVATE INSURANCE
96 OTHER
98 DON'T KNOW

716 Are you currently working at this job?	**716A** How long have you worked at this job? *RECORD IN MONTHS IF LESS THAN 2 YEARS.*	**716B** In which month and year did you quit this job?	**717** What was the reason of your resignment? *USE THE CODE LIST.*
YES.....1 718 ◄┘ NO.....2	MONTH.....1 ☐☐ YEAR.....2 ☐☐	MONTH..... ☐☐ YEAR.. ☐☐☐☐	☐☐ _____ (SPECIFY IF OTHER)
YES.....1 718 ◄┘ NO.....2	MONTH.....1 ☐☐ YEAR.....2 ☐☐	MONTH..... ☐☐ YEAR.. ☐☐☐☐	☐☐ _____ (SPECIFY IF OTHER)
YES.....1 718 ◄┘ NO.....2	MONTH.....1 ☐☐ YEAR.....2 ☐☐	MONTH..... ☐☐ YEAR.. ☐☐☐☐	☐☐ _____ (SPECIFY IF OTHER)
YES.....1 718 ◄┘ NO.....2	MONTH.....1 ☐☐ YEAR.....2 ☐☐	MONTH..... ☐☐ YEAR.. ☐☐☐☐	☐☐ _____ (SPECIFY IF OTHER)
YES.....1 718 ◄┘ NO.....2	MONTH.....1 ☐☐ YEAR.....2 ☐☐	MONTH..... ☐☐ YEAR.. ☐☐☐☐	☐☐ _____ (SPECIFY IF OTHER)

(717) REASON FOR RESIGNMENT

01 GOT PREGNANT/CHILD CARE
02 HOUSEWORK
03 SICK/DISABLED/HANDICAPPED
04 APPOINTMENT OF HUSBAND
05 JUST MOVED/MIGRATED
06 OPPOSITION OF HUSBAND/ELDERLY
07 DID NOT NEED TO WORK
08 DID NOT WANT TO WORK
09 WORKED UNPAID
10 DISMISSED
11 SICK/ELDERLY CARE IN FAMILY
12 WORKPLACE CLOSED
13 MARRIAGE
14 RETIREMENT
15 TO FIND/FOUND A BETTER JOB
16 SEASONAL/TEMPORARY

96 OTHER

718	*CHECK 716:* NOT CURRENTLY WORKING ☐ ↓ CURRENTLY WORKING ☐ → 730A		
718A	Aside from your own housework, did you work in a job whether paid or unpaid in last one week?	YES.....1 → 720 NO.....2	
719	As you know some women sell small things, sell goods at the market place, work on the family farm or business, look after children, work as housemaids etc. Did you do any of these or any other work of similar nature in the last week?	YES.....1 → 720 NO.....2	
719A	*GO TO 727.*		
720	*GO BACK AND CORRECT THE QUESTIONS BETWEEN 709-717 (ALSO 718-719 IF NECESSARY).*		
727	You told that you did not work last week. Do you have a job that you usually work?	JUST ABOUT TO START WORKING.....01 STUDENT.....02 HOUSEWIFE.....03 RETIRED.....04 INCOME RECIPIENT.....05 FAMILY WORKER.....06 DISABLED/SICK.....07 CARING FOR ELDERLY.....08 CARING FOR CHILDREN.....09 ABOUT TO GET MARRIED.....10 TOO YOUNG.....12 JUST GRADUATED.....13 HUSBAND/FAMILY DOES NOT ALLOW.....14 JUST MIGRATED/LEFT.....15 DOES NOT NEED TO WORK.....16 OTHER _____ 96 (SPECIFY)	
728	Are you currently looking for a job?	YES.....1 NO.....2 → 730	
729	For how long have you been looking for a job? *RECORD IN MONTHS IF LESS THAN 2 YEARS.*	MONTH .....1 ☐☐ YEAR.....2 ☐☐	
730	Would you start to work within two weeks if you had a chance to?	YES.....1 NO.....2	
730A	Are you covered by any health insurance? *(IF YES)* According to which schedule?	NO ..... 0 SSK .....1 EMEKLİ SANDIĞI .....2 BAĞ-KUR .....3 PRIVATE HEALTH INSURANCE.....4 YEŞİL KART .....5 OTHER _____ 7 (SPECIFY)	

730A	*CHECK 716:* CURRENTLY WORKING ☐ NOT CURRENTLY WORKING ☐ → 735	
731	*CHECK 217 AND 218:* HAS A CHILD LIVING WITH HER WHOSE AGE IS 5 OR LESS ☐ DOES NOT HAVE A CHILD LIVING WITH HER WHOSE AGE IS 5 OR LESS ☐ → 735	
732	Who usually takes care of …… (NAME OF THE YOUNGEST CHILD AT HOME) while you are working?	WOMAN ..... 01 HUSBAND ..... 02 FEMALE CHILD ..... 03 WOMAN'S MOTHER..... 05 HUSBAND'S MOTHER ..... 06 MALE CHILD ..... 07 OTHER RELATIVES ..... 08 BABYSITTER…….....09 KINDERGARDEN…….....10 HAS NOT WORKED SINCE LAST BIRTH..... 95 OTHER _____ 96 (SPECIFY)

SECTION 7B. HUSBAND'S BACKGROUND

735	*CHECK 160:* CURRENTLY MARRIED ☐ NOT CURRENTLY MARRIED ☐ →		737
736	How old is your (last) husband?	COMPLETED AGE ..... ☐☐	
737	Did your (last) husband ever attend school?	YES .....1 NO .....2 DON'T KNOW.....8 →	740A
738	What was the highest level of school your (last) husband attended?	PRIMARY SCHOOL.....11 GENERAL SECONDARY SCHOOL.....12 VOCATIONAL SECONDARY SCHOOL.....13 PRIMARY EDUCATION.....14 GENERAL HIGH SCHOOL.....15 VOCATIONAL HIGH SCHOOL.....16 UNIVERSITY.....17 MASTER'S DEGREE.....18 Ph. D. .....19 DON'T KNOW.....98 →	740A
739	What is the highest grade your (last) husband completed at that level? *RECORD "00" IF HE COMPLETED PREPARATORY CLASS OR HE DID NOT COMPLETE ANY GRADE, AND "66" FOR MASTER'S/Ph. D.*	GRADE ..... ☐☐ DON'T KNOW.....96	
739A	Did he graduate (receive diploma) from this school?	YES ..... 1 NO .....2 DON'T KNOW.....8	
740A	*CHECK 160:* CURRENTLY MARRIED ☐ NOT CURRENTLY MARRIED ☐ →		740N
740B	Did your husband work in a regular or an irregular job whether paid or unpaid in the past week?	YES .....1 NO... ..... 2 →	740E
740C	Does your husband have a job he normally works at?	YES .....1 NO..... .....2 →	740J
740E	What is (was) your husband's occupation? What kind of job does (did) he have? _____ *(RECORD THE JOB IN DETAIL AND CIRCLE THE APPROPRIATE SECTOR IN THE NEXT COLUMN)*	AGRICULTURE.....1 INDUSTRY.....2 SERVICES.....3	
740F	Does (did) your husband work for public or private sector?	PUBLIC.....1 PRIVATE.....2	

740G	What is your husband's status/position in his job?	EMPLOYER....01 WAGED, WORKER (REGULAR)....02 SALARIED, GOVERNMENT OFFICAL....03 DAILY WAGED (SEASONAL/TEMPORAL)....04 FOR HIS OWN (REGULAR)....05 FOR HIS OWN (IRREGULAR)....06 UNPAID FAMILY WORKER....07 OTHER _____ 96 (SPECIFY)	
740H	Does (did) your husband pay social security when doing this job? *(IF YES)* According to which schedule?	NO.. .... 0 SSK .... 1 EMEKLİ SANDIĞI .... 2 BAĞ-KUR .... 3 PRIVATE....4 OTHER _____ 7 (SPECIFY)	
740I	*GO TO 740N.*		
740J	What is the reason for your husband's not working?	JUST ABOUT TO START WORKING....01 STUDENT....02 RETIRED....04 INCOME RECIPIENT....05 FAMILY WORKER....06 DISABLED/SICK....07 CARING FOR ELDERLY....08 CARING FOR CHILDREN....09 ABOUT TO SERVE/SERVING IN THE MILITARY.... 11 LOOKING FOR A JOB/UNEMPLOYED....12 JUST GRADUATED.... 14 JUST MIGRATED/LEFT....16 DOES NOT NEED TO WORK....17 OTHER _____ 96 (SPECIFY) DON'T KNOW....98	
740K	Is your husband looking for a job?	YES.... 1 NO.... 2 DON'T KNOW....8	→740M
740L	For how long has your husband been looking for a job? *RECORD IN MONTHS IF LESS THAN 2 YEARS.*	MONTH....1 ☐☐ YEAR....2 ☐☐	
740M	Would he start to work within two weeks if he had a chance to?	YES .... 1 NO....2 DON'T KNOW....8	
740N	Is (was) your (last) husband covered by any health insurance? *(IF YES)* According to which schedule?	NO..... ....0 SSK ....1 EMEKLİ SANDIĞI ....2 BAĞ-KUR ....3 PRIVATE HEALTH INSURANCE....4 YEŞİL KART....5 OTHER _____ 7 (SPECIFY)	

741A	What is (was) your (last) husband's mother tongue? *RECORD ONE LANGUAGE ONLY.*	TURKISH ..... 1 KURDISH ..... 2 ARABIC ..... 3 OTHER _____ 7 (SPECIFY) DON'T KNOW 8	
741B	Can (could) your (last) husband speak any languages besides his mother tongue? *(IF YES)* Which language(s)? *RECORD ALL MENTIONED.*	TURKISH ..... A KURDISH ..... B ARABIC ..... C OTHER _____ U (SPECIFY) NO OTHER LANGUAGES ..... Y	
741C	What is (was) your (last) husband's mother's mother tongue? What is (was) your (last) husband's father's mother tongue? *USE THE CODES IN 741A.*	MOTHER ..... ☐ FATHER ..... ☐	
741D	Which language do (did) you usually use when talking with your (last) husband?	TURKISH ..... 1 KURDISH ..... 2 ARABIC ..... 3 OTHER _____ 7 (SPECIFY)	
742A	For most of the time until your (last) husband was 12 years old, where did he live? *RECORD THE NAME AND CODE OF THE PROVINCE.*	NAME OF PROVINCE _____ PROVINCE CODE ☐☐	
742B	Was this place then a province centre, a district centre, a sub-district or a village ? Or was it abroad?	PROVINCE CENTRE ..... 1 DISTRICT CENTRE ..... 2 SUBDISTRICT OR VILLAGE ..... 3 ABROAD 4	
742C	Are (were) your husband's parents related?	YES ..... 1 NO ..... 2 DON'T KNOW ..... 8 → 761	
742D	In what way is (was) your husband's father related to his mother?	SON OF FATHER'S BROTHER ..... 1 SON OF FATHER'S SISTER ..... 2 SON OF MOTHER'S SISTER ..... 3 SON OF MOTHER'S BROTHER ..... 4 OTHER PARENTAL BLOOD RELATIVE ..... 5 OTHER MATERNALBLOOD RELATIVE ..... 6 OTHER _____ 7 (SPECIFY) DON'T KNOW 8	

SECTION 7C. WOMEN'S STATUS

761 Now I would like to get your opinion on some aspects of family life. Can you tell me whether you agree or disagree with each statement?

	AGREE	DISAGREE	DON'T KNOW/ NO IDEA
The important decisions in the family should be made only by men of the family.	1	2	8
Men should also do the housework like cooking, washing, ironing, and cleaning.	1	2	8
A woman shouldn't argue with her husband even if she disagrees with him.	1	2	8
A married woman should work outside the home if she wants to.	1	2	8
It is better to educate a son than a daughter.	1	2	8
A woman may go anywhere she wants without her husband's permission.	1	2	8
Men are wiser.	1	2	8
Women should be more involved in politics.	1	2	8
Women should be virgins when they get married.	1	2	8

762 Now I would like to ask you some questions about your daily life.

IF YES, PROBE WHETHER REGULAR OR IRREGULAR

	NO	REGULAR	IRREGULAR	NOT APPLICABLE
Do you exercise?	0	1	2	3
Do you go to places other than your hometown for a holiday?	0	1	2	3
Do you go outside for meal with your family?	0	1	2	3
Do you organize meetings with your friends and/or neighbors?	0	1	2	3
Dou you use the internet?	0	1	2	3
Do you perform the namaz?	0	1	2	3
Do you fast?	0	1	2	3
Do you watch women's programs on TV?	0	1	2	3
Do you wear head scarf when you go outside?	0	1	2	3

763 Now I will list some situations. Can you tell me whether you agree or disagree with a husband's performance of physical violence to his wife under these situations?

	AGREES	DISAGREES	NO IDEA
If she does not cook?	1	2	8
If she burns the food?	1	2	8
If she neglects the housework?	1	2	8
If she neglects the children?	1	2	8
If she answers him back?	1	2	8
If she wastes money?	1	2	8
If she refuses to have sexual intercourse?	1	2	8

764	Now I will ask you some questions about housework. Who does the types of housework in your house that I will list now primarily?	HER OWN	HUSBAND	FEMALE CHILDREN	MALE CHILDREN	PAID SERVANT/ MAID	OTHER WOMEN	OTHER MEN	NO ONE	NOT APPLI CABLE
	Cooking?	11	12	13	14	15	16	17	18	00
	Setting and cleaning the dining table?	11	12	13	14	15	16	17	18	00
	Cleaning work such as wiping and sweeping?	11	12	13	14	15	16	17	18	00
	Washing the dishes/placing the dishes in the dishwasher?	11	12	13	14	15	16	17	18	00
	Doing the laundry?	11	12	13	14	15	16	17	18	00
	Ironing?	11	12	13	14	15	16	17	18	00
	Kitchen shopping?	11	12	13	14	15	16	17	18	00
	Preparing the household budget and accounting?	11	12	13	14	15	16	17	18	00
	Running errands in public offices, paying the bills?	11	12	13	14	15	16	17	18	00
	Doing reparations or amendments?	11	12	13	14	15	16	17	18	00
	Spending time with child(ren) at home (playing games, reading books, watching TV, etc.)?	11	12	13	14	15	16	17	18	00
	Spending time with child(ren) outside the house (going to the park, movies, etc.)?	11	12	13	14	15	16	17	18	00
	Helping child(ren) with homework?	11	12	13	14	15	16	17	18	00

765	Now I will read you some statements regarding situations some women experience. Can you please tell me how often you experience such situations in your relationship with your (last) husband? Often, sometimes or never? Does (did) your husband:	OFTEN	SOMETIMES	NEVER	NOT APPLICABLE
	Prevent you from seeing your female friends?	1	2	3	0
	Limit your contact with your family?	1	2	3	0
	Insist on knowing where you are at all times?	1	2	3	0
	Distrust you with money?	1	2	3	0
	Accuse you of being unfaithful?	1	2	3	0

766S	*RECORD THE TIME.*	HOUR – MINUTE.....				

781	PRESENCE OF OTHERS DURING THE INTERVIEW. CIRCLE ALL APPROPRIATE ALTERNATIVES.	NO ONE .....A CHILDREN UNDER 10 .....B MOTHER IN LAW .....C HER MOTHER .....D OTHER MEN ..... E OTHER WOMEN .....F	
782	WAS THE INTERVIEW INTERRUPTED? IF YES, FOR HOW MANY MINUTES APPROXIMATELY?	NO .....000 MINUTES .....1 ☐☐	
783	IN YOUR OPINION, WHAT IS THE RELIABILITY OF THE RESPONSES?	POOR ..... 1 FAIR .....2 GOOD .....3 VERY GOOD 4	
784	WHAT LANGUAGE WAS USED DURING THE INTERVIEW?	TURKISH.....1 → 800 KÜRDISH.....2 ARABIC.....3 OTHER _____ 7 (SPECIFY)	
785	WAS AN INTERPRETER USED DURING THE INTERVIEW?	YES .....1 NO 2	

SECTION 8. HEIGHT AND WEIGHT

800 *RECORD THE NAME OF THE WOMAN AND IF ANY, THE NAME(S) OF THE CHILDREN THAT WAS BORN AFTER JANUARY 2003 AND STILL ALIVE IN 801, BY BEGINNING FROM THE YOUNGEST CHILD.*

RECORD THE LINE NO. OF CHILDREN IN 802. IF THERE ARE MORE THAN 2 LIVING CHILDREN THAT WERE BORN AFTER JANUARY 2003, USE AN ADDITIONAL QUESTIONNAIRE.

MEAUSURE THE WEIGHT AND HEIGHT OF WOMAN AND HER LIVING CHILDREN THAT WERE BORN AFTER JANUARY 2003 AND RECORD IN THE APPROPRIATE FIELD.

		1 WOMAN	2 YOUNGEST CHILD ALIVE	3 NEXT – TO - YOUNGEST CHILD ALIVE
801	NAME CHECK 212 FOR CHILDREN.	(NAME) _____	(NAME) _____	(NAME) _____
802	LINE NO. IN 212.		LINE NO ..... ☐☐	LINE NO ..... ☐☐
803	HEIGHT (cm)	☐☐☐ • ☐	☐☐☐ • ☐	☐☐☐ • ☐
804	WAS THE HEIGHT OF THE CHILD MEASURED LYING DOWN OR STANDING UP?		LYING DOWN.....1 STANDING UP.....2	LYING DOWN..... 1 STANDING UP..... 2
805	WEIGHT (Kilograms)	☐☐☐ • ☐	☐☐☐ • ☐	☐☐☐ • ☐
806	DATE OF MEASUREMENT	DAY ..... ☐☐ MONTH ..... ☐☐	DAY ..... ☐☐ MONTH ..... ☐☐	DAY ..... ☐☐ MONTH ..... ☐☐
807	RESULT	MEASURED.....1 NOT AT HOME.....3 REFUSED.....4 OTHER _____ 7 (SPECIFY)	MEASURED.....1 NOT AT HOME.....3 REFUSED.....4 OTHER _____ 7 (SPECIFY)	MEASURED.....1 NOT AT HOME.....3 REFUSED.....4 OTHER _____ 7 (SPECIFY)
808	NAME OF MEASURER _____	☐☐☐		

INTERVIEWER'S OBSERVATIONS

To be filled after completing interview

COMMENTS ABOUT WOMEN

COMMENTS ON SPECIFIC QUESTIONS

OTHER OBSERVATIONS

SUPERVISOR'S OBSERVATIONS

NAME OF THE SUPERVISOR: DATE:

EDITOR'S OBSERVATIONS

NAME OF THE EDITOR: DATE:

CALENDAR

COLUMN 1: MARRIAGE
- **X** MARRIED
- **O** NOT MARRIED

COLUMN 2: BIRTHS AND PREGNANCIES
- **D** BIRTH
- **H** PREGNANCY
- **K** INDUCED ABORTION
- **F** SPONTANEOUS ABORTION
- **J** STILLBIRTH

COLUMN 2: CONTRACEPTIVE USE
- **0** NO METHOD
- **1** TUBAL LIGATION
- **2** MALE STERILIZATION
- **3** PILL
- **4** IUD
- **5** INJECTABLES
- **6** IMPLANT
- **7** CONDOM
- **8** FEMALE CONDOM
- **9** DIAPHRAM/FOAM/JELLY
- **A** EMERGENCY CONTRACEPTION
- **T** RHYTIM
- **G** WITHDRAWAL
- **U** OTHER _____ (SPECIFY)
- **N** MONTHS OF WEDLOCK

COLUMN 3: DISCONTINUATION OF CONTRACEPTIVE USE
- **0** INFREQUENT SEX/PARTNER AWAY
- **1** BECAME PREGNANT WHILE USING
- **2** WANTED TO BECOME PREGNANT
- **3** HUSBAND DISAPPROVED
- **4** WANTED MORE EFFECTIVE METHOD
- **5** HEALTH CONCERNS
- **6** SIDE EFFECTS
- **7** LACK OF ACESS/TOO FAR
- **8** EXPENSIVE
- **9** INCONVINENT TO USE
- **Y** FATALISTIC
- **M** DIFFICULT TO GET PREGNANT/MENOPAUSE
- **B** MARITAL DISSOLUTION/SEPERATION/WIDOWHOOD
- **U** OTHER_____ (SPECIFY)
- **X** DON'T KNOW

COLUMN 3: ASSISTED REPRODUCTIVE TECHNIQUES
- **K** NOT USED
- **A** INTRAUTERINE INSEMINATION (INJECTION)
- **T** CONVENTIONAL INVITRO FERTILIZATION
- **E** INTRACYROPLASMIC SPERM INJECTION
- **W** DOESN'T KNOW TECHNIQUE

				1	2	3				
	12	DEC	01				01	DEC	12	
	11	NOV	02				02	NOV	11	
	10	OCT	03				03	OCT	10	
	09	SEP	04				04	SEP	09	
2	08	AUG	05				05	AĞU	08	**2**
0	07	JULY	06				06	JULY	07	**0**
0	06	JUNE	07				07	JUNE	06	**0**
8	05	MAY	08				08	MAY	05	**8**
	04	APR	09				09	APR	04	
	03	MAR	10				10	MAR	03	
	02	FEB	11				11	FEB	02	
	01	JAN	12				12	JAN	01	
	12	DEC	13				13	DEC	12	
	11	NOV	14				14	NOV	11	
	10	OCT	15				15	OCT	10	
	09	SEP	16				16	SEP	09	
2	08	AUG	17				17	AĞU	10	**2**
0	07	JULY	18				18	JULY	07	**0**
0	06	JUNE	19				19	JUNE	06	**0**
7	05	MAY	20				20	MAY	05	**7**
	04	APR	21				21	APR	04	
	03	MAR	22				22	MAR	03	
	02	FEB	23				23	FEB	02	
	01	JAN	24				24	JAN	01	
	12	DEC	25				25	DEC	12	
	11	NOV	26				26	NOV	11	
	10	OCT	27				27	OCT	10	
	09	SEP	28				28	SEP	09	
2	08	AĞU	29				29	AĞU	08	**2**
0	07	JULY	30				30	JULY	07	**0**
0	06	JUNE	31				31	JUNE	06	**0**
6	05	MAY	32				32	MAY	05	**6**
	04	APR	33				33	APR	04	
	03	MAR	34				34	MAR	03	
	02	FEB	35				35	FEB	02	
	01	JAN	36				36	JAN	01	
	12	DEC	37				37	DEC	12	
	11	NOV	38				38	NOV	11	
	10	OCT	39				39	OCT	10	
	09	SEP	40				40	SEP	09	
2	08	AUG	41				41	AĞU	10	**2**
0	07	JULY	42				42	JULY	07	**0**
0	06	JUNE	43				43	JUNE	06	**0**
5	05	MAY	44				44	MAY	05	**5**
	04	APR	45				45	APR	04	
	03	MAR	46				46	MAR	03	
	02	ŞUB	47				47	ŞUB	02	
	01	JAN	48				48	JAN	01	
	12	DEC	49				49	DEC	12	
	11	NOV	50				50	NOV	11	
	10	OCT	51				51	OCT	10	
	09	SEP	52				52	SEP	09	
2	08	AUG	53				53	AĞU	10	**2**
0	07	JULY	54				54	JULY	07	**0**
0	06	JUNE	55				55	JUNE	06	**0**
4	05	MAY	56				56	MAY	05	**4**
	04	APR	57				57	APR	04	
	03	MAR	58				58	MAR	03	
	02	FEB	59				59	FEB	02	
	01	JAN	60				60	JAN	01	
	12	DEC	61				61	DEC	12	
	11	NOV	62				62	NOV	11	
	10	OCT	63				63	OCT	10	
	09	SEP	64				64	SEP	09	
2	08	AUG	65				65	AĞU	10	**2**
0	07	JULY	66				66	JULY	07	**0**
0	06	JUNE	67				67	JUNE	06	**0**
3	05	MAY	68				68	MAY	05	**3**
	04	APR	69				69	APR	04	
	03	MAR	70				70	MAR	03	
	02	FEB	71				71	FEB	02	
	01	JAN	72				72	JAN	01	

AGE – YEAR OF BIRTH TABLE

AGE	YEAR OF BIRTH	
	HAS NOT CELEBRATED BIRTHDAY IN 2008	CELEBRATED BIRTHDAY IN 2008
	DOES NOT KNOW	
0	2007	--
1	2006	2007
2	2005	2006
3	2004	2005
4	2003	2004
5	2002	2003
6	2001	2002
7	2000	2001
8	1999	2000
9	1998	1999
10	1997	1998
11	1996	1997
12	1995	1996
13	1994	1995
14	1993	1994
15	1992	1993
16	1991	1992
17	1990	1991
18	1989	1990
19	1988	1989
20	1987	1988
21	1986	1987
22	1985	1986
23	1984	1985
24	1983	1984
25	1982	1983
26	1981	1982
27	1980	1981
28	1979	1980
29	1978	1979
30	1977	1978
31	1976	1977
32	1975	1976
33	1974	1975
34	1973	1974
35	1972	1973
36	1971	1972
37	1970	1971
38	1969	1970
39	1968	1969
40	1967	1968
41	1966	1967
42	1965	1966
43	1964	1965
44	1963	1964
45	1962	1963
46	1961	1962
47	1960	1961
48	1959	1960
49	1958	1959

AGE	YEAR OF BIRTH	
	HAS NOT CELEBRATED BIRTHDAY IN 2008	CELEBRATED BIRTHDAY IN 2008
	DOES NOT KNOW	
50	1957	1958
51	1956	1957
52	1955	1956
53	1954	1955
54	1953	1954
55	1952	1953
56	1951	1952
57	1950	1951
58	1949	1950
59	1948	1949
60	1947	1948
61	1946	1947
62	1945	1946
63	1944	1945
64	1943	1944
65	1942	1943
66	1941	1942
67	1940	1941
68	1939	1940
69	1938	1939
70	1937	1938
71	1936	1937
72	1935	1936
73	1934	1935
74	1933	1934
75	1932	1933
76	1931	1932
77	1930	1931
78	1929	1930
79	1928	1929
80	1927	1928
81	1926	1927
82	1925	1926
83	1924	1925
84	1923	1924
85	1922	1923
86	1921	1922
87	1920	1921
88	1919	1920
89	1918	1919
90	1917	1918
91	1916	1917
92	1915	1916
93	1914	1915
94	1913	1914

PROVINCE TRAFFIC CODES

01 ADANA	21 DİYARBAKIR	41 KOCAELİ	61 TRABZON
02 ADIYAMAN	22 EDİRNE	42 KONYA	62 TUNCELİ
03 AFYON	23 ELAZIĞ	43 KÜTAHYA	63 ŞANLIURFA
04 AĞRI	24 ERZİNCAN	44 MALATYA	64 UŞAK
05 AMASYA	25 ERZURUM	45 MANİSA	65 VAN
06 ANKARA	26 ESKİŞEHİR	46 K.MARAŞ	66 YOZGAT
07 ANTALYA	27 GAZİANTEP	47 MARDİN	67 ZONGULDAK
08 ARTVİN	28 GİRESUN	48 MUĞLA	68 AKSARAY
09 AYDIN	29 GÜMÜŞHANE	49 MUŞ	69 BAYBURT
10 BALIKESİR	30 HAKKARİ	50 NEVŞEHİR	70 KARAMAN
11 BİLECİK	31 HATAY	51 NİĞDE	71 KIRIKKALE
12 BİNGÖL	32 ISPARTA	52 ORDU	72 BATMAN
13 BİTLİS	33 İÇEL	53 RİZE	73 ŞIRNAK
14 BOLU	34 İSTANBUL	54 SAKARYA	74 BARTIN
15 BURDUR	35 İZMİR	55 SAMSUN	75 ARDAHAN
16 BURSA	36 KARS	56 SİİRT	76 IĞDIR
17 ÇANAKKALE	37 KASTAMONU	57 SİNOP	77 YALOVA
18 ÇANKIRI	38 KAYSERİ	58 SİVAS	78 KARABÜK
19 ÇORUM	39 KIRKLARELİ	59 TEKİRDAĞ	79 KİLİS
20 DENİZLİ	40 KIRŞEHİR	60 TOKAT	80 OSMANİYE
			81 DÜZCE
90 ABROAD			

CONVERSION OF YEARS OF BIRTH FROM RUMI CALENDAR TO GREGORIAN CALENDAR YEARS

RUMI YEARS + 584 = GREGORIAN YEAR

SUMMARY INDICATORS

APPENDIX G

Turkey Demographic and Health Surveys, 1993, 1998, 2003 and 2008

Indicator	1993	1998	2003	2008
Fertility				
Total fertility rate (TFR) 15-49	2.73	2.61	2.22	2.15
Contraceptive prevalence rate				
Any method	62.6	63.9	71.0	73.0
Any modern method	34.5	37.7	42.5	46.0
Pill	4.9	4.4	4.7	5.3
IUD	18.8	19.8	20.2	16.9
Injection	0.1	0.5	0.4	0.9
Condom	6.6	8.2	10.8	14.3
Female sterilization	2.9	4.2	5.7	8.3
Male sterilization	0.0	0.0	0.1	0.1
Implants	-	-	-	0.0
Any traditional method	28.1	25.5	28.5	27.0
Contraceptive use among married adolescent				
Percentage of currently married adolescent girls using a modern contraceptive method				
Age 15-19	9.3	15.7	16.9	17.6
Unmet need for family planning				
Percentage of currently married women under age 50 with unmet need for family planning	12.0	10.1	6.0	6.2
Antenatal coverage				
Percentage of last live births in the five years preceding the survey for which women received at least one ANC from a medically trained provider	62.3	67.9	80.9	92.0
Skilled asistance at delivery				
Percentage of births in the five years preceding the survey attended by medically trained provider	75.9	80.6	82.9	91.3
Postnatal care				
Percent distribution of the mother's first postnatal check-up for the last live birth by time after delivery				
<4 hours	-	-	-	63.4
4-23 h	-	-	-	12.2
2 days	-	-	-	4.6
3-41 days	-	-	-	2.8
Total	-	-	-	83.0

Indicator	1993	1998	2003	2008
Childhood mortality rates				
Neonatal mortality	29	26	17	13
Post-neonatal mortality	23	17	12	4
Infant mortality	53	43	29	17
Child mortality	9	10	9	6
Under-five mortality	61	52	37	24
Vaccination coverage				
Percentage of children age 15-26 months who received specific vaccines at any time before the survey				
BCG	89.1	88.5	87.7	95.9
DPT3	77.1	58.7	64.4	89.3
Polio3	77.2	64.4	69.1	88.8
Measles	77.9	78.5	79.4	89.3
All vaccines	64.7	45.7	54.2	80.5
Birth registration				
Percentage of children under five whose births are registered with the civil authorities	74.2	77.7	84.3	93.7
Treatment for diarrhea				
Percentage of children under age five with diarrhea treated with				
ORT (ORS or homemade solution)	16.3	29.0	-	33.0
Increased fluid intake	57.0	57.0	-	48.9
Treatment for ARI				
Percentage of children under age five with symptoms of ARI seeking care from a trained provider	37.3	-	41.0	-
Nutritional status of children				
Percentage of children under age five considered malnourished according to three anthropometric indices of nutritional status				
Height-for-age (stunting)				
Moderate or severe	18.9	16.0	12.2	10.3
Severe	5.9	6.1	3.6	3.2
Weight for-height (wasting)				
Moderate or severe	3.0	1.9	0.7	0.9
Severe	0.4	0.4	0.3	0.3
Weight-for-age (underweight)				
Moderate or severe	9.5	8.3	3.9	2.8
Severe	1.8	1.4	0.6	0.3
Knowledge of HIV/AIDS				
Percentage of women/men who have heard of HIV/AIDS				
Ever-married women	-	83.4	88.1	-
Currently married men	-	92.9	-	-
Sanitary excreta disposal				
Percentage of households with flush toilets, pit toilets/latrines	59.4	67.4	75.9	81.1

Indicator	1993	1998	2003	2008
Education				
Percentage of females 15-19 with completed primary education	90.4	89.4	85.1	91.3
Percentage of males 15-19 with completed primary education	96.1	96.0	95.0	96.5
Percentage of females 20-24 with completed secondary education	27.4	27.7	44.2	57.6
Percentage of males 20-24 with completed secondary education	46.7	42.4	63.3	79.5
Breastfeeding				
Percentage of children born in the five years preceding the survey who who started breastfeeding within one hour and within one day of birth				
Within 1 hour after birth	19.9	51.8	53.9	39.0
Within 1 day of birth	75.9	84.8	83.6	73.4
Percentage of children under 6 months who are exclusively breastfed (based on 24 hour recall)	10.4	10.7	20.8	41.6
Percentage of children 6-9 months receiving breast milk and complementary food (based on 24 hour recall)	60.5	61.3	37.7	67.5
Maternal nutrition				
Percentage of women age 15-49 body mass İndex (BMI) and and percentage with specific BMI levels				
12.0-15.9 (Thin-Severe)		0.1	-	0.0
16.0-16.9 (Thin-Moderate)	2.3 (thin)	0.2	0.0	0.4
17.0-18.4 (Thin-Mild)		2.3	1.8	1.3
18.5-20.4 (Normal)	9.0	8.7	7.6	8.5
20.5-22.9 (Normal)	21.1	19.5	17.8	17.1
23.0-24.9 (Normal)	16.9	17.0	15.8	14.4
25.0-26.9 (Overweight)	14.7	16.6	16.3	16.7
27.0-28.9 (Overweight)	12.4	11.6	12.7	12.5
29.0-29.9 (Overweight)	4.9	5.2	5.3	5.2
>= 30.0 (Obese)	18.7	18.8	22.7	23.9

ISBN: 978-975-491-275-3