TURKISH FERTILITY SURVEY

1978

FIRST REPORT
VOLUME I : METHODOLOGY AND FINDINGS

HACETTEPE INSTITUTE OF POPULATION STUDIES

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PREFACE

The 1978 Turkish Fertility Survey is the third nation-wide survey which was carried out by the Hacettepe University Institute of Population Studies at five-year intervals. Prior to the 1968 Survey, the First Turkish KAP Survey was conducted by the Ministry of Health in 1963. The present survey is a result of close collaboration between the World Fertility Survey and the Institute of Population Studies. The field work of this survey was conducted with the cooperation of the Turkish Ministry of Health and Social Welfare.

Data derived from these surveys over a time period of fifteen years offer valuable information on the demographic situation and changes in Turkey for both researchers and policy makers.

The First Report of the Turkish Fertility Survey consists of two volumes, the first of which presents the background, methodology, main findings of the study, and a brief summary of the findings with policy implications; the second volume contains detailed statistical tables.

It is hoped that further in-depth analysis will follow this report, and researchers are invited to be involved in such studies.

It is my distinct pleasure to express my appreciation and thanks to Dr. Sunday Uner for his efforts as Survey Director in the successful organization and implementation of this extensive project, as well as to the entire institute staff for their support in all phases of the survey.

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ACKNOWLEDGEMENTS

The 1978 Turkish Fertility Survey was conducted and successfully completed with the combined efforts of numerous individuals all of whom deserve our sincere thanks and appreciation. Unfortunately, space does not allow us to list all their names individually.

The Institute of Population Studies would like to express their appreciation to the entire staff of the World Fertility Survey, in particular to Sir Maurice Kendall, Mr. Yasar Yaser, and Mr. Chris Scott for their untiring assistance during the entire survey period. Special thanks go to Dr. Vijay Verma for his invaluable efforts as country coordinator in all phases of the survey, beginning with the survey design up to the data processing analysis. His numerous visits to our Institute contributed to a great extent to the successful development and completion of the survey. We wish to thank Ms. Agnes Whitfield for assisting in the pretest and training phases; Mr. Yalcin Sahinkaya for his contribution during the field work, and Mr. Nuri Ozsever for his help during the data processing stage. The Turkish Ministry of Health and Social Welfare extended all possible assistance during the field work stage and special thanks go to the Undersecretary and the General Director of the Population Planning Directorate. The State Planning Organization and the State Institute of Statistics were instrumental, both in the design of the survey and in the sampling design. We would like to acknowledge our appreciation to the members of the Technical Advisory Committee of the survey for their valuable suggestions - Professor Baran Tuncer, Mr. Tandogan Tokgoz, and Ms. Samira Yener. We wish to thank Ms. Safiye Akad of the State Institute of Statistics for her contributions, especially as a sampling expert.

Of the Institute staff, we would like to thank the main contributors to the chapters in this report, who also participated in all phases of the survey. Dr. Sevil Cerit was asked to prepare Chapter II - The Demographic Situation in Turkey, on the basis of available material. She also contributed to Chapter V - Background Characteristics of Survey Respondents, and Chapter VIII - Infant and Child Mortality. Ms. Sevinc Kavadarli and Dr. Mumtaz Peker contributed to Chapter VII - Levels and Differentials in Fertility. Mr. Mahir Ulusoy who was responsible for the data processing stage, also contributed to the Appendices B and C - Data Processing Procedures and Variable Construction. Dr. Oztas Ayhan contributed to Appendix E - Sampling Errors. Mr. Ali Balamir and Dr. Aykut Toros contributed to Chapters IX and X - Use of Contraceptives and Fertility Preferences of Survey Respondents. Ms. Guliz Kunt contributed to Chapter VI - Nuptiality. Thanks are due to the administrative staff - Ms. Alev Bosuter - editor-typist, Ms. Safiye Keskin - typist, Mr. Sukru Ogec - typist, Mr. Mehmet Ogec - technical designer, Mr. Kursat Akyuz and Mr. Vedat Sarapci of the HIPS computer group, and the punchers Mr. Ahmet Avcibas and Mr. Ahmet Bulut. Special thanks go to Professors Ayse Baysal and Sevim Erel of the Department of Nutrition and Home Economics of Hacettepe University, for their kind assistance in providing their students as interviewers during the field work. Last, but not least, we wish to express our gratitude to the interviewers, field editors and supervisors whose tireless efforts made this survey possible.

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INTRODUCTION

The First Report of the Survey consists of two volumes: this first volume presents the background, methodology and the main findings of the study, and the second volume contains detailed statistical tables. A brief summary of the findings is also being issued simultaneously as a separate publication.

Full analysis of the results from the survey is likely to be a lengthy process. It will involve a detailed appraisal of the quality of the data and the application of refined demographic and statistical techniques to elucidate inter-relationships. The objective of this report, however, is to make the valuable information collected in the survey available as soon as possible. Consequently, the following commentary on the main findings necessarily takes the form of a broad and preliminary review, to be supplemented in the near future by in-depth studies of important areas. Similarly, some additional data - in particular those concerning migration and employment histories, availability and use of family planning facilities and services, as well as on response reliability - will be taken up in subsequent reports.

The material discussed in Volume I is arranged as follows:

Chapters I and II provide the background. The first chapter includes a brief description of the country, its socio-economic context and the population policy. The second chapter reviews in detail the demographic situation in Turkey on the basis of the materials available from previous censuses and surveys.

Chapters III and IV describe the institutional framework and methodology of the Turkish Fertility Survey. The study design, questionnaires used, and the procedures for pre-testing, training, fieldwork and data processing are outlined. Further details of methodological interests are provided in appendices to the report. These include: an English translation of the questionnaire (Appendix A); data processing procedures (Appendix B); variables constructed (Appendix C); sample design and outcome (Appendix D); and sampling errors for selected survey estimates (Appendix E). Finally, a glossary of terms in English, Turkish, French and Spanish appears in Appendix F.

The remainder of the report provides a broad review of the substantive findings of the survey. We begin in Chapter V with a description of the demographic and socio-economic characteristics of the survey respondents, and provide a definition of the various background variables employed in the following commentary. Chapter VI considers age at marriage, as well as marriage stability and exposure to child-bearing. Levels, differentials and trends in fertility, the main theme of this study, are discussed at some length in Chapter VII, and in Chapter VIII infant and child mortality levels are considered. This is followed by a review of the prevalence of knowledge and use of contraception in Chapter IX, and Chapter X concerns fertility preferences and their relationship to the respondents' background characteristics, fertility behaviour, and use of contraception.

Finally, the concluding chapter reiterates the major themes and provides a summary of the main findings. Policy implications of the results are also indicated.

The statistical tables in Volume II are sufficiently detailed to permit a certain degree of secondary analysis from the published results. The commentary in the present volume contains a number of summary tables constructed on the basis of the detailed tabulations. In each summary table, the source from Volume II is indicated. However, the former do not show the number of sample cases in the cells. To warn the reader when a statistic is based on a very small number of observations, the following convention has been followed:

(i) Statistics based on 20 to 50 sample cases are enclosed in paratheses "( )".

(ii) Statistics based on fewer than 20 observations are suppressed and replaced by an astrisk "*".

(iii) A cell which happens to be empty is indicated by a dash "-", while a cell which logically cannot have any cases is indicated by a dot ".".

BACKGROUND AND METHODOLOGY

CHAPTER I THE SETTING

1. THE COUNTRY

Turkey lies in the Northern Hemisphere situated in both Southeast Europe and Southwest Asia. Of the 780 thousand square kilometer total area of the country, a little over three per cent lies in Europe, the rest is in Asia. The country is roughly in the shape of a rectangle, stretching in the East-West direction for 1,600 kilometers and in the North-South direction for roughly 650 kilometers. In terms of surface areas, Turkey is a fairly large country, larger than any European country except the Soviet Union. Turkey is surrounded by seas on the North (Black Sea), on the West (Aegean), and on the South (Mediterranean) giving her a total coastline of approximately 5,500 kilometers. Her land borders stretch for a total of 2,753 kilometers. Mountains and high plains cover a great portion of the land surface in Turkey. Mountain ranges stretch parallel to the coastline along the Black Sea on the North and along the Mediterranean on the South until they meet in the Eastern part of the country. Lower plains of the coastal regions and the high plains of inner regions provide ample land for agriculture and animal husbandry. Presently, slightly over one-third of the total surface area of the country is under cultivation.

Geographically, the country can be divided into five regions. The Western region which is the most densely settled region of the country and includes the Coastal regions bordering on the Aegean Sea, the Sea of Marmara and the European part of the country (Thrace). Its climate and terrain are suitable for agriculture. The fertile river valleys of the Western provinces specialize in the production and exportation of cash crops including cotton, tobacco, raisins and figs. In addition, this region includes two of the three largest metropolitan areas of the country - Istanbul and Izmir - which are also the most industrialized and socio-economically most advanced areas of Turkey.

The Mediterranean region in the South includes two major and extremely fertile plains - Cukurova and Antalya - where cultivation of cotton and to some extent of other crops is providing high natural incomes, export earnings and a raw material basis for agriculture-related industries such as textiles. The Cukurova region around Adana is one of the richest agricultural plains and fastest growing industrial centres of the country.

The agricultural sector provides by far the largest source of income in the rest of the country. The Central Anatolian region, which includes Ankara, the capital and the second largest metropolitan area, specializes primarily in the production of cereals, especially wheat.

Due to its mountainous terrain, the Black Sea region has limited cultivable area and specializes primarily in small-scale labour-intensive crops such as hazel nuts and tea.

The Eastern and the Southeastern Anatolian region is socio-economically the least developed region of the country, with some unexploited potential. Presently, agriculture is concentrated in fertile plains situated between mountain ranges. The high plains are utilized primarily for animal husbandry.

2. EDUCATION

Overall Turkey achieves a moderately high level of literacy; almost 62 per cent of the total population aged 6 and over was literate in 1975. For the same year, 75.1 per cent of the men and 48.3 per cent of the women were literate. Though female literacy still lags considerably behind male literacy, the gap has been closing slowly. (See Table I-1). School attendance, however, is rather low. In 1975, only 42.0 per cent of the males aged 6 and over had completed primary school, whereas this percentage for females was only 27.1. Nearly 11.4 per cent of the male population 6 years and over, and 5.8 per cent of the female population had completed secondary education. (See Table I-2). Only one per cent of the population 6 years and over continued their education beyond the secondary level.

There is a regional differential in literacy which occurs with other socio-economic characteristics. According to the 1970 population census, male and female literacy are 87 per cent and 69 per cent in Istanbul, dropping to respectively 72 per cent and 43 per cent in Konya, a Central Anatolian province, and falling to a low of 35 per cent and 8 per cent in Hakkar, an Eastern Anatolian province.

TABLE I-1 : PER CENT LITERATE IN TURKEY BY SEX, 1935-1975 (Population aged 6 and over)

	1935	1940	1945	1950	1955	1960	1965	1970	1975
MALES	29.3	33.9	41.9	47.3	56.0	53.6	64.1	69.0	75.1
FEMALES	9.8	11.2	15.9	20.6	25.6	24.8	32.9	40.0	48.3

Source: Hacettepe University Institute of Population Studies, Population in Turkey, 1975.

TABLE I-2 : PER CENT DISTRIBUTION BY LEVEL OF FORMAL EDUCATION COMPLETED AND SEX, 1975
(Population aged 6 and over)

Literacy and level of formal education completed	Total	Male	Female
TOTAL	100.0	100.0	100.0
Illiteracy	38.1	24.9	51.7
Literate, no diploma	17.0	19.7	14.1
Primary School	34.9	42.0	27.7
Junior High School	4.8	6.4	3.1
Vocational school at junior high school level	.1	.1	.1
High School	2.2	2.9	1.4
Vocational school at high school level	1.6	2.0	1.2
Faculty and other high educational institutions	1.0	1.6	.4
Unknown	.3	.5	.2

Source: State Institute of Statistics, Statistical Yearbook of Turkey, 1977

Figure I - 1 - Regional Boundaries of the TFS Sample Design

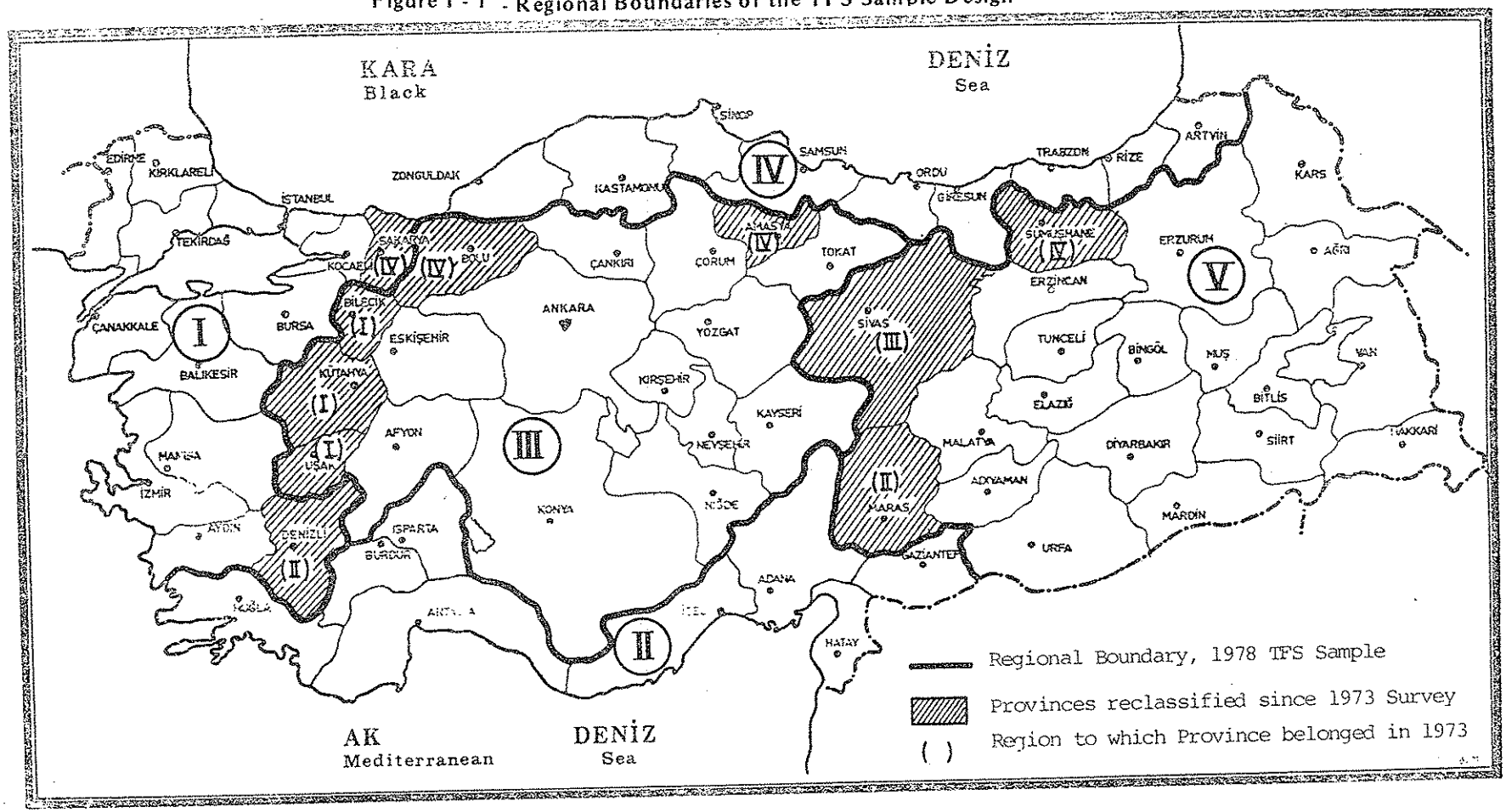

FIG. I-1: MAP OF TURKEY

3. HEALTH

Regional differentials in the distribution of health facilities and health personnel exist in the country. There is an enormous discrepancy between the distribution of doctors and the distribution of the population. In 1965, 63 per cent of all doctors (both specialists and general practitioners) were concentrated in the provinces of Istanbul, Ankara and Izmir. By 1972, this percentage had increased to 67 per cent. The distribution of other types of health personnel also shows this increased concentration. In 1965, 27 per cent of all health officials (saglik memurlari) resided in the three largest provinces, while this percentage had increased to 32 per cent in 1972.

In 1965, 15 per cent of all midwives resided in these provinces, while by 1972, this percentage had increased to 18. (Only with registered nurses has there been any redistribution to other provinces: in 1965, 38 per cent of all nurses were in the three biggest provinces, and by 1972, this had fallen to 35 per cent). Also, pharmacists have shown the same concentration tendencies. In 1964, 56 per cent of all pharmacists were in these provinces, while by 1972 this percentage had increased to 67 per cent. This general tendency to concentrate in the largest provinces (and most likely in the metropolitan areas of these provinces) has occurred inspite of an explicit goal established in 1961, to socialize the medical services in Turkey and to concentrate on rural health (community health, mother and child care, and family planning).

The figures just mentioned also reveal the status dimension of the medical distribution. The medical personnel of higher educational levels and higher status (specialists and general practitioners) concentrate more in the three biggest provinces than other health personnel. The health personnel allocated towards the small cities, towns, and rural areas tend to be of lower educational levels and lower status, the drop being proportional to the education and status levels. This, however, is not a question of facilities available. In 1965, 30 per cent of the hospitals and 48 per cent of the hospital beds were located in the three largest provinces. By 1972, these figures had dropped to 22 per cent and 44 per cent, respectively. Thus, in terms of health facilities available, there has been a move towards a more equal distribution. The problem is a personnel problem. In 1963, 32 per cent of all doctors worked for the Ministry of Health and Social Welfare. By 1968, this percentage had dropped to 28, and by 1972 to 24 per cent. Conversely, the percentage of doctors working in private practice remained around 30 per cent until 1968, but then increased to 46 per cent by 1972. The main motive for the concentration among doctors appears to be economic, as they seek to find increased income levels from private practice.

4. ECONOMY

Turkey might be considered a 'semi-industrialized' country with a per capita income in 1978 of approximately $1,000. Compared with most of the less developed countries, Turkey had, by the end of the 1970's, a fairly broad industrial base extending from textiles and food processing industries on the one hand, to petro-chemicals, iron and steel complexes and consumer durables such as automobiles on the other.

Primarily due to the ease with which import substitution industrialization proceeded, Turkey succeeded in maintaining rates of an average annual GNP growth rate above six per cent for the period 1961-1977. Thus, by the standards of most of the less-developed countries, the last two decades have been a period of fairly rapid economic growth for Turkey.

While the majority of the labour force still works in agriculture, the economy is quickly shifting over to an urban-based one, with a significant industrial structure. The share of industrial production in domestic production increased from 14.6 per cent in 1950, to 17.4 per cent in 1960, to 22.1 per cent in 1970, and to 25.1 per cent in 1975. On the other hand, the share of agricultural production in domestic production decreased from 41.9 per cent in 1950 to 38.0 per cent in 1960, to 27.6 per cent in 1970 and to about 24 per cent in 1975. This shift from an agricultural to an industrial economy is reflected in the growth of productivity of the two sectors. The sectoral growth rate for the industrial sector was around 9 per cent per year for the years 1950-1970, while the rate of growth in the agricultural sector was 3.8 per cent yearly for the same period. The rate of industrialization was relatively high in comparison with most developing countries.

In 1978, 61.2 per cent of the labour force was employed in agriculture with 12.8 per cent in industry and 26.0 per cent in services. (For a more detailed breakdown by economic activity for 1975, see Table I-3). By contrast, the percentage of the labour force employed in agriculture in 1955 was 74.4 per cent, while the percentage employed in industry was only 8.1 per cent, and the percentage employed in services 14.5.

TABLE I-3 : PER CENT DISTRIBUTION BY ECONOMIC ACTIVITY AND SEX (Active population 12 years and over)

Economic activity	Total	Male	Female
TOTAL	100.0	100.0	100.0
Agriculture, forestry hunting and fishing	64.1	50.1	88.9
Mining and quarrying	.7	1.0	.1
Manufacturing	7.6	10.0	3.5
Electricity, gas and water	.1	.1	-
Construction	2.7	4.2	.1
Wholesale and retail trade, restaurants and hotels	5.0	7.5	.7
Transport, storage and communication	3.1	4.8	.3
Financing, insurance, real-estate and business services	1.1	1.3	.7
Community, social and personal services	11.4	15.3	4.5
Activities not adequately defined	4.1	5.7	1.4

Source: State Institute of Statistics, Statistical Yearbook of Turkey, 1977

Though manufacturing is expanding quite fast in Turkey, this is not having an equal effect in creating employment. Since much of the new investment in industry is in machinery, of a fairly capital-intensive nature, the proportional increase in manufacturing employment has not kept pace; and as there is an increasing tendency towards capital-intensive technology, this growth of manufacturing employment may even decrease further over the next few years. Between 1967 and 1970, the value-added of manufacturing increased by 10 per cent per year, while the number of workers in manufacturing increased only by 4.8 per cent per year for the period.

An important component of demographic change is the rate of population redistribution, specifically rapid urbanization. In 1935, 16.9 per cent of the population lived in urban areas, this percentage not changing very much (18.7) until 1950, when a very rapid rise was seen. By 1960, 26.3 per cent were living in urban areas; by 1970 this percentage had risen to 36.1 and to 41 per cent in 1975. The dominant effect or urbanization has been rural to urban migration. For the 1970-75 period, the contribution of migration to urban growth was 63 per cent, more than compensating for the lower rate of the natural increase prevailing in the urban areas, and providing for continued high rates of urban growth.*

Since the rate or urbanization is faster than the rate of growth of manufacturing employment, the major absorption of migrants has occurred in the service sectors: commerce, public services and finance. For example, between 1965 and 1970, the value-added of commerce increased by 8.1 per cent per annum, while the corresponding increase in commercial employment was 15.6 per annum. Public services increased its value-added by 6.4 per cent per annum, and its size of employment by 13.8 per cent per annum. Finance also absorbed more labour than its increase in value-added would suggest, but this was from a low baseline. Since services are the residual employment category, this means that because of the slow increase in manufacturing employment (and the drop in agricultural employment), the majority have been pushed into jobs which show a very slow growth of productivity.

Another economic problem which helps exacerbate the population growth problem is the enormous regional disparity in wealth, mostly between the East and the West. We shall mention the East-West differentials in demographic variables in the next chapter. The dominant direction of migration is westward. Underlying this is an enormous economic graduation. As one moves eastward, the average income levels drop and the proportion employed in agriculture rises. Further, starting from the 1960's, large numbers of people have gone to seek employment outside the country, and it is estimated that around 1.5 million are working abroad, a large proportion of them in West Germany.

The geographical and urban-rural inequalities, of course, encourage income inequalities. In 1968, Turkey had a very high degree of income inequality, showing a Gini coefficient of 0.55. The greatest inequality appeared mostly in small towns surrounded by agricultural areas. Low productivity in agriculture, combined with a merchant class that distributes this agricultural produce appear to be the conditions upon which this inequality is based. In areas which are industrialized, income distribution is more equal. The results from the State Planning Organization confirm that income distribution for Turkey in 1973 had not changed very much over the five years since 1968, in spite of the heavy inflow of workers' remittances from abroad.

In spite of the expansion of the economy by over 6 per cent per year, heavy dependence on imports of intermediate goods, investment goods and above all, on petroleum for the maintenance of high growth rates in industry, creates serious difficulties for the Turkish economy. The ever-present problem of the current account deficit was accentuated by the 1974 petroleum price rise and the subsequent world-wide inflation.

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* Various definitions of 'urban-rural' are in current use. Here urban is defined as consisting of localities of population 10,000 or more. Occasionally, the size criterion used is 2,000 persons. In the later chapters below, the term 'urban' will be used to refer to provincial and district centres. This last definition implies no explicit criterion in terms of minimum population size, though in most cases it lies somewhere in the middle of the two population criteria mentioned above.

Moreover, the recent decline in the importation of investment goods and cutbacks in public and private investment expenditures have significant adverse effects in the medium term on the rate of growth and creation of employment. The Fourth Development Plan estimates unemployment at 13.5 per cent of the total labour force for 1977. Recent acceleration of inflation, which exceeded 60 per cent for 1978, creates further difficulties in the way of maintaining the past growth performance of the economy.

5. POPULATION POLICY

During the history of the Republic, two population policies were implemented - pro-natalists up to 1965, and relatively liberal after 1965.

Due to a great loss of life during the First World War and the War of Independence (1920-1922), and a generally high level of infant mortality associated with economic backwardness, an increase in population growth was deemed necessary at the time of the founding of the Republic. The defence needs of the country and the shortage of agricultural manpower seemed to necessitate an increase in the fertility level. Various laws were passed which had direct or indirect implications on population growth. However, it highly questionable whether any of these measures had an effect of increasing fertility. The growth of the crude birth rate until 1935 and the decrease thereafter, are trends which are much too smooth in order to be responses to legal measures and do not seem to fit any one legal or administrative decision. As in many other countries, pro-natalist policies in the 1920's and 1930's did not seem to have any effect.

After establishment of the State Planning Organization in the early 1960's, discussions developed between the Ministry of Health and the Planning Organization on the question of population policy. It was unanimously agreed that a change in the traditional policy was necessary. The First Five-Year Plan (1963-1967) discussed problems caused by the high population growth rate, arguing that the growth in GDP was undermined by the high population growth rate, and that it was necessary to make an attempt at bringing it under control.

It advocated the repeal of laws prohibiting contraceptive practice, the creation of a family planning programme, the training of health personnel in family planning, and the provision of family planning education to the public. The Government adopted these proposals, and a law on Population Planning was prepared in 1961, submitted to Parliament in 1962-1963, and passed in 1965. The bill states that the purpose of population planning is to allow individuals to have as many children as they desire and that preventive measures (contraception) are allowed to avoid pregnancy. The Ministry of Health was invested with the responsibility of implementing the programme, training of health personnel in contraceptive administration, and providing education for the public. The manner in which this was later interpreted was that contraceptive use was to be administered under a physician's supervision thus allowing doctors in private practice to implement contraception. The bill also contains strict conditions under which abortion or sterilization is allowed, viz. only for sound medical reasons.

Along with the Population Law, a law was passed in the same year setting up a General Directorate of Population Planning in the Ministry of Health, and a regulation was issued in 1967 which enumerates the medical conditions required for evacuation of the uterus and conditions for sterilization.

The Second Plan (1968-1972) attempted an extension of the scope of family planning services. It indicated a target of five per cent of the female population in the reproductive ages to be reached each year, with two million women accepting some type of birth control by 1972. The Plan programmed an additional five U.S. cents per capita to the family planning programme of the Ministry of Health and directed the provincial family planning directorates to use mobile teams to cover the rural population. The Third Plan (1973-1977) attempted an integration of family planning services with Mother and Child Care Services, though this association was previously understood. In spite of these directives, however, implementation of the programme never reached its official target and has suffered a considerable relapse.

CHAPTER II - DEMOGRAPHIC SITUATION IN TURKEY

1. SOURCES AND LIMITATIONS OF THE DEMOGRAPHIC DATA IN TURKEY

The three main sources of the demographic data, namely registration, censuses and sample surveys, are available in Turkey, though their degree of accuracy, coverage and thus usefulness vary considerably. The registration data on births and deaths are available only for the urban areas, but even in these areas the coverage is not complete. Thus registration data are not sufficiently reliable to become the basis of a serious demographic analysis.

After the establishment of the Turkish Republic, the first census was carried out in 1927; after then starting from 1935, censuses have been conducted every five years. Due to the size of the operation and the fact that the data collection operation must be completed during a single day, the questions included in the census are necessarily very limited in scope. Although age and sex structure of the population, the rate of population growth, and some other basic indeces can be computed, it is generally difficult to estimate the vital rates from census data. In addition to the failure to achieve the complete coverage assumed, the census data suffer from gross age mis-reporting, as for example manifest in age heaping at digits ending with 0 and 5. Also, the under reporting of children, especially of female children, in the 0-4 age group is a serious defect of census data. Nevertheless, these data constitute an important source of information for demographic analysis in Turkey.

The first demographic survey in Turkey was conducted in 1959 by the School of Public Health, and the first nation-wide survey was conducted in 1963. The Turkish Demographic Survey (1965-1967) based on the dual recording system provided important information on the demographic situation in Turkey. The Institute of Population Studies of Hacettepe University has conducted a series of demographic surveys in 1968, 1973 and 1978, the last one being the present Turkish Fertility Survey. In addition, there have been a number of other demographic or related surveys in Turkey, but these are of limited scope and coverage.

Demographic surveys constitute the basic source for estimating vital events. However, sampling and non-sampling errors tend to undermine the quality of survey data. Further, in retrospective surveys, recall lapse particularly among older women, can result in defective fertility and mortality data. Moreover, the emphasis in demographic surveys in Turkey has frequently been on fertility, which has hindered the collection of data on mortality on the basis of which life tables could be constructed. The only exception to this has been the Turkish Demographic Survey (1965-1967).

2. DEMOGRAPHIC STRUCTURE

Under this heading we will examine the annual rates of population growth, age and sex structure of the population and distribution by marital status for the years 1927-1975, for Turkey as a whole and also for urban and rural areas separately.

Turkey is a rapidly growing country. According to the census of 1927, the total population in Turkey was 13,648,270; this figure had reached 40,347,719 in 1975. The density of population per square km was 18 in 1927, and 52 in 1975 (see Table II-1).

The annual rates of growth were relatively low between 1935-1950, particularly for the years 1940-1945. This is due to worsening health, nutrition and general living conditions during the Second World War. The growth rates peaked during 1950-1960, and the subsequent decline is due largely to external migration. Starting from the 1960's large numbers of people have gone to seek employment outside the country (though the flow of migrants has lessened since 1975). Although we have no definite figures on the extent of external migration, it is estimated that around 1.5 million Turkish people are working outside the country. Initially, males at the younger working ages constituted the bulk of the migrants. Subsequently more and more of the workers have been joined by their families.

Internal migration is probably the most important vital event shaping the demographic situation in Turkey. Starting from the 1950's, the constant flow of migrants from rural to urban areas has changed the pattern of settlement. While in 1935 only 23.53 per cent of population was living in the urban areas, in 1975 this percentage had risen to 41.81. The annual rate of growth of urban areas is much higher than that of rural areas (see Table II-1).

TABLE II-1: POPULATION SIZE AND DENSITY ACCORDING TO THE 1927-1975 CENSUSES AND THE ANNUAL RATE OF POPULATION GROWTH BETWEEN CENSUSES - BY TYPE OF PLACE

Year	Population	Density per km^2	Percent Urban	Percent Annual Growth Rate Since Preceding Census*		
				Total	Urban	Rural
1927	13,648,270	18	.	-	-	-
1935	16,158,018	21	23.53	2.110	.	.
1940	17,820,450	23	24.39	1.959	2.672	1.734
1945	18,790,174	24	24.94	1.060	1.510	0.912
1950	20,947,188	27	25.04	2.173	2.247	2.149
1955	24,064,763	31	28.79	2.775	5.567	1.748
1960	27,754,820	36	31.92	2.853	4.921	1.953
1965	31,391,421	41	34.42	2.463	3.971	1.714
1970	35,605,176	45	38.45	2.519	4.733	1.251
1975	40,347,719	52	41.81	2.501	4.175	1.379

* Computed using the $P2/P1 = e^{rn}$ formula.

(Source: 1927-1975 Censuses, State Institute of Statistics)

The rate of population increase has been the highest in metropolitan areas. Considering the population living in municipal limits, the population of Ankara has risen from 122,720 in 1935 to 1,698,542 in 1975; the population of Istanbul has risen from 741,148 in 1935 to 2,534,839 in 1975; and that of Izmir has risen from 170,959 in 1935 to 636,078 in 1975. This means that in 40 years between 1935-1975 the population of Ankara has increased almost fourteen fold, and that of Istanbul and Izmir by almost four fold. Such high rates of migration have disrupted the structure of settlment in urban areas, resulting in inadequate housing and municipal services, and in generally low living standards. The disorder can be seen especially in Ankara, where growth of the population surpassed all estimates compiled for urban planning: it is

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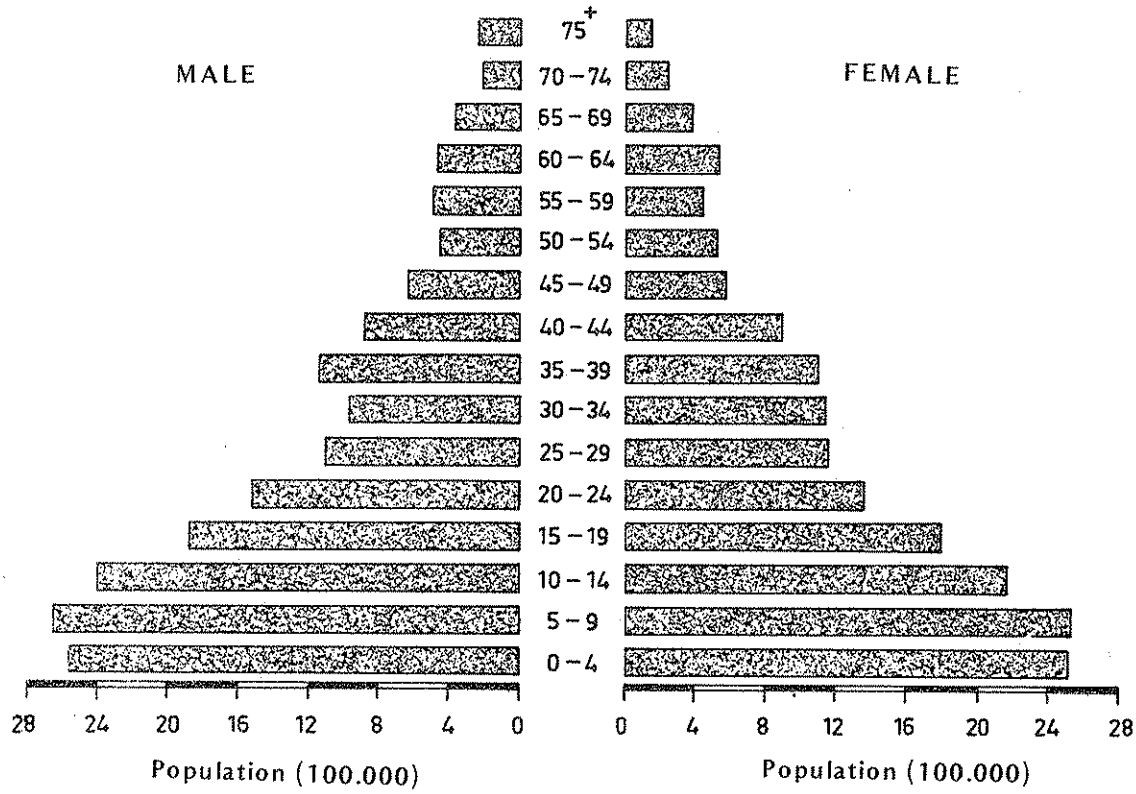
[1] According to the 1976 Census of West Germany, the number of Turkish nationals was 1,079,300. Although West Germany is not the only European country where Turkish migrant workers are living it is assumed that the main bulk live there.

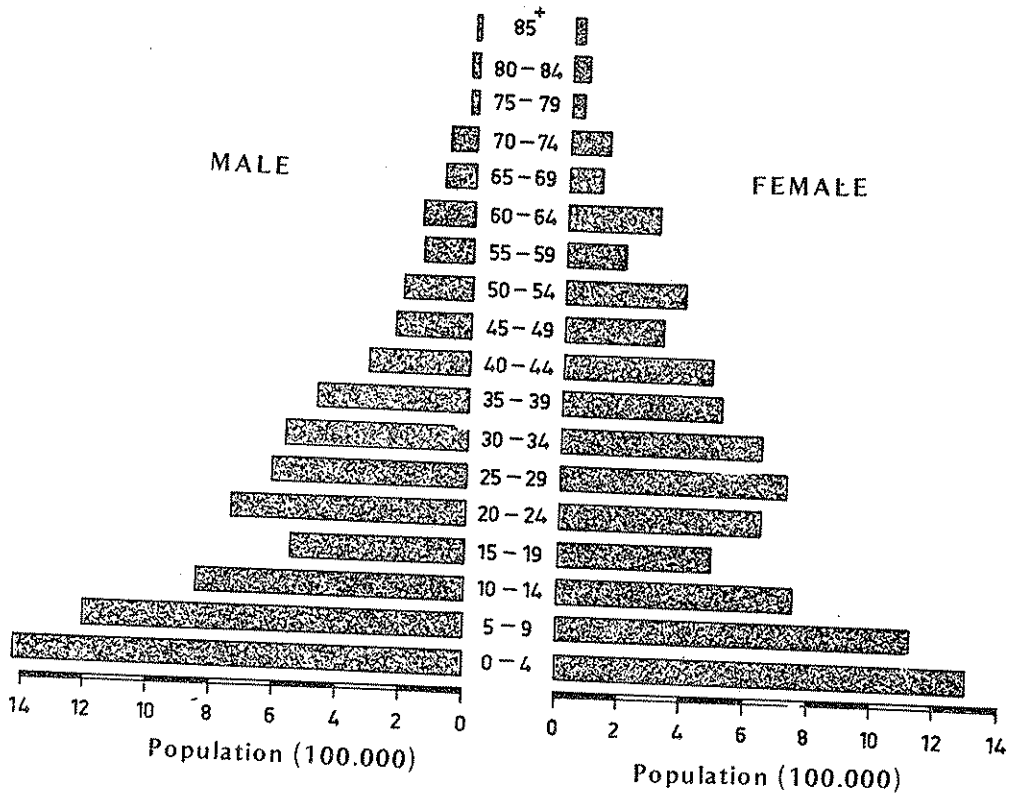
[2] Urban areas: localities with a population 5,000 or more for 1950, 10,000 or more for other years. Cf. definition of urban-rural used in later chapters in this report.

FIGURE II - 1 AGE AND SEX DISTRIBUTION OF POPULATION IN TURKEY, 1970 AND 1935

(1970)



(1935)



estimated that around 60 per cent of the population of Ankara lives in slum areas. Since it may take quite a long time for rural migrants to change their previous way of life, attitudes and values, the fertility and mortality patterns of rural migrants may continue to be an extension of rural patterns, in reverse proportion to the degree of adaptability of rural migrants to the urban way of life.

In Table II-2, sex ratios by age and type of place for 1970 are shown. The impact of internal and external migration can be seen clearly. At ages 15-39, there are more women than men in rural areas, and more men than women in urban areas. But for Turkey as a whole, we see that there are fewer men than women at ages 25-39. This is accounted for by external migration of men.

TABLE II-2: SEX RATIOS* BY AGE FOR 1970 - BY TYPE OF PLACE

Age	Urban	Rural	Turkey
0-4	108.60	100.20	102.59
5-9	108.30	103.79	105.12
10-14	115.94	105.72	109.06
15-19	133.24	95.09	108.70
20-24	153.89	82.95	110.42
25-29	118.13	82.81	96.04
30-34	102.83	78.62	87.44
35-39	111.62	96.18	101.84
40-44	113.58	95.92	102.40
45-49	120.59	110.46	114.29
50-54	98.65	83.57	88.53
55-59	112.42	113.05	112.83
60-64	86.25	91.59	89.91
65-69	87.60	107.65	100.71
70-74	78.19	85.59	83.19
75-79	70.60	77.40	74.89
80-84	51.97	53.50	53.00
85+	49.31	47.89	48.39
TOTAL	114.83	95.98	102.32

* Males per 100 females in the age group.

Table II-3 shows the age distribution of the population between 1935 and 1975, by type of place. The population of Turkey is relative young: in 1975, 40.14 per cent were aged under 15, and only 4.5 per cent were aged 65 and over, while the corresponding percentages in 1935 were, respectively, 41.30 and 4.00. The slight increase in the percentage aged 65 and over most probably reflects an increase in life-expectancy. The slight decrease in the 0-14 age group, and simultaneously an increase in the 15-64 age group after 1970, is probably the result of a decline in fertility. On the whole, the age-structure has been rather stable over the past 40 years, and reflects continued high fertility. A more detailed comparison of the 1935 and 1970 age-pyramids shows that there is not much change in the level of fertility, but there seems to be some change in the level of mortality, with improving life expectancy (see Figure II-1).

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[1] Yasa, Ibrahim, "Turkiye'nin Toplumsal Yapisi ve Temel Sorunlari", Ankara, 1970, p.139, Table 39.

Table II-3 also shows substantial urban-rural differentials in age structure. The percentage of the population aged under 15 is lower in urban areas compared to rural areas. This is because of lower urban birth rates, as well as selective rural to urban migration. This urban-rural difference is a long standing one though, in urban areas the percentage aged under 15 has been gradually increasing and the percentage aged 65 and over has slightly declined.

TABLE II-3: AGE STRUCTURE - BY TYPE OF PLACE AND YEAR

	Urban*			Rural			Turkey		
	0-14	15-64	65+	0-14	15-64	65+	0-14	15-64	65+
1935	31.20	64.40	4.40	43.30	53.00	3.70	41.30	54.70	4.00
1950	30.63	65.26	4.11	40.43	56.50	3.07	38.28	58.42	3.30
1960	33.60	62.42	3.85	43.88	52.51	3.41	41.17	55.12	3.53
1970	36.07	59.90	4.03	44.96	50.43	4.16	41.79	53.81	4.40
1975**	.	.	.	.	.	.	40.14	55.45	4.51

* Localities with population 5,000 or more for 1970; 10,000 or more for other years.

** One per cent sample results.

Finally, we may briefly mention nuptiality. Table II-4 shows the percentage single (never-married) by age, sex and type of place according to the 1970 census. Marriage is virtually universal among men as well as among women, both in urban and in rural areas. Among persons aged 40 and over, the percentage never-married reaches 3 per cent only for urban males.

According to the 1968 Hacettepe Survey conducted by the Institute of Population Studies, the mean age of first marriage is 17 for females, and 22 for males.[1] Mean age of marriage is higher in urban areas than in rural areas.[2]

TABLE II-4: PERCENTAGE OF SINGLE PERSONS BY AGE, SEX AND TYPE OF PLACE (1970)

	Rural		Urban		Total	
Age	Male	Female	Male	Female	Male	Female
12-14	.97	.95	.96	.93	.96	.95
15-19	.85	.72	.91	.74	.88	.72
20-24	.47	.16	.64	.24	.56	.19
25-29	.13	.04	.23	.08	.18	.05
30-34	.05	.02	.08	.04	.06	.02
35-39	.03	.01	.04	.03	.03	.02
40-44	.02	.01	.03	.02	.03	.01
45-49	.02	.01	.03	.02	.02	.01
50-54	.02	.01	.03	.02	.02	.01
55-59	.01	.01	.03	.02	.02	.01
60-64	.01	.01	.03	.02	.02	.01
65+	.01	.01	.03	.02	.02	.01

Source: 25.10.1970, Census of Population, Social and Economic Characteristics of Population, State Institute of Statistics, Ankara, 1977, p.88, Tables 16, 16a.

[1] Timur, Serim, "Turkiye 'de Aile Yapisi", Ankara, 1972, p.95, Table 50; p.96, Table 51. According to the results of 1973 Hacettepe Survey, the mean age of first marriage for women is 17.7. Kunt, Guliz, "Aile Yapisi ve Dogurganlik", Turkiye 'de Nufus Yapisi ve Nufus Sorunlari, 1973 Arastirmasi, Ankara, 1978, p.140, Table 4.

[2] Timur, Serim, Ibid.

3. VARIOUS ESTIMATES OF VITAL RATES

In this section we shall discuss the various sources from which estimates of fertility and mortality rates in Turkey have been made. The main sources of national scope are (i) the five yearly censuses, (ii) the 1963 Nation-Wide Survey, (iii) the 1965-1967 Turkish Demographic Survey, and (iv) the 1973 Hacettepe Survey. A number of other studies of more limited coverage are also available.

FERTILITY

For the 1955-1960 period, the crude birth rate (CBR) for Turkey has been estimated as 46.6 births per year per 1,000 population, if it is assumed that the crude death rate (CDR) for the period was 19.1 per thousand; if the CDR is assumed to be 17.2 per thousand, the corresponding estimate for the CBR is 44.7 per thousand.[1]

Table II-5 shows the crude birth rate for the period around 1960, by type of place, and by region within the rural stratum. The rates are computed using age distributions from the 1960 census and mortality estimates derived from the 1963 survey. Two sets of estimates have been made: those based on reports of women aged 20-24, and on reports of women aged 20-34.[2]

Table II-5 also shows the estimates of CBR from the 1963 nation-wide survey. The 1963 survey was conducted to study knowledge, attitudes and practices concerning family planning. As a part of this study, a demographic survey was designed to provide estimates of the infant mortality rate as well as of crude birth and death rates, for the first time on a national scale. The total number of interviews conducted was 9,701. In the computation of the rates two sets of data were used. The women interviewed were asked to state the number of births and deaths occurring in the past 12 months, as well as in the past 24 months separately in order to provide a check on the results. But after the computation, the rates based on 24 months were found to be substantially lower than the rates based on 12 months. Not wanting to assume one or the other set of estimates to be more correct, it was decided to publish both the sets. Either of these estimates for (around) 1960 is lower than the earlier estimates for the 1955-1960 period. Striking urban-rural and regional differentials appear in all estimates.

The Turkish Demographic Survey was begun in 1965. It had a dual recording system: local resident-registrars made regular monthly visits and reported demographic changes; supervisors sent from the central organisation made visits independently every six months to the same households and collected information on demographic events occurring during the preceding six months. The two reports were matched in the central office and discrepancies were corrected by the Chandrasekan and Deming method. It was found that generally the amount of vital events collected by supervisors was higher than the amount collected by registrars.

The sample size for Turkey was over 200,000 persons. The country was divided into five regions and each region was subdivided into rural and urban parts. The three metropolitan areas, Istanbul, Ankara and Izmir were treated separately.

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[1] Demeny, Paul and Shorter, Frederic, "Estimating Turkish Mortality, Fertility and Age Structure", Istanbul, 1968, p. 38.

[2] The geographical domains used in Table II-5 are not identical with the classification used in later chapters in this report, but an appropriate correspondence holds. We have rearranged the regions from the original source to make the order (in Table II-5) correspond to the order (west to east) used in later chapters of this report.

TABLE II-5: ESTIMATES OF CRUDE BIRTH RATE (CBR) AND INFANT MORTALITY RATE (IMR) FOR EARLY 1960s - BY TYPE OF PLACE, AND BY RURAL REGION

	CBR AROUND 1960*		CBR FROM 1963 SURVEY**		IMR FROM 1963 SURVEY**	
	Reports of women aged 20-24	Reports of women aged 20-34	Based on 12 months	Based on 24 months	Based on 12 months	Based on 24 months
Metropolis	23.3	23.8	28.0	25.3	158	101
Cities	36.9	35.4	37.7	33.1	200	143
Towns			36.9	32.2	219	153
Villages	51.3	49.2	45.2	37.6	278	190
RURAL REGION						
Marmara	39.3	40.1	32.9	31.1	306	211
Aegean	42.9	40.1	44.2	36.6	240	172
Mediterranean	53.9	54.1	49.9	40.6	268	167
South Central	52.7	50.1	54.8	49.0	331	226
North Central	55.0	53.0	53.9	46.7	367	249
East Central	61.9	57.3	48.1	43.9	367	221
Black Sea	52.2	51.6	44.5	38.8	258	166
North East	60.4	56.3	52.2	45.2	324	228
South East	60.6	56.8	33.5	29.9	149	102
TURKEY	46.8	44.5	41.3	35.0	247	170

* Adapted from Demeny, Paul and Frederic Shorter. Estimating Turkish Mortality, Fertility and Age Structure, Istanbul, 1968.

** Gales, K.E., The Report of an Enquiry into Birth and Death Rates in Turkey, School of Public Health, Unpublished Report, 1964.

During 1965-1966, the survey had to be confined to only two regions (Central Anatolia and the Black Sea), apart from the three metropolitan areas. Estimates of the crude birth rate vary from 54 per thousand in rural Central Anatolia to only 25 per thousand in Izmir metropolis. The corresponding Total Fertility Rates are 7.49 and 2.87 (see Table II-6).

During 1966-1967, the Turkish Demographic survey was extended to the entire country. Table II-7 shows the crude birth rate, general fertility rate, total fertility rate and the gross reproduction rate (as well as the crude death rate and the infant mortality rate discussed later). According to this survey, the CBR for all Turkey is 39.6 per thousand, for rural areas the rate is 43.9 and for urban areas 31.4. The corresponding estimates for the total fertility rate are 5.30 (all Turkey), 6.12 (rural) and 3.88 (urban). The geographic contrast is illustrated by the extreme figures: a TFR of 7.44 for rural areas of the Eastern region, compared with only 2.65 for Istanbul metropolis.[1]

TABLE II-6: FERTILITY AND MORTALITY RATES ACCORDING TO THE 1965-1966 TURKISH DEMOGRAPHIC SURVEY

		Crude Birth Rate (CBR)	General Fertility Rate (GFR)	Total Fertility Rate (TFR)	Gross Reproduction Rate (GRR)	Crude Death Rate (CDR)	Infant Mortality Rate (IMR)
Central Anatolia	Rural	54	248.6	7.49	3.61	21	204
	Urban	38	170.7	5.09	2.44	13	140
Black Sea	Rural	43	202.3	6.12	2.97	15	152
	Urban	30	133.8	3.97	1.99	10	98
Ankara		37	132.9	3.71	1.78	11	113
Istanbul		28	109.6	3.18	1.52	11	123
Izmir		25	97.0	2.87	1.44	10	84

Source: Vital Statistics from the Turkish Demographic Survey 1965-1966. School of Public Health, Ankara, 1967.

[1] The five regions in Table II-7 correspond approximately to the regions used in later chapters of this report. The exact boundaries of the regional classification are slightly different as explained in Appendix D concerning sampling design for the 1978 Turkish Fertility Survey.

TABLE II-7: FERTILITY AND MORTALITY RATES ACCORDING TO THE 1966-1967 TURKISH DEMOGRAPHIC SURVEY

			CBR	GFR	TFR	GRR	CDR	IMR
I	Marmara-Aegean	Rural	35.6	152.0	4.93	2.46	14.7	141.6
		Urban	26.5	99.6	3.14	1.67	10.9	148.6
		Total	.	.	.	.	.	143.1
II	Mediterranean	Rural	40.3	184.9	6.07	2.82	13.2	171.8
		Urban	31.9	132.7	4.28	1.67	8.9	82.2
		Total	.	.	.	.	.	137.8
III	Central Anatolia	Rural	52.7	220.2	7.09	3.43	21.7	214.7
		Urban	34.7	142.7	4.29	2.32	11.2	116.2
		Total	.	.	.	.	.	197.2
IV	Black Sea	Rural	38.1	155.5	5.15	2.64	14.9	147.9
		Urban	34.7	139.2	4.34	2.02	10.5	108.8
		Total	.	.	.	.	.	140.6
V	East	Rural	49.7	224.2	7.44	3.66	15.5	130.4
		Urban	43.9	186.7	6.09	3.06	12.2	113.7
		Total	.	.	.	.	.	126.7
	Ankara		31.2	112.3	3.30	1.52	9.4	101.0
	Istanbul		24.2	84.1	2.65	1.36	11.6	109.3
	Izmir		24.8	90.5	2.92	1.57	10.5	105.3
	TURKEY	Rural	43.9	187.5	6.12	3.01	16.7	168.3
		Urban	31.4	122.4	3.88	1.94	10.7	112.7
		Total	39.6	163.9	5.30	2.62	14.6	531.1

Source: Vital Statistics from the Turkish Demographic Survey 1966-1967, Ankara, 1970.

Finally, according to the 1973 survey conducted by the Hacettepe Institute of Population Studies, the crude birth rate is estimated as 30.1 per thousand, and the total fertility rate as 4.66. But Toros, who compiled these rates, finds them too low and says that the results should be multiplied by a factor of 1.3.[1] In this way, the CBR increases to 39.2 per thousand. This rate is close to the results obtained by application of the Brass Method to the 1973 data (see Table II-8).

TABLE II-8: RATES FROM THE 1973 HACETTEPE SURVEY

	Compiled by Toros[1]			Estimated by Brass Method			
	CBR	GFR	TFR	CBR	GFR	TFR	GRR
TURKEY	30.1	136	4.66	39.3	177	6.05	2.95
Locality Size:							
Metropolis	24.8	100	3.10	24.8	112	3.45	1.89
Population 100,000	26.0	108	3.65				
50,000-100,000	24.3	107	3.62	34.5	115	5.25	2.56
25,000- 50,000	29.9	123	4.20				
10,000- 25,000	29.3	126	4.25				
2,000- 10,000	28.8	128	4.25	44.9	202	7.06	3.44
Under 2,000	32.3	153	5.38				

Source: Cerit, Sevil, "Turkiye'nin Dogurganlik Duzeyi ve Egitim Uzerinde Bazi Tahminler", Nufusbilim Dergisi 1979, Ankara, 1980, p.33, Table 12.

[1] Toros, Aykut, "1973 Arastirmasinda Dogurganlik", Turkiye 'de Nufus Yapisi ve Nufus Sorunlari 1973 Arastirmasi, Ankara.

In conclusion, in spite of the availability of a number of estimates from various sources, no entirely consistant picture emerges of the past levels of fertility in Turkey. Prior to 1960, a CBR of over 45 per thousand has been estimated; for 1960 the estimate is around 45 per thousand. From the 1970 census, the average CBR for the decade 1960-70 has been estimated as 39 per thousand.[1] The published results from the 1963 survey do not provide a consistent set of estimates, since the estimate based on the prior 12 months (41 per thousand) differs considerably from that based on the prior 24 months (35 per thousand). The reported direct estimate from the 1973 survey (30 per thousand) is considered by the author to be too low, while indirect estimation using the Brass method results in a figure of 39 per thousand for all Turkey. Considered together, the various estimates probably imply some decline in birth rates during the years from late 1950s to early 1970s.

ADULT MORTALITY

The available data on adult mortality are rather limited in Turkey. Table II-9 shows the crude death rates estimated from the 1963 survey, classified by type of place. (Also for comparison are shown the rates computed from a survey conducted in 1962 in the province of Yozgat). The 1963 estimates based on the prior 12 months differ considerably from those based on the prior 24 months.

Crude death rates estimated from the 1965-1967 Turkish Demographic Survey have already been shown in Tables II-6 and II-7.

The life tables obtained from the Turkish Demographic Survey 1965-1967 are the only ones of their kind available in Turkey. Table II-10 shows the expectation of life at ages 0, 5 and 60 by type of place. Unfortunately, it is not possible to obtain reliable data on adult mortality from the surveys conducted after 1967.

TABLE II-9: CRUDE DEATH RATES FOR TURKEY BEFORE 1965

Survey	Villages	Towns	Cities	Metropolis	TOTAL
Yozgat Survey 1962	22.0	13.6	-	-	-
1963 Survey:					
Based on 12 months	21.0	19.4	12.2	14.6	18.9
Based on 24 months	15.9	16.2	9.5	12.7	14.7

Source: Fisek, Nusret, "Demographic Surveys in Turkey", Turkish Demography: Proceedings of a Conference, Ankara, 1969.

TABLE II-10: LIFE EXPECTANCY AT AGE 0, 5, AND 60 - BY TYPE OF PLACE, 1966-1967

Strata		Life Expectancy At Age 0	At Age 5	At Age 60
Rural	Male	48.82	59.11	14.29
	Female	53.17	61.89	15.86
Urban	Male	56.19	61.25	14.99
	Female	60.11	64.30	17.08
Turkey	Male	50.93	59.85	14.52
	Female	55.21	62.70	16.25

Source: Ozkan, Aysel, "Turkiye Nufus Arastirmasindan Elde Edilen Turkiye Hayat Tablolari ve Olumluluk Tahminleri", Ankara, 1974.

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[1] International Program of Laboratories for Population Statistics, Scientific Reports Series No. 17, January 1975.

INFANT MORTALITY

In 1959 a survey was conducted by the School of Public Health to measure infant and maternal mortality in the rural areas of Western and Central Turkey. A total of 7,092 women were interviewed in 137 villages. Table II-11 shows the estimated early neo-natal, post neo-natal and infant mortality rates per 1,000 live-births obtained from this survey. The levels are high, with 175 children dying per 1,000 live-births in rural areas of Central Turkey.

TABLE II-11: EARLY NEO-NATAL, LATE NEO-NATAL, AND INFANT MORTALITY RATES IN RURAL AREAS OF WESTERN AND CENTRAL TURKEY, 1959

	Mortality Rates per 1000 Live Births		
Regions	0-7 Days	0-28 Days	0-12 Months
Central	23.1	29.9	175.1
Western	11.9	21.5	155.6
TOTAL	18.0	26.0	166.1

Source: Fisek, Nusret, "Demographic Surveys in Turkey", Turkish Demography: Proceedings of a Conference, Ankara, 1969

According to the 1962 Yozgat Survey, the infant mortality rate for the province was 166 per thousand live-births: the figure was 181 for villages and 116 for the district centres (towns).[1]

Direct estimates of the infant mortality rate from the 1963 nation-wide survey have been shown in Table II-5 above. tAgain the discrepancy between the estimates based on the prior 12 months and those based on the prior 24 months is very marked (the respective estimates being 247 and 170 per thousand). In either case, urban-rural and regional differentials are outstanding.

The alternative (indirect) estimation of infant mortality is provided by the application of the Brass method. From the 1963 survey the following estimates of the proportions dying before two years of age per 1000 live-births ($_2q_0$) have been obtained.[2]

- Based on reports of women aged 20-24:
  All Turkey 254; metropolis 104; cities and towns 232; and villages 274
- Based on reports of women aged 20-34:
  All Turkey 226; metropolis 128; cities and towns 200; and villages 244

Infant mortality rates estimated from the 1965-1967 Turkish Demographic Survey have been presented in Tables II-6 and II-7 above. As noted earlier, the 1965-1966 survey was confined to Central Anatolia and the Black Sea regions, apart from the three metropolitan areas of Ankara, Istanbul and Izmir. The estimated IMR for rural areas of Central Anatolia is 204 per thousand, which contrast sharply with 84 per thousand for Izmir metropolis.

The 1966-1967 round of the Turkish Demographic Survey provides nation-wide estimates (see Table II-7). The IMR for all Turkey is 153, the figure being 168 for rural areas and 114 for urban. The estimate for each of the three regions Marmara-Aegean (west), Mediterranean (south), and Black Sea (north) is around 140, while it is much higher (nearly 200) for Central Anatolia. The results for the Eastern region are unexpectedly low (127 per thousand).

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1 Fisek, Nusret, "Demographic Surveys in Turkey", Turkish Demography: Proceedings of a Conference, Ankara, 1969.

2 Demeny, Paul and Shorter, Frederic, "Estimating Turkish Mortality, Fertility, and Age Structure", Istanbul, 1968.

Finally, Table II-12 shows infant mortality rates derived from the application of the Feeney method, and $_2q_0$ derived by applying the Brass method to the 1973 Hacettepe Survey data.

As noted earlier, the 1963 survey yielded $_2q_0$ values of 226 (based on reports of women aged 20-34) or 254 (based on reports of women aged 20-24); by comparison, $_2q_0$ from the 1973 survey using the Brass method is estimated as 194. This would indicate some decline in infant and child mortality. On the other hand, the infant mortality rate of 153 per thousand from the 1966-1967 Turkish Demographic Survey (see Table II-7) is close to the Feeney method estimation for 1971 from the 1973 Hacettepe survey (150 per thousand).

TABLE II-12: INFANT MORTALITY RATES BY FEENEY METHOD AND $_2q_0$ ESTIMATES BY BRASS METHOD, 1973 SURVEY

	Feeney Method		Brass Method
	Infant Mortality Rates (‰)		$_2q_0$ (‰)
Strata	1969	1971	1973
Metropolitan	103	99	125
Other localities with population 10,000+	136	146	190
Localities with population under 10,000	189	159	209
TURKEY	171	150	194

Source: Cerit, Sevil, "Feeney Yontemine Gore Bebek Olum Hizlarinin Hesaplanmasi", Nufusbilim Seri Yayinlari No.1, Ankara, 1979, p.9, Table 10.

4. CONCLUSION

So far, we have studied the vital rates obtained from the most important surveys conducted in Turkey. Although we have at our disposal a large quantity of data, this does not signify that the demographic situation in Turkey is very lucid. Far from it: even the most elementary rates, the crude birth rate and crude death rate, as subject to debate. Because of sampling and non-sampling errors, the survey data in Turkey do not always provide accurate estimates. It can be argued that the bulk of the vital rates that are presented in this chapter are probably underestimated. With the intention of getting more correct estimates, we have to turn to model life tables and to various other methods invented for incomplete data. But we cannot be sure that the results obtained by these techniques are more accurate than the ones obtained from the raw data, since these methods and model life tables have been developed on the basis of data from countries whose fertility and mortality experience are rather different from those of Turkey. So the most we can hope for is to estimate probable lower and upper limits for the vital rates.

In case of thecrude death rate, we have an important criterion: the crude death rate for Turkey should not be lower than the rates of more developed countries, because the socio-economic conditions of a country affect the mortality patterns.[1] Around 1973, the crude death rate in several European countries was around 10-12 per thousand. Hence one may expect a crude death rate of at least 13 or 14 per thousand for Turkey.

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[1] The Determinants and Consequences of Population Trends, Vol. I. United Nations Publ., New York, 1973, p. 110, Table V.1, p. 112, Table V.3.

Since the annual rate of population growth in Turkey was around 25 per thousand in the early 1970s (apart from the effects of outmigration), we may estimate a crude birth rate of not lower than 38-39 per thousand. This estimate agrees with the result acquired by application of the Brass method to the 1973 survey data (see above). Baran Tuncer has estimated the crude birth rate to be 37.7 per thousand, and the crude death rate to be 13.1 per thousand for 1970-1975 for Turkey.[1] But there are some who maintain that crude birth rate for Turkey was around 32-33 per thousand around 1973.[2] If the crude birth rate was 32-33 per thousand, then crude death rate must be around 7-8 per thousand, which appears to be an unacceptably low rate for Turkey.

The people who support a lower crude birth rate for Turkey rely for their support on the supposedly high effect of birth control on the reduction of fertility. Before 1965, Turkey had a pro-natalist population policy. Even after the launching of population control programs in 1965, induced abortions were still regarded as illegal. The effect of birth control programs on fertility is not very clear. While some say that the effect of birth control has been to steadily decrease fertility,[3] others are not so optimistic.[4]

Tuncer, Baran, "Gelecekte Turkiye Nufusu ve Ekonomisi", Ankara, 1977, p. 40, Table 7.

Ozbay, Ferhunde, "Turkiye 'de 1963, 1968 ve 1973 Yillarinda Aile Planlamasi Uygulamalarinda ve Dogurganliktaki Degismeler", Paper presented at Cesme Conference, 29 Sept.- 1 Oct. 1975, p. 16, Table 7.

Ozbay, Ferhunde; Shorter, Frederic; and Yener, Samira, "Accounting For the Trend of Fertility in Turkey", Paper presented to Tarabya Conference, Istanbul 27 April - 4 May 1977, p. 3.

Yener, Samira and Kocaman, Tuncer, "IV. Bes Yillik Plan Nufus Tahminleri", Ankara, 1979, p. 12. The highest crude rate estimated by Samira Yener was 34.43 per thousand, which makes the crude death rate a figure around 9 per thousand, still too low for Turkey.

Shorter, Frederic, "Information on Fertility, Mortality and Population Growth in Turkey", Turkish Demography: Proceedings of a Conference, p. 37.

Shorter, Frederic, "Turkey: Measuring the Change in Birth Control Practices, 1963 to 1968", Second Draft, 1969, p. 4.

Ozbay, Ferhunde, "Turkiye 'de 1963, 1968 ve 1973 Yillarinda Aile Planlamasi Uygulamalarinda ve Dogurganliktaki Degismeler", Paper presented to the Cesme Conference, 29 Sept. - 1 Oct. 1975, p. 8.

Mumtaz Peker says that although the number of women using some kind of contraceptive increased between 1968-1973, most of the methods used were ineffective methods. Furthermore, 1/3 of the women who have stated that they have been currently using some kind of contraceptive between 1968-1973, have become pregnant during the same period. Peker, Mumtaz, "Turkiye 'de Dogurganlik ve Dogurganlik Davranislarindaki Farkliliklar (1968-1973)", Ankara, 1979, Ph.D. Thesis, p. 138.

The controversy concerning the infant mortality rates has not been any less intense. The infant mortality rate obtained from the Turkish Demographic Survey, which was 153.1 per thousand for Turkey, has gained international acceptance. However, there are contradictions in these estimates. As noted earlier, the estimated infant mortality rates for the Eastern region are lower than those for the more developed Western region (see Table II-7). As Eastern Turkey is the most underdeveloped region of the country, it is logically expected to have the highest infant mortality rates.

The two rather complicated methods devised by Miroslav Masura to estimate infant mortality rates by the aid of Model Life Tables have given diverse results when applied to Turkish data.

TABLE II-13: INFANT MORTALITY RATES FOR TURKEY BY STRATA BETWEEN 1944-1967, COMPILED BY THE MACURA METHOD I

Year	Total	Rural*	Urban	Five Cities**
1966-67	.158	.164	.133	.116
1964-65	.169	.176	.140	.121
1962-63	.180	.187	.148	.130
1960-61	.190	.198	.155	.139
1958-59	.200	.209	.163	.146
1956-57	.212	.223	.171	.153
1954-55	.222	.236	.179	.158
1952-53	.232	.249	.185	.166
1950-51	.239	.260	.189	.173
1948-49	.248	.269	.194	.179
1946-47	.256	.280	.198	.182
1944-45	.264	.288	.204	.186

* Locations with population under 10,000
** Adana, Ankara, Bursa, Istanbul, Izmir

Source: Macura, Miroslav, "Estimates of Infant Mortality Trends in Turkey, 1944-67", Paper presented to the Cesme Conference, 29 Sept. - 1 Oct. 1975, p. 18, Table 5.

In Table II-13, we see that infant mortality rates have decreased in a smooth and steady way in all strata of Turkey between 1944-67. The impact of rural migration to urban areas, which should have shown its effect on the infant mortality rates of urban areas and especially on the rates of the five largest cities is not apparent. Yet, it is logical to expect that, since in rural areas infant mortality was higher than in urban areas, the advent of large quantities of rural migrants to urban areas would increase the infant mortality rates in urban areas after 1950 - at least until the rural migrants were able to adapt to the urban way of life.

In Table II-14, we can see the infant mortality rates for Turkey computed by the Macura II method. The infant mortality rate for 1968-72 was estimated to be 106 per thousand, which is unexpectedly low.

TABLE II-14: INFANT MORTALITY RATES FOR TURKEY BETWEEN 1948-1972 COMPILED BY THE MACURA METHOD II

Year	Infant Mortality Rates per 1000
1968-72	106
1963-67	139
1958-62	164
1953-57	200
1948-52	237

Source: Ergin, Ayse, "Estimation of Infant Mortality Trends From Pregnancy Histories", Ankara, 1975, Masters Thesis, p.22.

In Turkey, the most reliable demographic data have been obtained from the Etimesgut Rural Health District. This pilot area consists of two towns and 83 villages situated very near to Ankara, and acts as a training and evaluation centre for the Public Health Department of Hacettepe University. Data are collected by a registration-census system. The towns belonging to this pilot area have the characteristics of suburban Ankara, while the level of socio-economic conditions in its villages is higher than the average Turkish village. In addition, a very efficient health service is provided, composed of seven health units, 30 health stations and a rural hospital. Medical services are given free of charge.

If we can somehow fit the Etimesgut data into the puzzle-work of Turkish demography, we can get an idea on the infant mortality rates for Turkey. But we can make use of only the early part of Etimesgut data, obtained at the beginning of the project, because later on, the unparalelled extent of medical services bestowed to this pilot area has made any kind of comparison with other parts of the country unsuitable. Since the project was launched in 1965, the 1967 data would be the most suitable ones for such a comparison. In Table II-15, we can see the infant mortality rates for the Etimesgut Rural Health District, by strata, between 1967-1970.

TABLE II-15: INFANT MORTALITY RATES FOR TOWNS AND VILLAGES IN THE ETIMESGUT RURAL HEALTH DISTRICT BETWEEN 1967-1970

	Infant Mortality Rates (‰)		
Year	Towns	Villages	Total
1967	101.7	170.6	142.2
1968	93.3	140.0	120.8
1969	80.9	134.4	111.2
1970	93.5	114.5	104.3

Source: Cerit, Sevil, "Factors Affecting the Level and Trend of Infant Mortality in Turkey Since World War II", 1975, Ph.D. Thesis, p. 79, Table 49

If we agree that the socio-economic conditions and the extent of medical services in a certain community affect the level of infant mortality, then we can say that in 1967, the infant mortality rate for the rural areas of Turkey must be higher than 170.6 per thousand, because the Etimesgut villages have a higher level of education, better economic conditions and more efficient medical services than an average Turkish village. Similarly, the rate of 101.7 per thousand estimated for the Etimesgut towns, could be used as an indicator of the level of infant mortality in the metropolitan areas in 1967, because these pilot towns are situated very near to Ankara and have the socio-economic characteristics of a suburban area. Actually, the infant mortality rate of total Etimesgut could be used to estimate the level of infant mortality for urban areas of Turkey, which might be something around 142.2 per thousand in 1967. The infant mortality rates obtained by the application of the Feeney method to the 1973 survey data (Table II-12) are close to the estimates based on the Etimesgut data.

Table II-16 compares the Etimesgut data with those from the 1963 nationwide survey and the 1966-67 Turkish Demographic Survey.

TABLE II-16: INFANT MORTALITY RATES FOR TURKEY - BY STRATA, ACCORDING TO THE 1963 NATION-WIDE SURVEY, TURKISH DEMOGRAPHIC SURVEY 1966-67, AND THE ESTIMATES DERIVED FROM THE ETIMESGUT REGISTRATION DATA, 1967

	Infant Mortality Rates (‰)			
	1963			
	Based on 12 Months	Based on 24 Months	TDS 1966-67	Based on Estimesgut 1967 Data
Rural (less than 2000 population)	278	190	168.3	More Than 170.6
Urban				
Pop. 2000-15,000	219 ± 78	153 ± 33	112.7	Around 170.6
Pop. 15,000+	200 ± 114	143 ± 54		Around 142.2
Metropolitan Areas	158 ± 42	101 ± 32	106.2	Around 101.7
TOTAL	247	170	153.1	?

Source: Same as Table II-15, p. 170, Table 107

To sum up the arguments presented in this section: around 1970-1975, a crude birth rate around 39 per thousand, a crude death rate around 14 per thousand, and an infant mortality rate around 140-150 per thousand can be tentatively estimated for Turkey.

CHAPTER III INSTITUTIONAL FRAMEWORK OF THE TURKISH FERTILITY SURVEY

The Turkish Fertility Survey (TFS) was conducted by the Hacettepe Institute of Population Studies (HIPS) in collaboration with the Ministry of Health and Social Assistance (MOH).

The Hacettepe Institute of Population Studies, which is the only institute of its kind in Turkey, was established in 1967, and is presently governed by the Senate of the University through an Administrative Board and Executive Committee. The objectives of HIPS are to carry out research on the demographic, socio-economic and medical aspects of population problems with particular emphasis on Turkey, and to train specialists in the field of demography and related subjects, to create a public awareness of population problems and to educate the public in family planning, also to improve and extend the development of applied population studies in Turkey; finally, to organize and participate in academic and applied studies in the field of population and related subjects.

For the fulfillment of the above objectives, the following activities are under way and are in a continuous process of improvement at the Institute:

- Carrying out a graduate programme on population dynamics.
- Carrying out research projects in demography, sociology, economics, health, family planning, and related subjects.
- Giving information to the government agencies and ministries and to the public with regard to population problems by every available means.
- Expansion of a reference library and documentation center.
- Development of a data processing unit and data bank.
- Organizing seminars, conferences, group studies, training courses, and similar activities.

In executing the Turkish Fertility Survey, HIPS has been working in close cooperation and collaboration with the Ministry of Health during all phases of the project. In addition, cooperation with the State Planning Organization (SPO) and the State Institute of Statistics (SIS) as well as with other universities, has been maintained through a Technical Advisory Committee. Also, the sampling frame for the Survey was provided by the SIS. As the TFS covers the entire country with special attention to rural/urban variation and differences among the geographic regions, the results will be of great value to the above mentioned organizations and are now available to them.

The TFS was funded from two sources - the Turkish Government and a UNFPA grant. The UNFPA grant consists of funds for pre-test, training for pre-test and the main survey, enumeration and interviewing (transportation, subsistence and salary), data processing, printing of survey documents and report, and wages for the field staff. The Government of Turkey provided office space, survey personnel, transportation, and a secretarial/administrative staff.

The Survey was carried out in technical cooperation with the World Fertility Survey (WFS) of the International Statistical Institute, The Hague. In this way the TFS forms one of a series, not only of the five-yearly demographic surveys conducted in Turkey since 1963, but also of the large number of fertility surveys being conducted all over the world in the context of the WFS programme. The WFS assisted the present project by providing comprehensive survey documentation, including questionnaires, which were adapted and translated for the TFS, by making available computer package programs specially developed for the processing of the survey data, and by offering technical advice as deemed necessary by HIPS.

CHAPTER IV METHODOLOGY

1. OUTLINE OF THE STUDY DESIGN

The Turkish fertility Survey covered the entire country, and involved the successful enumeration of 5,142 households and 4,431 ever-married women in the child-bearing ages during September-November 1978.

The sample for the TFS was a nationally representative equal probability (self-weighting) sample of households. The State Institute of Statistics had carried out a special field operation to delineate area units (blocks) of an average size of around 100 households, and to list all households and dwellings within selected blocks. These blocks formed the primary sampling units for the TFS, and 215 were selected with probability proportional to a measure of population size. Within blocks appropriate fractions of households were selected (in small clumps of 5 units each) from the already available lists so as to yield a self-weighting sample of households. The sample households were enumerated using a household schedule in which usual residents were listed and data obtained on members' age, sex, marital status, and educational level as well as on migration and employment histories. All ever-married women aged under 50 in the sample households were eligible for the individual interview. The TFS questionnaire was adapted from the standard version prepared by the World Fertility Survey.

In brief, the following are the main stages of the survey.

(i) Initially, the plan was to conduct, in addition to the women's survey, a large husbands' survey. However, the husbands' survey was subsequently dropped and replaced by a more detailed household interview incorporating questions on migration and employment.

(ii) The husbands' and the women's questionnaires were pre-tested during fall 1977, approximately one year before the main fieldwork. A second small scale pre-test was conducted to test the additional households questions introduced after the first pre-test.

(iii) Interviewers, supervisors and 'team leaders' for the main fieldwork underwent the same training course. The training was thorough and lasted for 17 working days. Of the 130 trainees, only 82 were retained for fieldwork, though some of the remaining were allocated office work.

(iv) Interviewers worked in teams: each consisting of 4-5 female interviewers, one or two supervisors (male or female), and one team leader (male). The household and the individual interviews were generally conducted during a single visit to the household, by the same interviewer. Where the interview could not be obtained, the interviewer was required to make upto 3 call-backs.

(v) Following the main fieldwork, a response reliability study was conducted in around one-sixth of the sample areas. This study involved reinterviewing a designated subset of the respondents, and was followed by a third or reconciliation interview where required.

(vi) Data processing began while the fieldwork was still in progress. The approach used was a flexible one, with the various operations over-lapping both in time as well as in terms of the personnel involved. All data processing was done at Hacettepe University, largely using its B-3500 computer.

(vii) Inspite of considerable efforts, the data processing phase (including manual editing, coding, machine editing, variable construction, and tabulation) extended over a period of around 18 months. Most of the tabulations became available in April 1980, and the present detailed though largely descriptive First Report was drafted by staff members of the Hacettepe Institute of Population Studies in the short period April-May 1980.

Field and office procedures for the collection and processing of the TFS data are outlined in the following sections. Further details of methodological interest are given in appendices to this report. These include an English translation of the questionnaire, a note on variable construction and data processing procedures, a description of sample design and outcome, and estimations of sampling variability for the main survey estimates.

2. THE QUESTIONNAIRES

Two questionnaires were used for the interview: a household schedule and an individual questionnaire. The household schedule was applied to each sample household. It involved the listing of all usual residents, and the recording of certain demographic and socio-economic characteristics. The objectives of the household interviews were: (i) to identify ever-married women aged under 50 eligible for the individual interview; (ii) to provide the base population necessary for the computation of various demographic rates in conjunction with the detailed fertility data collected in the individual interview; and (iii) to collect substantive data on education, migration and employment history of individual household members.

The listing of members was confined to usual residents, including resident non-family members such as domestic servants, friends and lodgers, but excluding temporary visitors. The interview was carried out in two parts (though generally during a single visit to the household). The first part involved a listing of members and recording of each member's relationship (to the head), age, place of birth, level of education, and marital status. On the basis of these data, the interviewer proceeded to interview each eligible woman in the household. Following this, the second part of the household interview was carried out. It consisted of detailed migration and employment history of each member aged 8 or over. The migration history obtained data on the location and duration of stay at the current residence as well as for up to three previous residences. The employment history obtained information on current or most recent work status, occupation (including any secondary occupation) and duration of work. Similar data were obtained for up to three previous jobs. Finally, current income of each member, as well as of the household as a whole, was asked.

The separation of the household interview into two parts was introduced to reduce the risk of interference with the detailed individual interview, which was considered to be the main focus of the survey.

The respondent for the individual interview had to be the eligible woman herself, and it was a desirable aim to conduct the interview in private as far as possible. The questionnaire consisted of seven sections as follows: (for details, see Appendix A):

RESPONDENT'S BACKGROUND

This included questions on current place, last place and childhood place of residence, on literacy and level of education of the woman, her father's occupation, and finally on her current age.

Recognizing the difficulty in obtaining accurate data on age, the following procedure was used. The respondent was first asked her age, and then also her date of birth (calendar month and year). The interviewer was specially trained to probe in detail where required (for example, by referring to other events in the respondent's life) and also to consult any documentary evidence available. The reported age and date of birth were compared for consistency, and further probing was done if a difference of more than 2 years existed. The interviewer plotted the date of birth on an "Events Chart" (see below) so that this date could be subsequently compared with dates of other events in the respondent's life. Finally, the interviewer recorded her comments concerning age-reporting: whether the information was reported directly without further probing; whether it was obtained from some document; whether extensive probing was necessary; or whether the reporting was believed to be only an approximate estimate.

BIRTH HISTORY

To achieve as complete a record as possible of all live-births, the number of living children (by sex and whether living at home) was obtained first, and then the number of dead children. This was followed by a probe to confirm that the total number of live births so obtained was correct. Next, data were obtained on the name, sex, date of birth, survivorship and age at death if applicable for each live-birth, starting with first birth. The following procedure was used for obtaining birth dates. Calendar month and year of birth was asked first. If the year was not reported, the years-ago the birth occurred was asked. Where the month could not be given, an attempt was made to obtain the information in some other form, for example as the season or religious period when the birth occurred. In all cases (except for the first birth) independent information on the interval (in months and years) since the previous birth was asked. All births were plotted on the Events Chart so that any gross inconsistencies could be identified during the interview itself.

Once all births were recorded, the interviewer probed each birth interval for wasted pregnancies. The date of occurrence and duration of each such pregnancy was recorded. Any live-births discovered here were added to the list of live-births previously obtained, at the appropriate temporal location.

The maternity history section also collected information on the length of breast-feeding of the last two births, and a question on whether the woman menstruated during the last month.

MARRIAGE HISTORY

This section recorded the dates of beginning and termination as well as the outcome of each marriage. Currently married women were asked the reason for and duration of each temporary separation (lasting at least 3 months) from the husband.

Again, special attention was paid to obtaining dates in the marriage history. For the beginning of each marriage the calendar year and month of marriage as well as the woman's age at marriage were obtained. For the termination of each past marriage, the date of termination and also the total duration (in months and years) for which the marriage lasted were asked.

CONTRACEPTIVE KNOWLEDGE AND USE

In this section knowledge and use of various contraceptive methods were recorded method by method. First, the respondent was asked to name spontaneously the methods she had heard of. Then the interviewer read out a description of the methods not mentioned by the respondent and asked questions on knowledge and ever-use.

A number of additional questions were included on this topic: the first method ever-used and the woman's parity at first use; attitude towards sterilisation; knowledge and use of the various sources of family planning advice and supplies; the distance and time to the nearest such place; the place last visited (if any) and intentions regarding future visits; knowledge of the location, cost and distance of the source of supplies for the pill, IUD, and condom; and finally, experience of and attitudes towards induced abortion.

FERTILITY REGULATION

Information was sought on the perceived capacity to have children and the desire for more children, including the number desired, preferences concerning the sex of the next child, and whether the previous pregnancy was wanted. If the woman had used any contraceptive method, information was sought on current method being used, method used in the open birth interval and that used in the last closed interval. For those who had never used contraception, information was sought on intentions regarding future use.

WORK HISTORY

Detailed occupational data was sought about respondent's current or most recent work since marriage, and also about work before first marriage. For working women, questions were asked concerning means of child care available and husband's attitude towards wife's working. Expected means of support in old age, specifically financial help from children, were also elicited.

HUSBAND'S BACKGROUND

The last section includes information on current husband's age, and on current or last husband's childhood place of residence, occupation, employment status and education.

EVENTS CHART

This special chart was prepared to facilitate the interviewers' task in obtaining dates of vital events. One chart for each respondent was completed during the interview itself.

On this chart each vital event is plotted on a linear scale on the time dimension (see Appendix A). Duration in years before the interview along with the corresponding calendar years are premarked on the chart. After obtaining the respondent's date of birth and current age, the interviewer writes down her retrospective age corresponding to each duration before the interview. Following this, other events (births and marriages) can be plotted on the scale, and internal consistency of the dates and intervals given can be easily varified during the interview.

3. PRE-TEST

The pre-test for the Turkish Fertility Survey was conducted in purposive selected areas in and around Ankara during the first half of 1977. The main objectives of the pre-test were to test the household schedule and the husbands' and women's questionnaires, and also:

- to ensure that the interview flows smoothly and to test the language of the questionnaire.
- to find out if any questions would cause embarrassment to the respondents and hence would require special care on the part of the interviewer.
- to measure respondent's reaction to specific questions.

- to collect operational information for the main survey on such matters as gaining access to the respondents and average duration of the interview.

Around 150 women's interviews and the same number of husbands' and household interviews were conducted. The pre-test areas were purposively selected as follows: three villages around 70-90 km from Ankara; Kirikkale, a district centre 80 km from Ankara with a population of 130,000; a heavy industrial area; and four 'gecekondus' (shanty town) areas in Ankara.

Female interviewers conducted the women's survey, and male enumerators conducted the husbands' and household interviews. All field staff attended debriefing sessions after the pre-tests, during which they reported on their experience and on questions they had difficulties with, questions which required extra probing. Notably, all interviewers reported that extra probing was required to obtain dates, durations and ages. While revising the questionnaire use was made of the written comments provided by the pre-test interviewers.

On the basis of the pre-test experience, the women's questionnaire was improved. Also, it was decided to chop the husbands' survey, but at the same time to expand the household schedule to include questions on migration and work history of each household member. The husbands' survey was abandoned partly due to difficulties experienced in contacting and interviewing of husbands, and partly due to a redefinition of the survey objectives. The enlarged household schedule was pre-tested on a small scale in December 1977.

Another conclusion to emerge from the pre-test experience supported both by the supervisory and interviewing staff, was that the training period for the main survey should be relatively long, and also that the training programme should include many practice interviews in the class room as well as in the field.

4. RECRUITMENT AND TRAINING FOR THE MAIN SURVEY

Three types of personnel were required for fieldwork: interviewers and supervisors (females), team leaders (male), and drivers (male). Drivers were recruited from the regular work force of the Ministry of Health. Supervisors were concerned mainly with scrutiny of interviewers' work, while team leaders were responsible for general organisational and leadership functions, including responsibilities for creating a good working atmosphere and establishing contact with local officials during fieldwork.

It was decided that interviewers and supervisors should be educated at least to the high school level, while team leaders should have previous experience in similar surveys and should, if possible, be older than interviewers and supervisors. A single training course was conducted for the various categories of field staff. From a total of 178 applicants, 42 of whom were students from various departments of Hacettepe University, 130 were selected for training.

The pre-test had revealed that the duration of training should be longer than originally planned, and that the trainees should actually conduct as many practice interviews as possible during their training period. Thus the training lasted for 17 days, starting from August 15. Morning sessions, which were attended by the entire group, were devoted to explanations of the questionnaire and related theoretical issues; lectures were given on interviewing techniques, problems expected during fieldwork, as well as on human reproduction, contraception and sterilisation. During the afternoon sessions, trainees were divided into groups of 9 to 13 persons for 'role-playing' and class room practice interviews, during which the trainees interviewed each other under supervision. Candidates were also encouraged to interview their relatives and friends outside the regular training course. Each day of training started with a discussion of the problems arising during the previous day's practice interviews.

Fieldwork practice interviews were conducted in Ankara and in surrounding villages. A total of 235 women were interviewed during these rehearsals.

At the end of the training period, 82 candidates were selected for the main fieldwork. The more senior of these had already been designated as team leaders. Supervisors were chosen on the basis of performance during the training course, and were given one day's extra training.

5. ORGANISATION AND LOGISTICS OF FIELDWORK

Most of the interviews for the main survey were conducted during September and October 1978, and all fieldwork was completed by the end of November. The field staff were divided into 13 teams, each team consisting of one team leader, usually one but sometimes two field supervisors, and typically 4-5 but occasionally up to 7 interviewers. Higher level supervision was provided by the project director, two assistant directors and the field directors.

Composition and size of the teams and allocation of the work were carefully determined to ensure an equitable distribution of work between interviewers and between teams. Assignments to individual interviewers were also influenced by the requirements of the Response Reliability Study (see below). On the basis of estimations from the pre-test of the average duration of the interview (which was around one hour including the household schedule), average non-interviewing time spent in locating and contacting sample addresses, and travel time between sample areas, the total number of person-days required for each region were calculated. In determining the fieldwork schedule, priority was given to remote areas which were difficult to reach. An important consideration was to complete fieldwork in eastern Turkey before the onset of winter.

Work was reallocated to compensate for differences in the speed with which different teams worked during the survey.

In certain urban areas, particularly in Cukurova (southern Turkey) and the Black Sea region, respondents not being available at home was a serious problem. In several cases, a revisit by the team to the area 10-12 days after the first visit had to be arranged. Even so, many respondents could not be contacted after three and sometimes after four visits to the household (see response rates in Appendix D). In certain other areas, high non-response occurred because it was not feasible to maintain a team in the area for more than a day or two.

In cases where the interviewer had failed to record correctly all answers, the respondent was revisited by the supervisor (if the number of missing/incorrect items were small) or by the original interviewer (if the interview had to be largely redone).

6. RESPONSE RELIABILITY STUDY

A post-enumeration Response Reliability Study (RRS) was conducted in an attempt to measure response variability. In outline, the methodology of the RRS was as follows.

The 215 sample areas for the main survey were divided into 33 geographically contiguous groups (strata), and out of each group one area was semi-purposively designated for the study. All households (a total of 968) in the 33 designated areas were eligible for the reinterview survey. Each area was revisited by the same team of interviewers who did the first interviews in the area. The field logistics were arranged such that the revisit could be made by the team on its 'return journey' after completion of the main survey fieldwork within the stratum. This resulted in an average time interval of around 3 weeks between the original and the reinterview surveys.

Within an RRS area, assignments were made so as to ensure that, for a given respondent, the two interviews were conducted by different interviewers. Further, within teams, the interviewers' allocations were randomised as far as possible. Actually, the assignments were worked out on the basis of 'clumps' of around 5 households within each area: each clump was originally allocated to a pair of interviewers, and to a different pair during the reinterview.

The questionnaire for the RRS was a shortened version of the main survey individual interview questionnaire. Otherwise, in working, layout and even question numbers, the two questionnaires were identical. The RRS questionnaire included the following items:

- age, date of birth and education of the respondent
- maternity history (dropping the questions on other pregnancies and breast-feeding)
- full marriage history (but excluding questions on temporary separations)
- contraceptive knowledge and use, method by method (excluding questions on availability of family planning services and supplies, and on induced abortion)
- the complete fertility regulation section as in the main survey
- age and education of the husband

No questions were included on the women's work history or on the husbands' occupation.

The questionnaires for the first interview (main survey) were coded on specially designed coding sheets at the Institute of Population Studies. During the reinterview survey, the supervisor coded each reinterview on to the same sheets, so that discrepancies between the two interviews could be easily identified.

If a discrepancy occurred for any of the important items such as the number of children ever-born, the reinterview was followed by a third or reconciliation interview conducted by the supervisor. Further, each of the less important items was given a score depending on its importance; if the total score of discrepant answers exceeded a certain limit, a reconciliation interview was held. Once it had been decided to conduct a reconciliation interview, it covered all items in the questionnaire and not the discrepant items only. The 'true' answer as well as the reasons for discrepancy were coded.

The outcome of the study was as follows:

- households selected for the RRS	968
- eligible women interviewed in these households during main survey	657
- women reinterviewed	560 (85.2%)
- women interviewed a third time (reconciliation interview)	193

The major reason for non-response (of around 15 per cent) during the RRS was the failure to find respondents at home. Refusals were also somewhat more common than in the main survey. One in three of the reinterviewed women had to be interviewed a third time to reconcile differences between the first two interviews.

Results for the RRS will be published in a separate report.

7. DATA PROCESSING

Data processing of the TFS began in mid-September 1978, one week after the fieldwork commenced, and was completed in late April 1980. During this time, coding, punching and punch verification of the Response Reliability Study were also carried out. One senior supervisor, responsible for editing, coding and data processing, and one assistant supervisor worked full time during this period.

Forty-five candidates were trained for one week for manual editing and coding. From among these, 35 editors and coders were selected. One editor was assigned the job of checking questionnaire identification against sampling lists. The remaining 34 worked on general editing of the questionnaires for one week, following which 20 were transferred to coding of edited questionnaires. At this stage the open-ended questions were not coded. This operation of editing and coding work was completed by the first week of November 1978.

At the next stage, editing and coding staff were reduced from 35 to 12: 6 persons worked on edit-verification and 6 on the coding of open ended questions. The operation continued till the first week of February 1979. Hence manual editing and coding of the household and individual questionnaires required a total of around 400 person weeks, apart from the time spent by the two supervisory staff. Also, one editor continued to work on the correction of questionnaires during the machine editing phase till the end of August 1979.

Only two key-punchers and two punching machines were available at the Institute. Key punching started as soon as edited and coded questionnaires started becoming available. Punching and verification were completed at the end of March 1979. A considerable amount of overtime work was necessary on the part of the two key punchers.

All computer processing was done at the Hacettepe University computer centre by the TFS data processing supervisors.

Preparation for and the execution of the machine editing phase proceeded simultaneously with other data processing operations, just as manual editing and coding proceeded simultaneously with fieldwork on the one hand and key punching on the other. However, machine editing for interval consistency (as distinct from editing of format and identification numbers) began only after manual editing was completely finished. A variety of interval consistency checks were applied simultaneously so as to facilitate identification of any source of error. In fact three separate edit programs were run simultaneously, and error lists of these were corrected at the same time by reference to the questionnaires. The bulk of the editing was completed by the end of August 1979, though some further corrections continued till January 1980. In the meantime, the WFS package program Date Edit and Imputation (DIER) as well as the tabulation package COCENTS were installed on the Hacettepe University computer (B-3500), while parameters for some of the standard tabulations were created on an IBM machine using the WFS COCGEN package. For tabulating marginal distributions and editing of questionnaires, existing programs at the University were modified and developed; a new update program (in COBOL) was developed, and a COBOL based program for variable construction was also written and tested.

By using this flexible approach - combining standard package programs made available by the WFS, with new software developed at Hacettepe - the final tabulations were produced by late April 1980. Finally, sampling errors for the main survey estimates were computed by using the WFS package program CLUSTERS.

Further data processing details are given in Appendix B.

Data processing took around one-and-a-half times as long as originally planned. This delay of over 6 months was caused by several factors: (i) considerable difficulties were experienced in the installation of some of the standard packages on the Hacettepe computer; (ii) a great deal of software developmental work was necessary, and (iii) practically all programming work had to be done by a single systems analyst. Nevertheless, this phase of the TFS operation has contributed a great deal to future research capability at the Hacettepe Institute of Population Studies.

8. SURVEY TIME-TABLE

The timing of the actual implementation of the project did not differ significantly from the time-table originally planned, except for a two month delay in the start of fieldwork and a more substantial delay in the data processing phase. The First Report is being published around 20 months after the end of fieldwork, which compares well with the 16-17 months originally planned.

The actual timing of the operations is as follows:

Activities:	Time:
Preparation of questionnaire (English)	March, 1977
Translation and back translation of questionnaire	April-July, 1977
Sample design, selection, mapping and listing	April-September, 1977
Preparation of Interviewers' Instructions for pre-test	July, 1977
Reproduction of pre-test of questionnaire and manual	August, 1977
Pre-test - Training	September, 1977
Fieldwork	September, 1977
Evaluation	September-October, 1977
Questionnaire finalization	November-December, 1977
Manuals finalization	January-February, 1978
Programming : System design	January, 1978
Editing	February-March, 1978
Recoding	April-May, 1978
Tabulation	June-July, 1978
Printing of Documents	April, 1978
Updating of dwelling list in sample areas (SIS)	March-May, 1978
Field logistics and reproduction of sample lists	March-June, 1978
Recruitment of field staff and preparation of training materials	July-August, 1978
Supervisors' training	August-September, 1978
Interviewers' training	August-September, 1978
Fieldwork	September-October, 1978
Training of Editor/Coders	August-September, 1978
Editing-coding	September 1978-January, 1979
Punching and verification	December 1978-February, 1979
Reliability Study: Preparatory work	August, 1978
Fieldwork	October, 1978
Cleaning of tape	March 1979-January, 1980
Recoding of variables	February-March, 1980
Tabulations	March-April, 1980
Sampling errors computation	June, 1980
Draft of Country Report No. 1 (English)	April-May, 1980
Finalization of report	June, 1980
Printing of Report	June-July, 1980

FINDINGS

CHAPTER V BACKGROUND CHARACTERISTICS OF RESPONDENTS

To place the substantive findings of the survey in their proper context, this chapter describes the background characteristics of the survey respondents.

Age and sex composition of the population enumerated in household is considered in Section 1. Since eligible women are selected on the basis of the data collected in the household interview, the quality of the sample for the individual interview is determined by completeness of coverage and quality of enumeration in the household interview.

In the remainder of this chapter, the various socio-economic background variables used in cross-tabulation of the individual interview data are described.

1. POPULATION ENUMERATED IN THE HOUSEHOLD INTERVIEW

The sample for the Turkish Fertility Survey consisted of an equal probability sample of households. Within each household, all usual residents were listed and (among other things) data on age, sex and marital status obtained. On the basis of these data, ever-married women aged under 50 were identified for the individual interview.

A total of 5,137 households were successfully interviewed. These households contained 27,056 persons including 4,769 ever-married women aged under 50. Of the latter, 4,431 eligible women were successfully interviewed.[1]

Table VI shows age-sex distribution and sex-ratio (males per one hundred females) for the enumerated population compared to the 1975 Census. In broad age groups the age distribution in the survey is close to that in the census: around 40 per cent of the population is aged under 15, 26-27 per cent aged 15-29 and 20 per cent aged 30-49. There is some unsystematic difference for individual five-year age groups, though even here the overall agreement is excellent. However, the sex-ratios (males per 100 females) from the two sources does not agree well: the sex-ratio for the total population enumerated in the survey is 95, the corresponding figure from the census being 103. The largest difference is for the age group 15-29, for which the sex-ratio from the survey (88 males per 100 females in the age group) is very much lower than that from the census (106). A number of possible reasons for the discrepancies may be cited:

Unlike the census, the survey universe excludes institutional populations, such as the armed forces. Probably a substantial proportion of the excluded population consists of about males in the working ages. Further it is possible that family members (frequently adult males) working away for a prolonged period tend to get classified as "usual residents" of the household in the census, but not so in the more carefully conducted small scale survey. The census probably is also more prone to under-enumeration of female children. Discrepancies can also be caused by different patterns of age misreporting in the two sources. Finally, sampling and nonsampling errors in the survey can by no means be ruled out.

In either case, sex-ratios tend to have lower values in the middle age groups, for example for aged 15-44 in the survey. This is probably owing to outmigration of male workers.

Note that in the survey, the sex-ratio for age-group 45-49 is substantially higher than that for age-group 50-54. This would imply a shifting of women from the former to the later age-group, i.e. incorrect exclusion of some of the eligible women from the individual interview sample. The same effect is indicated by age-heaping (see below).

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[1] The sampling procedure and response rates by major geographical domains are described in Appendix D.

TABLE V-1: AGE-SEX COMPOSITION OF THE ENUMERATED POPULATION

	TURKISH FERTILITY SURVEY, 1978				POPULATION CENSUS, 1975 (1% sample results)			
	All	Male	Female	Sex-Ratio	All	Male	Female	Sex-Ratio*
All	100.0	100.0	100.0	95	100.0	100.0	100.0	103
Age Group								
0-4	13.3	13.5	13.0	98	13.5	13.6	13.5	104
5-9	13.8	14.4	13.1	104	13.6	13.8	13.5	105
10-14	13.1	13.5	12.8	100	13.0	13.3	12.6	109
15-19	11.3	10.9	11.7	89	11.1	11.3	10.9	107
20-24	8.1	7.5	8.6	83	8.8	9.0	8.6	107
25-29	6.8	6.6	7.0	90	7.1	7.1	7.0	104
30-34	5.4	5.2	5.5	91	5.4	5.3	5.5	99
35-39	4.6	4.4	4.8	88	5.4	5.1	5.8	99
40-44	4.8	4.7	5.0	91	4.4	5.3	5.4	102
45-49	4.6	5.0	4.2	115	4.3	4.4	4.2	109
50-54	4.2	4.0	4.4	87	3.2	3.2	3.3	101
55-59	2.6	2.7	2.5	105	7.9	1.9	2.0	99
60-64	2.2	2.3	2.1	102	2.7	2.5	2.8	94
65-69	2.0	2.0	2.0	94	1.8	1.7	1.9	95
70-74	1.5	1.4	1.4	97	1.4	1.3	1.5	88
75-79	0.9	0 9	1.0	89	0.7	0.7	0.7	92
80+	0.8	0.6	0.9	61	0.6	0.4	0.8	57
0-14	40.2	41.4	39.0	101	40.1	40.7	39.6	106
15-29	26.2	25.1	27.3	88	27.0	27.3	26.6	106
30-49	19.4	19.5	19.4	95	20.5	20.1	20.8	100
50+	14.2	14.0	14.3	93	12.4	11.9	13.0	94

* Males per 100 females
Source: Table 0.1.1

Table V-2 shows that the reported ages tend to be heaped at values ending in '0' and '5'[1]. The heaping is more pronounced for the female population than for the male. This heaping can have an important consequence when data are classified by conventional five-year age groups such as 30-34, 35-39, etc.: there would be a tendency for younger women (say aged 29) to be shifted into an older age group (say group 30-34).

The pronounced heaping at age 50 (see Table V-2) implies that some women actually aged under 50 (hence eligible for the interview) could have been incorrectly classified as aged 50 (and hence ineligible).

TABLE V-2: WHIPPLES' INDEX OF AGE PREFERENCE AT AGES ENDING IN '0' AND '5'

AGE	15	20	25	30	35	40	45	50	55	60
MALE	1.11	0.91	1.09	1.37	1.38	1.65	1.67	1.52	1.81	2.24
FEMALE	0.99	1.16	1.36	1.52	1.40	1.87	1.64	1.99	2.09	2.81

Source: Table 0.1.1

Table V-3 shows the distribution of certain characteristics of the enumerated population by region and type of place. According to the achieved sample, each of the three regions, West, Centre and East, has approximately a quarter of the population, the remaining quarter being equally divided between South and North. In accordance with the definition of urban-rural used in the survey (see below), 44 per cent of the

[1] The index in Table V-2 is computed as follows. At age 30, for example, it is the number of persons reported as aged 30, divided by one-fifth of the total number reported at the five ages 28 to 32.

population is urban and 56 per cent rural. However, there are relatively more eligible women per person in urban areas. This, coupled with the fact that response rates at the individual interview stage are somewhat higher in the urban sector, results in 50 per cent of the total interviewed women being urban.

We may note that the sex-ratio is higher in urban compared to rural areas (97 versus 93). At the same time women aged 15-49 form a comparatively larger percentage of the total urban population (26 versus 22 for rural). This is probably due to the pattern of rural to urban migration which is both sex and age selective.

TABLE V-3: DISTRIBUTION OF THE ENUMERATED POPULATION BY REGION AND TYPE OF PLACE

	West	South	Centre	North	East	All Urban	All Rural	Total
% Distribution of Population	27	12	26	13	22	44	56	100
Sex-ratio (Males for 100 Females)	97	99	93	91	96	97	93	95
Women Aged 15-49 per 100 Persons	26	24	25	23	21	26	22	24
Ever-Married Women Aged 15-49 for 100 Persons in Population	19	17	19	17	16	19	17	18
% Distribution of Eligible Women in Households	29	12	27	12	20	48	52	100
% Distribution of Women Interviewed	30	12	27	11	20	50	50	100

Source: Tables 0.1.1, 0.1.3

2. BACKGROUND VARIABLES

In the cross-tabulation of individual interview data, eight background variables have been used in this report. The variables and the size of their categories are shown in Table V-4. A brief description of the variables follows.

(i) Region. The country was divided into five regions on the basis of a number of socio-economic and geographic characteristics. The regions in fact formed the major sampling domains and their boundaries are shown in the map in Appendix D. A description of the regional characteristics has been given in Chapter I.

(ii) Type of Place. In classifying the sample areas as urban or rural, no absolutely fixed criterion regarding size of the locality was used. Instead, all provincial and district centres were classified as urban. It should be noted that the definition used here is distinct from the two other definitions employed elsewhere: localities exceeding two thousand or those exceeding ten thousand in population are sometimes defined as urban. The present definition is somewhere in the middle of these two[1].

(iii) Size of Place. Here, 1970 population figures were used to classify sample localities into eight groups as follows. The groups are relatively uniform in population size (and hence in sample size) as shown in Table V-4[2].

Metropolitan:	The cities of Ankara, Istanbul and Izmir
Large City:	localities with 1970 population over 50,000
Medium City:	population 25,000-50,000 in 1970
Small City:	population 10,000-25,000
Town:	population 2,000-10,000
Large Village:	population 1,000-2,000
Medium Village:	population 500-1,000
Small Village:	localities with population less than 500 persons in 1970.

1 The two-thousand limit in terms of 1970 population was used to define the urban sampling domain for the present study. See Appendix D.

2 These size groups formed explicit strata for sample selection.

(iv) Woman's Education. Those unable to read (on the basis of response to a simple question "can you read?") were classified as illiterate. Those who claimed to be able to read but had not completed primary school were classified as literate. The categories 'primary' and 'higher' refer to the highest level completed. Nearly 50 per cent of the women in the sample are illiterate; the other large category is primary completed (30 per cent).

	Distribution by Age (row percentages)					Distribution by Category (col. percentages)					Total Sample
Age	<25	25-34	35-44	45+	ALL	<25	25-34	35-44	45+	ALL	Size
TOTAL	26.1	34.4	28.3	11.2	100.0	100.0	100.0	100.0	100.0	100.0	4431
TYPE OF PLACE											
All Urban	26.7	37.2	26.3	9.9	100.0	51.5	54.5	46.5	44.8	50.3	2230
All Rural	25.5	31.4	30.5	12.6	100.0	48.5	45.5	53.5	55.2	49.7	2201
REGION											
West	23.3	37.1	27.6	11.9	100.0	27.2	32.9	29.6	32.1	30.4	1346
South	20.9	40.4	29.0	9.7	100.0	9.3	13.6	11.9	10.0	11.6	513
Centre	28.4	28.9	30.1	12.6	100.0	29.8	23.1	29.1	30.7	27.4	1213
North	27.5	35.4	26.1	11.0	100.0	11.7	11.4	10.2	10.8	11.1	491
East	29.5	33.4	27.8	9.3	100.0	22.1	19.1	19.2	16.3	19.6	868
SIZE OF PLACE											
Metropolitan	22.4	38.4	26.5	12.7	100.0	12.5	16.4	13.7	16.5	14.6	648
Large City	28.7	38.9	26.0	6.4	100.0	17.3	17.8	14.4	9.0	15.7	697
Medium City	29.7	34.6	26.0	9.7	100.0	9.0	8.0	7.3	6.8	7.9	350
Small City	25.8	37.7	24.8	11.7	100.0	7.1	7.9	6.3	7.4	7.2	318
Town	26.9	33.9	27.2	12.0	100.0	14.6	14.0	13.6	15.1	14.2	628
Large Village	24.3	30.6	31.2	13.9	100.0	10.5	10.0	12.4	13.9	11.2	497
Medium Village	26.6	33.5	28.9	11.0	100.0	16.9	16.2	16.9	16.3	16.6	734
Small Village	25.1	26.8	34.7	13.4	100.0	12.1	9.9	15.5	15.1	12.6	559
WOMANS EDUCATION											
Illiterate	17.9	31.5	35.1	15.5	100.0	33.7	45.2	61.0	68.1	49.3	2183
Literate	19.8	36.3	33.0	10.9	100.0	9.4	13.1	14.5	12.0	12.4	551
Primary	41.4	35.7	17.3	5.6	100.0	48.3	31.6	18.6	15.3	30.4	1348
Higher	28.4	43.8	21.2	6.6	100.0	8.6	10.1	5.9	4.6	7.9	349
HUSBAND'S EDUCATION											
Illiterate	11.5	23.5	42.0	23.0	100.0	5.7	8.9	19.4	26.7	13.0	578
Literate	13.3	32.3	38.3	16.2	100.0	10.6	19.6	28.3	30.1	20.9	926
Primary	31.3	38.3	23.2	7.2	100.0	58.3	54.2	39.8	31.3	48.6	2155
Higher	38.0	34.1	20.3	7.6	100.0	25.3	17.3	12.5	11.8	17.4	772
COUPLE'S LITERACY STATUS											
Neither Literate	10.6	22.2	43.5	23.7	100.0	4.7	7.4	17.7	24.3	11.5	510
Only One Literate	20.0	34.3	32.5	13.2	100.0	30.4	39.7	45.5	46.6	39.7	1759
Both Literate	34.7	37.2	21.4	6.7	100.0	64.9	52.9	36.8	29.1	48.8	2162
WOMAN'S WORK STATUS											
Not Working	31.7	34.8	25.0	8.5	100.0	60.7	50.5	44.1	37.6	49.9	2212
Family Farm	21.9	31.3	32.2	14.6	100.0	29.9	32.5	40.5	46.2	35.6	1579
Other Farming	15.2	27.9	42.6	14.3	100.0	2.7	3.7	6.9	5.8	4.6	204
Services	15.9	51.1	21.6	11.4	100.0	3.1	7.6	3.9	5.2	5.1	227
Industry	19.6	40.7	27.3	12.4	100.0	3.5	5.6	4.5	5.2	4.7	209
HUSBAND'S EMPLOYMENT STATUS											
Unpaid Worker	61.2	25.4	10.0	3.4	100.0	13.8	4.3	2.1	1.8	5.9	260
Employee	28.8	37.3	25.1	8.8	100.0	56.1	55.1	44.9	40.0	50.8	2251
Self-Employed	16.0	30.5	37.0	16.5	100.0	20.4	29.7	43.6	49.0	33.4	1479
Employer	21.2	38.9	29.2	10.7	100.0	7.0	9.8	8.9	8.2	8.6	383
Never-Worked	53.4	27.6	10.3	8.7	100.0	2.7	1.1	0.5	1.0	1.3	58

Source: Table 1.6.3

(v) Husband's Education. This refers to the level of education of the current (if any) or last husband. Categories are the same as those for woman's education, but this variables provides a somewhat better split of the sample. Around 50 per cent of the husbands were primary school graduates, 20 per cent had not completed primary school but were literate. Over one in six had completed at least secondary school.

(vi) Couple's Literacy Status. Since few illiterate husbands are expected to have literate wives, this variable essentially splits the category 'illiterate' in (iv) into two parts: those whose husbands were also illiterate, and those whose husbands were literate (or educated to a higher level).

(vii) Woman's Work Status. This variable refers to the respondent's current status. One-half of the women were not working and over a third worked on the family farm. Other farming, work in industry and work in services each accounts for only around 5 per cent of the sample.

In the questionnaires, "work" was defined as any occupation apart from usual housework, paid in cash or in kind or unpaid, on own account or for a family number or for someone else, done at home or away from home. Nevertheless, the distinction between the two larges categories 'not working' and 'working on family farm' - may not always have been conveyed to the respondent.

(viii) Husband's Employment Status. This refers to the most recent status of the current or last husband. One-half of the husbands were employees and a third were classified as self-employed. In the marginal or traditional sector, the self-employed category may include those who hire their labour but on an irregular basis.

3. RELATIONSHIP BETWEEN AGE AND BACKGROUND CHARACTERISTICS

It is to be expected that women with different background characteristics also differ in their distribution by age. Table V-4 shows the cross-tabulation of the sample by current age and background variables. The results are presented in two forms:

(i) Within each background variable category, the per cent distribution by age is shown. This identifies categories which contain relatively too few or too many younger women. Some of the observed substantive differences between different categories may be simply due to differences in age composition.

(ii) The second panel shows the distribution of each age group according to the background variables. Of course, these distributions are similar to the corresponding marginal distribution for the total sample, but they indicate more clearly the changing pattern with time. In any case, since much of the analysis involves control by age, the distributions within age groups are of interest in their own right.

The pattern may be summarized as follows:

Urban women are slightly younger than rural women: in the former 64 per cent and in the latter 57 per cent are aged under 35. Particularly women aged 25-34 are over-represented in the urban sector.

The difference by region is less marked, except for the notable under-representation of women aged 25-34 in the Central region. The pattern by size of place shows in greater detail the already mentioned urban-rural difference. As we move from metropolitan areas to small villages, the percentage in the 25-34 age group declines from 38 to 27, and that in the 35-44 age group increases from 26 to 35. In other words, women in metropolitan areas are on the average younger than women in small villages. However, for women aged under 25 the pattern is affected by age at marriage: fewer of the youngest women in urban areas are ever-married and hence in the sample.

Younger women are better educated than older women: only one-third in the youngest age group but two-thirds in the oldest age group are illiterate. The notable change is the increasingly large proportion who complete primary school (there being little change at higher levels). Consequently, the 'primary' category has a substantial over-representation of women aged under 25, while the 'primary and 'higher' categories have relatively fewer women aged 35 and over.

A similar pattern exists for husband's educational level, except that there is a more marked expansion of the 'higher' category. For the youngest age groups, under 6 per cent of the husbands are illiterate, while one in four have completed at least secondary school. In the older age group, one in four are illiterate, while only one in eight have completed secondary school.

The same is true of couples' literacy status. In the youngest age group, 5 per cent but in the oldest age group around 25 per cent of the couples are illiterate. Of literate couples (both husband and wife literate) nearly three-quartes are aged under 35; of illiterate couples only one in four are aged under 35.

A higher proportion of younger women are not working. However, except for the youngest age group, the shift with age is only between not working and working on the family farm: in every age-group only around 15 per cent report working outside the family farm.

A majority of the women with husbands as unpaid workers are aged under 25. As we move from older to younger women, the 'employee' category expands, and, more markedly, the 'self-employed' category shrinks. In other words, husbands of older women are relatively speaking, more often self-employed, while those younger women are more often employees or unpaid workers.

4. ASSOCIATION BETWEEN BACKGROUND VARIABLES

In the present report, the data have been tabulated using one background variable at a time. The only exception is that within regions, a further break-down by type of place is generally introduced. The regions differ greatly in the percentage urban as shown below[1].

REGION	WEST	SOUTH	CENTRE	NORTH	EAST	ALL
% URBAN	64.1	56.5	51.7	27.1	36.5	50.3

Nearly two-thirds of the Western women are urban compared to only one-third in the North and East. This fact accounts for some of the observed regional differences discussed in later chapters.

Inter-relationships of other background variables have not been tabulated at present. However, we may expect the usual strong relationship between husband's and wife's education, and between education and urbanization, etc.

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1 Note that these figures refer to the urban-rural distribution of eligible women interviewed, and not to the total population.

CHAPTER VI NUPTIALITY

1. INTRODUCTION

In Turkey, child-bearing takes place almost exclusively within marriage. Marriage, generally sanctified by religious or civil ceremony, has hitherto been a stable institution.

In the Turkish Fertility Survey, the following data on marriage history were obtained.

(i) The household questionnaire was used to record age, sex and marital status of each usual resident of the household.

(ii) The individual questionnaire was applied to ever-married women aged under 50, selected on the basis of the household interview. Though the household and the individual interviews were conducted during the same visit to the household and by the same interviewer (often the respondent was also the same), information on age and current marital status of the woman was obtained again in the individual interview.

(iii) For each marriage, the woman was asked the month and year of marriage; the question was worded so as to record the date of de facto beginning of cohabitation rather than simply the formal date of marriage. Whether or not the respondent was able to give the date of marriage, a direct question on age at marriage was asked in all cases.

(iv) Similarly, the month and year of effective termination of each past marriage were asked; an attempt was made to obtain in addition the total duration (years and months) for which the marriage lasted.

(v) For the most recent five years, data on temporary separations each of duration three months or more were obtained. For details see the questionnaire in Appendix A[1].

On the basis of the marriage history data, a number of variables were constructed, namely: the age at first marriage; duration in years since first marriage; the total number of months spent in the married state since first marriage; and whether the woman had been continuously in the married state for the past five years. Generally, these variables require dates coded down to the level of the month. Many respondents were unable to specify calendar months of occurrence of events and, consequently, extensive month-imputation was necessary. The procedure used is outlined in Appendix C[2].

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[1] Those who reported themselves as currently married, but with husband away, were probed to determine whether the separation was permanent. This, however, resulted in reclassification of only one woman from 'currently married' to 'separated'.

[2] The form in which the marriage history data were obtained is as follows (percentages):

	Month and Year reported	Only Year Reported	No. of Cases
Respondent's Birth	43	26	4,431
Current Marriage	62	10	4,257
Past Marriages:			
Beginning	62	12	4,627
Termination	52	48	370

Though age at marriage and duration of marriage were asked in all cases, in the present report they have been used only in cases where the calendar year could not be obtained.

In the following sections we describe trends and differentials in age at marriage on the basis, first, of the household interview data (Section 2), then the individual interview data (Section 3), and finally data from the two sources combined (Section 4). Next, we briefly consider marriage stability (Section 5), and exposure within marriage (Section 6).

2. CURRENT MARITAL STATUS BY AGE

Table VI-1 shows the distribution of women aged 15-49 by current marital status for the whole country, and Table VI-2 shows percentages ever-married by type of place and region.

Marriage is universal, in urban as well as in rural areas, and in all regions. Though there are some fluctuations in the detailed figures, it is possible that 1 per cent of the urban women and 1-2 per cent of those in the Western region never marry.

Marriage is relatively early: one in six of those aged 15-19 and nearly three quarters of those aged 20-24 are ever-married; 90 per cent or more of the women aged 25-29 are married in all categories shown in Table VI-2. On the other hand, in contrast to other countries such as Bangladesh, Pakistan and Indonesia, extremely early or child marriage does not exist in Turkey: in fact only 7 women aged under 15 were reported to be ever-married in the survey. The singulate mean age at marriage, following Hajnal, is calculated as 20.5 years.[1]

There is some urban-rural difference in age at marriage. The difference is more pronounced by region, with later marriage in West and South compared to Centre, North and East.

Table VI-1 indicates that marriage is very stable - even though the figures are affected by the incidence of remarriage. Under 1 per cent of all women aged 15-49 are divorced or separated, and this is true of all the individual five-year age groups.

TABLE VI-1: DISTRIBUTION OF WOMEN - BY AGE AND CURRENT MARITAL STATUS

	18-19	20-24	25-29	30-34	35-39	40-44	45-49	15-49
Single	77.8	26.2	7.5	2.6	0.9	1.6	0.7	26.0
Currently Married	21.7	72.1	90.5	93.5	95.2	92.7	89.4	70.9
Widowed	0.1	0.9	1.3	3.1	2.9	4.4	8.9	2.3
Divorced	0.2	0.4	0.2	0.3	0.5	0.4	0.5	0.3
Separated	0.2	0.4	0.5	0.5	0.5	0.9	0.5	0.5
All	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Table 0.1.2B

[1] John Hajnal, Age at Marriage and Proportions Marrying, Population Studies, 7(2), 1953. See also, Methods and Materials of Demography, U.S. Dept. of Commerce Bureau of the Census, Vol. 1, October 1971, p. 295. The SMAM is a crude measure compared to the more detailed data on age at marriage available in the present survey. As will be seen later, it is substantially higher than the age at which women in Turkey marry on the average. Probably, the SMAM is affected by the recent trend towards later marriage.

TABLE VI-2: OF ALL WOMEN IN THE HOUSEHOLD SURVEY, THE PERCENTAGE EVER-MARRIED - BY AGE, TYPE OF PLACE AND REGION

	15-19	20-24	25-29	30-34	35-39	40-44	45-49
All	15.7	73.8	92.5	97.4	99.1	98.4	99.3
All Urban	16.2	70.6	91.1	97.1	98.0	97.7	98.8
All Rural	15.4	77.4	94.0	97.5	100.0	99.0	99.7
REGION							
West	13.3	69.1	89.8	97.5	98.3	96.0	99.4
South	10.0	65.7	90.2	98.1	100.0	97.4	100.0
Centre	22.0	74.6	93.5	97.2	100.0	100.0	98.9
North	14.8	80.7	95.8	95.7	98.6	100.0	100.0
East	19.3	80.6	95.0	97.9	98.6	98.2	99.0

Source: Tables 0.1.1, 0.1.3

FIGURE VI.1 MEAN AGE AT FIRST MARRIAGE WOMEN CURRENTLY 25-49 WHO FIRST MARRIED AT AGES UNDER 25 BY REGION AND URBAN-RURAL BREAKDOWN

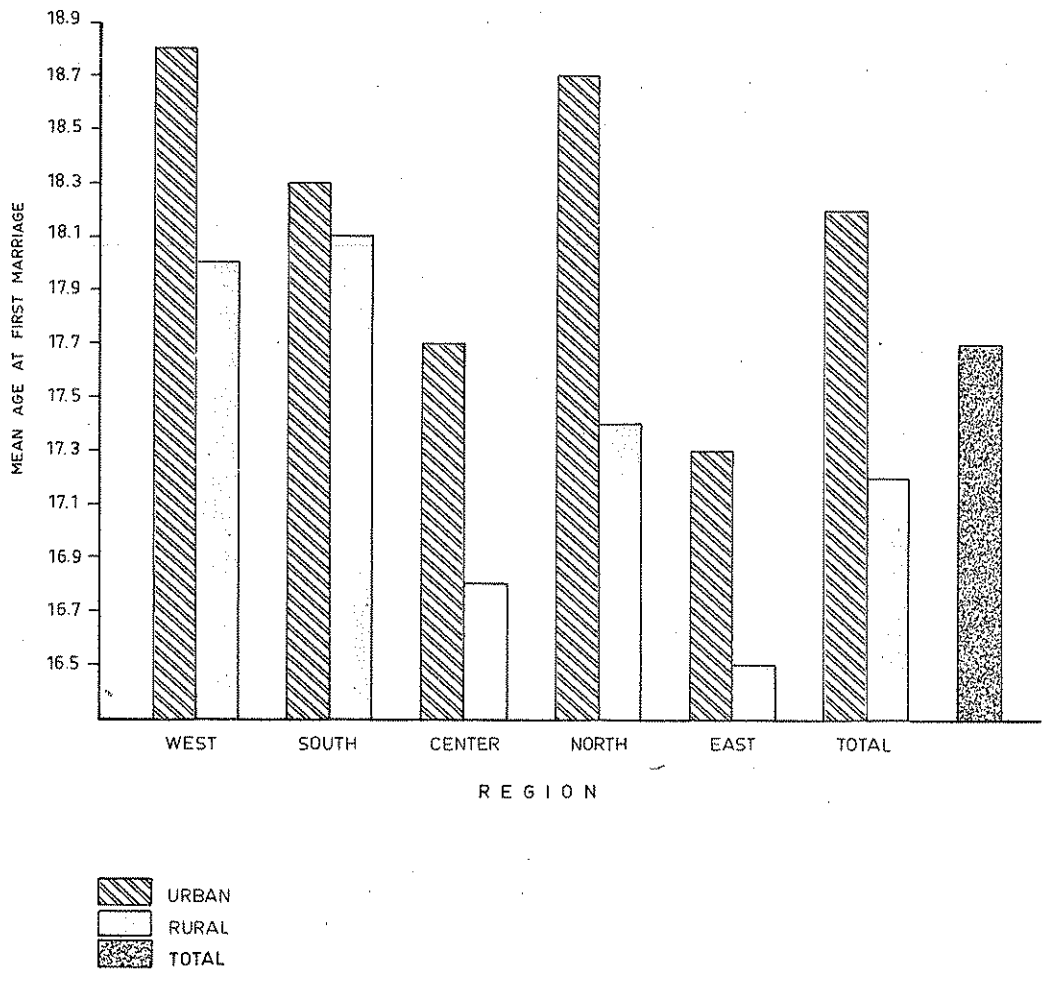
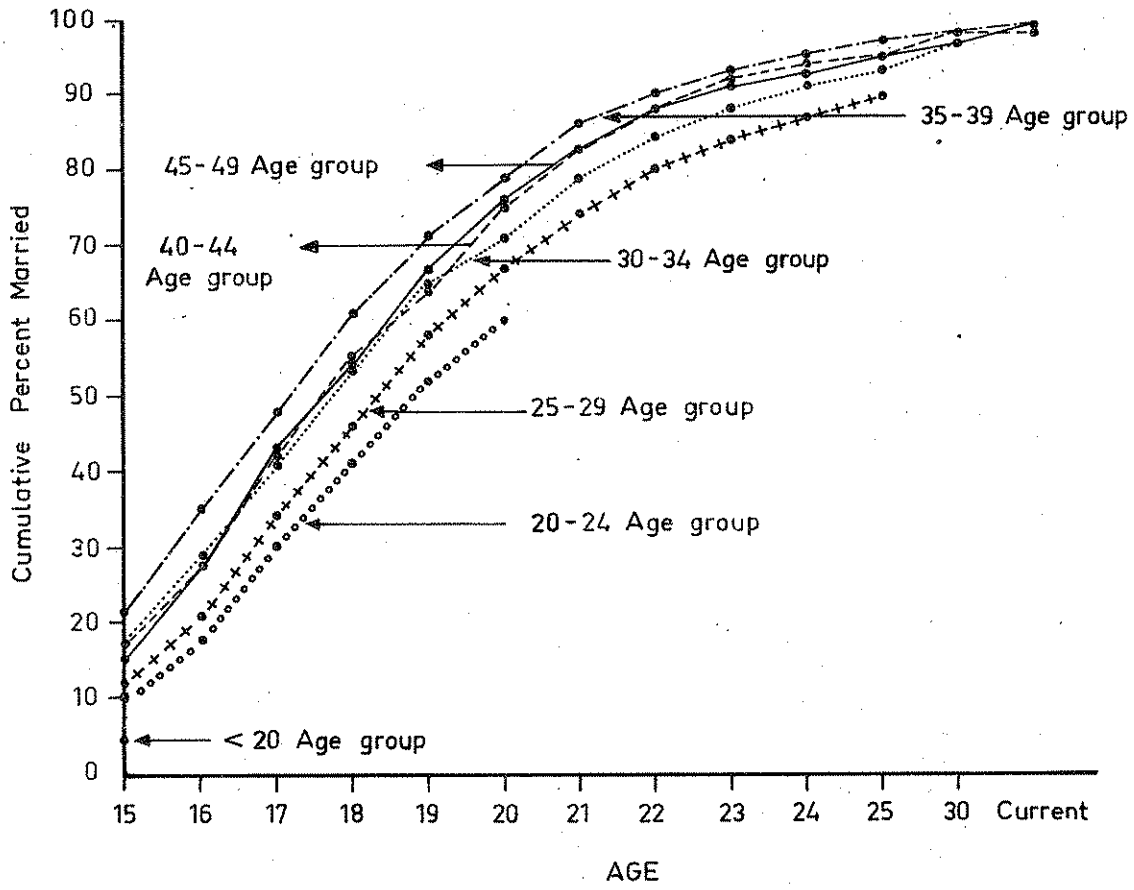


FIGURE VI-2: CUMULATIVE PERCENTAGE MARRIED BEFORE SPECIFIED AGE



3. MEAN AGE AT MARRIAGE

On the basis of the individual interview data, mean age at marriage and differentials in age at first marriage by background variables can be studied. However, since the sample is confined to ever-married women, it selectively excludes the relatively late marrying women in any age group. This selection bias is more pronounced for younger age groups since a larger proportion of them are not married by the time of the interview but will marry later. In comparing different categories of the sample, it is necessary to control for this effect. This is achieved by choosing a pivotal age (here 25) and excluding from comparison (i) women under that age, and (ii) of the remaining women those who were not married by that age. Exclusion (i) is unfortunate in the sense that it prevents the study of more recent differentials, i.e. differentials for the age at which most of the current or recent marriages take place. The consequence of (ii) is that by excluding some of the late marrying women, we obtain an under-estimate of the age at marriage. Further, we are also likely to slightly under-estimate differentials between groups, since proportionately more late marrying women are likely to be excluded from a group with a higher mean age at marriage. In Turkey, less than 10 per cent of the marriages take place at ages above 24. As shown in Table VI-3, the exclusion of later marrying women results in an under-estimation of 0.3-0.4 years in the mean age at marriage.

For the country as a whole, there is little consistent difference in the mean age at first marriage by current age, so.far as women aged 30 and over are concerned: The mean for these women is around 17.6 years, while the mean for women aged 25-29 is higher by half a year. (Table VI-3). Hence, in presenting differentials by background variable in Table VI-4, we have shown the overall means for women aged 25-49. Finer control by current age is not necessary for the present purpose.

TABLE VI-3: MEAN AGE AT FIRST MARRIAGE (M) AND NUMBER OF EVER-MARRIED WOMEN (n) - BY CURRENT AGE

	25 - 29		30 - 34		35 - 39		40 - 44		45 - 49		25 - 49	
	M	(n)	M	(n)	M	(n)	M	(n)	M	(n)	M	(n)
All Ever-Married Women	18.4	(840)	18.1	(682)	17.6	(644)	18.0	(611)	18.3	(498)	18.1	(3275)
Women Married by age 25	18.1	(813)	17.7	(654)	17.3	(628)	17.6	(589)	17.6	(475)	17.7	(3159)

Source: Tables 1.1.1, 1.1.3

From urban to rural, mean age at marriage declines by one year, and from West to East the mean declines by one and a half years. The results are illustrated very clearly in Figure VI-1; in fact, a part of the regional difference is accounted for by higher proportion urban in the West and lower proportion urban in the East.

The pattern by size of place is not so regular, though metropolitan areas and other large cities have the highest mean (18.5), followed by medium and small cities (18.0), and finally by towns and villages (overall average around 17.3).

Differentials by literacy and education are in the expected direction and very pronounced: a difference of 3 years in the mean between illiterate women and those educated to secondary school and beyond; a difference of 2.3 years between the corresponding categories of husband's education.

By husband's work status, the basic distinction is between unpaid family workers and self-employed on the one hand (mean 17.3), and employees and employers on the other (mean 18.0). It is probable that in rural areas the self-employed are largely farmers and in urban areas they are often persons working in the marginal sector.

Women working in services include, among others, the better educated office and other white-collar workers, and have a high mean (19.2). Those not working (on the average younger and probably more often urban) marry later than those working in farming (mostly rural).

The differentials presented so far give a general and rather expected picture. Further analysis involving inter-relationships between background variables is needed.

TABLE VI-4: DIFFERENTIALS IN MEAN AGE AT MARRIAGE (FOR WOMEN AGED 25-49 WHO MARRIED AT AGES UNDER 25)

BY REGION AND TYPE OF PLACE

	Total	West	South	Centre	North	East
Total	17.7	18.5	18.2	17.2	17.7	16.8
Urban	18.2	18.8	18.3	17.7	18.7	17.3
Rural	17.2	18.0	18.1	16.8	17.4	16.5

BY SIZE OF PLACE

Metropolitan	Large Cities	Medium Cities	Small Cities	Towns	Large Villages	Medium Villages	Small Villages
18.5	18.4	17.9	18.1	17.3	17.7	16.9	17.2

BY WOMAN'S EDUCATION

Illiterate	Literate	Primary	Higher
17.1	17.8	18.5	20.1

BY COUPLE'S LITERACY

None Literate	One Literate	Both Literate
16.5	17.3	18.6

BY HUSBAND'S EDUCATION

Illiterate	Literate	Primary	Higher
16.6	17.3	18.0	18.9

BY HUSBAND'S WORK STATUS

Unpaid Family Worker	Self-Employed	Employee	Employer
17.3	17.3	18.0	18.1

BY WOMAN'S WORK STATUS

Not Working	Family Farm	Other Farming	Industry	Services
18.0	17.2	17.4	18.2	19.2

Source: Table 1.1.3

4. TRENDS IN AGE AT MARRIAGE

The clearest indication of the pattern and trends in age at first marriage is obtained by considering all women in an age group, i.e. the number of ever-married women from the individual interview augmented by the appropriate number of never-married women, the latter estimated on the basis of proportions ever-married from the household interview. In this way the cumulative percentage married before specified ages can be estimated for each age group, as shown in Table VI-5.[1]

We note, for example, that 60 per cent of the women currently aged 20-24 were married by their 20th birthday. This percentage increases as we move to older women: it increases to 71 per cent for women aged 30-34, beyond which it fluctuates between 75-80 per cent. Hence a trend in age at marriage is indicated. This is illustrated in Figure VI-2. Whereas the curves for age groups 40-44 and 45-49 are almost identical, age group 35-39 deviates somewhat from the pattern. This could be a real effect or due to reporting errors; further scrutiny of the data is necessary. However the trend from the 30-34 age group to the 20-24 age group is clear.

TABLE VI-5: OF ALL WOMEN IN AN AGE-COHORT, THE CUMULATIVE PERCENTAGE MARRIED BEFORE A SPECIFIED AGE

	Cumulative Percentage Married Before Age												
Cohort:	15	16	17	18	19	20	21	22	23	24	25	30	% Ever-Married at present
15-19	4											.	15.7
20-24	10	18	30	41	52	60						.	73.8
25-29	12	21	34	46	58	67	74	80	84	87	90	.	92.5
30-34	17	29	41	53	65	71	79	84	88	91	93	97	97.4
35-39	21	35	48	61	71	79	86	90	93	95	97	98	99.1
40-44	17	29	42	55	64	75	83	88	92	94	95	98	98.4
45-49	15	28	43	54	67	76	83	88	91	93	95	97	99.3

Source: Tables 0.1.1, 0.1.3, 1.1.1

The same picture emerges when we examine the summary indices given in Table VI-6. The indices shown are (i) the percentage in the age group who married before their 15th birthday, (ii) the median age at marriage, i.e. the exact (interpolated) age by which 50 per cent in a cohort are married, and (iii) the percentage not married by their 25th birthday.

The percentage married before age 15 declines from 15-20 per cent for women currently aged 30-49, to 10 per cent for those aged 20-24, and then more markedly to under 5 per cent for the youngest women (aged 15-19). This points to the disappearance in Turkey of marriage at ages under 15, as indeed is confirmed by the fact that practically no ever-married women in the household interview were reported to be aged under 15.

There also has been some increase in the percentage not married by age 25: from around 5 per cent for women aged 35 and over, to 10 per cent for women aged 25-29.

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[1] The table is constructed by multiplying the frequencies of age at first marriage in Table 1.1.1 (Vol. II), by the proportion ever-married from Tables 0.1.3 and 0.1.1. The result is then cumulated. Note that Table 1.1.1 refers to age at marriage in completed years, while VI-5 refers to exact ages.

The median, in general, has an advantage over the mean as a measure of central tendency since it is less affected by the presence of extreme values. In the present case, however, it is close to the mean. The median for women currently aged 20-24 is around one year higher than that for women aged 30 and over.

Similar analysis is possible also by background variables for which proportions ever-married from the household interview are available. In the present case, these are the variables relating to geographical location of the sample area, namely type of place, region and size of place. The three summary indices for the first two variables are shown in Table VI-6. The recent moderate trend in age at marriage appears equally in both urban and rural areas. It is perhaps somewhat stronger in the West, South and Centre, compared to North and East; however, there is certain unsystematic variability in the figures.

TABLE VI-6: SELECTED INDICATORS OF DISTRIBUTION OF COHORTS OF WOMEN ACCORDING TO AGE AT FIRST MARRIAGE - BY TYPE OF PLACE AND REGION

	Cohort						
% Married Before Age 15	15-19	20-24	25-29	30-34	35-39	40-44	45-49
All	4	10	12	17	21	17	15
All Urban	3	6	8	14	18	13	13
All Rural	4	14	16	21	23	20	18
Region: West	2	3	6	7	11	9	9
South	2	7	13	16	20	11	18
Centre	5	9	9	24	24	22	20
North	3	13	14	16	22	19	6
East	6	21	27	29	30	27	23
Median Age at Marriage							
All	.	18.8	18.3	17.8	17.2	17.6	17.7
All Urban	.	19.6	19.0	18.5	17.6	18.3	18.7
All Rural	.	18.1	17.7	17.0	16.7	17.2	17.2
Region: West	.	20.9	19.2	18.7	18.2	18.2	18.5
South	.	20.2	18.8	18.2	17.1	19.0	17.5
Centre	.	18.8	18.0	17.2	16.8	16.0	17.2
North	.	17.8	17.9	18.2	17.4	17.7	18.6
East	.	17.4	16.7	16.3	15.8	16.8	16.8
% Not Married By Age 25							
All	.	.	10	7	3	5	5
All Urban	.	.	13	9	7	7	8
All Rural	.	.	8	4	0	4	3
Region: West	.	.	14	7	5	8	6
South	.	.	14	4	4	5	2
Centre	.	.	9	7	2	2	6
North	.	.	5	8	5	6	11
East	.	.	2	6	2	5	2

Source: Table V-4

5. MARRIAGE STABILITY

In Turkey, marriage is stable. For example as a whole, over 92 per cent of first marriages were intact at the time of the survey. Over one-half of the dissolved marriages were owing to widowhood. The only exception is the relative small category of marriages which began 30 or more years ago: around 9 per cent of such marriages are reported to have ended in divorce or separation. This category of course consists of the oldest and earliest marrying women in the sample.

Practically no women have married more than twice; 96 per cent have married only once. A second marriage dissolution is rare. Consequently, 96 per cent are currently married, and on the average women have spent over 98 per cent of the time since first marriage in the married state. There is little variation in the last mentioned figure by women's current age or age at first marriage.

The table below summarises the incidence of marriage dissolution and remarriage by duration since first marriage. In each category, approximately half the women with first marriage dissolved remarry.

Duration Since First Marriage	5	5-9	10-14	15-19	20-24	25-29	30+	All
Per Cent Marriages Dissolved	2.8	3.1	6.5	8.2	11.5	13.5	22.3	7.7
Per Cent Remarried	0.4	1.8	3.8	4.5	6.8	6.2	10.9	4.2
Per Cent Currently Not Married	2.4	1.5	2.9	3.9	5.1	7.1	11.8	3.9

6. EXPOSURE STATUS

Following the entry into marriage, a woman may not be exposed to the risk of child-bearing for a number of reasons, such as: marriage dissolution, temporary separation of spouses, sexual abstinence, primary or secondary sterility, sterilization, post-partum amenorrhoea, and of course, a current pregnancy. In the TFS, only some of these factors were incorporated to define a composite variable 'Exposure Status'. Essentially, it consists of the following categories:

(i) women currently not married;
(ii) infecund women;

and of the remaining currently married fecund women:

(iii) those currently pregnant, and
(iv) exposed women[1]

Infecundity was measured in the form of "self-reported fecundity impairment" in response to the following question (asked of all currently married non-pregnant women not using a method of contraception):

> "Do you think it is physically possible for you and your husband to have a child, supposing you wanted one?"

Such a subjective question is necessarily imprecise. In addition to real differences in the incidence of infecundity, it is probable that respondents differ in their knowledge of the fact, as well as in their willingness to admit fecundity impairment. For example, for women aged 45-49 the following percentages report fecundity impairment.

ALL	TYPE OF PLACE		COUPLE'S LITERACY		
	Urban	Rural	None literate	Only one	Both literate
50	47	53	54	55	41

[1] The small number of sterilized women (18 cases) and women whose husbands were sterilized (7 cases) are included in category (iv), on the assumption that these women are using a very efficient method of contraception and want no more children. We may also note a minor difference in the above categorization and the scheme followed in Vol. II tables. There, any pregnant but currently not married women is included in (iii) rather than in (i). We shall ignore this trivial distinction since there are only 2 such women in the sample.

While these differences may be real, it is also possible that the urban, more literate women are less ready to admit fecundity impairment.[1] The importance of this category lies in identifying more precisely the subpopulations relevant to the study of fertility preferences (currently married fecund women) and the use of contraception (exposed women).

In fact, the 'exposed' category may be over-estimated not only because infecundity may be underreported, but also because current pregnancies (particularly of short durations) tend to be underreported. Nevertheless, introduction of this category constitutes an important refinement in the analysis of contraceptive use.

Table VI-7 shows the per cent distribution according to exposure status by current age. For age groups in the range 25-44, the percentage exposed does not change greatly since a higher proportion pregnant at younger ages is balanced by a higher proportion reporting fecundity impairment at older ages. By contrast, one-half of the women aged 45-49 report fecundity impairment, consequently only 2 in 5 are fecund or exposed.

TABLE VI-7: PER CENT DISTRIBUTION OF EVER-MARRIED WOMEN ACCORDING TO EXPOSURE - BY CURRENT AGE

	25	25-34	35-44	45-49	All
Not Married	2	2	5	10	4
Fecundity Impairment	0	3	17	50	12
Currently Married					
Fecund	98	95	78	40	84
Pregnant	25	13	3	1	12
Exposed	73	82	75	39	72

Source: Table 1.6.3

[1] The same pattern has been noted in other countries. For example, see Indonesia Fertility Survey Principal Report, Central Bureau of Statistics, Jakarta, 1978, Vol. I, p. 37.

CHAPTER VII FERTILITY

1. INTRODUCTION

The 1978 Turkish Fertility Survey is the fourth quinquennial survey on fertility in Turkey and was conducted mainly to obtain information on the current and past fertility levels and trends. Special care was taken in the collection of fertility data since the main problem in deriving fertility measurements is caused by inaccuracies in the data.

The first measure of fertility employed in this chapter is the number of children ever-born, regardless of when these births occurred. This is the current parity or 'cumulative fertility' of the respondents observed at the time of the survey. Current parity is discussed by current age, age at first marriage, and by years since first marriage, in Section 2.

Early marital fertility is studied in Section 3. The cumulative percentages of women by intervals between marriage and first birth are used as the first measure of early marital fertility. Other measures employed are: the mean number of children born during the first five years of marriage, and the mean length of first birth interval.

Section 4 discusses the recent levels of fertility in terms of the mean number of children born in the past five years and current pregnancies. Age-specific fertility rates are considered in Section 5.

In Section 6, fertility differentials are discussed at length. Differentials by residential and socio-economic background variables for a number of indices of cumulative, early marital and current fertility are examined.

Trends in fertility are studied in Section 7. Age-specific and total fertility rates are shown for the period 1970 to 1978. Fertility of birth cohorts is examined to indicate the longer term trends.

It is obvious that the various measures of fertility employed in this analysis depend critically not only on the full reporting of all births by women, but also on their ability to give dates of occurrence of the births. Hence, some of the conclusions reached in this chapter may be subject to further evaluation of the quality of the data.

2. CHILDREN EVER-BORN

Table VII-1 shows the distribution of ever-married women according to the number of children ever-born. In the sample as a whole, approximately 10 per cent of ever-married women have not had a child. This is primarily because of the presence of younger women in the sample. The proportion childless diminishes to 5 per cent among women aged 25-34, and to only 2-3 per cent among older women. This points to a very low level of primary sterility in Turkey.

The mean number of children ever-born increases consistently with age. It rises from 0.67 for ages below 20 to 6.30 for those aged 45-49. The substantial increase with age at the older ages is noteworthy: a difference of half a child in the mean between 35-39 and 40-44 age groups, and of one-third of a child between 40-44 and 45-49 age groups. These data indicate a long span of child-bearing.

The table also shows the mean parity for currently married women. The figures are almost identical to those for all ever-married women. This is to be expected in view of the high marriage stability in Turkey, as discussed in the previous chapter.

TABLE VII-1: PER CENT DISTRIBUTION OF EVER-MARRIED WOMEN ACCORDING TO THE NUMBER OF CHILDREN EVER-BORN BY CURRENT AGE

Current Age	0	1-2	3-4	5-6	7-8	9-	Mean	Mean for Currently Married Women
<20	49.3	47.6	3.2	-	-	-	0.67	0.67
20-24	16.4	56.3	24.1	3.1	.1	-	1.81	1.83
25-29	6.1	37.6	37.7	15.7	2.3	.5	2.99	3.00
30-34	4.1	19.6	34.1	23.7	13.5	4.9	4.28	4.31
35-39	2.0	12.0	26.6	25.0	19.7	14.7	5.48	5.51
40-44	2.9	9.1	24.4	23.9	19.0	21.6	5.96	6.01
45-49	2.4	9.6	20.2	22.0	19.8	25.6	6.30	6.43
All Ages	9.6	28.4	26.4	16.6	10.2	8.8	3.94	3.93

Source: Tables 2.2.1A, 2.2.1B

The simplest way of describing 'completed fertility' in a population is to examine the parity of women aged 45-49. As noted earlier, only around 2 per cent of these women are childless, and the overall mean is 6.30. There is a considerable dispersion in the distribution by children ever-born to these women. The distribution is nearly uniform from parity 3 to 9, with approximately 10 per cent of the women at each parity in this range (Table VII-2). There is no sudden drop above any particular parity, as may be the case in a population with wide-spread fertility control. Another description of the same feature is provided by parity progression ratios (PPR). These ratios represent the birth probabilities by specified parities, i.e. they give the proportions of women who, after having achieved a certain parity, proceed to have at least another birth. In Table VII-2, the ratio for zero parity is 0.98, which means that 98 per cent of ever-married women aged 45-49 have had one or more births. Similarly, after having had one birth, 98 per cent proceed to have another. The ratio declines very gradually with parity. At parity 10, for example, the ratio is 0.65; this shows that two-thirds of the women who have had ten births proceed to have at least one more.

TABLE VII-2: FOR ALL EVER-MARRIED WOMEN AGED 45-49 THE PER CENT DISTRIBUTION ACCORDING TO THE NUMBER OF CHILDREN EVER-BORN AND THE PARITY PROGRESSION RATIOS

	Children Ever-Born												
	0	1	2	3	4	5	6	7	8	9	10	11+	Mean
Per Cent Distribution	2.4	1.8	7.8	9.4	10.8	11.4	10.6	11.2	8.6	8.8	6.0	10.8	6.30
PPR	.98	.98	.92	.90	.86	.84	.81	.76	.74	.65	.65	-	

Source: Table 2.2.1A

Age at marriage is an important demographic variable and is expected to be closely related to fertility. Table VII-3[1] presents the parity of women by age at first marriage, classified by years since marriage and by current age. The effect of age at marriage is seen clearly for women aged 40 and over who are near the end of their reproductive span. The mean parity (7.5) of women who married before 15 years of age is two and a half children higher than the mean (4.9) for women who married at ages 20 and above.

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[1] Generally, the summary tables in this volume do not show the number of cases in the cells. To warn the reader when a figure is based on very small numbers of observations, the following convention is followed:

(i) Statistics based on 20 to 50 sample cases are enclosed in parentheses "()".
(ii) Statistics based on fewer than 20 observations are suppressed and replaced by an astrisk "*".
(iii) A cell which happens to be empty is indicated by a dash "-".
(iv) A cell which cannot logically have any cases is indicated by a dot ".".

These differences may arise from two sources. The first is purely biological: late marrying women have a short child-bearing span. Secondly, age at marriage also reflects the socio-economic background of the women, which may be associated with the level of fertility independently of the age at marriage as such. For example, we saw in the previous chapter that better educated urban women and women in the Western region tend to marry later.

The first effect is obvious in the case of younger age groups in Table VII-3. This initial difference in parity by age at marriage more or less persists in magnitude as we move from younger to older age groups. For example, among women who married at ages under 18, the difference in current parity between the 40-49 and 20-24 age groups is around 4.5 children; the corresponding difference for women marrying at ages 18 and above is similar in magnitude (4.2 children). It is true that these data relate to a cross-sectional view of different age-groups, rather than to the retrospective history of a given cohort of women. Nevertheless, the figures quoted above suggest that the effect of age at marriage on fertility has been largely biological.

At short marriage durations, the data do not indicate any higher tempo of fertility among late marrying women - with the possible but minor exception of women married for less than 5 years (see Table VII-3, first panel). Rather, a negative association between mean parity and age at marriage emerges for the 5-9 year marriage duration group and becomes increasingly more pronounced as we move to longer marriage durations. At a given marriage duration, the later marrying women are obviously also older.

TABLE VII-3: MEAN NUMBER OF CHILDREN BORN TO EVER-MARRIED WOMEN - BY AGE AT FIRST MARRIAGE

	<15	15-17	18-19	20-24	25	ALL
Years Since First Marriage						
< 5	0.87	0.91	0.97	1.05	(0.77)	0.89
5 - 9	2.51	2.76	2.60	2.30	(2.18)	2.58
10-14	4.29	4.06	3.63	3.28	(3.53)	3.85
15-19	5.83	5.24	4.51	4.55	-	5.06
20-24	6.56	6.12	5.25	5.06	-	5.81
25 +	7.37	6.75	5.62	5.42	.	6.62
Current Age						
< 20	1.07	0.62	(0.24)	.	.	0.67
20-24	2.89	2.19	1.35	0.83	.	1.81
25-29	4.65	3.46	2.90	1.83	(0.56)	2.99
30-34	6.07	4.82	3.86	2.85	(1.72)	4.28
35-39	6.68	5.98	4.85	4.05	-	5.48
40-49	7.47	6.66	5.42	5.14	(3.65)	6.11
All mean	5.33	4.18	3.42	3.01	2.27	3.94
n	723	1819	926	847	116	4431

Source: Tables 2.2.3A, 2.2.4A

3. EARLY MARITAL FERTILITY

The previous section was concerned with parity at the time of the survey, and made no use of the dating of births in the survey. The only dates involved were those determining the women's age-group, her age at first marriage and, related to the above, her current marriage duration.

In investigating early marital fertility, we will examine births during a specified period (five years) following first marriage. The study is complicated by the fact that for around 38 per cent of marriages no data on calendar month of the marriage were available; further in around 26 per cent of the cases, the date of marriage was specified simply as an estimate of the woman's age at marriage. Similarly for first births, 46 per cent of the respondents were unable to state the calendar month of birth, and a further 41 per cent could give only an estimate of the duration since birth occurred (but not the calendar year of occurrence). Consequently, a considerable amount of month-imputation was necessary before the various measures of early marital fertility could be constructed.

An illustration of the problem is provided by the fact that just under 10 per cent of the computed first birth intervals turned out to be negative, implying pre-marital births (this figure changed little by women's age at marriage or current marriage duration). In addition, a similar proportion of the intervals were of durations 0-7 months, implying pre-marital conception. In the socio-cultural context of Turkey, this clearly is an absurd result.[1]

In the present discussion we will employ three measures of early marital fertility:

(i) Mean length of the first birth interval. Negative intervals are excluded from the mean, as are women who did not have a birth during the first five years of marriage.[2]
(ii) Mean number of births during (or before) first five years of marriage.
(iii) The percentage of women who were childless after 5 years of marriage.

Overall, there is a substantial negative association between the mean length of the first birth interval and age at marriage: it decreases from 25.8 months for women married at age under 15 to 17.7 months for those married at age 20 or above (Table VII-4, first panel). This association holds when marriage duration is controlled. Also, with a given age at marriage, the birth interval appears to shorten as we move from older to younger marriage cohorts.

The pattern is less clear for the other indicators. The positive association of the mean number of births with age at marriage is clear only for women of marriage durations of 20 years or more. However, these women, specifically the early marrying ones among them, report a very high level of childlessness after 5 years of marriage. It is possible that these older women have a tendency to bring the time of their first birth closer to the interviewing date. This phenomenon of misplacement or 'telescoping' may have resulted in some births being shifted out of the five years following marriage.

In conclusion, though a substantial negative association of first birth interval length with age at marriage is indicated, the data do not allow us to draw any conclusions concerning trends due to unreliability in the dating of relatively distant events, particularly among women first married many years ago.

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[1] The procedure used for month imputation assumes that all reported ages are in terms of completed years. However, it may be at least equally reasonable to assume that women report ages and durations rounded to the nearest year. The first assumption increases the chance of an interval being classed as negative when it is computed from the woman's reported age at marriage and the reported duration in years since the birth of her first child. In further analysis of the TFS data, a careful investigation of this problem is warranted.

[2] In addition, women married less than 5 years ago are excluded from all measures.

TABLE VII-4: MEASURES OF EARLY MARITAL FERTILITY - BY AGE AT MARRIAGE AND MARRIAGE DURATION

	Mean Length of Interval (Months)				Births in First Five Years				% Childless After 5 Years			
Marriage Duration	5-9	10-19	20 +	All	5-9	10-19	20+	All	5-9	10-19	20+	All
Age at Marriage												
<15	24.0	24.1	27.9	25.8	1.79	1.90	1.45	1.65	11	11	28	20
15-17	19.0	22.2	24.0	21.3	2.00	1.95	1.78	1.89	7	9	15	11
18-19	16.2	19.0	20.6	18.8	1.97	1.96	1.88	1.93	8	6	10	8
20 +	16.8	16.9	19.9	17.7	1.75	2.06	1.96	1.93	10	8	8	8
All	18.4	19.9	23.5	20.8	1.91	1.97	1.74	1.86	8	9	16	12

Source: Tables 2.1.1, 2.1.2

4. RECENT MARITAL FERTILITY

Births in the past five years to women who have been continuously in the married state during that interval provide a measure of recent marital fertility.

Table VII-5 shows the mean number of births during the past five years by current age, classified by (i) the number of living children five years ago, and (ii) age at first marriage.

It should be noted that since the tabulation is restricted to women continuously in the married state during the past five years, it is selectively confined to early marrying women among the younger age groups. For example, among women currently aged under 20, the table includes only those married before 15 years of age. (Actually, there are fewer than 20 such women in the sample; hence the figure has to be suppressed in the table). Similarly, among women currently aged 20-24, only those who married at ages under 20 are included; in fact a large proportion of those marrying at ages such as 18 or 19 also get excluded. This selectivity diminishes as we move to older age groups, since most of the marriages in Turkey occur by age 25, and practically all by age 30.

TABLE VII-5: BIRTHS IN PAST FIVE YEARS TO WOMEN CONTINUOUSLY IN THE MARRIED STATE FOR PAST FIVE YEARS - BY CURRENT AGE AND BY (i) LIVING CHILDREN 5 YEARS AGO, (ii) AGE AT FIRST MARRIAGE

	Living Children 5 Years Ago				Age at First Marriage				
Current Age	0	1-2	3-4	5+	<15	15-17	18-19	20+	All
<20	-	-	-	-	-	.	.	.	-
20-24	1.82	1.62	-	-	1.57	1.79	(1.67)	.	1.71
25-29	1.44	1.41	1.31	-	1.48	1.36	1.42	1.39	1.40
30-34	1.09	1.06	1.00	1.16	1.18	1.07	1.00	0.97	1.05
35-39	-	0.52	0.60	0.98	0.84	0.69	0.65	0.59	0.60
40-44	(0.14)	0.13	0.23	0.60	0.43	0.39	0.39	0.32	0.37
45-49	-	0.08	0.06	0.22	0.16	0.15	0.12	0.14	0.14
All	1.43	1.10	0.64	0.64	1.01	0.96	0.84	0.72	0.90

Source: Tables 2.4.1, 2.4.2

Of the three demographic variables appearing in Table VII-5, the mean number of births is associated by far the most strongly with current age. Within age groups, association with the other two variables is generally weak.

The relationship with the number of living children five years ago is as follows. For the younger women (aged under 30) the association, though weak, appears negative (i.e., a lower mean for those who already had more children). For the older women (aged 35+) the association is positive, probably because higher parity women are selectively the more fertile ones.

For women aged 30 and above the association of recent fertility with age at first marriage is generally negative, probably reflecting the 'higher' socio-economic background of late marrying women. This refines the remarks made earlier in Section 2 when current parity by age at marriage was discussed. In other words, at the same age, late marrying women have lower fertility, at least among women currently aged 30 and over.

The mean number of live-births during the past five years classified by current marriage duration is as follows (Source: Table 2.4.3B):

Marriage Duration	5-9	10-14	15-19	20-24	25-29	30+	All
Mean	1.54	1.17	0.83	0.53	0.28	0.15	0.90

The above figures refer to the fertility of different marriage cohorts but over the same period, namely the five years immediately preceding the survey. An unweighted sum of these means provides a measure of 'total marital fertility'. Because of the upper age limit (49) for eligibility for the individual interview, women at long marriage durations are selectively the early marrying ones: for example, those at duration 35 were all married at ages under 15; those at duration 30 were married at ages under 20, etc. To reduce the effect of this selectivity, cumulation for the 'total marital fertility rate' (TMFR) may be done up to marriage durations 25-29 only. Further, it is necessary to add to this the fertility of women married for less than five years.[1] This procedure give a TMFR of 5.24. In other words, at the duration-specific marital fertility rates prevailing over the past five years, a woman after 25-29 years of continuous marriage would have had an average of 5.24 births. (This duration of 25-29 years approximately corresponds to the interval from the mean age at marriage in Turkey to the age at the end of child-bearing).

As will be seen later (Section 6), the above approach provides a useful way of studying differentials in recent marital fertility, particularly when categories with small sample sizes are involved.

Finally, another indicator of current marital fertility may also be mentioned briefly: namely the percentage of currently married women reporting a current pregnancy. The distribution by age is as follows (Source: Table 2.4.5):

Current Age	<20	20-24	25-29	30-34	35-39	40-44	45-49	All
Per Cent Pregnant	30.2	22.8	16.1	9.9	4.5	2.4	0.4	12.3

One may expect underreporting of current pregnancies, particularly by women in the first months of pregnancy. Nevertheless, the level reported in the present survey appears to be remarkably consistent with more refined indicators based on birth-history data.[2]

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[1] We may take the latter as the number of children ever-born (0.89) to women first married within the past five years. This assumes, reasonably for Turkey, that these women have been continuously in the married state since first marriage and have no pre-marital fertility.

[2] For example, assuming that pregnancies in the first month are never reported and that there is no pregnancy wastage, 12.3 per cent currently pregnant would imply $5 \times \frac{12}{8} \times 0.123 = 0.92$ births per married woman over a 5 year period. This figure is comparable with the mean shown in Table VII-5.

5. AGE-SPECIFIC FERTILITY RATES

An age-specific fertility rate (ASFR) is defined as the "fertility rate with the number of live-births during a given year born to women of a given age (or age group) as the numerator, and the number of person-years lived by that age (or age group) of women during the year as the denominator".[1]

Since the denominator for the ASFRs includes all women irrespective of marital status, the numbers of ever-married women by single years of age from the individual interview were inflated by proportions ever-married from the household schedule. Also, to make use of the most recent data from the survey, the ASFR's were computed for the full year preceding the survey, rather than for a particular calendar year. Since the survey was held towards the end (September-October) of 1978, the rates shown below approximately correspond to the year 1978:

Age Group	15-19	20-24	25-29	30-34	35-39	40-44	45-49	TFR
ASFR (1978)	.093	.259	.218	.154	.101	.038	.002	4.33

The total fertility rate (TFR) is the unweighted sum of the ASFRs (multiplied by 5 since the latter are for five year groups). As an index of fertility, the TFR is independent of the age and sex structure of the population, and may be considered equivalent to the mean parity of a group of women who have passed through the reproductive period experiencing the prevailing age-specific fertility rates.

For the purpose of comparison with other sources of data, certain other less refined measures of the current level of fertility may also be presented:

(i) The General Fertility Rate, defined as the ratio of the total number of live-births during a given period to the total number of person-years lived by women in the child-bearing ages (15-49, say). The GFR is essentially a weighted sum of ASFRs, the weights being the proportionate distribution of women by age within the 15-49 range. (This distribution is available from the household schedule data). Hence the GFR is not independent of the female age distribution within the reproductive span.

The GFR for all Turkey for 1978 (strictly, for the year preceding the survey) is computed as 134.

(ii) From the household schedule data, women aged 15-49 constitute around 24 per cent of the total population. Hence the above GFR implies a crude birth rate of around 32 per thousand population.

Age-specific fertility rates will be considered in greater detail in Section 7 when fertility trends are discussed. Figure VII-1 presents the 1978 ASFRs graphically. Fertility peaks rather sharply at ages 20-24.

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[1] Grebenik, E. and A. Hill, International Demographic Terminology, IUSSP Papers, No. 4, 1974.

FIGURE : Ⅶ-2 AGE-SPECIFIC FERTILITY RATES by REGIONS
(1978)

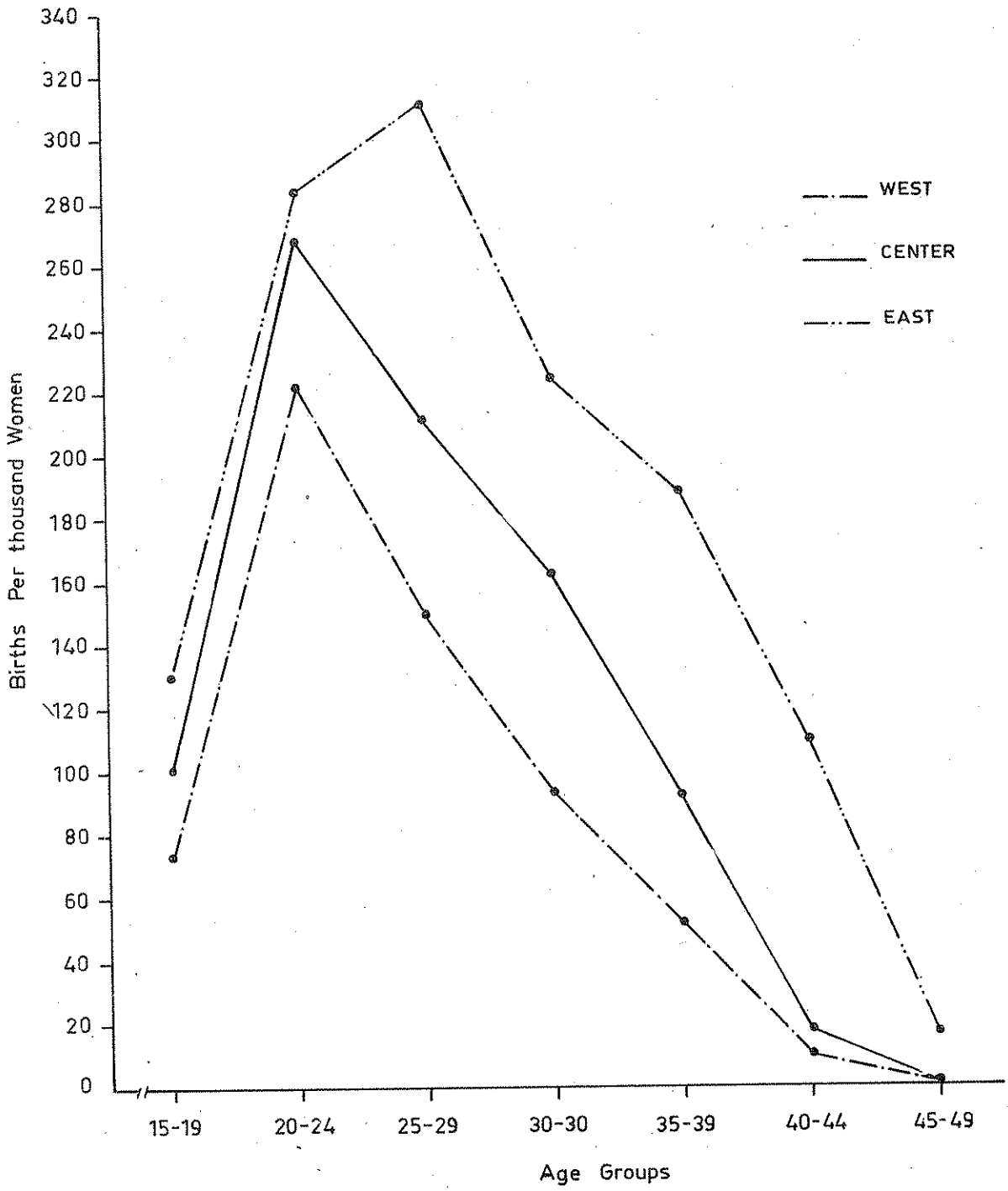


TABLE VII-6: VARIOUS INDICES OF DIFFERENTIALS IN FERTILITY - BY TYPE OF PLACE AND REGION

	CEB by Current Age				T F R	Women With Marriage Duration 10-19 Years			T M F R
	25	25-34	35-44	45-49	(1978)	CEB	Births in first 5 years	Births in past 5 years	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
All	1.47	3.57	5.71	6.30	4.33	4.4	1.97	1.01	5.24
All Urban	1.35	3.00	4.68	5.01	3.67	3.8	1.89	0.78	4.30
All Rural	1.60	4.25	6.61	7.33	5.06	5.0	2.04	1.24	6.27
West Total	1.21	2.69	4.42	5.10	2.89	3.5	1.82	0.59	3.69
Urban	1.12	2.41	4.08	4.73	-	3.3	1.82	0.55	3.54
Rural	1.37	3.26	4.70	5.68	-	3.8	1.83	0.66	3.92
South Total	1.39	3.53	5.41	5.98	3.77	4.3	2.00	1.06	5.46
Urban	1.16	3.29	4.79	(4.93)	-	3.9	1.94	0.89	4.63
Rural	(1.72)	3.84	6.16	(7.43)	-	4.8	2.05	1.26	6.54
Centre Total	1.45	3.55	5.67	6.07	4.26	4.2	1.88	0.97	5.11
Urban	1.46	2.92	4.51	4.42	-	3.5	1.73	0.67	3.94
Rural	1.44	4.39	6.71	7.35	-	5.0	2.00	1.32	6.28
North Total	1.71	4.17	6.45	7.13	4.99	5.1	2.17	1.25	6.37
Urban	(1.58)	3.24	(3.91)	-	-	(4.3)	(2.16)	(0.91)	4.26
Rural	1.75	4.64	7.33	(7.48)	-	5.4	2.17	1.40	7.09
East Total	1.73	4.77	7.72	8.76	6.31	5.7	2.18	1.53	7.43
Urban	1.66	4.40	7.15	-	-	5.5	2.19	1.44	6.84
Rural	1.77	5.04	7.97	8.82	-	5.9	2.17	1.58	7.74

Notes:
Cols. (1), (4), (6): CEB - Children Ever-Born
Col. (5): TFR - Total Fertility Rate for the year preceding the survey (approx. 1978)
Col. (7): Includes any births classified as premarital
Col. (8): Computed for women continuously in the married state for past five years
Col. (9): TMFR-Total Marital Fertility Rate. See Section 4 for a description of the measure

Source: Tables 0.1.2, 0.1.3, 2.1.2, 2.2.5, 2.2.6, 2.4.3B

Hence the data indicate long standing and continuing residential differentials. This is seen even more clearly when we compare completed fertility (children ever-born to women currently aged 45-49), with the Total Fertility Rate for the year immediately preceding the survey. The two indices mentioned above cover the entire time-span of the survey. Completed fertility relates to the life-time fertility of the oldest women in the sample, while the TFR refers to a (hypothetical) life-time fertility, given the age-specific rates prevailing at the time of the survey. For the country as a whole, the TFR of 4.3 contrasts with the reported completed fertility of 6.3,implying an overall decline of 30 per cent. The magnitude of the implied decline is almost the same in urban and rural areas. Regional variation in the trend is, however, more notable: the difference between the two indices (of over 40 per cent) is the highest in the West, and the lowest (under 30 per cent) in the East. The implication is that the urban-rural differences have persisted, while the at least equally marked regional differences have tended to become even more pronounced.

To provide further detail on residential differentials in current fertility, Table VII-7 shows the age specific fertility rates for the year preceding the survey (approximately 1978), by type of place and region. Here some caution is necessary in view of the small sample sizes involved. For Turkey as a whole, the rates for a single year are based on a total (i.e. for all age groups together) of approximately 800 births, the separate urban-rural rates on around half that number of births, and those for each of the three larger regions (West, Centre and East) on a quarter of that total. In the two smaller regions (South and North) the total number of births per year in the sample does not exceed 100.

The urban-rural pattern by age is shown in Figure VII-1, and the regional pattern in Figure VII-2 (leaving out the two smallest regions). The age-specific fertility schedules are similar for urban and rural areas, with fertility peaking at ages 20-24, following by a steep decline particularly after ages 25-29. The marked urban-rural difference operates more or less equally at the middle age groups 20-34. For example, the urban to rural ratios in the ASFRs for the 20-24, 25-29 and 30-34 age groups are, respectively, 0.76, 0.78 and 0.78. At higher ages, the urban fertility schedule drops more steeply, with the above mentioned ratio falling to around 0.5.

TABLE VII-7: AGE-SPECIFIC FERTILITY RATES (1978) - BY TYPE OF PLACE AND REGIONS

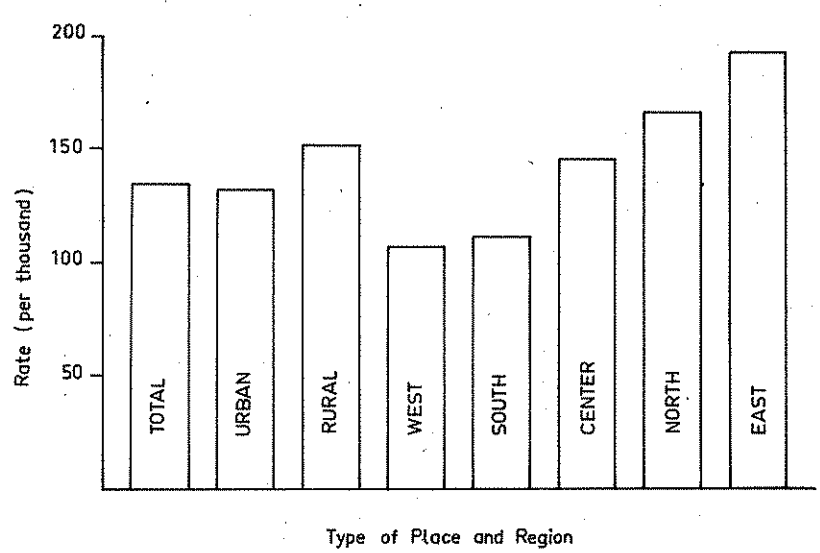
		Type of Place		Region				
Age Group	Total	Urban	Rural	West	South	Centre	North	East
15-19	.093	.083	.101	.073	.042	.101	.078	.130
20-24	.259	.227	.299	.221	.207	.268	.341	.283
25-29	.218	.197	.254	.149	.248	.211	.149	.311
30-34	.154	.135	.173	.073	.129	.162	.260	.224
35-39	.101	.065	.134	.052	.082	.092	.104	.188
40-44	.038	.027	.047	.010	.045	.018	.066	.109
45-49	.002	.000	.004	.000	.000	.000	.000	.016
TFR	4.33	3.67	5.06	2.89	3.77	4.26	4.99	6.31

Source: Tables 0.1.2, 0.1.3, 2.5.1

The fertility schedules for the regions are less regular. The patterns in the West and the Centre are similar to that for Turkey as a whole; in the East, the schedule peaks at ages 25-29 rather than at 20-24. In view of the lower literacy level and more rural character of the Eastern region, reporting errors are more likely to have occurred. The South shows a pattern similar to the East, and that for the North is very irregular indeed. However, considerable sampling variability can be expected for these two smaller regions.

Finally, we show in Figure VII-3 the current General Fertility Rates by type of place and region. The more or less regular gradation from the West (GFR 110 per thousand) to the East (GFR 192) can be seen.

FIGURE: VII-3 GENERAL FERTILITY RATES (1978)



RESIDENTIAL DIFFERENTIALS IN MARITAL FERTILITY

In this section, we describe the fertility of women first married 10-19 years ago. To provide a more dynamic view of the pattern of fertility, differentials in the following measures will be examined together: (i) children ever-born (to women first married 10-19 years ago); (ii) the mean number of births in the first five years of marriage; and (iii) births in the past five years to women continuously in the married state during that period.[1]

Women first married 10-19 years ago have been married on the average for just under 15 years and are aged somewhat under 35. They have had an average of 4.4 children (which is of the same order as the prevailing TFR). The by now familiar residential differentials have already emerged among these women, for example, with 3.3 children ever-born in urban West, and 5.9 children ever-born in rural East,

The differentials in early marital fertility are rather minor, though in the expected direction: an urban-rural difference of just over 5 per cent and a West-East difference of under 10 per cent in the number of children born in the first five years of marriage. By contrast, after 10-15 years of marriage, the differences in fertility become extremely marked, in fact proportionately more so than any other indicator examined so far. The mean number of births during the past five years for urban women is less than two-thirds of that for rural women; the mean for women in the West is under two-fifths of that for the for the Eastern women.

Table VII-6 also shows the 'total marital fertility rate' as defined earlier. It provides a useful summary measure which is independent of the distribution by marriage duration within a category, and also reduces the problem of small sample sizes. The urban to rural and West to East ratios in the TMFR are rather similar to those for the TFR described earlier, being around 0.7 and 0.5 respectively.

DIFFERENTIALS BY OTHER SOCIO-ECONOMIC VARIABLES

The various indicators of fertility by other background variables are shown in Table VII-8. Literacy and education appear to be among the most important variables related to fertility. We will first consider cumulative fertility. The number of children ever-born varies greatly by the women's level of education. Among women aged under 25, the mean for illiterate women exceeds the mean for those educated to the secondary level (or beyond) by almost one child.[2] The corresponding difference in completed fertility between the least educated and the most educated women is of the order of 4 children. Similarly, the completed fertility of women with illiterate husbands is higher by 3.5 children, compared to that of women with husbands in the highest education category.

Regarding the couple's literacy, the difference is less marked between the first two categories, that is, when couples with both spouses illiterate are compared to couples with only one (usually the husband) literate. The difference is more marked when the second category (only one of the spouses - usually the husband - literate) is compared with the third (both spouses literate).[3]

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1 We have taken a ten year marriage duration group (10-19) to ensure sufficient sample size for the various categories (particularly for Table VII-8 to be discussed later). However, it is possible that in comparison of different background groups, it is necessary to control marriage duration more finely. Hence in constructing measures (i) and (iii) above we have put together the 10-14 and 15-19 marriage duration groups for any category in the same proportion as they appear in the sample as a whole. This is an elementary form of direct standardization on marriage duration.

2 Note that these differentials for the younger women tend to be under-estimates, since a sample of ever-married women by its nature tends to have an over-representation of the early marrying women. This selection bias is more likely to be present for the relatively late marrying better educated women.

3 The above may suggest, but does not necessarily imply, that the wife's literacy is a more important variable than the husband's literacy. However, it is possible that husbands with literate wives are substantially better educated than (literate) husbands with illiterate wives. Cross-classification by the various background variables is necessary before any such conclusion can be drawn.

In commenting on differentials by woman's work status and husband's employment status, we may consider women aged 35-44 since the sample sizes for the 45-49 age group are generally too small. Those working on the family farm have the highest cumulative fertility (6.6 for women aged 35-44), followed by those doing other farming work (5.8) - these women are mainly rural. The mean is much lower (4.2) for the mainly urban women working in services and industry. Women with self-employed husbands have a high mean (6.2) compared to women whose husbands are classified as employers or employees (5.3). It is likely that the self-employed category includes those in the marginal sector of the economy in urban areas, and mainly farmers in rural areas.

Finally we may also mention differentials in cumulative fertility by size of place. These of course reflect urban-rural differentials discussed earlier, and show a gradation by size of place. The range of variation from metropolitan areas to small villages is very large. For example women aged 45-49 have had an average of 4.51 children in metropolitan areas and 7.23 in small villages.

TABLE VII-8: DIFFERENTIALS IN FERTILITY - BY SOCIO-ECONOMIC BACKGROUND VARIABLES

	CEB by Current Age				Women With Marriage Duration 10-19 Years		TMFR
	< 25	25-34	35-44	45-49	Births in first 5 years of marriage	Births in past 5 years	
Women's Education							
Illiterate	1.86	4.48	6.67	7.13	2.07	1.34	6.56
Literate	1.53	3.49	5.17	5.83	1.97	0.90	4.86
Primary	1.27	2.88	3.91	3.92	1.86	0.64	3.88
Higher	0.97	1.72	2.76	(3.13)	1.57	0.35	2.71
Husband's Education							
Illiterate	1.89	4.84	6.95	7.28	2.13	1.44	6.95
Literate	2.04	4.46	6.22	6.89	2.08	1.21	6.23
Primary	1.47	3.42	5.46	5.87	1.92	0.96	5.23
Higher	1.13	2.37	3.48	3.78	1.77	0.47	3.24
Couple's Literacy							
None Literate	1.96	5.03	7.22	7.46	2.18	1.48	7.28
Only One Literate	1.83	4.37	6.36	6.87	2.05	1.31	6.37
Both Literate	1.27	2.76	4.20	4.43	1.84	0.64	3.90
Woman's Work Status							
Not Working	1.38	3.41	5.17	5.38	1.94	0.95	5.00
Family Farm	1.65	4.26	6.62	7.33	2.03	1.19	6.02
Other Farming	(2.13)	4.23	5.76	(7.14)	2.13	1.13	5.97
Services	(1.00)	(1.93)	4.16	(4.77)	1.54	(0.61)	3.49
Industry	(1.44)	2.58	4.16	(4.50)	1.89	0.56	3.65
Husband's Employment Status							
Unpaid Worker	1.26	3.65	(6.27)	-	(1.62)	(1.47)	(7.08)
Employee	1.44	3.29	5.26	5.57	1.94	0.94	5.04
Self Employed	1.73	4.25	6.24	7.02	2.03	1.14	5.87
Employer	1.56	3.11	5.29	(5.22)	2.00	0.79	4.64
Size of Place							
Metropolitan	1.34	2.52	4.05	4.51	1.80	0.57	3.52
Large City	1.18	3.05	4.56	(5.07)	1.84	0.82	4.34
Medium City	1.51	3.16	4.78	(5.76)	2.05	0.74	4.51
Small City	1.55	3.12	5.23	(6.38)	1.97	0.87	4.84
Town	1.43	4.10	6.22	5.77	1.97	1.16	5.93
Small Village	1.58	4.06	6.60	6.96	2.17	1.03	5.88
Medium Village	1.66	4.34	7.10	8.07	2.02	1.37	6.57
Large Village	1.64	4.45	6.23	7.23	1.99	1.34	6.44

Source and Notes: See Table VII-6

Next we consider the early marital and recent fertility of women first married 10-19 years ago. By the woman's or the husband's level of education, fairly marked differences exist even during the first five years of marriage: a difference of half a child between the extreme categories.

Women (currently) working in services had substantially lower fertility in the first years of marriage.[1] Differentials are not particularly marked between other categories of the woman's work status or of the husband's employment status. A difference of over 10 per cent in the level of early marital fertility exists between metropolitan areas and small villages.

After 10-15 years of marriage, fertility differentials have become very much more marked, particularly differentials by the level of education. For example, the mean number of births during the past five years to illiterate women (1.34) is three to four times higher than the mean (0.35) for women in the highest educational category. The mean for women in small villages (1.34) exceeds the mean for metropolitan women (0.57) by a factor of over two.

Similarly, the TMFR from the least educated to the most educated groups varies by over 3 children. Women employed in services and industry have a TMFR of around 3.5, and those in farming 6.0. Women with self-employed husbands have a TMFR of 5.9, while for those with husbands classified as 'employers' it is 4.6. The TMFR of women in small villages (6.4) is nearly twice as large as that of women in metropolitan areas (3.5).

In conclusion, women in Turkey show very pronounced differentials in cumulative as well as recent fertility. Many of these differences are found in all age groups, i.e., are long standing and persistent; others, such as regional differences, may even be becoming more pronounced.

TREND IN FERTILITY RATES

Table VII-9 shows the age specific fertility rates for nine years preceding the survey. The period covered approximately corresponds to the years 1970-1978, since the survey was held towards the end of 1978.

For 1978, single year rates are shown, while for the years 1970-1977, three-year moving averages are shown to smooth out some fluctuations in the computed rates. Also shown in the table are averaged rates for the years 1970-72, 1973-75 and 1976-78 and these averages are shown graphically in Figure VII-4.

The rates presented show that the peak in fertility is at ages 20-24 throughout the period. For this age group, the survey data show a decline of just over 15 per cent from the years 1970-72 to 1976-78. During the same period the fertility at the youngest ages (15-19) has declined much more substantially, by around 40 per cent. This is expected in view of the increasing age at marriage due to the changing social and economic conditions. The decline is also more marked at ages after the age group of peak fertility: around 25 per cent for most age groups 25-45.

The Total Fertility Rates in Table VII-9 reflect the declining fertility of the nine year period. The total fertility rate has dropped from 5.80 children in 1970 to 4.33 children in 1978. The change in the TFRs can be seen more clearly in Figure VII-5. There are some fluctuations such as the small increase in the TFR from 1970 to 1971, and again from 1977 to 1978. It is probable that they are caused by inaccuracies in the data.

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[1] Women currently working are perhaps also more likely to have been working during their first years of marriage.

FIGURE: VII - 4 AGE-SPECIFIC FERTILITY RATES (1970-1978)

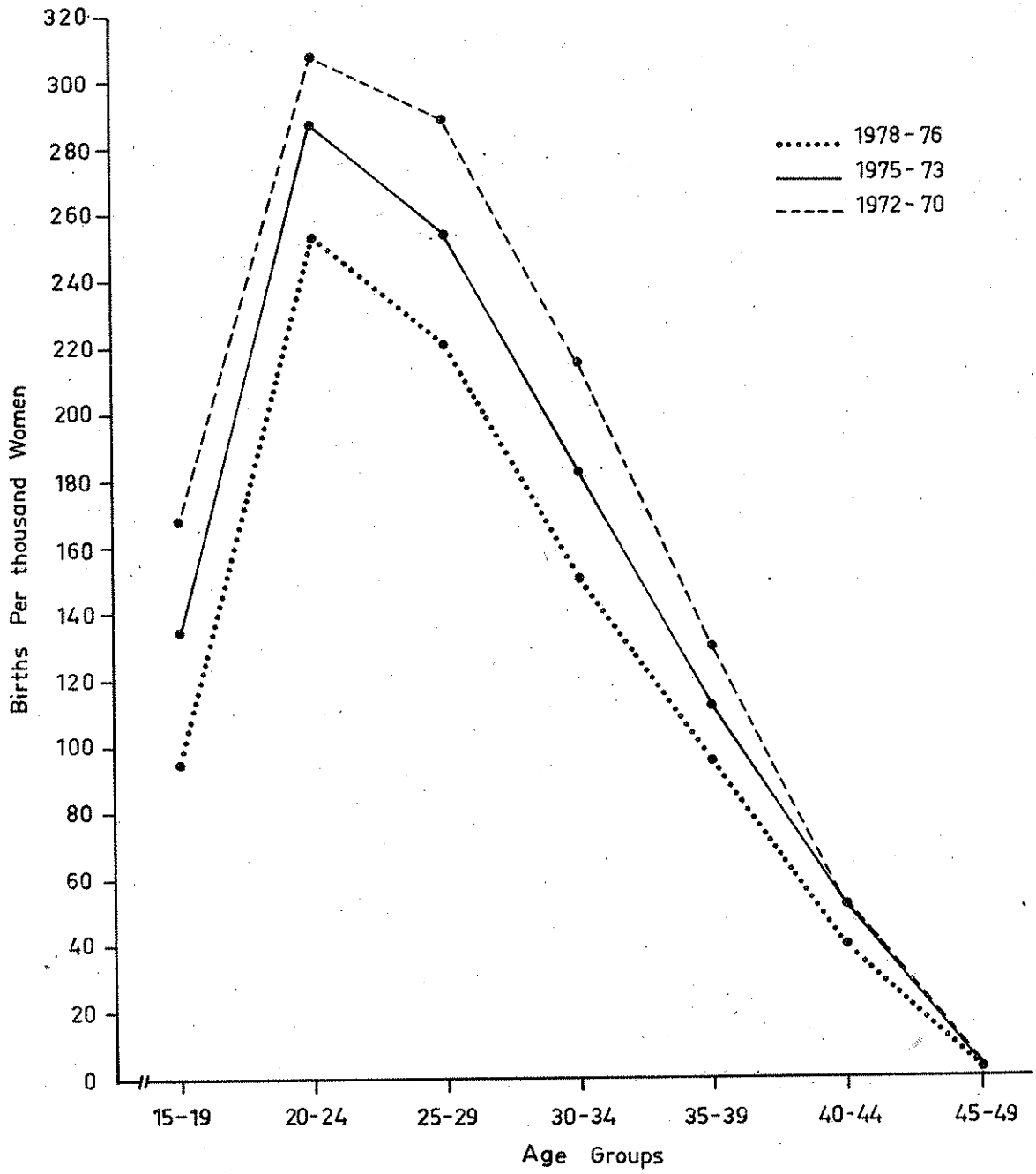


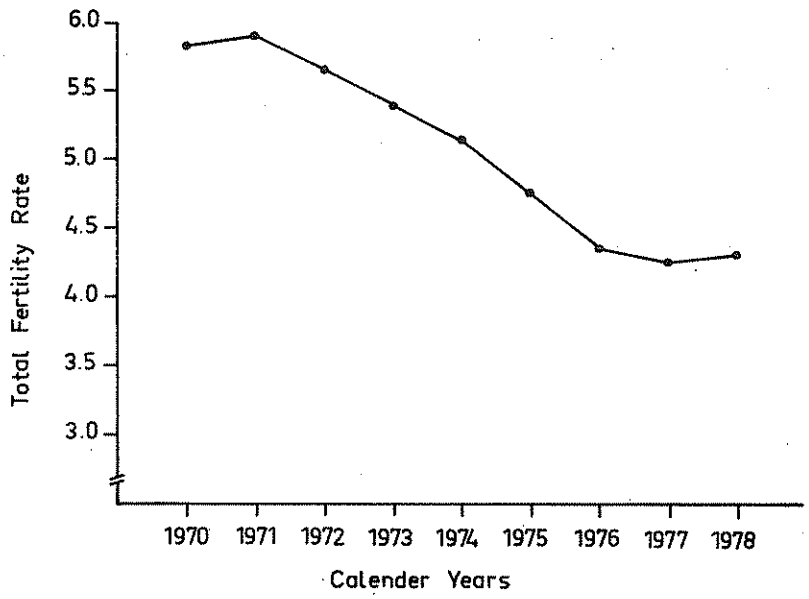
TABLE VII-9: AGE-SPECIFIC FERTILITY RATES (1970-1978)

Age Group	Calendar Year 1978[1]	1977[2]	1976	1975	1974	1973	1972	1971	1970	Average 1976-78	1973-75	1970-72
15-19	.093	.094	.103	.115	.139	.150	.166	.164	.161	.097	.135	.164
20-24	.259	.247	.256	.271	.287	.283	.301	.317	.305	.254	.284	.308
25-29	.218	.219	.225	.242	.249	.271	.284	.296	.287	.221	.254	.289
30-34	.154	.153	.149	.170	.187	.193	.207	.216	.222	.152	.183	.215
35-39	.101	.094	.094	.101	.113	.121	.124	.130	.137	.096	.112	.130
40-44	.038	.040	.043	.052	.052	(.052)	(.052)	(.052)	(.052)	.040	.052	.052
45-49	.002	(.002)[3]	(.002)	(.002)	(.002)	(.002)	(.002)	(.002)	(.002)	(.002)	(.002)	(.002)
Total Fertility Rate	4.33	4.25	4.36	4.77	5.15	5.41	5.68	5.89	5.83	4.31	5.11	5.80

Source: Tables 0.1.2, 0.1.3, 2.5.1

[1] Rates have been computed from births during the year preceding the survey.
[2] Rates for 1970-77 have been based on three year averages centered on the specific year.
[3] Rates in parentheses are assumed to be the same as the preceding year.

FIGURE: VII-5 TOTAL FERTILITY RATES (1970-1978)



Birth cohort fertility from birth histories is presented in Table VII-10 by five year age groups. Cohort fertility is shown as the mean parity achieved by a specified age group.

The mean parity of the 25-29 age group achieved by age 25 (2.31 children ever-born) shows a decline as compared with the mean of the 30-34 age group (2.65 children). Comparison of group 30-34 with group 35-39 at age 30 shows a change in the same direction. The difference in the means at age 35 for the 35-39 and 40-44 cohorts is the largest - nearly 0.6 of a child. This is indicative of declining fertility in recent years.

TABLE VII-10: MEAN NUMBER OF CHILDREN EVER-BORN - BY A SPECIFIC AGE

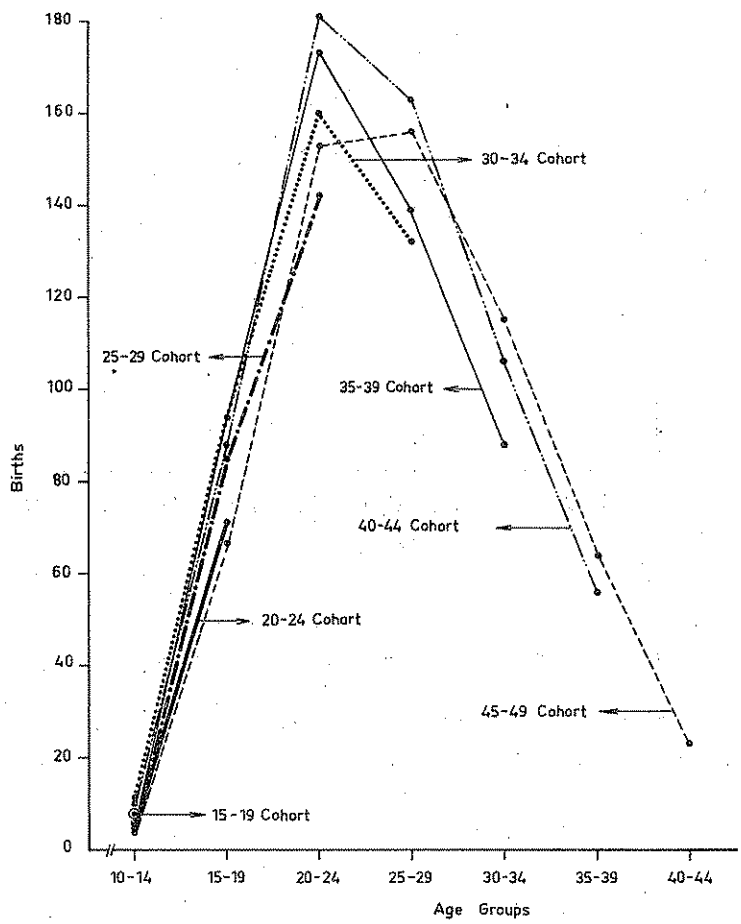
Age Group	Mean Parity by Age: 15	20	25	30	35	40	45	Current Mean	Number of Women*	% Ever Married
15-19	.07	-	-	-	-	-	-	0.15	1,509	22.4
20-24	.05	.76	-	-	-	-	-	1.34	1,092	73.8
25-29	.04	.89	2.31	-	-	-	-	2.84	884	92.5
30-34	.11	1.05	2.65	3.97	-	-	-	4.33	675	97.4
35-39	.06	1.00	2.73	4.12	5.00	-	-	5.24	674	99.1
40-44	.10	.98	2.79	4.42	5.58	6.14	-	6.25	582	98.4
45-49	.04	.71	2.24	3.80	4.95	5.59	5.80	5.81	540	99.3

* Ever-married women interviewed divided by the proportion ever-married in the age group from the household questionnaire. This estimate of the number of all women in the age group is used as the denominator.

Source: Tables 0.1.2, 0.1.3, 2.5.3

Figure VII-6 is a graphical representation of retrospective birth cohort fertility. It shows that age-specific fertility peaks at ages 20-24 in all cohorts except the 45-49 group. The schedule for this oldest group may be affected by reporting errors, probably misplacement of date of births. Further evaluation of the data is necessary. Nevertheless, comparing the schedules of cohorts younger than 45 shows that older cohorts have higher peaks than the younger cohorts. Fertility continues to decline steadily as we move from older cohorts to younger cohorts. Therefore, it is possible to speak of a fertility decline on the basis of the retrospective birth data.

FIGURE : VII - 6 AGE - SPECIFIC RATES OF RETROSPECTIVE BIRTH COHORTS



CHAPTER VIII INFANT AND CHILD MORTALITY

1. CHILD SURVIVORSHIP

The question of levels and differentials in infant and child mortality in Turkey is an important one in view of the high rates which are believed to have hitherto prevailed. The TFS data provide information on infant mortality and, to a more limited extent, on child mortality. However, little information is provided on adult mortality levels.

On the basis of detailed birth-history data, live-births to survey respondents can be classified according to survivorship status and age at death, as well as according to temporal variables such as period of occurrence of birth; mother's age at birth of child, and her current age. However, a good deal of useful information can be extracted from the survey data by considering simply the proportion of children ever-born who are still alive, without reference to the timing of the birth or to age at death. That the experience of child-deaths is widespread in Turkey is illustrated by the following figures, which show the percentage of women who have experienced at least one child death, classified by the woman's number of children ever-born (Source: Table 2.2.3):

Children Ever-Born	1	2	3	4	5	6	7	8
% With 1 or More Children Dead	9	16	32	51	62	76	84	86

Among women with 7 or more children ever-born, the experience of child-deaths is almost universal; three-quarters of women with 6 children ever-born, and one half of those with 4 children ever-born have lost one or more children. The above figures confound women of all ages, and births during all periods covered in the survey. The higher parities generally refer to older women and to births in the relatively distant past. Nevertheless, the figures are clearly indicative of high levels of mortality.

Of all children ever-born reported in the survey, 22.3 per cent had died, with marked urban-rural and regional differentials as follows:

Place/Region	All	Urban	Rural	West	South	Centre	North	East
% of Children Dead	22	18	25	18	18	25	22	26

Data on child survivorship, classified by mother's age group, can be used to obtain indirect estimates of infant and child mortality rates by using the well known techniques developed by Brass and others. Table VIII-1 shows the mean number of children ever-born to ever-married women, and the survival ratio (i.e. the proportion still alive), classified by the mother's age group and type of place of residence. Rural women have higher fertility, and higher absolute as well as relative levels of child mortality. For example, among women aged 45-49, the mean number of children ever-born in rural areas is 7.33, still alive is 5.19, deceased is 2.14, so that only 70.8 per cent of children ever-born are still alive. The corresponding figures in urban areas are: mean ever-born 5.01, still alive 3.91, deceased 1.10, so that 78.1 per cent of children ever-born to urban women aged 45-49 are still alive.

Finally, we may briefly indicate the levels of child mortality reported in the survey. Table VIII-3 shows the proportion of children who died within the first five years of life, and the distribution of these deaths according to age at death. The figures are confined to the two years 1972-1973. These are the most recent years for which the survey data are not censored (in other words only births occurring at least 5 years ago are included).

The survey data indicate that nearly one in five children born in the early 1970s died within the first five years of life. The level of child mortality in rural areas exceeded that in urban areas by around a third (30 per cent). Relatively speaking, neo-natal mortality was a somewhat more important component in urban areas, reflecting the fact that the urban-rural differential results almost completely from differences in post neo-natal and child mortality rates.

TABLE VIII-3: INFANT AND CHILD MORTALITY BY TYPE OF PLACE (AVERAGE 1972-73)

	No. of Births	% dead within five years	% Distribution by Age at Death				
			Neo-natal	Post neo-natal	1 completed year	2-4 comp. years	Total
All	1723	18.9	30	48	15	7	100
Urban	713	16.1	36	48	10	6	100
Rural	1010	20.9	27	48	17	8	100

Source: Table 2.3.5

CHAPTER IX KNOWLEDGE AND USE OF CONTRACEPTION

1. INTRODUCTION

As has been noted in Chapter I, the population policy of the Turkish Republic was pro-natalist upto 1965, but has been more liberal since. The First Five Year Plan (1963-67) discussed problems caused by the high population growth rate and advocated the repeal of laws prohibiting contraceptive practice. It also proposed the creation of a family planning programme. The Second Plan attempted an extension of the scope of family planning services, and the Third Plan (1973-77) advocated an integration of family planning services with mother and child care services. Though some relapse in these official goals has been noted, the regulation of fertility has been a lively issue in demographic circles in Turkey for several years. In fact as early as 1964 a study concluded that "Turkish couples already welcome the idea of limiting family size, so that the implementation of the practice is more necessary than the pervasion of the idea itself".[1]

The TFS questionnaire (see Appendix A) includes a list of ten specific methods of contraception, plus provision for recording any other methods not listed. For each method spontaneously mentioned by the respondent, the question is asked as to whether or not she has ever-used the method. Following that, each method not mentioned by the respondent is described, and if she claims to have heard of the method, the question on ever-use is asked. Finally, currently married non-pregnant women who have ever-used contraception are questioned regarding current use.

The questionnaire contains a number of other items relating to family planning methods. These are: attitude towards sterilization; intentions regarding future use for never-users; for users, the method used in the open birth interval and in the last closed birth interval; the woman's parity at the time of the very first use of any method; and finally, knowledge and ulitisation of sources of supplies and services relating to family planning. Breast-feeding is an issue whose effect on conception and contracept is being widely debated, and the TFS questionnaire includes data on the duration of breast-feeding of the last two children.

In this chapter, the discussion is confined mainly to knowledge, ever-use and current use of various methods of contraception. We will also comment briefly on the pattern of contraceptive use and the practice of breast-feeding.

The various methods of contraception may be divided into two groups:

(a) Modern or 'efficient' methods. These include (in order of salience in Turkey) the pill, IUD, condom, 'female scientific' methods (such as diaphragm, tampon, sponge, foam tablets, jelly or cream), female and male sterilisation, and injection.

(b) Traditional or 'inefficient' methods. These include withdrawal, douche, rhythm, abstinence, a collection of folk methods (most of the folk methods mentioned by the respondents involved the use of various objects placed in the uterus), and finally, a residual category of other methods.

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[1] Bernard Berelson "Turkey: National Survey on Population" Studies in Family Planning, No. 5, The Population Council, 1964.

2. KNOWLEDGE OF CONTRACEPTION

Knowledge is defined here as having heard of any specific method to delay or avoid pregnancy. No reference is made to the knowledge of how to use a method or, for a supply method, where to obtain it. Knowledge so defined is ascertained at two levels: names of methods mentioned by the respondent spontaneously without specific probing; and the additional methods she claims to have heard of after the interviewer reads out a description of the method.

TABLE IX-1: PERCENTAGE OF EVER-MARRIED WOMEN REPORTING KNOWLEDGE OF VARIOUS CONTRACEPTIVE METHODS - BY WHETHER THE REPORTING WAS SPONTANEOUS OR ONLY AFTER PROBING

	MODERN METHODS							TRADITIONAL METHODS					
	Pill	IUD	Condom	Female Sterilisation	'Female Scientific'	Male Sterilisation	Injection	Withdrawal	Douche	Rhythm	Abstinence	Folk Methods	Other
Spontaneously	51	24	12	1	4	0	6	20	5	2	0	24	4
After Probing	30	44	40	38	28	9	*	45	45	21	10	*	*
Total	81	68	52	39	32	9	6	65	49	23	10	24	4

* No probing done for these methods

Source: Table 4.4.1

Table IX-1 shows the percentage of ever-married women reporting knowledge of specific contraceptive methods, broken down by whether the knowledge was reported spontaneously or only after probing. Just over 50 per cent of the respondents spontaneously mentioned the pill, and 20-25 per cent mentioned the IUD, withdrawal, or one or more folk methods. The condom was mentioned by around 10 per cent, and injection, douche and 'female scientific' methods by around 5 per cent. All other methods such as rhythm, abstinence and female and male sterilisation, were spontaneously mentioned by fewer than 2 per cent of the women.

The picture alters greatly when we consider the 'total knowledge', i.e. including women who claimed to know of a method after a description of the method was read out by the interviewer. The pill is known to 81 per cent of ever-married women, the IUD to 68 per cent and withdrawal to 65 per cent. In the case of several methods such as sterilisation, 'female scientific' methods, douche, rhythm and abstinence, practically all knowledge is reported only after method-by-method probing. Note that the injection and the various folk methods were not included in the list of methods in the questionnaire. Hence any knowledge of these methods is reported spontaneously, and in this sense underreporting of knowledge is likely to have occurred. It is, nevertheless, of note that one in four women report the knowledge of a folk method.

In the following, no further distinction will be made in terms of the form in which knowledge was reported.

TABLE IX-2: PERCENTAGE OF EVER-MARRIED WOMEN WHO HAVE EVER HEARD OF ANY METHOD OF CONTRACEPTION - BY CURRENT AGE AND NUMBER OF LIVING CHILDREN

	LIVING CHILDREN								
	0	1	2	3	4	5	6	7+	All
Current Age									
<25	87	87	91	87	(77)	*	*	-	88
25-34	91	89	96	94	88	87	80	(90)	91
35-44	(76)	85	92	90	88	86	84	82	87
45-49	*	*	92	86	88	86	80	75	84
All	87	87	94	91	88	86	82	81	88

Source: Table 4.2.2

Of all ever-married women, 88 per cent have heard of one or more methods of contraception. Of these all but 2 per cent know of at least one modern method, and a vast majority know of the pill.

The variation in the level of knowledge by age or family size (number of living children) is not marked, though the level of knowledge is somewhat higher among women in the intermediate groups. For example, among women aged 25-34 with 2-3 living children, 95 per cent have heard of at least one method; the corresponding figure is under 80 per cent for women aged 45-49 with 6 or more living children (see Table IX-2).

The percentages who have heard of any method within categories of background variables are summarised in Table IX-3. The figures shown are confined to women currently aged 25-34, so as to ensure that the various background variable categories being compared are demographically more homogeneous.[1]

Practically all women who are educated to the secondary level or beyond, or who are working in services and industry, or whose husbands are classified as employers, know of at least one method. Of those residing in urban areas, or living in the western region, or educated to the primary level, only 3 per cent do not know of any method. By contrast, 15 per cent of rural women, over 20 per cent of women in the eastern region, and 25 per cent of those working in farming outside the family farm do not know of any method.

Overall, the survey results confirm that knowledge of contraceptive methods, even of modern methods, is now fairly widespread among Turkish women.

TABLE IX-3: PERCENTAGE OF EVER-MARRIED WOMEN AGED 25-34 WHO HAVE HEARD OF ANY METHOD OF CONTRACEPTION - BY BACKGROUND VARIABLE

ALL	TYPE OF PLACE		REGION				
TURKEY	Urban	Rural	West	South	Centre	North	East
91	97	85	97	88	95	95	79

WOMAN'S EDUCATION				COUPLE'S LITERACY		
Illiterate	Literate	Primary	Higher	Neither literate	Only one literate	Both literate
85	93	97	100	78	87	97

WOMAN'S OCCUPATIONAL STATUS					HUSBAND'S WORK STATUS			
Not working	Family farm	Other farming	Services	Industry	Unpaid worker	Employee	Self-employed	Employer
93	89	75	98	99	89	93	87	99

Source: Table 4.2.2

[1] Generally, within a category, the figure for women aged 25-34 is slightly higher than the corresponding overall average for all ages. The particular age group 25-34 is selected in Table IX-3 to make the data on knowledge presented here comparable with the data on contraceptive use considered later. In any case, the variation in the level of knowledge by age or family size is generally small.

3. EVER-USE OF CONTRACEPTION

Of all ever-married women, 55 per cent report having ever-used contraception. The figure is even higher among the more relevant group of currently married fecund women - three-fifths (59%) of these women have ever-used at least one method of contraception, whether a modern or a traditional method.

The variation by age and family size in ever-use is more pronounced than that in knowledge described earlier. Women in the intermediate categories of age or family size have higher levels of use. For example, 63 per cent of all women aged 25-34 report ever-use, while of all women with 2-3 living children 69 per cent report ever-use. The highest figure is for women who are both aged 25-34 and have 2-3 living children: three-quarters (74%) in this subgroup report ever-use compared with the overall average of 55 per cent (see Table IX-4).

TABLE IX-4: PERCENTAGE OF EVER-MARRIED WOMEN WHO HAVE EVER USED ANY METHOD OF CONTRACEPTION - BY CURRENT AGE AND NUMBER OF LIVING CHILDREN

	LIVING CHILDREN									
	0	1	2	3	4	5	6	7+	All	% used modern method
Current Age										
<25	13	50	62	58	(50)	*	*	-	42	24
25-34	11	59	76	71	58	59	53	(50)	63	42
35-44	(3)	43	72	73	67	59	56	53	61	36
45-49	*	*	62	58	51	54	33	35	46	27
All	11	51	70	68	60	57	50	47	55	34
% used modern method	4	29	45	43	36	35	30	32	34	

Source: Tables 4.3.2, 4.3.3

Hence the use of contraception is fairly widespread. This statement, however, needs to be qualified when we consider the type of method used. Only one in three (34%) ever-married women have ever used a modern method, while one in five (21%) have used only a traditional but not a modern method. The most commonly used method is withdrawal (32% have ever-used), followed by the pill (25% ever-used), and douche (19%); 5-10 per cent report ever-use of the condom, IUD, rhythm, or one or more of the various folk methods (see Table IX-5). Sterilisation is practically absent, with only 18 women reporting female sterilisation and 7 reporting male sterilisation from a total of 4431 women in the sample.

It is interesting to examine the level of ever-use of modern methods as a proportion of ever-use of any methods including traditional methods. Overall, just over 60 per cent of ever-users have used a modern method. This proportion varies little by current age or family size, with only two minor exceptions: it is somewhat higher (67%) among women aged 25-34, and lower among women with no living children. It is worth noting that relatively speaking, modern methods have in general not been any less popular among older women or women with larger families.

TABLE IX-5: PERCENTAGE OF EVER-MARRIED WOMEN WHO HAVE EVER-USED SPECIFIED CONTRACEPTIVE METHODS

BY TYPE OF METHOD			MODERN METHODS					TRADITIONAL METHODS				
Used modern method(s)	Only traditional method(s)	Never used method	Pill hap	IUD intrauterin devices	Condom kapot	'Female Scientific'	Injection	Withdrawal gericekme	Douche yikama	Rhythm rithm	Folk	Other
34	21	45	25	7	11	3	1	32	19	5	8	1

Source: Table 4.3.1.A

Table IX-6 shows the percentage of women aged 25-34 who have ever-used a contraceptive method, classified by background variables. In this age group 63 per cent report ever-use in all Turkey. In urban areas the level of ever-use is one and a half times higher than the level in rural areas (75% versus 48%), and in the West it is nearly twice as high as in the East (78% versus 40%). Nearly all (93%) ever-married women with secondary education or beyond have used contraception (the figure is even higher when 0 and 1 parity women are excluded); this percentage is twice as high as that among illiterate women. The same order of difference exists when couples with both husband and wife literate are compared with couples where both partners are illiterate (77% versus 35%); or when women working in services or industry are compared with women working in farming outside the family farm (85% versus 40% ever-used); or when women with husbands classified as employers are compared with those whose husbands are unpaid workers (86% versus 39%).

TABLE IX-6: PERCENTAGE OF EVER-MARRIED WOMEN AGED 25-34 WHO HAVE EVER-USED (a) ANY METHOD, (b) A MODERN METHOD OF CONTRACEPTION - BY BACKGROUND VARIABLE

	ALL TURKEY	TYPE OF PLACE		REGION				
		Urban	Rural	West	South	Centre	North	East
(a) ANY	63	75	48	78	53	67	61	40
(b) MODERN	42	55	28	52	37	47	37	28

	WOMAN'S EDUCATION				COUPLE'S LITERACY		
	Illiterate	Literate	Primary	Higher	Neither literate	Only one literate	Both literate
(a) ANY	47	64	76	93	35	49	77
(b) MODERN	30	44	51	70	20	32	53

	WOMAN'S OCCUPATION STATUS					HUSBAND'S WORK STATUS			
	Not working	Family farm	Other farming	Services	Industry	Unpaid worker	Employee	Self-employed	Employer
(a) ANY	67	50	40	85	84	39	67	52	86
(b) MODERN	49	28	26	61	55	24	46	34	59

Source: Tables 4.3.2, 4.3.3

Table IX-6 also shows the percentage among women aged 25-34 who have ever-used a modern method. Again it is instructive to compare across categories users of a modern method as a proportion of all ever-users. Overall, two-thirds (67%) of all users in this age group have used a modern method. This proportion does not vary much from one background variable category to another, even when the absolute level of ever-use varies greatly. For example, there is no difference in the relative popularity of modern methods between the Western and the Eastern regions. Generally, however, modern methods are relatively speaking slightly more common in categories with higher overall level of ever-use: among illiterate women or women working in farming, or with husbands classified as unpaid workers, the proportion of all users who have used a modern method is nearer 60 per cent; among the better educated women, or those working in services and industry, or those with husbands classified as employers, the proportion is nearer 70 per cent. The largest difference in Table IX-6 is that between urban and rural areas: 73 per cent of urban users have used a modern method, compared with 58 per cent of rural users. Hence the urban-rural differential in ever-use becomes very pronounced when attention is confined to modern methods (55% urban versus 28% rural ever-married women have used a modern method).

4. CURRENT USE

In discussion of the results concerning current use, analytic precision is enhanced when attention is focused on the group of women who are currently exposed to the risk of conception. The exposed group excludes women who are not married, or are not able to have children, or are currently pregnant.[1] No account is taken of temporary cessation of exposure due to factors such as temporary separations within marriage, post partum amenorrhea etc.

Of all exposed women, 50 per cent report current use of a method of contraception. Except for the lower level of use among women aged under 25 (36% are using), the level varies little by age (see Table IX-7). There is a clearer association with the number of living children: within any age group the level of use is the highest among women with 2 or 3 living children, beyond which there is a substantial fall with increasing family size. For example, among exposed women aged 35-44, the percentage currently contracepting falls from around 70 per cent for those with 2-3 children, to around 40 per cent for those with 7 or more living children. Only a small minority (8%) of those with no children are current users. This would imply that concern to delay the first birth is not widely felt, though such concern is not absent. The level of use increases dramatically to 47 per cent for those with one living child, and to 63 per cent for those with two children. This is indicative of a fairly widespread acceptance of the idea of spacing of births at the earlier stages of family building.

TABLE IX-7: PERCENTAGE OF EXPOSED WOMEN WHO ARE CURRENTLY USING ANY METHOD OF CONTRACEPTION - BY CURRENT AGE AND NUMBER OF LIVING CHILDREN

	LIVING CHILDREN									% using modern method	% using withdrawal
	0	1	2	3	4	5	6	7+	All		
CURRENT AGE											
<25	8	43	50	42	(35)	*	*	-	36	15	15
25-34	11	55	69	65	47	46	39	(33)	56	21	24
35-44	*	(46)	74	67	63	46	48	39	55	17	26
45-49	*	*	(68)	(69)	(58)	(58)	*	(24)	52	14	24
All	8	47	63	62	54	47	45	36	50	18	22
% using modern method	2	18	24	21	18	15	13	14	18		
% using withdrawal	2	20	26	28	23	24	24	17	22		

Source: Tables 4.4.5-4.4.7

[1] The small number of cases with husband or wife sterilised are regarded as "exposed" women who are using a very efficient method of contraception.

Even though the overall level of current use is relatively high in Turkey, a remarkable fact is that only one in three of the current users are using a modern method. Consequently, a modern method is being used by little over one in six (18%) of the exposed women. The relative popularity of modern methods declines with age: among women aged under 25, a modern method is being used by 40 per cent of the current users; the corresponding figure is 25 per cent among users aged 45-49. There appears to be no association of the relative popularity of modern methods with the number of living children, particularly when women in a given age group are compared.

Table IX-8 shows the distribution of users by the method being used. As many as 44 per cent of current users are using withdrawal, the level of use of which exceeds that of all modern methods put together (35%). Of the latter, the most common method is the pill (used by 16% of all users), followed by the IUD and the condom (8% of all users in each case). Among the traditional methods, douche is common (11% of all users), followed by one of the various folk methods (6% of users).

TABLE IX-8: PER CENT DISTRIBUTION OF (A) ALL EXPOSED WOMEN, (B) ALL CURRENT USERS ACCORDING TO THE METHOD BEING USED - BY CURRENT AGE

	MODERN METHODS					TRADITIONAL METHODS					
	Pill	IUD	Condom	Other	Total	Withdrawal	Douche	Folk	Other	Total	All Users
(A) % OF EXPOSED											
<25	8	4	2	1	15	15	3	2	1	21	36
25-34	10	5	5	1	21	24	4	4	3	35	56
35-44	6	3	5	3	17	26	8	2	2	38	55
45-49	4	2	6	2	14	24	11	2	1	38	52
ALL	8	4	4	2	18	22	6	3	1	32	50
(B) % OF USERS											
<25	23	11	6	0	40	41	9	6	4	60	100
25-34	19	9	8	2	38	43	8	8	3	62	100
35-44	11	5	9	5	30	47	15	4	4	70	100
45-49	8	3	12	4	27	47	22	4	0	73	100
ALL	16	8	8	3	35	44	12	6	3	65	100

Source: Table 4.4.1

The percentage using withdrawal exceeds the percentage using a modern method not only in the sample as a whole but also within any age or family size group shown in Table IX-8. The relative popularity of withdrawal does not change much by age; similarly folk methods are, relatively speaking, no more common among older women than among younger women.

However as noted above, taking all traditional methods together, the relative frequency of their use among all users tends to increase with age. This is mainly due to the greater popularity of douche among women aged 35 and over. Among the modern methods, the use of the condom is (relatively) somewhat more common among older women, while the level of use of the pill declines with age from 23 per cent of users among women aged under 25 to only 8 per cent of users among women aged 45-49. The reported use of the IUD also declines consistently with age, which may be considered a rather unexpected finding in so far as the IUD is used more as a means of limiting family size than for the spacing of births.

It is interesting to contrast the pattern of current use with that of ever-use discussed earlier. Table IX-9 shows the percentage of currently married fecund women who have ever-used contraception, compared to the percentage of exposed women who are currently using contraception. The two populations differ only in that the former also includes currently pregnant women. The figures are comparable in so far as women who happen to be currently pregnant do not constitute a particularly selective subgroup among all currently married fecund women in relation to past contraceptive use.

TABLE IX-9: COMPARISON BETWEEN EVER-USE AND CURRENT USE ACCORDING TO TYPE OF METHOD - BY CURRENT AGE

	Current Age				
	<25	25-34	35-44	45-49	All
Use Of Any Method					
Ever Use (% of currently married fecund women)	43	65	69	64	59
Current Use (% of exposed women)	36	56	55	52	50
Use Of Modern Method					
Ever Use (% of currently married fecund women)	24	44	41	37	37
Current Use (% of exposed women)	15	21	17	14	18

Source: Tables 4.3.1B, 4.4.5, 4.4.6

On the basis of these data we may state that approximately five-sixths of the exposed women who ever-used contraception are also currently using. The ratio of ever-users to current users differs little by age: for example it is around 85 per cent among women aged under 35, and around 80 per cent among older women. This indicates a high level of persistence in use among all age groups. However, a different picture emerges when we examine the use of modern methods. Overall, 37 per cent of currently married fecund women have ever-used a modern method, but only 18 per cent of exposed women are currently using a modern method. That is, only one in two of those who have used a modern method in the past are currently doing so. Further, among exposed women this ratio of current users of modern methods to ever-users of modern methods declines by age, from 60 per cent among women aged under 25 to under 40 per cent among women aged 35 and over. The implication is an important one. A dominant majority are currently using a traditional method, not because many have never tried a modern method, but because they have discontinued the use of a modern method and switched to a traditional method, mainly to withdrawal.

TABLE IX-10: PERCENTAGE OF EXPOSED WOMEN AGED 25-34 WHO ARE CURRENTLY USING (A) ANY METHOD, (B) A MODERN METHOD, (C) WITHDRAWAL AND (D) ANY OTHER TRADITIONAL METHOD - BY BACKGROUND VARIABLE

	All Turkey	TYPE OF PLACE		REGION				
		Urban	Rural	West	South	Centre	North	East
(a)ANY METHOD	56	67	41	71	50	56	55	30
(b)MODERN METHOD	21	28	12	25	22	22	20	13
(c)WITHDRAWAL (geri çekme)	24	25	22	31	19	22	28	13
(d)OTHER TRADITIONAL	11	14	7	15	9	12	7	4

	WOMAN'S EDUCATION				COUPLE'S LITERACY		
	Illiterate	Literate	Primary	Higher	Neither Literate	Only One Literate	Both Literate
(a)ANY METHOD	37	62	68	87	32	39	70
(b)MODERN METHOD	14	22	25	38	11	16	27
(c)WITHDRAWAL	17	30	30	26	13	17	30
(d)OTHER TRADITIONAL	6	10	13	23	8	4	13

	WOMAN'S OCCUPATIONAL STATUS					HUSBAND'S WORK STATUS			
	Not Working	Family Farm	Other Farming	Services	Industry	Unpaid Worker	Employee	Self-Employed	Employer
(a)ANY METHOD	58	45	36	80	76	(37)	58	47	76
(b)MODERN METHOD	25	13	11	30	30	(18)	23	16	30
(c)WITHDRAWAL	24	24	11	28	30	(14)	24	23	31
(d)OTHER TRADITIONAL	9	8	14	22	16	(5)	11	8	15

Source: Tables 4.4.5-4.4.7

Finally, we briefly comment on differentials in current use of contraception by background variables. As before, Table IX-10 is confined to women currently aged 25-34. For each background variable category, the following figures are shown: (a) the percentage of exposed women aged 25-34 who are currently using any method; (b) the percentage who are currently using a modern method; (c) the percentage using withdrawal; and (d) the percentage using any other traditional method. Figures (b) to (d) add up to (a).

Overall, 56 per cent of exposed women aged 25-34 are currently contracepting. Here again we note very pronounced differentials by background variables. Two-thirds of the women in urban areas compared with only two-fifths in rural areas are currently using a method. The prevalence of use is around 70 per cent in the Western region, and only 30 per cent in the Eastern region. The most outstanding differentials are by women's level of education: 87 per cent of those with secondary education or beyond, compared with 37 per cent of those illiterate are currently using contraception. Among women working in services, 80 per cent are currently using; among those working in farming outside the family farm only 36 per cent are using. Similarly, three-quarters of those with husbands classified as employers, compared with fewer than one-half of those with self-employed husbands are currently using any method of contraception.

Turning next to the current use of modern methods among exposed women aged 25-34, only one in five (21%) are using a modern method in all Turkey. In rural areas as well as in the Eastern region, only one in eight are using a modern method: this low figure of 12-13 per cent may be contrasted with the relative high all-Turkey figure of 56 per cent using any method in the age group being considered.

Relatively speaking, modern methods are used more frequently by users in urban areas: of all current users in urban areas, 42 per cent are using a modern method; the corresponding figure for rural areas is 29 per cent. Generally, however, the ratio of users of a modern method to all users does not vary in any systematic way by background variable, and the range of this variation is rather small, mostly between 30 to 40 per cent.

It follows from the above that regional and educational differentials in the level of current use are equally pronounced whether all methods or only modern methods are considered, though urban-rural differentials in current use of any method become substantially more pronounced when attention is confined only to modern methods. By contrast, Table IX-10 shows that differentials in the actual level of use of withdrawal are much less marked than differentials in the overall level of use of any method or any modern method. For example, similar proportions of urban and rural exposed women aged 25-34 are currently using withdrawal: 25 per cent in urban areas and 22 per cent in rural. Similarly, 24 per cent of those working on the family farm and 28 per cent of those working in services are using withdrawal; 23 per cent of those with husbands classified as employers are using this method. One outstanding exception to this pattern is the marked regional variation in the percentage using withdrawal (see Table IX-10).

5. PATTERN OF CONTRACEPTIVE USE

To summarise, the knowledge or modern contraceptive methods is widespread in Turkey. Over one in two ever-married women have used contraception, and two-thirds of the ever-users have used a modern method. One in two exposed women are currently contracepting, but only a third of these users are using a modern method. Many of the current users of traditional methods have in the past used a modern method.

Leaving aside the question of a switch from modern to traditional methods, the relationship between past use and current use of any method of contraception may be summarised in terms of the composite variable "pattern of contraceptive use". This variable defines the period of the most recent use, and the following are its main categories:

(i) Current users, including the small minority who are sterilised.

(ii) Past users whose most recent use was in the open interval. The open birth interval is defined only for women currently not pregnant. It refers to the time elapsed since last birth (if any), or since first marriage (if the woman has had no live-births).

(iii) Past users whose most recent use was during the last closed interval. For non-pregnant women with at least two births, the last closed birth interval refers to the period between the last two births. For currently pregnant women, the current pregnancy is counted as the "last birth". For women with only one birth (including any current pregnancy) the interval begins with the date of first marriage. The interval is not defined for women who have not had a live-birth nor a current pregnancy.

(iv) Past users whose most recent use was in some earlier interval.

The remaining categories relate to women who have never-used contraception:

(v) Currently married fecund women who have never-used contraception but intend future use.

(vi) Currently married fecund never-users who do not intend future use.

(vii) Never-users who are not currently married or are not fecund.

TABLE IX-11: PER CENT DISTRIBUTION OF EXPOSED WOMEN ACCORDING TO THE PATTERN OF CONTRACEPTIVE USE - BY CURRENT AGE

Current Age	Current User	PAST USER, MOST RECENT USE IN			NEVER USER		TOTAL
		Open Interval	Last closed Interval	Earlier Interval	Intends Future Use	Does Not Intend Use	
<25	36	5	4	2	26	27	100
25-34	56	6	4	2	11	21	100
35-44	55	8	3	3	7	24	100
45-49	51	8	2	3	3	33	100
All	50	6	3	3	14	24	100

Source: Table 4.5.4

Of all ever-married women, 36 per cent are current users, 8 per cent have used in the open interval but are not currently using, 7 per cent used most recently in the last closed interval, and 4 per cent used only in some earlier interval - giving a total of 55 per cent who have ever-used. The remaining 45 per cent have never-used: of these 14 per cent intend future use, 21 per cent do not intend future use, and 10 per cent are not currently married and fecund.

A clearer picture emerges when we examine the pattern of contraceptive use of currently exposed (i.e. currently married fecund non-pregnant) women. As shown in Table IX-11, 50 per cent of these women are currently using a method, and 12 per cent have used in the past but are not currently using. One in two of the last mentioned category are recent users - their last use is in the open interval, i.e. subsequent to their last birth (if any); some of these women may have stopped using in order to have a child. Three per cent used most recently in their last closed interval but have not started use since their last birth, and a similar proportion abandoned use at least since the birth of their next-to-last child.

Among never-users, the proportion intending future use declines sharply with current age - as might be expected. Nearly 50 per cent of never-users among exposed women aged under 25 intend future use - a figure which is remarkably close to the overall level of use in Turkey and gives some confidence in the otherwise notoriously unreliable question on future intentions. By contrast, very few report intentions to use among exposed women aged 45-49.

It is also rather remarkable that in each age group, around three-quarters have either used contraception or intend future use. The only exception is the slightly lower proportion (67%) among the oldest women aged 45-49: in any case the number of exposed women in this last mentioned group is rather small. Once again a picture of relative homogeneity among various demographic categories (i.e. among various age groups) emerges in relation to behaviour and intentions regarding contraceptive use.

6. BREAST-FEEDING

Despite widespread interest, the exact role of breast-feeding in delaying conception is not fully established. It is not possible here to address this issue in any extensive way for two reasons: firstly, the TFS questionnaire collects only a limited amount of data on the subject; secondly, the First Report is confined only to a small set of simple cross-tabulations of these data and precludes more in-depth analysis at this stage.

Table IX-12 summarises the distribution according to the length of breast-feeding during the last closed birth interval. For women currently not pregnant, the table refers to the breast-feeding of the next-to-last child (whether or not the child is currently alive); for pregnant women, the reference is to the last child. Row (A) of the table includes all ever-married women who have had at least two births, including any current pregnancy. There is a strong tendency for the responses to be heaped at durations 12, 18 and 24 months. There is, nevertheless, considerable dispersion in reported durations: around one in three report durations of 11 months or less, while a third report durations of 19 months or more. Only a small minority (6%) did not breast-feed at all. The overall mean duration is around 15 months.

TABLE IX-12: BREAST-FEEDING IN THE LAST CLOSED INTERVAL - BY CURRENT AGE AND CHILDREN EVER-BORN

Distribution According to Length of Breast-feeding in Last Closed Interval

	Did not breast-feed	0-5	6	7-11	12	13-17	18	19-23	24	25+	Fed till child died	All
(A)	6	13	4	7	15	3	17	1	18	8	8	100
(B)	3	13	4	9	21	4	28	1	17	.	.	100

Per Cent Who Did Not Breast-feed in Last Closed Interval

	Current Age				Children Ever Born				All
	<25	25-34	35-44	45-49	2	3	4	5+	
(A)	10	6	5	4	11	5	4	5	6
(B)	8	3	2	3	5	4	1	3	3

Mean Length (Months) of Breast-feeding

	Current Age				Children Ever Born				All
	<25	25-34	35-44	45-49	2	3	4	5+	
(A)	10.4	13.3	16.8	18.2	10.7	13.0	15.4	17.1	14.7
(B)	12.1	12.9	14.6	15.6	11.2	12.4	14.5	15.7	13.8

Source: Tables 4.1.1-4.1.4

In comparing the mean duration of breast-feeding among categories of the sample, it is necessary to control for exposure to, or opportunity for, breast-feeding. For this purpose a duration of 24 months was used as the period of observation. This implied the exclusion of women who could not have breast-fed for at least 24 months - either because they became pregnant before the period elapsed (i.e. the length of their closed interval was less than 24 + 9 = 33 months), or because the child died within 24 months. At the same time it is also necessary, for comparability across categories, to exclude women who breast-fed for more than 23 months.[1]

These restrictions, while making the mean durations more comparable across different sample categories, result in a drastic reduction in the sample size to only a third of the total: from 3573 women with at least two births, to only 1224 whose intervals satisfy the above mentioned conditions. This major reduction in the sample seriously limits the usefulness of the comparisons, and consequently a different approach will be necessary in any further analysis of the data.

Row (B) of the table shows the distribution of the curtailed sample according to the length of breast-feeding. The relative heaping at durations 12 and 18 months appears even more pronounced. Also the proportion who did not breast-feed is reduced to 3 per cent, compared to 6 per cent for the whole sample. (This may in part be due to the exclusion of infant deaths from row (B)). Due to the exclusion of longer durations, the overall mean length of breast-feeding is reduced by approximately a month, to around 14 months for the curtailed sample.

Whether the whole sample or the curtailed sample is considered, the proportion who did not breast-feed during the last closed interval varies little by age or number of children ever-born. Exceptions to this are the younger women aged under 25, and women with only two children: a higher proportion among these subgroups did not breast-feed. It is difficult to state whether this reflects a time trend or is merely a life-cycle effect.

In contrast to the proportions who did not breast-feed, the stated mean length of breast-feeding is clearly related to current age as well as to children ever-born in a positive way. For example, for the full sample, there is a difference of over 6 months in the reported mean between the youngest women (mean 10.4 months) and the oldest women (mean 18.2 months). This difference persists - though is substantially reduced - for the curtailed sample (see Table IX-12).

With the major qualifications noted earlier, we may in conclusion briefly indicate socio-economic differentials in the practice of breast-feeding (for details, see Table 4.1.5, Volume II). In almost all categories the proportion who did not breast-feed their last child is negligible. Hence urban women as well as women educated to the highest level, for example, continue the practice of breast-feeding. In the reported length of breast-feeding, there is an urban-rural difference of around 2 months in the mean (13 months in urban areas, 15 months in rural areas - for the curtailed sample), and West-East difference of around 3 months. Illiterate women report a mean duration of 15 months, and women educated at least to the secondary level report a mean duration of only 9 months.

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[1] Due to the tendency in responses to be heaped at 24 months, it is unreasonable to assume that all durations reported as 24 months actually exceed 23 completed months. It is in any case not reasonable to assume that the durations are reported in 'completed' rather than in 'rounded' months. Hence in computing the mean lengths in Tables 4.1.3 - 4.1.5 in Volume II, one-half of the cases with reported durations of 24 months were included and one-half excluded.

CHAPTER X FERTILITY PREFERENCES

1. INTRODUCTION

The present chapter is concerned with three inter-related questions: the desire to stop child-bearing and preferred family size; preferences regarding sex of children and their possible effect on preferred family size; and contraceptive knowledge and use in the light of fertility preferences.

In the TFS questionnaire, fertility preferences were measured through the following sequence of questions. First, all currently married fecund women were asked:

Q1. "Do you want to have another child, either now or within the next few years?"

Stability and predictive value of such attitudinal questions can be a major problem. One difficulty in Q1 is to convey to the respondent the time reference implied by that question, namely, the desire to have another child at any time in the future. There is a possibility of misunderstanding this question as relating to the desire to have another child in the near future or even immediately. Hence, if the answer to Q1 was 'NO' or 'UNDECIDED', the respondent was asked another probe question:

Q2. "Do you want to have another child at any time in the future?"

If the answer to Q1 or Q2 was 'YES', the respondent was asked to state the additional number of children wanted (Q3), and sex preference concerning the next child (Q4). Otherwise, if the respondent had had at least one live-birth, she was asked:

Q5. "Had you wanted to have another child before you became pregnant with your last one?"

For currently pregnant women, Q1 and Q2 referred to the desire for more children after the birth of the child being expected, Q3 to the number wanted in addition to current pregnancy, Q4 to sex preference of the expected child, and Q5 to whether or not the current pregnancy was wanted.[1]

Finally, all respondents irrespective of current exposure status were asked:

Q6. "If you could choose exactly the number of children to have in your whole life, how many would that be?"

Interpretation of data on desired family size is always problematic. It is therefore necessary to treat the following results with caution: the emphasis should be on the general pattern of the data rather than on individual figures.

2. DESIRE TO STOP CHILD-BEARING

Of all currently married fecund women in the sample 57 per cent want to have no more children, 39 per cent want more children, and the remaining 4 per cent are undecided.

As shows in Table X-1, the percentage wanting no more is strongly and positively related to current age, as well as to current family size (number of living children). Just over 50 per cent of those with two living children and nearly 75 per cent of those with three living children want no more. Fewer than one in six of those with 4 or more children want more.

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[1] For non-pregnant women with no live-birth, Q3 was not asked, and responses to Q6 below were used as a substitute for the 'additional' number wanted. The actual wording of the above questions differed slightly between different categories of respondents. For details see Appendix A.

By contrast, only 1 per cent of those with no living child and 10 per cent of those with one child want to stop child-bearing. Childlessness, or even a one child family, is clearly regarded as undesirable. At least among the younger women, the increase in the percentage wanting no more is fairly steep as we move from a one child to a two child family, and from that to a three child family. This indicates that a family of two or three children is a fairly widely held norm among Turkish women. These family size norms are substantially lower than achieved family sizes on the basis of hitherto prevailing levels of fertility.

An independent association with current age is reflected in the fact that a majority of women aged 35 and over want no more children, irrespective of their current number living.

TABLE X-1: PERCENTAGE OF CURRENTLY MARRIED FECUND WOMEN WHO WANT NO MORE CHILDREN - BY NUMBER OF LIVING CHILDREN (INCLUDING ANY CURRENT PREGNANCY) AND CURRENT AGE

	LIVING CHILDREN						
	0	1	2	3	4	5+	All
Current Age							
<25	1	6	40	56	(76)	*	24
25-34	0	10	49	69	75	80	58
35-44	*	(61)	85	90	91	89	87
45-49	*	*	(91)	(97)	(95)	88	90
All	1	10	52	73	83	86	57

Source: Table 3.1.3

Table X-2 shows the urban-rural, regional and educational differentials in the percentage wanting no more children, classified by the current number of living children. Generally, the differentials in preferences are consistent with differentials in actual fertility discussed earlier: as we move from categories with lower fertility to those with higher fertility, the percentage wanting no more children (at a given family size) declines. For example among women with two living children, the percentage wanting no more is 59 among urban and 40 among rural women; this percentage is 64 among Western women and only 31 among Eastern women; similarly, the percentage wanting no more declines from 72 among women in the highest educational category to 39 among illiterate women.

The same point is illustrated by the last column in Table X-2, which shows the linearly interpolated family size at which the percentage wanting no more reaches 50. The median for the sample as a whole is 2.0 living children, the corresponding figure for urban women is 1.8 and for rural it is 2.4. There is a difference of nearly one child between the highest and the lowest educational categories. The regional differences are most striking: the median being 1.7 for Western women, and as high as 3.1 for Eastern.

TABLE X-2: PERCENTAGE OF CURRENTLY MARRIED FECUND WOMEN WHO WANT NO MORE CHILDREN - BY NUMBER OF LIVING CHILDREN (INCLUDING ANY CURRENT PREGNANCY) AND BACKGROUND VARIABLE

	LIVING CHILDREN					
	1	2	3	4	5	Median **
All Turkey	10	52	73	83	85	2.0
PLACE						
Urban	12	59	81	90	91	1.8
Rural	8	40	65	77	81	2.4
REGION						
West	10	64	85	93	95	1.7
South	11	45	68	(71)	(87)	2.2
Centre	12	51	78	88	93	2.0
North	(8)	30	65	79	86	2.6
East	8	31	48	69	70	3.1
WOMAN'S EDUCATION						
Illiterate	8	39	62	79	82	2.5
Literate	18	52	78	84	(94)	1.9
Primary	6	53	82	88	(94)	1.9
Higher	16	72	(90)	*	*	1.6

** Interpolated number of living children at which exactly 50 per cent would want no more.

Source: Table 3.1.3

3. DESIRE FOR LAST PREGNANCY

In response to the question as to whether women wanted to be pregnant before their last pregnancy, two in five (38 per cent) stated that they did not. This is indicative of a substantial level of unwanted fertility in Turkey. This conclusion emerges in spite of the possibility that psychological justification of, or adjustment to, the children already born may have resulted in underreporting of unwanted fertility.

Table X-3 shows that the percentage who did not want their last pregnancy is almost completely determined by the number of living children, there being little independent association with age. One in five of the women with currently two living children, two in five of those with three, and a majority of those with four or more children did not want their last child.

Comparison of those figures with the percentages who want no more children (Table X-1) is particularly revealing. For example, 52 per cent of those with two living children want no more, while as many as 40 per cent of those with three children did not want their last child. In so far as these figures can be taken to reflect stable patterns, they imply that a very substantial proportion of those wanting to stop child-bearing were unable to implement their intentions in practice.

TABLE X-3: PERCENTAGE WHO DID NOT WANT THEIR LAST CHILD - BY NUMBER OF LIVING CHILDREN (INCLUDING ANY CURRENT PREGNANCY) AND CURRENT AGE

	LIVING CHILDREN						
	≤1	2	3	4	5	6+	All
Current Age							
<25	2	20	35	(58)	*	*	16
25-34	2	16	39	51	63	69	35
35-44	4	24	43	57	60	72	53
45-49	*	37	44	53	69	69	56
All	2	20	40	54	63	71	38

Source: Table 3.1.6

Table X-4 shows urban-rural, regional and educational differentials in the percentage who did not want their last child, classified by the current number of living children. It is remarkable that for a given family size, the percentage who did not want their last child increases as we move from high fertility to low fertility categories - for example, from rural to urban, from East to West, and from illiterate women to women in the highest educational group. The implication is that in spite of higher levels of contraceptive use among urban, Western and educated women, their lower fertility has, relatively speaking, not kept pace with their even lower family size desires.

TABLE X-4: PERCENTAGE WHO DID NOT WANT THEIR LAST CHILD - BY NUMBER OF LIVING CHILDREN (INCLUDING ANY CURRENT PREGNANCY) AND BACKGROUND VARIABLE

	LIVING CHILDREN					
	≤1	2	3	4	5	6
All Turkey	2	20	40	54	63	69
PLACE						
Urban	3	23	45	60	68	73
Rural	2	14	35	49	59	67
REGION						
West	2	22	42	64	64	(75)
South	1	17	39	40	67	(63)
Centre	2	20	45	57	73	71
North	2	22	36	55	53	(64)
East	5	13	27	42	53	71
WOMAN'S EDUCATION						
Illiterate	2	16	32	48	60	67
Literate	4	23	43	50	68	(80)
Primary	1	19	44	71	(75)	*
Higher	5	29	59	*	*	*

Source: Table 3.1.6

4. NUMBER OF CHILDREN WANTED

The interpretation of the abstract question (Q6, see Section 1) on the total number of children wanted (or 'desired family size') can differ from one category of women to another, particularly since in a cross-sectional survey, the information is gathered from women at widely differing stages of the life-cycle. For women at the start of marriage, the data represent statements of long term goals whose stability and predictive value are unknown. For women at the end of their reproductive span, these statements are inevitably influenced by past experience. One of the common problems noted in many surveys in different settings is that with increasing family size, the stated desired family size tends increasingly to become highly correlated with the actual family size.

This problem does not, however, appear pronounced in the data collected in the TFS. As shown in Table X-5, the mean desired size increases only slowly with increasing family size, from 2.9 for women with no living children to 3.9 for women with eight living children. Such a positive association is in any case not entirely unexpected, in so far as fertility performance may to an extent reflect fertility preferences. This gives us a certain degree of confidence in the data.

TABLE X-5: PER CENT DISTRIBUTION OF CURRENTLY MARRIED WOMEN ACCORDING TO TOTAL NUMBER OF CHILDREN WANTED - BY NUMBER OF LIVING CHILDREN

	Total Number Wanted							
	≤1	2	3	4	5	6+	All	Mean
Living Children								
0	4	48	27	14	4	3	100	2.86
1	4	51	28	12	3	2	100	2.70
2	3	47	32	14	2	2	100	2.72
3	3	34	41	16	3	3	100	2.95
4	2	40	23	25	4	6	100	3.15
5	3	31	32	18	9	7	100	3.35
6	2	26	32	23	6	11	100	3.59
7	2	26	30	25	6	11	100	3.85
8	2	21	26	24	13	14	100	3.94
9+	2	21	30	21	9	17	100	4.50
All	3	40	31	17	4	5	100	3.03

Source: Table 3.3.3

Table X-5 shows the per cent distribution of currently married women according to the stated number of children wanted. The table excludes just under 6 per cent of the women who did not give a numerical response to the question (including 10 or so cases for which answers were not stated). There is no systematic variation in the mean number desired with age, independent of the positive association with actual family size (number of living children) noted above.

A desired family size of only one child is rare (3 per cent of the respondents): most of the respondents desire at least two children. A significant majority in the sample (71 per cent) state their desired size to be 2 or 3 children, and nearly 90 per cent desired 2 to 4 children. The mode is 2 children among those with small families (say those with up to 3-4 living children), while among women with 5 or more living children the modal number desired is 3. Hence the data indicate that small family size norms are fairly widespread among Turkish women.

Further, substantial proportions of women are willing to state their desired size to be smaller than their achieved family size. Among women with 3 living children, 37 per cent state their desired size to be less than their achieved size, the corresponding figure being 65 per cent among those with 4 living children and as high as 84 per cent among those with 5 living children. These data are generally consistent in implication with the data discussed earlier on whether the last child was unwanted: the implication again being a substantia level of unwanted fertility.

5. SEX PREFERENCES

The preferences that women have for the sex of their children can be determined from several questions: The preferred sex of their next child, given the sex composition of their present children; the percentage who want no more children among those with various present numbers of sons and daughters; and the mean number of children wanted, according to the sex composition of those presently living. Our analysis will be restricted to exposed women, i.e., to women who are currently married, fecund and non-pregnant.

Table X-6 shows the preferences for the sex of the next child expressed by women with different numbers of living children who desire additional births. (The figures exclude the proportion -- 7 per cent -- whose responses could not be classified). Of exposed women wanting another child, 42 per cent would prefer to have a boy, 26 per cent a girl, and the remaining 32 per cent expressed no preference. These data indicate a certain degree of son preference, although it is notable that the proportion indifferent to the sex of their next child is nearly half (48 per cent) among those with no children as yet. At other parities the proportion who are indifferent is relatively constant at 20-30 per cent. However, the percentage preferring a son is higher than the percentage preferring a daughter at all parities, and the difference widens as family size increases.

TABLE X-6: SEX PREFERENCE OF EXPOSED WOMEN WANTING ANOTHER CHILD - BY CURRENT NUMBER OF LIVING CHILDREN

PREFERENCE	NUMBER OF LIVING CHILDREN						
	0	1	2	3	4	5+	All
Percentage preferring a boy	37	37	43	51	60	57	42
Percentage preferring a girl	15	35	27	24	18	16	26
Percentage indifferent	48	28	30	25	22	27	32

Source: Table 3.4.3

A more striking picture emerges when sex preferences are examined in relation to the sex composition of women's present families. From Table X-7 it is evident that nearly all women with 2 or 3 children already living want either to stop having children or to have some children of each sex. For example, among women with two living girls and no boys, about one-third (33 per cent) want to stop, while of the remainder 91 per cent hope to have a son and only 1 per cent prefer another daughter. The proportion wanting to stop is higher among those with 2 boys (46 per cent), but of women wanting more children 80 per cent want a daughter and only 2 per cent prefer their next child to be a son. Of women who already have one child of each sex, more wish to stop (61 per cent) and fewer express a preference for the sex of their next child. After three children these patterns become even stronger.

TABLE X-7: FERTILITY PREFERENCES - BY SEX COMPOSITION OF LIVING CHILDREN, FOR WOMEN WITH 2 OR 3 CHILD FAMILIES

	2 living children			3 living children			
No. of living boys	0	1	2	0	1	2	3
Percentage wanting no more*	33	61	46	44	75	82	69
Mean number wanted**	2.99	2.59	2.74	2.96	3.00	2.88	2.84
Percentage preferring boy***	91	39	2	(92)	(67)	(20)	(0)
Percentage preferring girl***	1	8	80	(0)	(0)	(37)	(95)
Percentage indifferent***	8	53	18	(8)	(33)	(43)	(5)

* For currently married, fecund, non-pregnant (exposed)
** For currently married non-pregnant women
*** For exposed women wanting another child

Source: Tables 3.4.1, 3.4.3, 3.4.5

Table X-7 also shows that ideal family sizes are not greatly affected by sex preferences. Among currently married non-pregnant women with 2-3 living children the preferred mean family size varies between 2.75 and 3.00 children, with no marked differences by present family composition. Evidently, whether women have mainly sons or mainly daughters only moderately influences their outlook as to their preferred numbers.

6. USE OF CONTRACEPTION IN RELATION TO FERTILITY PREFERENCES

Questions on women's ideal family sizes, and their own fertility intentions lead to the further issue of whether the stated ideals and intents are likely to be realised. With respect to those women who are currently married, fecund and non-pregnant, and who want no additional children, part of the answer is contained in the extent of their knowledge and use of contraception.

Table X-8 shows the percentages of currently married, fecund and non-pregnant women who do not know any contraceptive methods and the percentages of current users according to whether or not they want additional children. As we might expect, the proportion not knowing of any methods is higher among women who want more children (14 per cent) than among those who don't (7 per cent). Differences are not large by age groups (see Table 5.1.1).

TABLE X-8: PERCENTAGE OF CURRENTLY MARRIED WOMEN WHO DO NOT KNOW ANY METHOD AND PERCENTAGE CURRENTLY USING SOME METHOD - BY WANTING FUTURE BIRTH OR NOT

Desire For More Children	Per cent not knowing any method	Per cent current users	n
Wants future birth	14.5	32.7	1466
Does not want future birth	7.1	62.1	2135
Undecided	7.9	54.2	127
Total	10.1	50.4	3728

Source: Tables 5.1.1, 5.2.1

Rates of current contraceptive use display much greater differences. About 30 per cent of women who want additional children are current users of contraception, as compared with 60 per cent among those wanting no more births. In both groups modern methods are used only about half as widely as traditional methods (they are used by 12 per cent of those wanting children, and 20 per cent of those not wanting children), and in both the level of use of all methods is lower at high parities than at low and middle parities (Table 5.2.1). By region and place of residence, women wanting no additional children and using modern methods are more likely to be urban (28 per cent using modern methods) than rural (13 per cent), and more likely to be in the West or Central regions than in the North or East. In the Southern region, rates differ more sharply by residence than elsewhere, with urban women displaying a high rate of use of modern methods (32 per cent) but rural women the lowest rate (6 per cent) of any of the regions (Table X-9).

TABLE X-9: PERCENTAGE WHO ARE USING A MODERN CONTRACEPTIVE METHOD - BY REGION AND PLACE OF RESIDENCE, CONFINED TO EXPOSED WOMEN WHO DO NOT WANT ANY MORE CHILDREN

Region	PLACE OF RESIDENCE		
	Urban (1)	Rural (2)	Rural/Urban Ratio (3) = (2)/(1)
Total	28.5	12.8	.45
Central	33.2	17.4	.64
North	29.3	9.1	.31
West	26.4	16.4	.62
South	32.3	5.6	.17
East	20.8	8.5	.41

Source: Table 5.2.2A

Differentials in modern contraceptive use are less wide by age group than by residence and region. The highest rates of use are among women 25-34 (25 per cent), followed by women under 25, and then women in older age groups. By ages 45-49, only 15 per cent of women who are fecund and want no children use modern methods (Table 5.2.4).

By education, differences are as sharp as by residence. Among both husbands and wives, those with middle schooling or more are twice as likely to be using a modern method as are illiterates (32 per cent vs. 16 per cent). When neither spouse is literate the rate of use falls to 14 per cent (Table 5.2.4). By women's employment status, farm work is associated with lower rates of modern method use than other occupations or non-work (12 per cent for farm as against 25-30 per cent for other categories). As before, the figures are for women who are currently married, fecund, non-pregnant, and who want no additional children.

For all groups the rates of use of modern methods are low, and it is likely that many of those who want no more children will have future births. Although findings are not available by the sex composition of women's present children, by total family size those who already have several children are more at risk of unwanted births than those with only 1 or 2 children. About 15 per cent of women with 5 or more children who want no more births use modern methods, compared with 20 per cent of those with 4 children and 25 to 30 per cent of those with 1-3 children. Most at risk are rural women with families of 5 and above (Table X-10).

AGE AT MARRIAGE

Age at marriage from the individual interview was studied by restricting attention to women currently aged 25 and over who married before age 25. (This is to ensure that women in all categories considered have the same chance to marry at a certain age). This mean for all Turkey is 17.7 years, with an urban-rural difference of one year (18.2 urban versus 17.2 years rural) and an west-east difference of 1.5 years (18.0 in west versus 16.5 in east). Women with secondary education or beyond have a mean age at marriage of 20.1 years, which is 3.0 years higher than the mean for illiterate women.

By combining the distribution by age at marriage for ever-married women from the individual interview, with the data on proportion ever-married from the household schedule, cumulative proportions marrying by specified ages can be estimated for various cohorts of women. This mode of presentation of the data indicates a recent though moderate trend towards later marriage. For example, among women currently aged 30 and over, 15-20 per cent married before 15 years of age; this percentage declines to 10 per cent among women currently aged 20-24 and to only 4 per cent among those aged 15-19. The median age at marriage (the exact age by which 50 per cent of women in a cohort are married) has risen from around 17.5 for women currently aged 30-49, to 18.8 years for women aged 20-24. Further, the effect of this trend is to widen differentials in age at marriage. For example, a west-east difference of under 2 years in the median age at marriage among older women is increased to a difference of 3.5 years among women currently aged 20-24.

MARRIAGE STABILITY

Over 97 per cent of first marriages among women married within the past 10 years are intact. Of all ever-married women in the sample, over 92 per cent are still in their first union and over half the dissolved marriages are due to widowhood. Only 4 per cent have married twice, and practically none more than twice. In fact a second marriage dissolution is rare. Consequently, ever-married women have spent over 98 per cent of the time since first marriage in the married state, and 96 per cent are currently married.

EXPOSURE STATUS

Excluding such temporary factors as separation within marriage or post partum abstinence and amenorrhoea, 72 per cent of the ever-married women are classified as exposed to the risk of pregnancy. Of the remainder, 12 per cent (almost all currently married) report a current pregnancy, so that a total of 84 per cent are "currently married fecund". Four per cent are currently not married, and 12 per cent, though married, report a fecundity impairment. The percentage in the last mentioned category increases sharply with age, from 3 per cent among women aged 25-34, to 17 per cent among 35-44, and to 50 per cent among women aged 45-49. At the same age, better educated and urban women report somewhat lower levels of fecundity impairment than do less educated rural women.

3. FERTILITY

CHILDREN EVER-BORN

Classified by age, the mean number of children ever-born to ever-married women is as follows:

Age	<20	20-24	25-29	30-34	35-39	40-44	45-49	All
Mean	0.7	1.8	3.0	4.3	5.5	6.0	6.3	3.9

The substantial increase in the mean number of children ever-born from one age group to the next, up to the highest ages, indicates a long span of childbearing in Turkey. Among women aged 45-49 the distribution according to the number of children ever-born is:

Children ever born	0	1-2	3-4	5-6	7-8	9+	All
Per cent distribution	2.4	9.6	20.2	22.2	19.8	25.6	100.0

In fact, not only among women aged 45-49, but also among all women aged 35 and over, only 2 or 3 per cent report never having had a birth. This indicates a low level of primary sterility.

The figures for currently married women are practically identical to those shown above for ever-married women. This is expected in view of the stability of marriage.

Cumulative fertility is related to age at marriage. Late marrying women have fewer children at a given age because of their shorter duration of exposure to child-bearing. There may also be other factors apart from this biological effect. For example, women with high socio-economic status tend to have a higher age at marriage and may have lower fertility; this will tend to increase the observed association between age at marriage and fertility. However, in the present case, cross-sectional data on children ever-born indicate that the effect of age at marriage has been largely biological. As illustrated in Table XI-2, the increment of children ever-born from one age group to another among ever-married women does not vary greatly by age at marriage. The implication is that the age-pattern of fertility has hitherto been rather similar for women marrying at different ages. The same inference is supported by the fact that at a given marriage duration (at least for durations of 10 years or more), the late marrying women have fewer children ever-born. However, Table XI-2 relates to a cross-sectional view of different cohorts, rather than to the retrospective history of a particular cohort. A clearer picture emerges from an examination of recent marital fertility (see below) by age at marriage: late marrying women in fact have lower fertility at the same age compared to early marrying women - probably due to the association between age at marriage and socio-economic background of the respondent.

TABLE XI-2

CHILDREN EVER BORN, BY AGE AT MARRIAGE

		Age at Marriage					
		<15	15-17	18-19	20-24	25+	All
Current Age	20-24	2.9	2.2	1.3	0.8	.	1.8
	40-49	7.5	6.7	5.2	5.1	3.7	6.1
	Increment	4.6	4.5	3.9	4.3	.	4.3
Years Since Marriage	5-9	2.5	2.8	2.6	2.3	2.2	2.3
	10-14	4.3	4.1	3.6	3.3	3.5	3.9
	25+	7.4	6.8	5.6	5.4	.	6.6

4. CONTRACEPTION

KNOWLEDGE OF CONTRACEPTIVE METHODS

Knowledge is defined in the survey as having heard of any specific method to delay or avoid pregnancy. No reference is made to the knowledge of how to use a method or, for a supply method, where to obtain it.

The survey results confirm that knowledge of contraceptive methods is now widespread among Turkish women. Of all ever-married women, 88 per cent report having heard of one or more methods of contraception; all but 2 per cent of these know of a modern method. A vast majority (81 per cent) know of the pill, while the IUD is known to 68 per cent, and withdrawal to 65 per cent of the women. The variation in the level of knowledge by age or family size is not marked, though the level is somewhat higher among women in the intermediate groups. For example among women aged 25-34 with 2-3 children, 95 per cent have heard of at least one method. Practically all women educated to at least the secondary level, or women residing in metropolitan areas, or those working in services and industry, know of a method. By contrast, 15 per cent of rural women, over 20 per cent of those in the eastern region, and 25 per cent of those working in farming outside the family farm do not know of any method.

EVER-USE OF CONTRACEPTION

Of all ever-married women, 55 per cent report having used a method of contraception at some stage in their lives; the corresponding figure among currently married fecund women is 59 per cent. Women in the intermediate categories of current age and family size report higher levels of ever-use. For example among women aged 25-34 with 2-3 living children, 74 per cent have ever used a method.

Though the use of contraception is fairly widespread, only one in three have ever-used a modern method (such as the pill, IUD, condom, etc.), while one in five have used only a traditional method (such as withdrawal, douche, rhythm, or some 'folk' method). In order of importance the main methods ever-used are: withdrawal (32 per cent), pill (25 per cent), douche (19 per cent), condom (11 per cent), IUD (7 per cent), folk methods (8 per cent), and rhythm (5 per cent). There is no indication that the use of modern methods relative to that of traditional methods has been any less common among older women or among women with larger families.

There are marked geographical and socio-economic differentials in ever-use. For example, among women aged 25-34, 75 per cent in urban areas, but only 48 per cent in rural areas have ever used any method. (The overall figure is 63 per cent). In the same age group, 78 per cent in the western region but only 40 per cent in the eastern region have ever-used. Similarly, 93 per cent of those educated to at least the secondary level, compared with only 47 per cent of those illiterate, have ever used a method.

The urban-rural difference is further increased when attention is confined to the ever-use of a modern method: among ever-married women aged 25-34, for example, 55 per cent have used a modern method in urban areas, compared with only 28 per cent in rural areas. However, the proportion of all users who have used a modern method does not vary much by region or by level of education, even though the absolute level of use varies greatly by these variables.

CURRENT USE OF CONTRACEPTION

The level of current use is defined on the basis of women who are currently exposed to the risk of conception, i.e. women who are currently married, non-pregnant and physically able to have a child. Of all exposed women, 50 per cent report current use of a method. Women aged under 25 report a lower level of use (36 per cent), apart from which the level varies little by age. There is a clearer association with the number of living children as Table XI-3 illustrates.

TABLE XI-3
PERCENTAGE CURRENTLY USING, BY NUMBER OF LIVING CHILDREN

	Number of Living Children								
Currently Using	0	1	2	3	4	5	6	7+	All
Any Method	8	47	63	62	54	47	45	36	50
A Modern Method	2	18	24	21	18	15	13	14	18

These figures imply that concern to delay the first birth is not commonly felt, but there is a fairly widespread acceptance of the idea of the spacing of children after the first birth.

Even though the overall level of current use is relatively high in Turkey, only one in three of the current users are using a modern method. A substantial proportion of the women currently using a traditional method have in the past used a modern method, a finding that suggest problems of supplies or medical supervision. The distribution of current users by the method being used is as follows: withdrawal 44 per cent; the pill 16 per cent; douche 11 per cent; the IUD 8 per cent; condom 8 per cent; and folk methods 6 per cent.

Geographical and socio-economic differentials in current use are even more marked than those in ever-use. For example, among exposed women aged 25-34 some of the contrasting figures are as follows: urban 67 per cent, versus rural 41 per cent; western region 71 per cent, versus eastern region 30 per cent; women with at least secondary education 87 per cent, versus illiterate women 37 per cent; women working in services 80 per cent, versus those working in farming outside the family farm 36 per cent. Even though in Turkey as a whole 56 per cent of the exposed women aged 25-34 are using some method, in rural areas only 12 per cent and in the eastern region only 13 per cent are using a modern method. Over 40 per cent of the urban users are using a modern method, but just under 30 per cent of rural users are doing so. Generally, however, the relative popularity of modern methods does not vary greatly between the various demographic or socio-economic categories of the sample.

5. FERTILITY PREFERENCES

PERCENTAGE WANTING NO MORE CHILDREN

Of all currently married fecund women in the sample, 57 per cent state that they want to have no more children. This percentage is associated strongly with the number of living children; there is also an independent positive association with the woman's current age. A majority of the women aged 35 and over want to have no more children irrespective of their current family size. Among women aged 25-34 (as well as in the sample as a whole) 50 per cent of those with 2 living children want no more.

Socio-economic differentials in this variable are generally consistent with other aspects of reproductive behaviour and in the expected direction. Among women with two living children (including a current pregnancy), the percentages wanting no more children in the various background variable categories are given in parentheses below: all Turkey (50 per cent); urban (59 per cent) versus rural (40 per cent); western region (64 per cent) versus central region (51 per cent) versus eastern region (31 per cent); illiterate women (39 per cent) versus women with primary education (53 per cent) versus women educated to at least secondary level (72 per cent). These differentials generally correspond to the marked differentials described earlier in the level of fertility and contraceptive use.

DESIRE FOR LAST PREGNANCY

Women were also asked whether they had wanted another child at the time of their last pregnancy, and 38 per cent stated that they did not. There is no clear independent association with current age, but the percentage is positively associated with the number of living children as follows:

Current Number Of Living Children	0,1	2	3	4	5	6+	All
Per Cent Who Did Not Want Last Child	2	20	40	54	63	71	38

Comparison of these figures with the percentages currently wanting no more children is particularly revealing. For example, as noted earlier, 50 per cent of those with two living children want no more, while as many as 40 per cent of those with three living children state that they did not want their third child. Even though the time reference in the two questions is not the same, these figures indicate a substantial level of unwanted fertility in Turkey.

Socio-economic differentials in whether the last pregnancy was wanted are similar to those in the desire for a future birth discussed above. For example, among women with 3 living children, the percentages who did not want their last pregnancy are as follows: all Turkey (40 per cent); urban (45 per cent) versus rural (35 per cent); western region (42 per cent) versus eastern region (27 per cent); women educated at least to secondary level (59 per cent) versus illiterate women (27 per cent). Thus it appears that even in sub-populations where fertility is relatively low and contraception high, desire for smaller families has increased and kept ahead of the propensity to adopt appropriate precautions.

TOTAL NUMBER OF CHILDREN DESIRED

In response to the question on the total number of children desired given the choice, nearly 90 per cent of women stated 2, 3 or 4 children, with an overall mean of 3.0 children. The mean desired size varies little by age; even with the number of living children the variation is not particularly marked. Three-quarters of women with 0 to 3 living children state their desired size to be 2 or 3 children, with a mean of just under 3.0. Among women with 5 or more children, three-quarters state their desired family size to be 2, 3 or 4 children, with the mean increasing from 3.5 for those with 5-6 living children to just under 4.0 for those with 8 living children. Hence a vast majority of the women with more than 3 living children state a desired number substantially below their actual number of living children.

SEX PREFERENCE

Of exposed women wanting another child, 42 per cent would prefer to have a boy, 26 per cent a girl, and the remaining 32 per cent state that they do not have preference. These percentages vary little by woman's current age and indicate a certain degree of boy-preference among all age groups. The picture is refined when analysed by the sex of the present children (see Table XI-4). It appears that women want children of each sex, since among women with two living children both of the same sex, a vast majority want their next child to be of the other sex. If they already have one child of each sex, there is a marked boy-preference, though in this case over half the women are indifferent to the sex of their next child.

TABLE XI-4

SEX PREFERENCE OF WOMEN WITH TWO AND THREE LIVING CHILDREN

Family Composition	Family Size				
	Two Living Children			Three Living Children	
	2 Boys	1 Boy, 1 Girl	2 Girls	2 Boys, 1 Girl*	1 Boy, 2 Girls*
Per Cent Preferring					
A Boy	2	39	91	20	67
A Girl	80	8	1	37	0
Either	18	53	8	43	33

* Each column based on only around 40 sample cases.

FERTILITY PREFERENCES IN RELATION TO CONTRACEPTIVE USE

Of exposed women who want no more children, 62 per cent are currently using a method of contraception, while use is 33 per cent among those who do want another child. The difference in the level of use becomes sharper when women with the same number of living children are compared: for example among women with 3 living children 72 per cent of those wanting no more children and 32 per cent of those wanting another child are contracepting. These data indicate that Turkish women to an extent are attempting to implement their fertility preferences, and that the use of contraceptives for the termination of child-bearing is substantially more important than the use for spacing. However in any category, approximately only a third of the users are using a modern method.

6. POLICY IMPLICATIONS

The findings of the Turkish Fertility Survey give the picture of a country demographically in transition with pronounced urban-rural, regional and social differentials which are persistent or may even be increasing.

The marked downward trend in fertility seems largely due to changes in marital fertility. Relatively small family size norms are becoming common; an average desired size of 3 children, with one in two wanting to stop after their second child. These norms are substantially below the achieved family sizes of older women, and may also be lower than the family sizes implied by the prevailing fertility rates.

For the majority of Turkish women the use of contraceptives for the termination of child-bearing is substantially more important than the use for spacing. However, only a third of the users are using a modern method.

The gap between the desired and actual family size, the failure to use a modern, efficient method of contraception by large proportions of those not wanting to have more children, and the failure by many to persist in the use of such methods - these are some of the factors which indicate problems of supply of contraceptives and of availability of family planning services. Even among the subgroups with relatively lower fertility and more widespread use of contraceptive methods, the actual levels of fertility experienced, though declining, still remain appreciably higher than the small family size norms coming into effect. The survey results clearly imply the necessity for an extension of family planning services and supplies throughout the country, specially to rural areas and to backward and remote regions.

The pronounced regional, urban-rural, educational and other differentials in fertility, and even more so in infant mortality, are reflective of the great economic and social disparities in the country. In fact the overall level of infant mortality is higher than the level of development of Turkey would suggest. There is thus an urgent need for the improvement of health conditions, particularly through the integration of family planning services with mother and child care facilities. At the same time, a more equitable distribution of these facilities is required.

Meanwhile, in spite of some improvement, women's status in Turkey remains low, and their social role highly circumscribed by family and custom. Women have lower literacy rates and much lower levels of non-agricultural employment than men in Turkey. These levels are in fact lower than most other countries at comparable levels of economic development. Here again, developmental efforts need to be concentrated in backward and remote regions and in areas where enormous disparities of health and income exist.

APPENDICES

APPENDIX A: QUESTIONNAIRES

CONFIDENTIAL

TURKISH FERTILITY SURVEY, 1978

HACETTEPE UNIVERSITY

INSTITUTE OF POPULATION STUDIES

IDENTIFICATION

PLACE NAME _____

DISTRICT _____

PROVINCE _____

Cluster Number ----------

Household Number --------

1	1

LISTING OF HOUSEHOLD MEMBERS

Interviewer Calls	1	2	3	4
Date				
Interviewer				
Result *				

* Result codes:

1 completed
2 House Occupied, but no competent R at home
3 Deferred
4 Refused
5 Dwelling Vacant
6 Address not a dwelling
7 Address not found or non-existent
8 Other (SPECIFY)

Total Number of Household Members ☐☐

Number of eligible women ☐

HOUSEHOLD MEMBER LIST

LIST ALL USUAL RESIDENTS, PREFACE QUESTIONING WITH:

Please tell me the names of persons who usually live in this household, starting with the household head.

AFTER LISTING, PROBE:

(A) Just to make sure I have a complete listing of all household members. Are there any other persons such as small children or infants that we have not listed?

YES ☐ (ENTER EACH IN TABLE) NO ☐

(B) In addition, are there any other people who may [illegible] members of your family, such as domestic servants, friends [illegible] live here?

YES ☐ (ENTER EACH IN TABLE) N[illegible]

SERIAL NUMBER	(1) NAME OF USUAL RESIDENT Please tell me the names of persons who usually live in this household. STARTING WITH HOUSEHOLD HEAD	(2) RELATION-SHIP TO HEAD What is this person's relation-ship to household head?	(3) SEX Is this person male or female? M/F	(4) AGE (a) In what year was he or she born? YEAR	(4) AGE (b) How old is he or she? AGE	TICK IF AGED 8 OR OVER	SERIAL NUMBER
01							01
02							02
03							03
04							04
05							05
06							06
07							07
08							08
09							09
10							10
11							11
12							12
13							13
14							14
15							15
16							16

FOR ALL RESIDENTS				FOR AGED 8 OR OVER					FOR AGED 12 OR OVER		
(5)				(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Where was he/she born? IF HE/SHE WAS BORN OUTSIDE TURKEY, ONLY WRITE NAME OF THIS COUNTRY				MOTHER Is his/her mother living in this house? IF 'YES', WRITE MOTHER'S LINE NO. IF 'DEAD', WRITE DEAD	Can he/she write,say,a simple letter? Y/N	What was the highest level of school he/she attended?	What was the last grade completed at (LEVEL ATTENDED)?	Has he/she ever been married? Y/N	IF 'YES' Is he/she now married, widowed, divorced or separated? M/W/D/S	TICK ALL ELIGIBLE WOMEN (3) = Female (4) = Under 50 (10)= Yes	FOR ALL CURRENTLY MARRIED WOMEN. LINE NO. OF HUSBAND
PRO-VINCE	DIS-TRICT	CENTER OR VIL-LAGE C/V									

TURKISH FERTILITY SURVEY, 1978

INDIVIDUAL QUESTIONNAIRE

(For Ever-Married, Widowed, Divorced or Separated Women Aged Under 50)

2 1
1

IDENTIFICATION

PLACE NAME _____
DISTRICT _____
PROVINCE _____

Cluster Number ----------
Household Number ---------
Woman's Line Number ------

3 6
7 9
10

INTERVIEWER CALLS	1	2	3
Date: Day / Month			
Interviewer Name			
Result*			
Time Started / Time Ended / Duration (minutes)			
Next Visit: Date / Time			

12
13 15
17
19
20

*Result Codes:
1. Completed
2. Not at Home
3. Deferred
4. Refused
5. Partly completed
6. Other (SPECIFY)

Scrutinised ☐ Name _____ Date _____

Reinterview or Spot-checked: YES [1] NO [2]
Name _____ Date _____

Edited ☐ Name _____ Date _____

Coded ☐ Name _____ Date _____

22

FIELD SUPERVISOR: _____

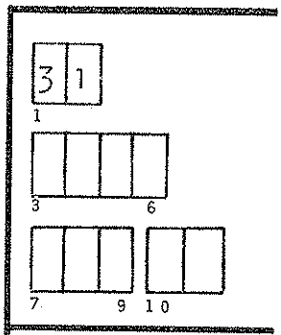
23

HUSBAND'S SERIAL NUMBER IN THE HOUSEHOLD QUESTIONNAIRE

IF SELECTED TO RESPONSE RELIABILITY SURVEY, CIRCLE BOX ☐

25

SECTION 1. RESPONDENT'S BACKGROUND



LOCATION OF INTERVIEW (Place Name)_____

DISTRICT_____ PROVINCE_____

101. Do you live in this house?

YES [1] NO [2]

(SKIP TO 104)

102. Do you live in _____(PLACE NAME)?

YES [1] NO [2]

103. Where do you live?

PLACE NAME: _____

DISTRICT_____ PROVINCE_____

104. How long have you lived in _____(PLACE NAME)?

_____(YEARS)

ALWAYS (SINCE BIRTH) [77]

105. Where did you live before you moved to (PLACE NAME IN 104)?

PLACE NAME_____

DISTRICT_____ PROVINCE_____

106. Where did you live mostly when you were a child, say to age 12?

PLACE NAME_____

DISTRICT_____ PROVINCE_____

107. What kind of place according to you would you say (this, that) was where you lived as a child, say to age 12?

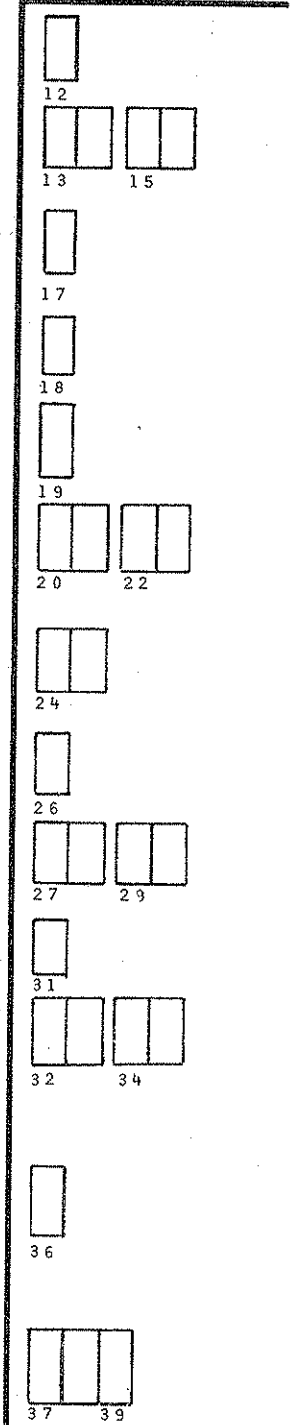
VILLAGE [1] TOWN [2] CITY [3]

108. What was your father's occupation - that is, what kind of work did he mostly do when you were a child?

_____

_____

(INTERVIEWER: OBTAIN DETAILED DESCRIPTION)



109. How old are you now? _____ (YEARS)

40

110. Can you tell me in what month and year you were born?

MONTH _____ YEAR 19 _____

42 44

INTERVIEWER: PROBE AND CORRECT ANY INCONSISTENCIES BETWEEN 109 AND 110.

THEN INDICATE RESPONDENT'S BIRTH DATE ON THE "DATING CHART" AND CIRCLE BELOW:

AGE AND BIRTH DATE GIVEN SPONTANEOUSLY	1
BIRTH DATE OBTAINED FROM DOCUMENT	2
AGE/BIRTH DATE OBTAINED AFTER PROBING, BUT BELIEVED TO BE ACCURATE	3
AGE ESTIMATED, ONLY AFTER DETAILED PROBING	4
OTHER (SPECIFY) _____	

46

111. Have you ever attended school?

YES [1] NO [2] (SKIP TO 115)

47

112. What was the highest level of school you attended - primary, junior high, senior high, or university?

PRIMARY [1] JUNIOR HIGH [2]

SENIOR HIGH [3] UNIVERSITY [4]

OTHER (SPECIFY) _____

48

113. What was the last grade you completed at (LEVEL ATTENDED)?

_____

49

114. *INTERVIEWER: CIRCLE BOX (SEE 112 AND 113)*

5 OR FEWER YEARS OF SCHOOLING COMPLETED [1]

6 OR MORE YEARS COMPLETED [2] (SKIP TO SECTION 2)

50

115. Can you read - say a newspaper or magazine?

YES [1] NO [2] (SKIP TO SECTION 2)

51

116. Can you write, say a simple letter?

YES [1] NO [2]

52

4.

SECTION 2. MATERNITY HISTORY

201. We would like to get a record of all the babies each woman has actually given birth to in all her life. Let's start with your sons. Do you have any sons you have given birth to who are now living with you?

YES [1] NO [2]

202. How many live with you? _____

203. Do you have any sons you have given birth to who do not live with you?

YES [1] NO [2]

204. How many do not live with you? _____

205. Do you have any daughters you have given birth to now living with you?

YES [1] NO [2]

206. How many live with you? _____

207. Do you have any daughters you have given birth to who do not live with you?

YES [1] NO [2]

208. How many do not live with you? _____

209. Have you ever given birth to any boy or girl who later died, even if the child lived for only a short time?

YES [1] NO [2]

210. How many of your children have died?

_____

211. *INTERVIEWER: SUM ANSWERS TO 202, 204, 206, 208 and 210* _____ *(SUM)*

NOW ASK: Just to make sure I have this right, you have had (SUM) births. Is that correct?

YES [ ] NO [ ]

(PROBE AND CORRECT AS NECESSARY)

3 2
1
3 6
7 9 10
12
13
15
16
18
19
21
22
24
25
27

212. Are you pregnant now?

YES [1] NO [2] (SKIP TO 215) DK [3] (SKIP TO 215)

29

213. How many months pregnant are you? _____(MONTHS)

30

214. Would you prefer to have a boy or a girl?

BOY [1] GIRL [2] EITHER (DON'T CARE) [3]

OTHER ANSWER (SPECIFY) _____

32

215. *INTERVIEWER: CIRCLE BOX (SEE 211)*

NO LIVE BIRTH [1] ONLY ONE LIVE BIRTH [2] (SKIP TO 221, BIRTH HISTORY) TWO OR MORE LIVE BIRTHS [3] (SKIP TO 218)

33

216. Have you ever had a miscarriage, or an abortion, or a still birth?

YES [1] NO [2] (SKIP TO 245)

34

217. How many such pregnancies have you had?

_____(NUMBER)

35

INTERVIEWER: SKIP TO 235, AND COMPLETE 235-239 FOR EACH SUCH PREGNANCY)

218. Have you ever had twins or triplets?

YES [1] NO [2] (SKIP TO 220)

36

219. *INTERVIEWER: ASK, AND COMPLETE THE FOLLOWING:*

A. NUMBER OF TIMES HAD TWINS _____ TRIPLETS _____

B. NUMBER OF SEPARATE PREGNANCIES RESULTING IN LIVE BIRTHS: _____

(SUBTRACT 1 FOR EACH SET OF TWINS, 2 FOR TRIPLETS, FROM SUM IN 211. USE THIS NUMBER IN PLACE OF 211 IN ALL SUBSEQUENT FILTERS.)

IN BIRTH HISTORY TABLE USE ONE LINE FOR EACH CHILD; CONNECT TWINS WITH BRACKET AT THE LEFT AND CROSS OUT 227-232 FOR THE SECOND TWIN. FOR THE SECOND AND THIRD TRIPLE.

GO ON TO 220

37

FOR CODERS ONLY: TOTAL NUMBER OF PREGNANCIES IN 228-232:

39

BIRTH HISTORY

220. *INTERVIEWER: FIRST ENTER NAMES AND SEX OF ALL CHILDREN IN 221 , STARTING WITH THE FIRST BORN. CHECK TOTAL WITH 211. THEN COMPLETE 222-226 FOR EACH BIRTH. NEXT, ASK 227-232 FOR EACH INTERVAL (UP TO LAST BIRTH), USING NAMES OF CHILDREN. FINALLY, GO ON TO 233. PREFACE 221 WITH:* Now I want to ask you some questions about each of your (SUM) births. Please give me the names of each of your children, including any who have died, starting with the first child you had.

BIRTH NUMBER	221. NAME	222. SEX	223. In what month and year was (NAME) born? IF DK, ASK: How many years ago?	224. (EXCEPT FOR FIRST BIRTH) How many years and months after the birth of your previous child was (NAME) born?	225. Is (NAME) alive?	226. IF DEAD: How long did (he/she) live? (OBTAIN COMPLETED YEARS AND MONTHS)
01		BOY [1] GIRL [2]	MONTH _____ YEAR 19 _____ YRS. AGO _____		YES [1] NO [2]→	_____ COMPLETED YRS.
		12	13 15 17	19 21 (99 99)	23	24 26
02		BOY [1] GIRL [2]	MONTH _____ YEAR 19 _____ YRS. AGO _____	_____ COMPLETED YEARS _____ COMPLETED MONTHS	YES [1] NO [2]→	_____ COMPLETED YRS. _____ COMPLETED MOS.
		29	30 32 34	36 38	40	41 43
03		BOY [1] GIRL [2]	MONTH _____ YEAR 19 _____ YRS. AGO _____	_____ COMPLETED YEARS _____ COMPLETED MONTHS	YES [1] NO [2]→	_____ COMPLETED YRS. _____ COMPLETED MOS.
		46	47 49 51	53 55	57	58 60
04		BOY [1] GIRL [2]	MONTH _____ YEAR 19 _____ YRS. AGO _____	_____ COMPLETED YEARS _____ COMPLETED MONTHS	YES [1] NO [2]→	_____ COMPLETED YRS. _____ COMPLETED MOS.
		63	64 66 68	70 72	74	75 77

OTHER PREGNANCIES

6.

4 1 | | | | | | | | | | |
1 3 6 7 9 10

INTERVAL Use names where possible (TO BE USED FOR 227)	227. During the period (INTERVAL) did you have any miscarriage, abortion, or still birth? IF YES: How many?	*ASK 228-232 FOR EACH PREGNANCY IN THE INTERVAL. (IF MORE THAN TWO PREGNANCIES IN AN INTERVAL, USE SPACE AT END OF TABLE AND SPECIFY INTERVAL.)* 228. In what month and year did this pregnancy end?	229. How many months did the pregnancy last?	230. IF 6 MONTHS OR LESS (OR DK): Did you or a doctor or someone else do any thing to end that pregnancy early?	231. IF 7 MONTHS OR MORE: Did that baby cry or show any sign of life after it was born?	232. IF "YES" TO 231: Was that a boy or a girl?
BEFORE YOUR FIRST BIRTH	YES ☐ → _____ (NUMBER)	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐	YES 1 ↙ NO 2 →	YES ☐ → NO ☐ ↙	BOY ☐ GIRL ☐
	NO 0 ↙	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐	YES 1 ↙ NO 2 →	YES ☐ → NO ☐ ↙	BOY ☐ GIRL ☐
	28					
BETWEEN YOUR 1st AND 2nd BIRTHS	YES ☐ → _____ (NUMBER)	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐	YES 1 ↙ NO 2 →	YES ☐ → NO ☐ ↙	BOY ☐ GIRL ☐
	NO 0 ↙	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐	YES 1 ↙ NO 2 →	YES ☐ → NO ☐ ↙	BOY ☐ GIRL ☐
	45					
BETWEEN YOUR 2nd AND 3rd BIRTHS	YES ☐ → _____ (NUMBER)	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐	YES 1 ↙ NO 2 →	YES ☐ → NO ☐ ↙	BOY ☐ GIRL ☐
	NO 0 ↙	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐	YES 1 ↙ NO 2 →	YES ☐ → NO ☐ ↙	BOY ☐ GIRL ☐
	62					
BETWEEN YOUR 3rd AND 4th BIRTHS	YES ☐ → _____ (NUMBER)	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐	YES 1 ↙ NO 2 →	YES ☐ → NO ☐ ↙	BOY ☐ GIRL ☐
	NO 0 ↙	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐	YES 1 ↙ NO 2 →	YES ☐ → NO ☐ ↙	BOY ☐ GIRL ☐
	79					

BIRTH NUMBER	221. NAME	222. SEX	223. In what month and year was (NAME) born? IF DK, ASK: How many years ago?	224. How many years and months after the birth of your previous child was (NAME) born?	225. Is (NAME) alive ?	226. IF DEAD: How long did (he/she) live? (OBTAIN COMPLETED YEARS AND MONTHS)
05		BOY [1] GIRL [2]	MONTH_____ YEAR 19_____ YRS. AGO_____	_____ COMPLETED YEARS _____ COMPLETED MONTHS	YES [1] NO [2]→	_____ COMPLETED YRS. _____ COMPLETED MOS.
		12	13 15 17	19 21	23	24 26
06		BOY [1] GIRL [2]	MONTH_____ YEAR 19_____ YRS. AGO_____	_____ COMPLETED YEARS _____ COMPLETED MONTHS	YES [1] NO [2]→	_____ COMPLETED YRS. _____ COMPLETED MOS.
		29	30 32 34	36 38	40	41 43
07		BOY [1] GIRL [2]	MONTH_____ YEAR 19_____ YRS. AGO_____	_____ COMPLETED YEARS _____ COMPLETED MONTHS	YES [1] NO [2]→	_____ COMPLETED YRS. _____ COMPLETED MOS.
		46	47 49 51	53 55	57	58 60
08		BOY [1] GIRL [2]	MONTH_____ YEAR 19_____ YRS. AGO_____	_____ COMPLETED YEARS _____ COMPLETED MONTHS	YES [1] NO [2]→	_____ COMPLETED YRS. _____ COMPLETED MOS.
		63	64 66 68	70 72	74	75 77

4 2
1 3 6 7 9 10

INTERVAL Use names where possible (To be used for 227)	227. During the period (INTERVAL) did you have any miscarriage, abortion, or still birth? IF YES: How many?	*ASK 228-232 FOR EACH PREGNANCY IN THE INTERVAL. (IF MORE THAN TWO PREGNANCIES IN AN INTERVAL, USE SPACE AT END OF TABLE AND SPECIFY INTERVAL.)*				
		228. In what month and year did this pregnancy end?	229. How many months did the pregnancy last?	230. IF 6 MONTHS OR LESS (OR DK): Did you or a doctor or someone else do any thing to end that pregnancy early?	231. IF 7 MONTHS OR MORE: Did that baby cry or show any sign of life after it was born?	232. IF "YES" TO 231: Was that a boy or a girl?
BETWEEN YOUR 4th AND 5th BIRTHS	YES ☐ → _____ (NUMBER) NO 0 ↙	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐ →	YES 1 ↙ NO 2 ↙ →	YES ☐ → NO ☐ ↙	BOY ☐ GIRL ☐
	28	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐ →	YES 1 ↙ NO 2 ↙ →	YES ☐ → NO ☐ ↙	BOY ☐ GIRL ☐
BETWEEN YOUR 5th AND 6th BIRTHS	YES ☐ → _____ (NUMBER) NO 0 ↙	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐ →	YES 1 ↙ NO 2 ↙ →	YES ☐ → NO ☐ ↙	BOY ☐ GIRL ☐
	45	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐ →	YES 1 ↙ NO 2 ↙ →	YES ☐ → NO ☐ ↙	BOY ☐ GIRL ☐
BETWEEN YOUR 6th AND 7th BIRTHS	YES ☐ → _____ (NUMBER) NO 0 ↙	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐ →	YES 1 ↙ NO 2 ↙ →	YES ☐ → NO ☐ ↙	BOY ☐ GIRL ☐
	62	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐ →	YES 1 ↙ NO 2 ↙ →	YES ☐ → NO ☐ ↙	BOY ☐ GIRL ☐
BETWEEN YOUR 7th AND 8th BIRTHS	YES ☐ → _____ (NUMBER) NO 0 ↙	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐ →	YES 1 ↙ NO 2 ↙ →	YES ☐ → NO ☐ ↙	BOY ☐ GIRL ☐
	79	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐ →	YES 1 ↙ NO 2 ↙ →	YES ☐ → NO ☐ ↙	BOY ☐ GIRL ☐

BIRTH NUMBER	221. NAME	222. SEX	223. In what month and year was (NAME) born? IF DK, ASK: How many years ago?	224. How many years and months after the birth of your previous child was (NAME) born?	225. Is (NAME) alive ?	226. IF DEAD: How long did (he/she) live? (OBTAIN COMPLETED YEARS AND MONTHS)
09		BOY [1] GIRL [2]	MONTH _____ YEAR 19 _____ YRS. AGO _____	_____ COMPLETED YEARS _____ COMPLETED MONTHS	YES [1] NO [2]→	_____ COMPLETED YRS. _____ COMPLETED MOS.
		12	13 15 17	19 21	23	24 26
10		BOY [1] GIRL [2]	MONTH _____ YEAR 19 _____ YRS. AGO _____	_____ COMPLETED YEARS _____ COMPLETED MONTHS	YES [1] NO [2]→	_____ COMPLETED YRS. _____ COMPLETED MOS.
		29	30 32 34	36 38	40	41 43
11		BOY [1] GIRL [2]	MONTH _____ YEAR 19 _____ YRS. AGO _____	_____ COMPLETED YEARS _____ COMPLETED MONTHS	YES [1] NO [2]→	_____ COMPLETED YRS. _____ COMPLETED MOS.
		46	47 49 51	53 55	57	58 60
12		BOY [1] GIRL [2]	MONTH _____ YEAR 19 _____ YRS. AGO _____	_____ COMPLETED YEARS _____ COMPLETED MONTHS	YES [1] NO [2]→	_____ COMPLETED YRS. _____ COMPLETED MOS.
		63	64 66 68	70 72	74	75 77

4 3 | | | | | | | | | |
1 3 6 7 9 10

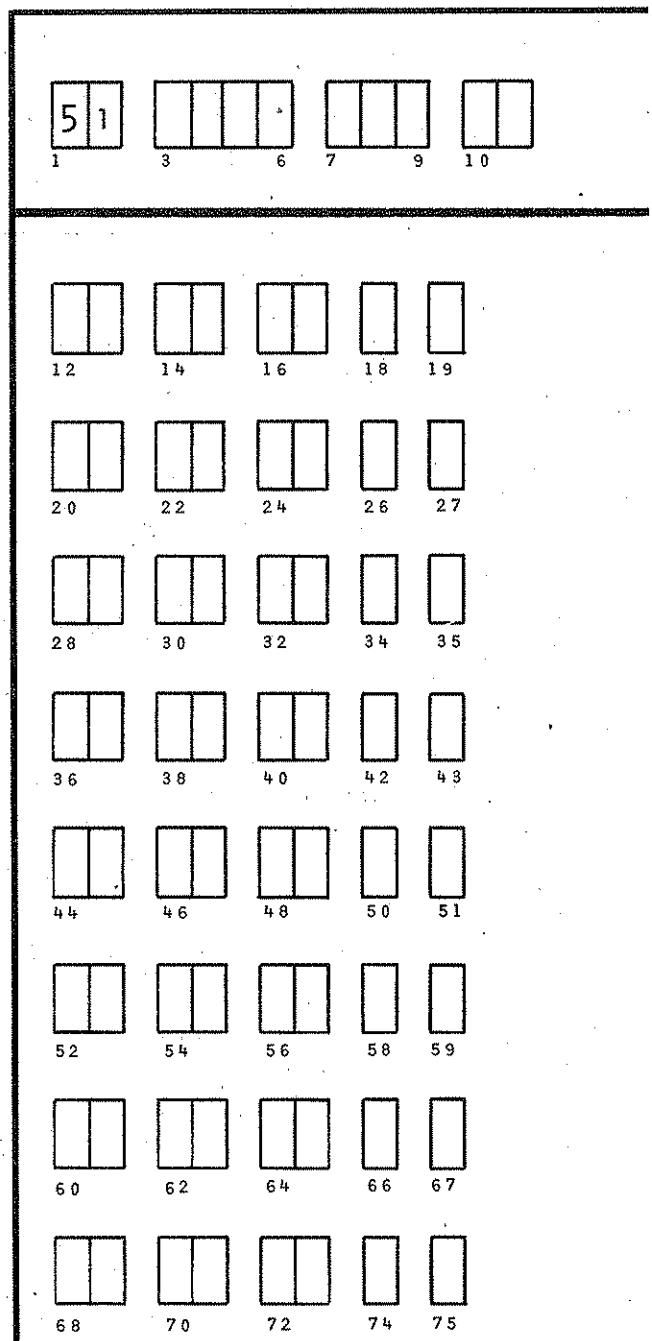
INTERVAL Use names where possible (To be used for 227).	227. During the period (INTERVAL) did you have any mis-carriage, abortion, or still birth? IF YES: How many?	*ASK 228-232 FOR EACH PREGNANCY IN THE INTERVAL.* *(IF MORE THAN TWO PREGNANCIES IN AN INTERVAL, USE SPACE AT END OF TABLE AND SPECIFY INTERVAL.)*				
		228. In what month and year did this pregnancy end?	229. How many months did the pregnancy last?	230. IF 6 MONTHS OR LESS (OR DK): Did you or a doctor or some-one else do any thing to end that pregnancy early?	231. IF 7 MONTHS OR MORE: Did that baby cry or show any sign of life after it was born?	232. IF "YES" TO 231: Was that a boy or a girl?
BETWEEN YOUR 8th AND 9th BIRTHS	YES ☐ → _____ (NUMBER) NO ☐ 0	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐	YES ☐ 1 NO ☐ 2 →	YES ☐ → NO ☐	BOY ☐ GIRL ☐
	☐ 28	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐	YES ☐ 1 NO ☐ 2 →	YES ☐ → NO ☐	BOY ☐ GIRL ☐
BETWEEN YOUR 9th AND 10th BIRTHS	YES ☐ → _____ (NUMBER) NO ☐ 0	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐	YES ☐ 1 NO ☐ 2 →	YES ☐ → NO ☐	BOY ☐ GIRL ☐
	☐ 45	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐	YES ☐ 1 NO ☐ 2 →	YES ☐ → NO ☐	BOY ☐ GIRL ☐
BETWEEN YOUR 10th AND 11th BIRTHS	YES ☐ → _____ (NUMBER) NO ☐ 0	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐	YES ☐ 1 NO ☐ 2 →	YES ☐ → NO ☐	BOY ☐ GIRL ☐
	☐ 62	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐	YES ☐ 1 NO ☐ 2 →	YES ☐ → NO ☐	BOY ☐ GIRL ☐
BETWEEN YOUR 11th AND 12th BIRTHS	YES ☐ → _____ (NUMBER) NO ☐ 0	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐	YES ☐ 1 NO ☐ 2 →	YES ☐ → NO ☐	BOY ☐ GIRL ☐
	☐ 79	MONTH _____ YEAR 19 _____	MOS. _____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐	YES ☐ 1 NO ☐ 2 →	YES ☐ → NO ☐	BOY ☐ GIRL ☐

BIRTH NUMBER	221. NAME	222. SEX	223. In what month and year was (NAME) born? IF DK, ASK: How many years ago?	224. How many years and months after the birth of your previous child was (NAME) born?	225. Is (NAME) alive ?	226. IF DEAD: How long did (he/she) live? (OBTAIN COMPLETED YEARS AND MONTHS)
13		BOY [1] GIRL [2]	MONTH _____ YEAR 19 _____ YRS. AGO _____	_____ COMPLETED YEARS _____ COMPLETED MONTHS	YES [1] NO [2]→	_____ COMPLETED YRS. _____ COMPLETED MOS.
		12	13 15 17	19 21	23	24 26
14		BOY [1] GIRL [2]	MONTH _____ YEAR 19 _____ YRS. AGO _____	_____ COMPLETED YEARS _____ COMPLETED MONTHS	YES [1] NO [2]→	_____ COMPLETED YRS. _____ COMPLETED MOS.
		29	30 32 34	36 38	40	41 43
15		BOY [1] GIRL [2]	MONTH _____ YEAR 19 _____ YRS. AGO _____	_____ COMPLETED YEARS _____ COMPLETED MONTHS	YES [1] NO [2]→	_____ COMPLETED YRS. _____ COMPLETED MOS.
		46	47 49 51	53 55	57	58 60
16		BOY [1] GIRL [2]	MONTH _____ YEAR 19 _____ YRS. AGO _____	_____ COMPLETED YEARS _____ COMPLETED MONTHS	YES [1] NO [2]→	_____ COMPLETED YRS. _____ COMPLETED MOS.
		63	64 66 68	70 72	74	75 77

4	4									
1		3				6	7		9	10

INTERVAL Use names where possible (To be used for 227)	227. During the period (INTERVAL) did you have any miscarriage, abortion, or still birth? IF YES: How many?	*ASK 228-232 FOR EACH PREGNANCY IN THE INTERVAL. (IF MORE THAN TWO PREGNANCIES IN AN INTERVAL, USE SPACE AT END OF TABLE AND SPECIFY INTERVAL.)*				
		228. In what month and year did this pregnancy end?	229. How many months did the pregnancy last?	230. IF 6 MONTHS OR LESS (OR DK): Did you or a doctor or someone else do any thing to end that pregnancy early?	231. IF 7 MONTHS OR MORE: Did that baby cry or show any sign of life after it was born?	232. IF "YES" TO 231: Was that a boy or a girl?
BETWEEN YOUR 12th AND 13TH BIRTHS	YES ☐ → ____ (NUMBER) NO 0 ↘	MONTH ____ YEAR 19 ____	MOS. ____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐ →	YES 1 ↘ NO 2 ↘ →	YES ☐ → NO ☐ ↘	BOY ☐ GIRL ☐
	☐ 28	MONTH ____ YEAR 19 ____	MOS. ____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐ →	YES 1 ↘ NO 2 ↘ →	YES ☐ → NO ☐ ↘	BOY ☐ GIRL ☐
BETWEEN YOUR 13th AND 14th BIRTHS	YES ☐ → ____ (NUMBER) NO 0 ↘	MONTH ____ YEAR 19 ____	MOS. ____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐ →	YES 1 ↘ NO 2 ↘ →	YES ☐ → NO ☐ ↘	BOY ☐ GIRL ☐
	☐ 45	MONTH ____ YEAR 19 ____	MOS. ____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐ →	YES 1 ↘ NO 2 ↘ →	YES ☐ → NO ☐ ↘	BOY ☐ GIRL ☐
BETWEEN YOUR 14th AND 15th BIRTHS	YES ☐ → ____ (NUMBER) NO 0 ↘	MONTH ____ YEAR 19 ____	MOS. ____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐ →	YES 1 ↘ NO 2 ↘ →	YES ☐ → NO ☐ ↘	BOY ☐ GIRL ☐
	☐ 62	MONTH ____ YEAR 19 ____	MOS. ____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐ →	YES 1 ↘ NO 2 ↘ →	YES ☐ → NO ☐ ↘	BOY ☐ GIRL ☐
BETWEEN YOUR 15th AND 16th BIRTHS	YES ☐ → ____ (NUMBER) NO 0 ↘	MONTH ____ YEAR 19 ____	MOS. ____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐ →	YES 1 ↘ NO 2 ↘ →	YES ☐ → NO ☐ ↘	BOY ☐ GIRL ☐
	☐ 79	MONTH ____ YEAR 19 ____	MOS. ____ 6 OR LESS (OR DK) ☐ → 7 OR MORE ☐ →	YES 1 ↘ NO 2 ↘ →	YES ☐ → NO ☐ ↘	BOY ☐ GIRL ☐

CODING SHEET FOR FOURTH PAGE OF BIRTH HISTORY



10. 6 1

1

3 6

7 9 10

12

233. Have you had any miscarriage, abortion, or a still birth since the birth of your last child, (NAME)?

YES [1] → NO [2] (SKIP TO 240)

13

234. How many such pregnancies have you had since the birth of your last child?

_____(NUMBER)

INTERVIEWER: COMPLETE 235-239 FOR EACH SUCH PREGNANCY

	235. In what month and year did the (first, second...) such pregnancy end?	236. How many months did this pregnancy last?	237. IF 6 MONTHS OR LESS (OR DK): Did you or a doctor or someone else do anything to end that pregnancy early?	238. IF 7 MONTHS OR MORE: Did that baby cry or show any sign of life after it was born?	239. IF "YES" TO 238: Was that a boy or a girl?
1	MONTH _____ YEAR 19 _____	_____ MOS; 6 OR LESS (OR DK) [ ]; 7 OR MORE [ ]	YES [1]; NO [2]	YES [ ]; NO [ ]	BOY [ ]; GIRL [ ]
2	MONTH _____ YEAR 19 _____	_____ MOS; 6 OR LESS (OR DK) [ ]; 7 OR MORE [ ]	YES [1]; NO [2]	YES [ ]; NO [ ]	BOY [ ]; GIRL [ ]
3	MONTH _____ YEAR 19 _____	_____ MOS; 6 OR LESS (OR DK) [ ]; 7 OR MORE [ ]	YES [1]; NO [2]	YES [ ]; NO [ ]	BOY [ ]; GIRL [ ]

14 16

18 19

20 22

24 25

26 28

30 31

11.

240. *INTERVIEWER: CIRCLE BOX (SEE 219B or 211)*

NO LIVE BIRTH [1] (SKIP TO 245)

ONLY ONE LIVE BIRTH [2] (SKIP TO 243)

TWO OR MORE LIVE BIRTHS [3]

32

241. Did you feed _____(NAME, "second-to-last child") at the breast?

YES [1]

NO [2] (SKIP TO 243)

33

242. For how many months did you breastfeed him/her?

_____(MONTHS) TILL CHILD DIED [98]

34

243. Did you feed _____(NAME, "most recent child") at the breast?

YES [1]

NO [2] (SKIP TO 244-B)

36

244.(A) For how many months did you breastfeed him/her?

_____(MONTHS) STILL BREAST-FEEDING [97] TILL CHILD DID [98]

(SKIP TO 244-B)

37

244.(B) Did you menstruate last month?

YES ☐ NO ☐

39

245. INTERVIEWER: CIRCLE BOX BEFORE STARTING SECTION 3
RELIABILITY OF ANSWERS IN SECTION 2:

GOOD [1] FAIR [2] POOR [3]

40

SECTION 3. MARRIAGE HISTORY

301. Now I have some questions about your married life. Are you now married, widowed, divorced or separated?

MARRIED [1] WIDOWED [2] DIVORCED [3] SEPARATED [4] → 41

302. Have you been married once, or more than once?

ONCE [1] MORE THAN ONCE [2] → 42

303. How many times have you been married altogether?

_____(NUMBER) → 43

INTERVIEWER: SKIP TO 315, AND ASK 315-319 FOR EACH MARRIAGE.

304. In what month and year did you and your husband start living together?

MONTH_____ YEAR 19_____ → 44 46

305. How old were you when you started living together?

_____(AGE) → 48

13.

306. Is your husband living in your household these days?
IF YES, PROBE: He is not in military service, or in another country, or away doing a job. Is that correct?

YES [1] (SKIP TO 313)

NO [2]

307. Is he away only for the time being, or have you stopped living together for good?

AWAY FOR TIME BEING [1]

STOPPED FOR GOOD [2]

308. In what month and year did you stop living together?

MONTH_____ YEAR 19_____

309. *IF YEAR DK:* How long did you live together?

YEARS_____(PLUS) MONTHS_____

310. Where is he living these days?

PLACE NAME_____

DISTRICT_____ PROVINCE_____

311. Why is he living there?

_____

_____

312. How long have you been living apart?

YEARS_____(PLUS) MONTHS_____

313. Is this your first marriage, or have you been married before?

FIRST MARRIAGE [1] (SKIP TO 320)

MARRIED BEFORE [2]

314. How many times have you been married altogether?

_____(NUMBER)

INTERVIEWER: ASK 315-319 FOR EACH FORMER MARRIAGE.
(ENTRIES IN TABLE ONE LESS THAN NUMBER IN 314.)

FOR CODERS ONLY: NUMBER OF ENTRIES IN FORMER MARRIAGE TABLE

50 51 52 54 56 58 60 61 63 65 67 69 71 72 73

14.

7 1
1

3 6

7 9 10

FORMER MARRIAGES

INTERVIEWER: IF MORE THAN FOUR FORMER MARRIAGES, USE SUPPLEMENTARY SHEET

	315. In what month and year did you start living together with your (first, second ...) husband?	316. How old were you at the time you started living together?	317. How did the marriage end - in husband's death, in divorce, or in separation?	318. IF DEATH: In what month and year did he die? IF DIVORCE OR SEPARATION: In what month and year did you stop living together?	319. IF YEAR DK IN 318: For how long did you live together ?
1	MONTH_____ YEAR 19_____	____ AGE	DEATH [1] DIVORCE [2] SEPARATION [3]	MONTH_____ YEAR 19_____ DK [ ] →	YRS____ (Plus) MOS____
2	MONTH_____ YEAR 19_____	____ AGE	DEATH [1] DIVORCE [2] SEPARATION [3]	MONTH_____ YEAR 19_____ DK [ ] →	YRS____ (Plus) MOS____
3	MONTH_____ YEAR 19_____	____ AGE	DEATH [1] DIVORCE [2] SEPARATION [3]	MONTH_____ YEAR 19_____ DK [ ] →	YRS____ (Plus) MOS____
4	MONTH_____ YEAR 19_____	____ AGE	DEATH [1] DIVORCE [2] SEPARATION [3]	MONTH_____ YEAR 19_____ DK [ ] →	YRS____ (Plus) MOS____

12 14 16

18 19 21

23 25

27 29 31

33 34 36

38 40

42 44 46

48 49 51

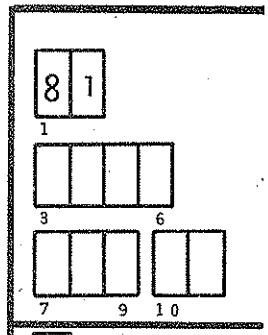
53 55

57 59 61

63 64 66

68 70

15.



320. *INTERVIEWER: INDICATE BEGINNINGS AND ENDS OF ALL MARRIAGES (INCLUDING CURRENT, IF ANY) ON THE "DATING CHART". THEN CIRCLE BELOW:*

AT LEAST YEAR GIVEN FOR ALL EVENTS [1]

YEAR OR EQUIVALENT NOT GIVEN FOR SOME EVENTS [2]

(PROBE FURTHER AND CORRECT IF POSSIBLE)

12

321. *INTERVIEWER: CIRCLE BOX (SEE 301, 307)*

CURRENTLY MARRIED [1]

WIDOWED, DIVORCED OR SEPARATED [2]

(SKIP TO 331)

13

322. *INTERVIEWER: CIRCLE BOX (SEE 304, 305, DATING CHART)*

MARRIED TO PRESENT HUSBAND FOR LESS THAN 5 YEARS [1]

MARRIED TO PRESENT HUSBAND FOR 5 YEARS OR MORE [2]

14

323. Since you first started living with your husband, have there been any times when you and your husband were living apart from each other for three months or more?

YES [1] NO [2] (SKIP TO 331)

(GO ON TO 325)

324. Think back to the past five years. Have there been any times during the past five years when you and your husband were living apart from each other for three months or more?

YES [1] NO [2] (SKIP TO 331)

(GO ON TO 325)

15

325. When were you apart for three months or more for the first time in this period?

MONTH _____ YEAR 19____ IF DK OBTAIN YEARS AGO: _____

16 18

	326. Where was your husband living when you were apart the (first, second ...) time?	327. Why was he living there?	328. How many months were you apart?	329. During this period were you continuously apart, without seeing each other?	330. After this, were there any other times you were temporarily apart for three months or more?
1	PLACE _____ DIST. _____ PROV. _____ HUSBAND AT HOME, R HERSELF WAS AWAY [7] →	_____ _____ _____	_____ MONTHS	YES [ ] → NO [ ] (PROBE AND CORRECT)	YES [1] ↓ (REPEAT 326-330) NO [2] (SKIP TO 331)
2	PLACE _____ DIST. _____ PROV. _____ HUSBAND AT HOME, R HERSELF WAS AWAY [7] →	_____ _____ _____	_____ MONTHS	YES [ ] → NO [ ] (PROBE AND CORRECT)	YES [1] ↓ (REPEAT 326-330) NO [2] (SKIP TO 331)
3	PLACE _____ DIST. _____ PROV. _____ HUSBAND AT HOME, R HERSELF WAS AWAY [7] →	_____ _____ _____	_____ MONTHS	YES [ ] → NO [ ] (PROBE AND CORRECT)	YES [1] ↓ (REPEAT 326-330) NO [2] (SKIP TO 331)
4	PLACE _____ DIST. _____ PROV. _____ HUSBAND AT HOME, R HERSELF WAS AWAY [7] →	_____ _____ _____	_____ MONTHS	YES [ ] → NO [ ] (PROBE AND CORRECT)	YES [1] ↓ (REPEAT 326-330) NO [2] (SKIP TO 331)
5	PLACE _____ DIST. _____ PROV. _____ HUSBAND AT HOME, R HERSELF WAS AWAY [7] →	_____ _____ _____	_____ MONTHS	YES [ ] → NO [ ] (PROBE AND CORRECT)	YES [1] ↓ (SKIP TO 331) NO [2] (SKIP TO 331)

20 21 23 25 27 29

30 31 33 35 37 39

40 41 43 45 47 49

50 51 53 55 57 59

60 61 63 65 67 69

331. *INTERVIEWER: BEFORE STARTING SECTION 4, CIRCLE ALL THAT APPLY:*

PRESENCE OF OTHERS AT THIS POINT

NO OTHERS	CHILDREN UNDER 10	HUSBAND	OTHER MALES	OTHER FEMALES
[0]	[1]	[2]	[4]	[8]

70

17.

SECTION 4. CONTRACEPTIVE KNOWLEDGE AND USE

8 2
1
3 6
7 9 10

401. Now I would like to talk about another topic. There are methods that people can use to avoid having children when they do not want them. Do you know of, or have you heard of, any of these ways or methods?

YES [1] NO [2]

(SKIP TO 403)

12

402. *INTERVIEWER: READ OUT DESCRIPTION OF METHODS (405-413) BELOW.*

FOR METHODS CIRCLED "YES" IN COL. 2 ASK:

Have you ever used (METHOD)? *AND CIRCLE RESPONSE IN COL. 3.*

PREFACE QUESTIONING WITH:

Just to make sure, let me describe some methods to see if you have heard of them.

(SKIP TO 405)

403. Which methods to delay or avoid a pregnancy do you know of?

_____

PROBE: Do you know any others? _____

13

404. *INTERVIEWER: RECORD ANSWERS, AND THEN PROCEED TO CIRCLE BOX(ES) IN COL. 1 CORRESPONDING TO THE METHOD(S) MENTIONED. FOR EACH METHOD THUS CIRCLED, EXCEPT STERILIZATION, ASK:*

Have you used (METHOD)? *AND CIRCLE RESPONSE IN COL. 3. (REFER TO METHOD IN SAME WORDS USED BY R IN 403.)*

NOW ASK 405-413, IN TURN, SKIPPING THOSE METHODS CIRCLED IN COL. 1.

PREFACE THE QUESTIONING WITH:

There are some other methods which you have not mentioned and I would like to find out if you might have heard of them.

(CIRCLE RESPONSES IN COLS 2 AND 3)

COL. 1 FROM 403	*DESCRIBE EACH METHOD*	COL.2 EVER HEARD OF	COL.3 EVER USED	
0 PILL	405. One way a woman can delay the next pregnancy, or avoid getting pregnant, is to take a pill every day. Have you heard of this method? *(CIRCLE RESPONSE IN COL. 2.) IF "NO", SKIP TO NEXT UNCIRCLED METHOD. IF "YES":* Have you used this method? *(CIRCLE RESPONSE IN COL. 3.)*	YES 1→ NO 2	YES 1 NO 2	15 16
0 IUD	406. A woman may have a loop or coil of plastic or metal, the intrauterine device, IUD, inserted in her womb by a doctor and left there. Have you heard of this method? *(AS ABOVE.) IF "YES":* Have you used this method? *(AS ABOVE.)*	YES 1→ NO 2	YES 1 NO 2	17 18
0 OTHER FEMALE SCIENTIFIC	407. Women may also use other methods to avoid getting pregnant, such as placing a diaphragm or tampon or sponge in themselves before sex, or using foam tablets, or jelly or cream. Have you heard of any of these methods? *IF "YES":* Have you used any of these methods?	YES 1→ NO 2	YES 1 NO 2	19 20
0 DOUCHE	408. To prevent pregnancy, some women wash themselves immediately after sex, with water or perhaps some other liquid. Have you heard of this method to avoid getting pregnant? *IF "YES":* Have you used this method?	YES 1→ NO 2	YES 1 NO 2	21 22
0 CONDOM	409. There are also some methods men use so that their wives will not get pregnant. Some men wear a condom during sex. Have you heard of this method? *IF "YES":* Did you and your husband use this method?	YES 1→ NO 2	YES 1 NO 2	23 24
0 RHYTHM	410. Some couples avoid having sex on particular days of the month when the woman is most able to become pregnant. This is called the safe period or rhythm method. Have you heard of this method? *IF "YES":* Did you and your husband do this?	YES 1→ NO 2	YES 1 NO 2	25 26
0 WITHDRAWAL	411. Some men practise withdrawal; that is, they are careful and pull out before climax. Have you heard of this method? *IF "YES":* Did you and your husband use this method?	YES 1→ NO 2	YES 1 NO 2	27 28

COL. 1 FROM 403	DESCRIBE EACH METHOD	COL.2 EVER HEARD OF	COL. 3 EVER USED
0 ABSTAIN	412. Another way is to go without sex for several months or longer to avoid getting pregnant. Have you heard of this method being used? *IF "YES":* Have you done this to avoid getting pregnant?	YES 1 → NO 2	YES 1 NO 2
1 FEMALE STERIL 1 MALE STERIL 1 OTHER METHODS	413. Have you heard of any other methods which women or men may use to avoid pregnancy? YES 1 ↓ NO 2 (SKIP TO 414) *SPECIFY BELOW, AND FOR EACH METHOD ASK:* Have you used this method so that you would not become pregnant? *(IF STERILISATION, SIMPLY CIRCLE COL. 1; DO NOT ASK "USE".)* METHOD 1 _____ METHOD 2 _____		YES_1 1 NO_1 2 YES_2 1 NO_2 2

29 30

31

32 33 34

35 37

38 40

414. *INTERVIEWER: CIRCLE BOX (SEE 404-413)*

AT LEAST ONE "YES" IN COL. 3 → 1

NOT A SINGLE "YES" IN COL. 3 → 2

41

415. I want to make sure I have the correct information. Have you ever done anything or tried in any way to delay or avoid getting pregnant?

YES 1 ↓ NO 2 (SKIP TO 419)

42

416. What did you do? _____

_____

(SKIP TO 418) *(IF STERILISATION, SKIP TO 424)*

43

417. Which was the very first method you used to delay or avoid pregnancy?

_____ (METHOD)

45

418. After how many live births did you first use that method?

_____ (NUMBER)

47

419. Some women have an operation, called sterilisation, such as having their tubes tied, in order not to have any more children. Have you ever heard of this method?

YES [1] NO [2] (SKIP TO 422) — 49

420. Do you think it is all right for a woman to have a sterilisation operation if she and her husband do not want any more children?

YES [1] NO [2] — 50

421. Would you yourself consider having a sterilisation operation if you were in that situation?

YES [1] NO [2] — 51

422. Some men have a sterilisation operation, called vasectomy, so that their wives will not have any more children. This operation does not interfere with the husband's and wife's normal sex life. Have you heard of this method?

YES [1] NO [2] (SKIP TO 424) — 52

423. Do you think it is all right for a man to have a vasectomy if the couple do not want any more children?

YES [1] NO [2] — 53

424. *INTERVIEWER: CIRCLE BOX (SEE 301, 307)* — 54

CURRENTLY MARRIED [1]

WIDOWED, DIVORCED OR SEPARATED [2] (SKIP TO 439)

425. Do you know of any place or person you can go to for assistance or contraceptive supplies for avoiding pregnancy?

YES [1] (GO ON TO 426) NO [2] (SKIP TO 439) — 55

21.

426. *INTERVIEWER: ASK FOR EACH CATEGORY LISTED IN TABLE BELOW:*

Have you heard that you can go to (PLACE/PERSON) for assistance or contraceptive supplies for avoiding pregnancy?

FOR EACH CATEGORY: IF "YES" TO 427, ASK 428;
IF "YES" TO 428, ASK 429.

FINALLY PROBE: Have you heard of any other place or person you can go to for that purpose? *(IF "YES", SPECIFY* UNDER "other" BELOW)

	PLACE/PERSON	427. WHETHER HEARD OF	428. IF "YES" TO 427: Have you yourself gone to (PLACE/PERSON) for that purpose?	429. IF "YES" TO 428: Have you yourself gone there in the past twelve months for that purpose?
1	Maternity Hospital or Clinic	YES [1]→ NO [2]↘	YES [1]→ NO [2]↘	YES [1] NO [2]
2	General Hospital	YES [1]→ NO [2]↘	YES [1]→ NO [2]↘	YES [1] NO [2]
3	MCH Centre	YES [1]→ NO [2]↘	YES [1]→ NO [2]↘	YES [1] NO [2]
4	Pharmacy	YES [1]→ NO [2]↘	YES [1]→ NO [2]↘	YES [1] NO [2]
5	Private Doctor (in his rooms)	YES [1]→ NO [2]↘	YES [1]→ NO [2]↘	YES [1] NO [2]
6	Midwife or a nurse (except trad.midwife.)	YES [1]→ NO [2]↘	YES [1]→ NO [2]↘	YES [1] NO [2]
7	Other (SPECIFY) 1. _____ 2. _____		YES [1]→ NO [2]↘ YES [1]→ NO [2]↘	YES [1] NO [2] YES [1] NO [2]

430. What is the distance from your house to the nearest place or person where you can go for assistance or contraceptive supplies for avoiding pregnancy?

_____

(INTERVIEWER: RECORD DISTANCE AS SPECIFIED BY RESPONDENT)

431. How long would it normally take you to get there?

_____(MINUTES) *(RECORD BEST ESTIMATE)*

432. *INTERVIEWER: CIRCLE BOX (SEE 429)*

AT LEAST ONE "YES" TO 429 [1] (SKIP TO 435)

NOT A SINGLE "YES" TO 429 [2]

44

433. In the past twelve months did you ever think seriously about going to some place or person for assistance or contraceptive supplies for avoiding pregnancy?

YES [1]

NO [2] (SKIP TO 439)

45

434. Why is it that you decided not to go to some place or person for this purpose?

_____

_____

PROBE: Any other reason? _____

(SKIP TO 439)

46

48

435. Where did you go the last time for assistance or contraceptive supplies for avoiding pregnancy? *(CIRCLE ONLY ONE.)*

MATERNITY HOSPITAL OR CLINIC [1]
GOVERNMENT HOSPITAL [2]
MCH CENTRE [3]
PHARMACY [4]
PRIVATE DOCTOR [5]
MIDWIFE OR NURSE [6]
OTHER (SPECIFY): _____

50

436. Were you satisfied with the attention you got on your last visit?

YES [1] NO [2] OTHER ANSWER (SPECIFY) _____

52

437. Will you be going to _____(LAST PLACE/PERSON VISITED) in the future for assistance or contraceptive supplies for avoiding pregnancy?

YES [1] (SKIP TO 439)

NO [2] OTHER ANSWER (SPECIFY) _____

_____

(SKIP TO 439)

53

438. Why is it that you will not go back to _____(LAST PLACE/PERSON VISITED) in the future?

_____

PROBE: Any other reason? _____

54

56

(GO ON TO 439)

23.

439. *INTERVIEWER: CIRCLE IN A METHODS KNOWN BY RESPONDENT (Circled in Col.1 or 'Yes' in Col.2 in 405, 406, 409)*

FOR EACH METHOD CIRCLED IN A, ASK B TO D.

8 4

1

3 6

7 9 10

A. CIRCLE FROM COL.1 AND COL.2	B. Where would you go to get (METHOD)?	C. How long would it take you to get there?	D. How much do you think (METHOD) may cost there?
PILL [1] (405)	PLACE/PERSON_____ LOCATION_____ DK [99]	_____ MINUTES _____ HOURS	_____ COST PER CYCLE
IUD [1] (406)	PLACE/PERSON_____ LOCATION_____ DK [99]	_____ MINUTES _____ HOURS	_____ COST OF INSERTING
CONDOM [1] (409)	PLACE/PERSON_____ LOCATION_____ DK [99]	_____ MINUTES _____ HOURS	_____ COST PER _____ UNIT

12 13

15 18 20

21 22

24 27 29

30 31

33 36 38

(GO ON TO 440)

440. What can a woman do if she gets pregnant but does not want a baby?

_____ 39

441. *INTERVIEWER: CIRCLE BOX (SEE 230, - 237)*

HAS HAD AN INDUCED ABORTION (AT LEAST ONE "YES" TO 230 OR 237) [1] (SKIP TO 443)

NO INDUCED ABORTION REPORTED (NOT A SINGLE "YES" TO 230 AND 237) [2] 41

442A. Some women do something, or have something done, either by a doctor or in some other way, to end a pregnancy they do not want. They have an induced abortion. Has this ever been the case with you?

YES [1] NO [2] (SKIP TO 446) 42

442B. How many times have you had an induced abortion?

_____(NUMBER) 43

443. When was your last induced abortion performed?

MONTH_____ YEAR 19____ IF YEAR DK, OBTAIN YEARS AGO:_____ 44 46

444. Who assisted you while having your last induced abortion?

NO ONE (only herself) [0|0]
PRIVATE DOCTOR [0|1]
HOSPITAL DOCTOR [0|2]
GOVERNMENT MIDWIFE [0|4]
TRADITIONAL MIDWIFE [0|8]
OTHER PERSONS (SPECIFY)_____ 48

445. By what means was your last induced abortion performed?

ASPIRATION [0|0]
D & C [0|1]
MEDICINE TAKEN ORALLY [0|2]
INJECTION [0|4]
MATERIAL PLACED IN UTERUS [0|8]
LIFTING HEAVY OBJECTS [1|6]
OTHER MEANS (SPECIFY)_____ 50

446. If the continuation of a pregnancy is dangerous to a woman's life, would you approve or disapprove of her having an abortion by a doctor?

APPROVE [1] DISAPPROVE [2]

OTHER ANSWER (SPECIFY):_____

52

447. If the doctor says that the child a woman is expecting might be deformed or mentally defective, would you approve or disapprove of her having an abortion by a doctor?

APPROVE [1] DISAPPROVE [2]

OTHER ANSWER (SPECIFY):_____

53

448. If the couple cannot afford another child, would you approve or disapprove of the woman having an abortion by a doctor?

APPROVE [1] DISAPPROVE [2]

OTHER ANSWER (SPECIFY):_____

54

449. If a woman wants an abortion by a doctor for whatever reason, would you approve or disapprove of her having one?

APPROVE [1] DISAPPROVE [2]

OTHER ANSWER (SPECIFY):_____

55

450. *INTERVIEWER: BEFORE STARTING SECTION 5, CIRCLE ALL THAT APPLY:*

PRESENCE OF OTHERS AT THIS POINT:

NO OTHERS	[0]
CHILDREN UNDER 10	[1]
HUSBAND	[2]
OTHER MALES	[4]
OTHER FEMALES	[8]

56

SECTION 5. FERTILITY REGULATION

501. *INTERVIEWER: CIRCLE BOX (SEE 212)*

CURRENTLY PREGNANT [1] (SKIP TO 535)

NOT CURRENTLY PREGNANT OR DK [2]

502. *INTERVIEWER: CIRCLE BOX (SEE 301, 307)*

CURRENTLY MARRIED [1]

WIDOWED, DIVORCED OR SEPARATED [2] (SKIP TO 511)

503. *INTERVIEWER: CIRCLE BOX (SEE 414, 415)*

HAS USED CONTRACEPTION [1]

HAS NEVER USED CONTRACEPTION [2] (SKIP TO 509)

504. Are you or your husband currently using a method to keep you from getting pregnant?

YES [1]

NO [2] (SKIP TO 509)

505. What method are you using? _____(METHOD)

(INTERVIEWER: IF METHOD IS STERILISATION, SKIP TO 512)

506. *INTERVIEWER: CIRCLE BOX (SEE 219B OR 211)*

NO LIVE BIRTH [1] (SKIP TO 532)

ONLY ONE LIVE BIRTH [2]

TWO OR MORE LIVE BIRTHS [3]

507. Think back to the time before you became pregnant with your child. Was there any time when you or your husband were using a method to keep you from getting pregnant?

YES [1]

NO [2] (SKIP TO 522)

Think back to the interval between your last two births. Was there any time during that interval when you or your husband were using a method to keep you from getting pregnant?

YES [1]

NO [2] (SKIP TO 522)

508. What method were you using? _____(METHOD)

(SKIP TO 522)

1 [8][5]

3 6 [ ][ ][ ][ ]

7 9 10 [ ][ ][ ]

12 [ ]

13 [ ]

14 [ ]

15 [ ]

16 [ ][ ]

18 [ ]

19 [ ]

20 [ ][ ]

27.

509. As far as you know, is it possible for you and your husband to have a child, supposing you wanted one?

YES [1] (SKIP TO 513)

NO [2]

DK [3] (SKIP TO 513)

22

510. Has your husband had an operation that makes it impossible to have children?

YES [1] (SKIP TO 513)

NO [2]

23

511. Have you had an operation that makes it impossible for you to have any (more) children?

YES [1]

NO [2] (SKIP TO 513)

24

512. Was one purpose of that operation to prevent you from having any (more) children?

YES [1]

NO [2]

25

513. *INTERVIEWER: CIRCLE BOX (SEE 211)*

NO LIVE BIRTH [1] (SKIP TO 527)

ONE OR MORE LIVE BIRTHS [2] (GO ON TO 514)

26

NOTE: QUESTIONS 514-526 ARE FOR NON-PREGNANT WOMEN WITH ONE OR MORE LIVE BIRTHS.

514. *INTERVIEWER: CIRCLE BOX (SEE 414, 415)*

HAS USED CONTRACEPTION (OTHER THAN STERILISATION) [1] (SKIP TO 517)

HAS NEVER USED CONTRACEPTION [2]

27

515. *INTERVIEWER: CIRCLE BOX (SEE 502, 509)*

CURRENTLY MARRIED AND ABLE TO HAVE A CHILD (YES, DK TO 509) [1]

NOT CURRENTLY MARRIED, OR NOT ABLE TO HAVE A CHILD (NO TO 509) [2] (SKIP TO 526)

28

516. Do you think you and your husband may use any method at any time in the future so that you will not become pregnant?

YES [1] (SKIP TO 522)

NO [2] (SKIP TO 522)

UNDECIDED [3] (SKIP TO 522)

29

517. Did you or your husband use a method to keep you from getting pregnant at any time since your last child's birth?

YES [1]

NO [2] (SKIP TO 519)

30

518. What was the last method you used?

_____(METHOD)

(OTHER THAN STERILISATION)

31

519. *IF ONLY ONE LIVE BIRTH, ASK:*

Think back to the time before you became pregnant with your child. Was there any time when you or your husband were using a method to keep you from getting pregnant?

YES [1]

NO [2] (SKIP TO 521)

IF TWO OR MORE LIVE BIRTHS, ASK:

Think back to the interval between your last two births. Was there any time during that interval when you or your husband were using a method to keep you from getting pregnant?

YES [1]

NO [2] (SKIP TO 521)

33

520. What method were you using? _____(METHOD)

34

521. *INTERVIEWER: CIRCLE BOX (SEE 502, 509)*

CURRENTLY MARRIED AND ABLE TO HAVE A CHILD (YES, DK TO 509) [1]

NOT CURRENTLY MARRIED, OR NOT ABLE TO HAVE A CHILD (NO TO 509) [2] (SKIP TO 526)

36

31.

NOTE: QUESTIONS 535-544 ARE FOR CURRENTLY PREGNANT WOMEN

535. *INTERVIEWER: CIRCLE BOX (SEE 414, 415)*

HAS USED CONTRACEPTION [1] (SKIP TO 538)

HAS NEVER USED CONTRACEPTION [2] ↓ 54

536. *INTERVIEWER: CIRCLE BOX (SEE 301, 307)*

CURRENTLY MARRIED [1] ↓ 55

WIDOWED, DIVORCED OR SEPARATED [2] (SKIP TO 544)

537. Do you think you and your husband may use any method at any time in the future so that you will not become pregnant? 56

YES [1] (SKIP TO 542) NO [2] (SKIP TO 542) UNDECIDED [3] (SKIP TO 542)

538. *INTERVIEWER: CIRCLE BOX (SEE 211)*

NO LIVE BIRTH [1] (SKIP TO 540) 57

ONE OR MORE LIVE BIRTHS [2] ↓

539. Think back to the interval between your last birth and your current pregnancy. Was there any time during that interval when you or your husband were using a method to keep you from getting pregnant? 58

YES [1] ↓

NO [2] (SKIP TO 541)

540. What was the last method you or your husband used to keep you from getting pregnant? 59

_____(METHOD)

541. *INTERVIEWER: CIRCLE BOX (SEE 301, 307)*

CURRENTLY MARRIED [1] ↓ 61

WIDOWED, DIVORCED OR SEPARATED [2] (SKIP TO 544)

542. Do you want to have another child sometime, in addition to the one you are expecting? 62

YES [1] ↓

NO [2] (SKIP TO 544) UNDECIDED [3] (SKIP TO 544)

543. How many more children do you want to have, after the one you are expecting? 63 65

_____(NUMBER MORE)

(SKIP TO 545)

544. Had you wanted to have another child before you became pregnant?

YES [1] NO [2] UNDECIDED [3]

[ ] 67

545. If you could choose exactly the number of children to have in your whole life, how many would that be?

_____(NUMBER)

[ ][ ] 68 70

OTHER ANSWER (SPECIFY):_____

_____

SECTION 6. WORK HISTORY

601. As you know, many women work - I mean aside from doing their own housework. Some take up jobs for which they are paid in cash or kind. Others sell things or have a small business, or work on the family farm. Are you working at the present time?

YES [1] NO [2]

(SKIP TO 609)

602. I would like to ask you some questions about your present work. What is your occupation - that is, what kind of work do you do?

_____

_____

603. *INTERVIEWER: CIRCLE BOX (SEE 223, 225 FOR THE YOUNGEST CHILD ALIVE)*

YOUNGEST CHILD AGED 14 OR UNDER [1]

NO LIVING CHILD, OR YOUNGEST AGED OVER 14 [2]

(SKIP TO 606)

604. Do you have someone to look after the children when you are at work?

YES [1] NO [2]

605. How are the children looked after when you are at work?

(INTERVIEWER: DO NOT READ OUT RESPONSES OR PROBE. CIRCLE AS MANY AS MENTIONED)

NO PROBLEM: CHILDREN GROWN UP, OR AWAY AT SCHOOL, OR AWAY AT WORK	[1]
NO PROBLEM: R WORKS AT HOME	[2]
R CAN TAKE THEM WITH HER TO WORK	[3]
OLDER CHILDREN CAN LOOK AFTER YOUNGER ONES	[4]
OTHER FAMILY MEMBERS LOOK AFTER THEM	[5]
FRIENDS OR NEIGHBOURS LOOK AFTER THEM	[6]
PRIVATE CARETAKERS OR DOMESTIC WORKERS	[7]
SENT TO CRECHE OR KINDERGARTEN	[8]
OTHER MEANS (SPECIFY): _____	

(GO ON TO 606)

1 [8][6]

3 6

7 9 10

12

13 15

16

17

18 19

20 21

22 23

24 25

26

606. *INTERVIEWER: CIRCLE BOX (SEE 301, 307)*

CURRENTLY MARRIED [1] — WIDOWED, DIVORCED OR SEPARATED [2] (SKIP TO 622)

27

607. How does your husband feel about your working - does he approve or does he disapprove?

APPROVE [1] (GO ON TO 608) — DISAPPROVE [2] (GO ON TO 608) — DOES NOT CARE [3] (SKIP TO 622)

28

OTHER ANSWER (SPECIFY): _____

_____

(SKIP TO 622)

608. In what way does he (approve, disapprove)?

_____

_____

(SKIP TO 622)

29

609. Have you worked since the day you were first married?

YES [1] — NO [2] (SKIP TO 613)

31

610. What was your last occupation - that is, what kind of work did you do last?

_____

_____

32 34

611. Why did you stop working?

_____

35

612. In what year did you work last? YEAR 19 ____

37

613. Are you interested in finding any work at present?

YES [1] — NO [2]

39

614. Why are you interested? | Why are you not interested?

_____

_____

40

35.

615. *INTERVIEWER: CIRCLE BOX (SEE 223, 225 FOR YOUNGEST CHILD ALIVE)*

YOUNGEST CHILD AGED 14 OR UNDER [1] ↓

NO LIVING CHILD, OR YOUNGEST AGED OVER 14 [2] (SKIP TO 618)

616. If you were to take up working, would you have to pay someone to look after the children?

YES [1] NO [2]

617. How would the children be looked after if you were to take up working?

(INTERVIEWER: DO NOT READ OUT RESPONSES OR PROBE. CIRCLE AS MANY AS MENTIONED)

NO PROBLEM: CHILDREN GROWN UP, OR AWAY AT SCHOOL, OR AWAY AT WORK [1]

NO PROBLEM: CAN WORK AT HOME [2]

R CAN TAKE THEM WITH HER TO WORK [3]

OLDER CHILDREN CAN LOOK AFTER YOUNGER ONES [4]

OTHER FAMILY MEMBERS [5]

FRIENDS AND NEIGHBOURS [6]

PRIVATE CARETAKERS OR DOMESTIC WORKER [7]

CAN BE SENT TO CRECHE OR KINDERGARTEN [8]

OTHER MEANS (SPECIFY):_____

NO MEANS OF CHILD CARE, HENCE NOT POSSIBLE TO GO OUT TO WORK [9]

618. *INTERVIEWER: CIRCLE BOX (SEE 301, 307)*

CURRENTLY MARRIED [1] ↓

WIDOWED, DIVORCED OR SEPARATED [2] (SKIP TO 621)

619. How would your husband feel if you were to start working - would he approve, or would he disapprove?

APPROVE [1] DISAPPROVE [2] WOULD NOT CARE [3] (SKIP TO 621)

OTHER ANSWER (SPECIFY):_____ (SKIP TO 621)

620. In what way would he (approve, disapprove)?

_____

621. *INTERVIEWER: CIRCLE BOX (SEE 609)*

"YES" TO 609 ☐ (GO ON TO 622)

"NO" to 609 ☐ (SKIP TO 630)

42 43 44 45 46 47 48 49 50 51 52 53 54 55

622. *INTERVIEWER: CIRCLE BOX (SEE 602, 610)*

WORK (IS, WAS) FARMING [1] — WORK (IS, WAS) NOT FARMING [2] (SKIP TO 624)

57

623. (Do, did) you work on your family farm, field?

YES [1] (SKIP TO 630) — NO [2] (SKIP TO 628)

58

624. Now I would like to ask some more questions about your (current, most recent) work. (Do, did) you work mostly at home, or (do, did) you work mostly away from home at that job?

HOME [1] — AWAY [2]

59

625. (Are, were) you self-employed, or (are, were) you employed by some member of your family, or by someone else?

SELF-EMPLOYED [1] — FAMILY MEMBER [2] (SKIP TO 628) — SOMEONE ELSE [3] (SKIP TO 628)

60

626. (Do, did) you have any regular paid employees in your business?

YES [1] — NO [2] (SKIP TO 629)

61

627. How many regular paid employees (do, did) you have?

_____(NUMBER)

(SKIP TO 629)

62

628. (Do, did) you get paid mostly in cash, or mostly in kind?

CASH [1] — KIND [2] — UNPAID [3]

64

629. (Do, did) you have social security of any kind at your work (i.e.social insurance, pension, self-employed insurance)? (IF "YES", SPECIFY)

YES [ ] _____ (SPECIFY TYPE) — NO [0]

65

37.

630. Now let us go back to the time before you were first married. Did you do any work at any time before you were first married?

YES [1] NO [2] (SKIP TO 634)

66

631. What kind of work did you do mainly, before you were first married?

_____

67 69

632. Were you self employed, or were you employed by some member of your family, or by someone else?

SELF-EMPLOYED [1] FAMILY MEMBER [2] SOMEONE ELSE [3]

(SKIP TO 634)

70

633. Did you get paid mostly in cash, or mostly in kind?

CASH [1] KIND [2] UNPAID [3]

71

634. Thinking of the time when you (and your husband) are old, or can no longer work for any other reason, what means of financial support might you have?

(INTERVIEWER: CIRCLE AS MANY AS MENTIONED. DO NOT READ OUT RESPONSES, PROBE ONCE: Any others?*)*

SAVING OR INCOME FROM FARM, BUSINESS OR OTHER PROPERTY	[1]
PENSION OR WORKER'S INSURANCE, SELF-EMPLOYED INSURANCE	[2]
HELP FROM CHILDREN	[3]
HELP FROM FAMILY OTHER THAN CHILDREN	[4]
CHARITY, OR HELP FROM FRIENDS	[5]
OTHER MEANS (SPECIFY): _____	
NONE, OR WILL HAVE TO KEEP WORKING	[9]

72 73 74 75 76 77

635. When you are old, do you expect to rely for financial support on your children a good deal, or only a little, or not at all?

GOOD DEAL [1] ONLY A LITTLE [2] NOT AT ALL [3]

78

SECTION 7. CURRENT (LAST) HUSBAND'S BACKGROUND

701. *INTERVIEWER: CIRCLE BOX (SEE 301, 307)*

CURRENTLY MARRIED [1] → 702

WIDOWED, DIVORCED OR SEPARATED [2] → *ASK THE FOLLOWING QUESTIONS ABOUT R's LAST HUSBAND:*

702. How old is your (present) husband?

_____(AGE)

703. Did your (present, last) husband ever attend school?

YES [1] → 704

NO [2] (SKIP TO 707)

DK [3] (SKIP TO 707)

704. What was the highest level of school he attended - primary, junior high, senior high, or university?

PRIMARY [1] JH [2] Sr.H [3] UNIVERSITY [4]

OTHER (SPECIFY):_____ DK [9] → 709

705. What was the last grade he completed at that level?

_____

706. *INTERVIEWER: CIRCLE BOX (SEE 704, 705)*

5 OR FEWER YEARS OF SCHOOLING COMPLETED [1] → 707

6 OR MORE YEARS COMPLETED [2] (SKIP TO 709)

707. (Can, could) he read - say a newspaper or magazine?

YES [1] → 708

NO [2] (SKIP TO 709)

708. (Can, could) he write, say a simple letter?

YES [1]

NO [2]

709. Where did your (present, last) husband live mostly when he was a child, say to age 12?

PLACE_____

DISTRICT_____ PROVINCE_____

710. What kind of place would you say that was - was it a village, a town or a city?

VILLAGE [1] TOWN [2] CITY [3]

8 7 | 1 | 3 | 6 | 7 | 9 | 10 | 12 | 13 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 24 | 26

711. Now I have some questions about your (present, last) husband's work experience. What (is, was) his occupation - that is, what kind of work (does, did) he do? *(IF UNEMPLOYED OR RETIRED, ASK LATEST OCCUPATION)*

27 29

(IF NEVER WORKED, SKIP TO 716)

712. (Is, was) he self-employed, or (is, was) he employed by a member of his family, or by someone else?

SELF-EMPLOYED [1] → 714

FAMILY MEMBER [2]

SOMEONE ELSE [3]

DK [4]

30

713. (Does, did) he get paid mostly in cash, or mostly in kind?

CASH [1] KIND [2] UNPAID [3]

31

(ALL SKIP TO 716)

714. (Does, did) he have any regular paid employees in his business?

YES [1]

NO [2] (SKIP TO 716)

32

715. How many regular paid employees (does, did) he have?

_____(NUMBER)

33

716. *INTERVIEWER: CIRCLE APPROPRIATE BOX*

DURING ASKING QUESTIONS IN SECTION 7 (HUSBAND'S BACKGROUND):

HUSBAND NOT PRESENT (OR R NOT CURRENTLY MARRIED) [1]

HUSBAND PRESENT, BUT DID NOT INTERFERE [2]

HUSBAND HELPED WIFE IN ANSWERING QUESTIONS [3]

HUSBAND ANSWERED MOST QUESTIONS HIMSELF [4]

35

Thank you. *END INTERVIEW*

MIGRATION ROSTER:

FOR PAST 8 YEARS, FOR EACH PERSON AGED 8 OR OVER.

LOCATION OF INTERVIEW _____
(COPY FROM COVER PAGE)

INTERVIEWER: i) ACCEPT AS VALID CHANGES OF RESIDENCE OF 6 MONTHS OR MORE.

ii) IF MEMBER HAS LIVED AT A PLACE SINCE BIRTH OR FOR 8 OR MORE YEARS, SKIP TO (14) FOR NEXT PERSON.

iii) AFTER EACH QUESTION, ADD TOTAL DURATION OF STAY; WHEN DURATION IS 8 YEARS OR MORE, SKIP TO (14) FOR NEXT PERSON.

(14) How long has (NAME) been living in (LOCATION OF INTERVIEW)? IF SINCE BIRTH OR FOR 8 OR MORE YRS., SKIP TO NEXT PERSON.		(15) PREVIOUS LOCATION-1					(16) PREVIOUS LOCATION-2				(17) PREVIOUS LOCATION-3				LINE NUMBER
		(a) Where did he/she live before moving to _____ (LOCATION OF INTERVIEW)?			(b) How long did he/she live in (PREV. LOCATION-1)?		(a) Where did he/she live before moving to _____ (LOCATION - 1)?			(b) How long did he/she live in (LOCATION-2)?	(a) Where did he/she live before moving to _____ (LOCATION - 2)?			(b) How long did he/she live in (LOCATION-3)?	
		IF DURATION "SINCE BIRTH", OR 8 OR MORE YEARS, SKIP TO (14) FOR NEXT PERSON.					IN 16(a), READ LOCATION SPECIFIED IN (15); IN 16(b), READ LOCATION MENTIONED IN 16(a).				IN 17(a) READ LOCATION SPECIFIED IN (16); IN 17(b), READ LOCATION MENTIONED IN 17(a).				
		LOCATION-1			DURATION		LOCATION-2			DURATION	LOCATION-3			DURATION	
YEARS	MONTHS	PLACE (U/R)	DISTRICT	PROVINCE	YEARS	MONTHS	PLACE (U/R)	DISTRICT	PROVINCE	YEARS MONTHS	PLACE (U/R)	DISTRICT	PROVINCE	YEARS	MONTHS

EMPLOYMENT HISTORY: FOR EACH PERSON AGED 8 OR OVER.

INTERVIEWER: i) ACCEPT AS VALID CHANGES IN OCCUPATION JOBS DONE FOR 6 MONTHS OR MORE, IGNORING CHANGES IN STATUS ONLY.
ii) PROBE DURATIONS OF EMPLOYMENT AND UNEMPLOYMENT USING DATES OF MILITARY SERVICE, MARRIAGE.

(18)	(19) NOT CURRENTLY WORKING				(20) CURRENT/LAST MAIN OCCUPATION							
Is (NAME) currently working, even if it is not paid work? IF 'YES', SKIP TO (2)	(a) What is he/she doing now? SPECIFY:	(b) Has he/she ever worked before? IF NO, SKIP TO (28)	c) IF YES, How long has he/she not worked? PROBE AS NECESSARY. GO ON TO (20)		(a) What kind of work (does, did) he/she do? SPECIFY MAIN OCCUPATION	b) IF AGRICULTURE, SPECIFY:	(c) IF NON-AGRICULTURE, SPECIFY:			(d) How long has/he/she been doing this work? (PROBE AS NECESSARY)		LINE NUMBER
						0) Absentee landlord 1) Landowner-employer 2) Landowner-self-employed 3) Owns & shares crops, self-empl 4) Owns land, also works out 5) Landless share cropper 6) Landless worker 7) Unpaid family worker 8) Other (SPECIFY) 9) DK	EMPLOYMENT STATUS	OCCUPATION STATUS	SOCIAL SECURITY			
	1) Seeking employment, 2) Housewife, 3) Student, 4) Under age, 5) Disabled, 6) Retired, 7) Need not work, 8) Other (SPECIFY), 9) DK.						1) Employer, 2) Self-exmployed, 3) Employeed, 4) Unpaid family worker, 5) Irregular jobs, 6) Other (SPECIFY), 9) DK.	1) Administrative professional, etc., 2) Clerical, 3) Tech./skilled worker, 4) Unskilled worker, 5) Substantial tradesman, 6) Petty tradesman, 7) Other services, 8) Marginal work, 9) Other, DK.	1) Insurance, 2) Pension, 3) Self-employed insurance, 4) Special social security schemes, 5) Combination of 1), 2), 3) and 4), 6) None (SPECIFY), 9) DK.			
Y/N		Y/N	YEARS	MONTHS						YEARS	MONTHS	

(21)SECONDARY OCCUPATION	(22)UNEMPLOYMENT		(23) PREVIOUS JOB - 1							LINE NUMBER
In addition to that (CURRENT,LAST OCCUPATION) (does,did) he/she do any other work? IF 'YES', SPECIFY IF 'NO', WRITE NO	How long had he/she remained unemployed before he/she started (current, last) main occupation? IF NEVER WORKED BEFORE, WRITE 'NW' AND SKIP TO (28)		(a)What kind of work was he/she doing before the (current, last) work? SPECIFY PREVIOUS OCCUPATION	b)IF AGRICULTURE,SPECIFY: 1)Absentee landlord 2)Landowner-employer 3)Landowner-self-employed 4)Owns and share-crops, self-employed 5)Share cropper 6)Landless worker 7)Unpaid family worker. 8)Other (SPECIFY) 9) DK	(c)IF NON-AGRICULTURE,SPECIFY			d)How long had he/she been doing this work? (PROBE AS NECESSARY)		
	YEARS	MONTHS			EMPLOYMENT STATUS 1)Employer, 2)Self-employed, 3)Employee, 4)Unpaid family worker, 5)Irregular jobs, 6)Other (SPECIFY), 9) DK.	OCCUPATION STATUS 1)Administrative professional,etc., 2)Clerical, 3)Tech/skilled worker, 4)Unskilled, 5)Substantial tradesman,6)Petty tradesman,7)Other services,8)Marginal, 9)Other,DK	SOCIAL SECURITY 1)Insurance,2)Pension,3)Self-employed insurance,4)Special social security schemes 5)Combination of 1)2)3)and 4),6)None, 7)Other (SPECIFY), 9)DK.		YEARS	MONTHS

(24)UNEMPOY-MENT	(25) PREVIOUS JOB - 2							(26)UN-EMPLOY-MENT		
How long had he/she remained unemployed before he/she started (previous job-1)? IF NEVER WORKED BEFORE WRITE 'NW' AND SKIP TO (28)	(a)What kind of work was he/she doing before his/her (Previous job-1)? SPECIFY PREVIOUS OCCUPATION		(c)IF AGRI-CULTURE, SPECIFY: 1)Absentee landlord 2)Landowner employer 3)Landowner self-employed 4)Owns & sharecrops self-employed 5)Share-cropper 6)Landless worker 7)Unpaid family worker 8)Other (SPECIFY) 9) DK.	(c) IF NON-AGRICULTURAL, SPECIFY:			(d) How long had he/she been doing this work? (PROBE AS NECESSARY)	How long had he/she remained unemployed before he/she started (previous job-2)? IF NEVER WORKED BEFORE, WRITE 'NW' & SKIP TO (28).		LINE NUMBER
	YEARS	MONTHS		EMPLOYMENT STATUS 1)Employer,2)Self-employed,3)Employee,4)Unpaid family worker,5)Irregular jobs,6)Other (SPECIFY) 9)DK.	OCCUPATION SIAT 1)Administrative professional,etc.,2)Clerical, 3)Tech/skilled worker,4)Unskilled worker,5)Sub-stantial tradesman,6)Petty tradesman,7)Other services,8)Marginal work,9)Other, DK.	SOCIAL SECURITY 1)Workers'Insurance,2)Pension,3)Self-employed insurance,4)Special social security schemes, 5) Combination of 1),2),3),and 4), 6)None,7)Other (SPECIFY) 9)DK		YEARS	MONTHS	

(27) PREVIOUS JOB - 3							(28) INCOME		
(a) What kind of work was he/she doing before his her (previous job-2)? SPECIFY PREVIOUS OCCUPATION	(b) IF AGRICULTURE SPECIFY: 1) Absentee landlord, 2) Landowner-selfemployed, 3) Landowner-selfemployed, 4) Owns & share crops, selfemployed, 5) Share cropper, 6) Landless worker 7) Unpaid fam. worker, 8) Other (SPECIFY), 9) DK.	(c) IF NON-AGRICULTURE, SPECIFY: EMPLOYMENT STATUS 1) Employer, 2) Self-employed, 3) Employee, 4) Unpaid family worker, 5) Irregular jobs (SPECIFY), 9) DK.	OCCUPATION STATUS 1) Admin. high tech. expert, etc., 2) Clerical 3) Tech/skilled worker, 4) Unskilled, 5) Substantial tradesman, 6) Petty tradesman, 7) Other services, 8) Marginal work, 9) Other, DK.	SOCIAL SECURITY 1) Insurance, 2) Pension, 3) Self-employed insurance, 4) Special social security, 5) Combination of 1), 2), 3), 4), 6) None, 7) Other (SPECIFY), 9) DK.	(d) How long had he/she been doing this work? PROBE AS NECESSARY. YEARS	MONTHS	What is his/her current income per month? SPECIFY MONTHLY INCOME IN CATEGORY 0) 1-1500 TL 1) 1501-2500 2) 2501-5000 3) 5001-7500 4) 7501-10000 5) 10000-15000 6) 15001-25000 7) 25001-50000 8) 50,000 + 9) DK	LINE NUMBER	AFTER COMPLETING (28) FOR ALL MEMBERS, ASK THE FOLLOWING TO HOUSEHOLD HEAD: 1. What is the total current income per month for the household? SPECIFY IN CATEGORIES AS (28). 2. What was the occupation of your (head's) father? (SPECIFY IN DETAIL)

INTERVIEWER'S OBSERVATIONS

(To be filled in after completing interview)

DEGREE OF COOPERATION:

BAD [1]
AVERAGE [2]
GOOD [3]
VERY GOOD [4]

[ ] 36

INTERVIEWER'S COMMENTS

Person interviewed: _____

_____

_____

Specific questions: _____

_____

_____

Other aspects: _____

_____

_____

Name of interviewer: _____ Date: _____

SUPERVISOR'S OBSERVATIONS

_____

_____

_____

_____

_____

_____

EDITOR'S OBSERVATIONS

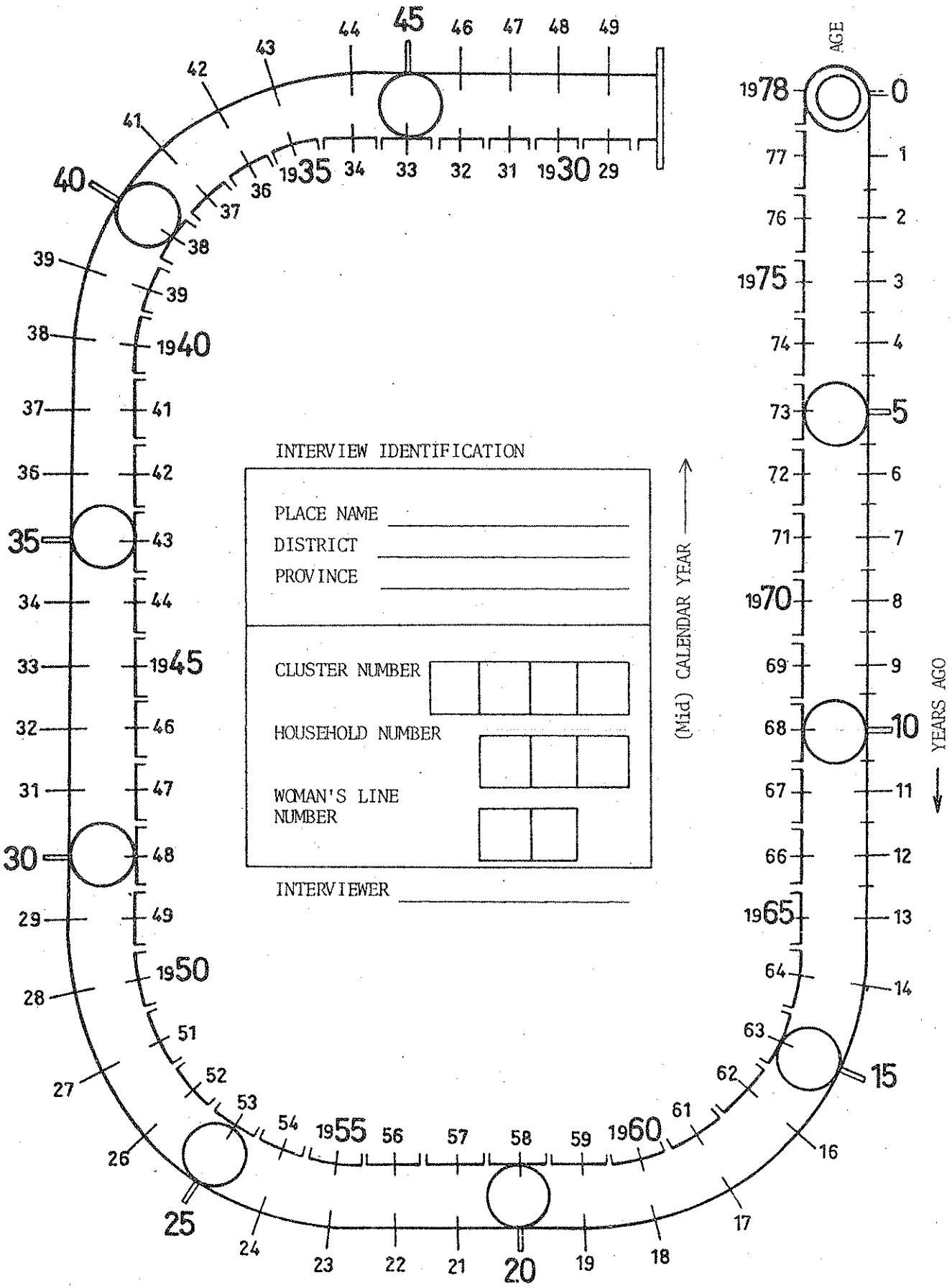
_____

_____

_____

TURKISH FERTILITY SURVEY 1978

DATING CHART



APPENDIX B DATA PROCESSING

One week after the commencement of fieldwork, data processing of the Turkish Fertility Survey began simultaneously with the training of editors and coders. One full-time supervisor and one editing assistant conducted office manual editing.

1. Editing of the individual and household questionnaires was conducted in two stages:

a) Field editing: As previously explained in the fieldwork report, field supervisors edited the questionnaires of both types in the field and repeated the interview when necessary.

b) Office editing: In the second week of September 1978, 45 students were trained for one week for all stages of office editing. Of these students, 35 were selected for manual editing.

Office editing of the questionnaires was done by one person and was completed by the end of the fieldwork (first week of November 1978). This process consisted of checking women's identification numbers from the sampling lists, as well as their eligibility, the existence of individual questionnaires for those eligible, and the correctness of the line numbers of eligible women on the individual questionnaire. A summary of the sampling lists was prepared for each cluster, which includes:

- Number of booklets in which either the household schedule or individual questionnaire, or both, were completed.

- Number of completed household schedules

- Number of first eligible women's (individual) questionnaires completed

- Number of second, third, etc., eligible women's (individual) questionnaires completed.

- Number of eligible women who were not present at home during interview

- Number of households where there was no eligible woman

- Number of refusals and semi-completed individual questionnaires

- Number of addresses not found

The summary for each cluster was checked to ensure that the following equalities held:

The number of booklets = Number of households completed + number of 2nd, 3rd, etc., eligible women's questionnaires completed. The number of completed household schedules = number of first eligible women's questionnaires completed + number of eligible women who were not present during the interview + number of households with no eligible women + number of refusals and semi-completed individual questionnaires.

Internal editing and coding of the household and individual questionnaires was conducted by 34 editors and coders. Two groups were formed from these 34, one of which did internal editing of both questionnaires, while the other group coded edited questionnaires leaving open-ended questions in the individual questionnaire uncoded. Internal editing and coding of 95 per cent of the questionnaires was completed by the first week of November 1978.

Twelve editors were then selected out of the 34, and four 6-member teams were formed for the coding of open-ended questions. The remaining 6 editors did final editing on the questionnaires for which coding of open-ended questions was completed. This process was completed in the first week of February 1979. Editing, punching, punch verification, identification and structural editing with the machine, as well as manual editing of the questionnaires were conducted simultaneously.

For simultaneous identification editing and structural editing, the sample was divided arbitrarily into four groups. Identification and structural editing were done separately for the groups as punching and verification were completed for each.

Two punchers and two machines were employed overtime for punching and verification, which processes ended at the end of March 1979.

The principles of editing were set beforehand in all phases of questionnaire editing and are as follows:

1) Never change or spoil the original information unless you have a reliable source
2) Never produce information for the missing answers
3) Never impute missing or inconsistent data which may be imputable
4) Never ignore the evaluation of the events chart and the notes taken by the interviewer during the interview
5) If any question is precoded and the answer is not suitable to any of the existing codes, give a new code to the answer and be sure to inform the coding supervisor of the new code
6) Do not hesitate to apply to the coding supervisor in case of even the smallest problem

Specific editing peculiarities of the TFS are as follows: In the field, the household schedule was completed by someone from the household who knew most about the household. Frequently, the eligible woman interviewed and the person interviewed to fill the household schedule were not the same. Therefore, during manual and machine editing, none of the information in the household schedule was accepted as a reliable source for making any modifications in the information on the individual questionnaire. The household schedule was referred to only in the event of specific problems encountered in the individual questionnaire.

Among the individual questionnaires, some women did not know their age, year of birth, and date of marriage, from which decisions on eligibility arise. However, by looking at the birth date of the first and last child (if any) and trusting on the observational capabilities of the interviewers, none of these women was deleted. It was also possible to delete women whose age was unknown after the age of those women was imputed by the IMPUTATION program.

All questionnaires were sorted so that a thorough picture of the households, especially those with more than one eligible woman, could be seen.

Age of woman, age of husband, presence of husband at home, number of children, line number of mother, and occupation of woman and husband were checked by referring to the information in the household schedule. Any correction, modification or information produced by the supervisors in the field was not taken into consideration if the interview was not repeated in the field.

No correction was done on questions 107 and 709 since the answers to these questions are perceptions of the women interviewed,

In some cases, one of the multiple births was a stillbirth. These were coded on the 51 or 52 cards and 70 was added to the birth interval number of the live birth to differentiate the loss as being one from a multiple birth.

There is no space to code the losses in the open interval if the number of losses exceeds 3. These were coded on 51 or 52 cards giving 88 to the birth interval number.

Q.320 is a filter question which is used in the field for interviewing; nothing was done with this question during editing.

The separation history (Q.325-Q.330) is not suitable for those working in foreign countries. If detailed information was not given in these cases, it was assumed that they would be home for one month in a year. This table is also not suitable for those who have moved more than once without returning home. In the TFS, some women's husbands are still away; for these cases, Q.330 was coded 3.

A deficiency in the TFS individual questionnaire is the impossibility of differentiating sterile women. In these cases, the 4th and 5th sections of the questionnaire should be deleted.

We were not quite sure whether to include some of the contraceptive methods mentioned in Q.304 in scientific methods. Hence to prevent loss of information on country-specific methods, these cases were given different codes and coded on Q.413. In the case of more than two methods of this type, the first two were coded on Q.413.

Women who answered "drugstore" to Q.435, were necessarily also asked Q.436 since there is no skip instruction for these cases, and code 6 was used in order not to spoil the flow of the questionnaire.

Questions 230 and 237 in the loss table consisted of asking whether a doctor assisted during the woman's abortion, and filter question 441 was filled in accordingly. If the answer was positive, it was assumed that the abortion was induced, otherwise it was a spontaneous abortion.

There are, however, some losses which are spontaneous abortions but at which the doctor assisted because of medical complications. For these cases code 3 was given to Q.441 and the flow of the questionnaire went on to Q.442.

MACHINE EDITING AND TABULATION

Machine editing was done by one programmer and one assistant. One of the editors was also employed in correcting the erroneous questionnaires. Machine editing terminated at the end of August 1979, and data was cleared completely in January 1980. In the meantime, the date imputation programme and COCENTS systems were installed on the Hacettepe University computer, and the parameters of standard tables were created on an IBM machine using COCGEN. Also, new options were added to the existing library programmes and other programmes were developed for data processing. Tabulation ended in late April 1980.

An update program written in COBOL and developed at the Institute of Population Studies was used in all phases of machine editing.

ID control and structural editing of the card images were done simultaneously and a special program was written for that purpose. Also, complete lists of the identification numbers of the cards were used during correction.

CONSISTENCY CHECK

After each correction, marginal frequency distributions of the variables in the raw data file were printed and the marginals were checked. New checks were added and some of the checks were modified according to the results of the marginal distrubiton checks.

Skip checks and consistency checks can be defined as the conditional range checks. A library program developed in HIPS was used for all types of checks. A set of parameter cards defining the checks was prepared as an input to the program. This was not a fixed set of parameters. After each run of the program and correction of the erroneous questionnaires, the set was modified and some new additions were made to the set.

A special program was written for the TFS for the checks which could not be included in the library program mentioned above, such as multi-conditional checks. This program was also modified and new check routines were added after each run. The two check programs were run together in a round, and the error lists for both were corrected at the same time by referring to the questionnaires.

While the rounds were going on for corrections, an imputation program developed by the WFS staff was installed on the Hacettepe University machine. Suitable parameters were set for this program for the TFS, and the program was run with the others in the error finding rounds. The file used by the IMPUTATION Program was extracted by an extraction program developed in the Institute of Population Studies according to the instructions given in the IMPUTATION program manual.

IMPUTATION PROGRAM PARAMETERS

The following parameters were used in the first run of the IMPUTATION program:

Priority 1 was given to calendar date of the event and years ago; priority 2 was given to the age of respondent at event; priority 3 was given to age of child at the time of interview.

* Interval data was used with other data
* Interview dates are 09-1978 to 11-1978
* Respondent's age is 14 to 49 years
* Birth minimum age is 13 years
* Minimum birth interval is 9 months
* Marriage minimum age is 13 years
* Minimum marriage interval is 03 months

Age was interpreted as completed years,
Years ago are interpreted as completed years,
Premarital births are avoided,
Non-live births are not used,
Random imputation method was used.

In the first two runs of the imputation program, many of the erroneous questionnaires were not corrected, instead, the parameters given to the IMPUTATION program were changed.

In the last run, the parameters were set as follows: Interval data was not used, minimum age of respondent was dropped to 10; birth minimum age was decreased to 10 and minimum birth interval to 7 months; minimum marriage age was reduced to 10 years and minimum marriage interval to 0 months.

In some cases the sex pf children was not known; for these, the sex code was given randomly in the extraction programme.

Month information was obtained in terms of arabic months in some cases. These were converted to the current month code according to the formula below:

I = J + (78 - Y) * 11) where J is the Jth day of the specified year corresponding to the middle of the specified month. I is the Ith day of the specified year. Y is the specified year. Then "I" was converted to the corresponding month code.

Recoding of the raw data file was done with two programs which were prepared at the Institute.

In the first recode program V001 to V006, auxiliary variables V401-V910, additional variables (5001-5162) and auxiliary variables used for the creation of V301-V306 were created.

In the second recode program, the variables created in the first program (V001-V006, V401-V910, 5001-5162) and the variables created by the IMPUTATION programme were copied directly, and V301-306 were created by using the auxiliary variables created in the first recode programme.

Each time the recoded file was created, the marginal distribution of the variables in the recoded file (excluding the 4 digit variables) was printed and these distributions were checked. The errors found after checking the recoded file marginal distributions were corrected by correcting the recode programs or extraction program.

TABULATION

A tabulation plan was prepared for the TFS data according to which some of the tables required by the WFS headquarters were dropped and some new tables were added. Also, tables with background variables were repeated with additional background variables. Very limited numbers of tables were obtained from the children's file and household file. We are grateful for the valuable help of the WFS staff during tabulation.

COCENTS system was used for tabulation. The programs of this system were installed on the Hacettepe University computer system (B-3500).

The parameters of the 78 standard tables required by the WFS were created in the IBM machine at the Middle East Technical University (METU). For this purpose, the COCGEN programme developed in London was installed on the METU computer. Necessary modifications of the parameters were made on the Hacettepe University computer. The parameters of the rest of the tables were written at the Institute and run on the Hacettepe University computer.

APPENDIX D SAMPLE DESIGN AND OUTCOME

1. OUTLINE OF THE DESIGN

The sample for the Turkish Fertility Survey was a nationally representative probability sample of non-institutional households, based on a clustered, stratified multistage area design. The primary sampling units were stratified by population size and by geographic regions defined in terms of a number of spatial and socio-economic variables. In the urban part of the sample, localities, than wards, and in the third stage, blocks were selected systematically with probability proportional to size (PPS); within sample blocks, small segments of five dwelling units each were selected so as to yield a self-weighting sample. In the rural part, villages were selected systematically with constant probability within each size stratum; this was followed by equal probability selection of segments of households to provide, again, a self-weighting sample of households.

Within sample segments, all households were enumerated using a household schedule in which usual residents were listed and data on a number of demographic and socio-economic items obtained. This was followed by the detailed individual interview of ever-married women aged 15-49 on a de jure basis.

The sample was originally designed for the Turkish Demographic Survey of the State Institute of Statistics, Turkey, in May 1976. Since data from the 1975 Population Census were not available at the time, the 1970 Census data formed the basis for the selection of primary sampling units. The frame within sample PSUs was updated in December 1976. The TFS is based on the same clusters as the Turkish Demographic Surveys, but on different segments of households.

Before describing the sampling procedure in detail, it will be useful to indicate the basic design parameters of the sample for the Turkish Demographic Survey (TDS) and the subsampling procedure used for the TFS.

The TDS required a self-weighting sample of around 20,000 dwellings or households. With the 1978 population estimated at 44 million residing in around 8 million households, the overall sampling fraction was determined as 1 in 400. Approximately one-half of the population resided in urban localities, in around 4.5 million households with an average of 5 persons per household. There were 3.5 million rural households, with an average of 6 persons per household.

Generally speaking, the effective primary sampling units (PSUs) in urban areas were wards (average size around 500 households)[1], and in rural areas villages (average size 100 households). Each sample ward was divided into blocks of 100 households on the average, from which 2 blocks were selected. The average sample take per ward was determined at around 55 households, divided between the two blocks. In rural areas, due to more difficult travel conditions, a higher average take of around 90 households per sample village was used. The table below summarises the design.

TABLE D-1: TDS SAMPLE DESIGN (APPROXIMATE FIGURES)

	Population		Households		Overall Sampling Fraction	Sample Size (HHs)	Effective PSUs		HHs selected per PSU		No. of PSUs Selected
	Mill.	%	Av. Size	No. (mill)			Unit	Av. Size (HHs)	1970 base	1978	
Domain											
Urban	22	50	5	4.5	1/400	11000	Ward	500	50	55	200
Rural	22	50	6	3.5	1/400	9000	Village	100	80	90	100

[1] In certain strata, the selection of wards was preceded by the selection of localities. However, in all such cases only one ward from each sample locality was selected. The selection of localities thus introduces no clustering of the resulting sample of wards, localities serving merely as 'addresses' for the wards. In this sense wards constitute the effective PSUs. For the TFS, as will be seen later, blocks constitute the effective PSUs in urban areas.

For the sample of around 6,500 dwellings, the TFS required a further subsampling of 1 in 3 from the TDS sample. This was achieved in urban areas by selecting two-thirds of the TDS wards, and then selecting one block out of the two sample blocks in each selected ward; within a block a new set of dwelling units was selected in compact segments of 5 dwellings each. In rural areas except for the smallest villages, all TDS villages were retained in the TFS sample; the sampling fraction within a village was reduced to a third and, again, a new set of households was selected.

Consequently the main parameters of the TFS sample are as follows.

TABLE D-2: TFS SAMPLE: MAIN PARAMETERS

Domain	Effective PSUs: Unit	Effective PSUs: Av. Size (HH)	No. of PSUs Selected	No. of Dwellings Selected	Av. per PSU	No. of H.holds found	Av. per PSU	Overall Sampling Fraction
Urban	Block	100	131	4,085	31.2	3,523	29.6	1/1200
Rural	Village	100	84	2,308	27.5	2,148	25.6	1/1200
Total	-	100	215	6,393	29.7	5,671	26.4	1/1200

2. PRIMARY STRATIFICATION

All localities (cities, towns and villages) in the country were classified into a number of strata defined jointly in terms of regions and localitiy size.

The country was first divided into five regions on the basis of a number of socio-economic and geographic variables, as described in the study "A Method of Determining the Level of Development in Provinces, Taxonomy" conducted by the State Planning Organization in 1972.[1] The regions so defined are shown in Figure D-1, with the 1970 and 1975 population given below.

TABLE D-3: 1970 AND 1975 POPULATION BY REGION

Region	1970 Population ('000s)	Per Cent	1975 Population ('000s)	Per Cent
I West	10,016	28.1	11,645	28.8
II South	4,280	12.0	5,032	12.5
III Centre	8,750	24.6	10,204	25.3
IV North	4,846	13.6	4,859	12.0
V East	7,722	21.7	8,608	21.3
Total	35,615	100.0	40,348	100.0

The second variable used for primary stratification was the locality size group. These groups were defined in terms of the 1970 population figures as follows.

[1] Illerin Gelismislik Düzeylerinin Saptanmasinda bir Yontem Denemesi (Taksonomi). Eylul 1972, Yayin No. DPT: 1252, SPD:250.

TABLE D-4: POPULATION SIZE GROUPS OF LOCALITIES

Population Size Group		1970 Population		No. of Localities in Group
		Number	Per Cent	
A	50,000 and over	8,298,566	23.3	43
B_1	25,000 - 49,999	2,210,742	6.2	67
B_2	10,000 - 24,999	2,225,453	6.2	154
B_3	2,000 - 9,999	5,145,212	14.4	1,493
C	District Centres under 2,000	74,188	0.2	40
K_1	1,500 - 1,999	1,201,064	3.4	706
K_2	1,000 - 1,499	3,108,465	8.7	2,603
K_3	500 - 999	7,186,109	20.2	10,352
K_4	< 500	6,165,197	17.3	21,160
Total	-	35,614,996	100.0	36,618

The size groups in conjunction with regional or subregional classification defined the following primary strata for sample selection.

TABLE D-5: SIZE GROUP ACCORDING TO PRIMARY STRATA

Size Group	No. of Strata	Comments
A	43	Each locality being self-representing (i.e. selected with certainty) forms a stratum.
B_1	5	Regions
B_2	5	Regions
B_3	15	Each region divided into 2-4 subregions
C	1	No stratification by region as size group small
K_1	5	Regions
K_2	5	Regions
K_3	10	Subregions
K_4	10	Subregions
Total	99	

It should be noted that within each explicit stratum, sample areas were selected systematically from geographically ordered lists, thus providing a further measure of implicit stratification.

The sampling procedure used generally varied from one size group to another; for a given size group the same procedure was used in all regions or subregions. For the purpose of describing the procedures below, size group A will be referred to as "self-representing", B_1 to C as "urban" and K_1 to K_4 as "rural' It should be useful to clarify the distinction between these major sampling domains and defined above and the reporting domains used elsewhere in this report.

(i) Size of Place. In the presentation of substantive results, sample localities are classified into the following eight size groups:

- 'Metropolitan', referring to the three largest cities of Istanbul, Ankara and Izmir (these account for approximately two-thirds of the sampling size group A);

- 'Large cities', which refer to the remaining places with 1970 population of 50,000 and over (i.e. the remainder of size group A);

- 'Medium cities', with 1970 population of 25,000-49,999 (size group B_1);

- 'Small cities' with 1970 population of 10,000-24,999 (size group B_2);

- 'Towns' with 1970 population of 2,000-19,999 (Groups B_3 and C);

- 'Large villages' with 1,000-1,999 persons (Groups K_1 and K_2); and

- 'Small villages' with 1970 population under 500 (Group K_4).

(ii) Type of Place. Substantive results are also presented by two categories of type of place: urban and rural. These are based on an independent classification which nevertheless corresponds closely to the classification by size. Areas within municipal boundaries and district headquarters are classified as 'urban' and generally correspond to size groups A, B_1, B_2 and part of B_3.

(iii) Regions. The five sampling regions also form the major domains for the reporting of substantive results in the report. It may be noted that the present regional boundaries do not correspond exactly to the boundaries used in some earlier studies such as the 1973 Fertility Survey. Figure 1 shows the provinces which have been classified into a different region since 1973. In the reporting of survey results, each region was sometimes further divided into two parts: 'urban' and 'rural' as defined in (ii) above.

3. SAMPLING IN URBAN AREAS

For the purpose of sample selection, all localities with a population of 2,000 or more (in 1970) were considered urban. District centres with population under 2,000 were also included in this group. This population criterion is also an indicator of the existence of a municipal organization. The frame for the urban sample consisted of 43 'self-representing' (i.e. selected with certainty) municipalities with a population of 50,000 or over in 1970, and 1,714 'non-self-representing' municipalities classified into 26 regional/subregional strata as described in the previous section.

Each of the 43 self-representing municipalities as well as each of the remaining 26 urban strata was allocated the number of wards to be selected as follows:

$$a = f \cdot \frac{n}{HHS \times NHS} \qquad (1)$$

where n is the 1970 population of the stratum;
f - overall sampling fraction = 1/400 for the TDS;
HHS - average household size in urban areas = 5.0; and
NHS - target number of households to be selected from each sample;
ward = 50 in terms of 1970 population.

The above gives

$$a = n/100{,}000, \text{ rounded upwards in most cases.} \qquad (2)$$

In each self-representing municipality, at least one ward was selected; in stratum C, it was decided to select two sample areas.

SELF REPRESENTING MUNICIPALITIES (SIZE GROUP A)

Within each locality, wards were selected systematically with probability proportional to size (PPS), using the population of the latest date available for the wards as the measure of size. The probabilities of selection are as follows:

Selection of locality i

$$q_i = 1 \text{ (with certainty).} \qquad (3)$$

Selection of ward j in locality i,

$$q_{ij} = a \frac{m_{ij}}{m_i} \qquad (4)$$

where $a = n/100{,}000$ (rounded) based on the locality's 1970 population

m_{ij} = the most recent available population of the ward

m_i = most recent estimate of the locality population = $\Sigma_j m_{ij}$

Once the sample ward was selected, it was completely mapped showing:

a) the boundaries of the ward
b) the roads and streets within the ward
c) the buildings and their location; a number identifying its address on the building, and a description of the building such as school, hospital, mosque, etc., if necessary
d) the number of dwelling units within each building.

On the map of the sample ward, the number of dwelling units within each block (block = the smallest area surrounded by streets and/or other specific boundaries such as a river, creek, railroad, etc.) was counted. Then, smaller blocks were combined, when necessary, to form blocks of approximately 100 dwelling units each. The blocks of this average size were listed and two sample blocks were selected with probability

$$q_{ijk} = 2 \cdot \frac{b_{ijk}}{b_{ij}} \qquad (5)$$

where b_{ijk} = number of dwelling units with block k, and

b_{ij} = number in ward j, = $\Sigma_k b_{ijk}$

After listing dwelling units within a selected block, a systematic sample of dwellings in segments of five units was selected with probability r_{ijk} such that

$$q_i \times q_{ij} \times q_{ijk} \times r_{ijk} = 1/400, \qquad (6)$$

$$\ldots \quad n_i \quad m_{ij} \quad b_{ijk} \quad \ldots$$

where c = (n/800.a), and in this special case n_i = n, the 1970 population of the locality.

SIZE GROUPS B_1 AND B_2 (1970 POPULATION 10 - 50,000)

Within each stratum, the first stage consisted of systematic selection of localities with PPS:

$$q_i = a \frac{n_i}{n}$$

where a = (n/100,000) as defined by equation (1) for the stratum, and n_i is the 1970 population of locality i; $n = \Sigma_i n_i$. Next, one ward was selected with probability

$$q_{ij} = m_{ij}/m_i, \text{ with the terms defined in equation (4).}$$

Within selected ward exactly the same procedure as described in (III.3.1) was followed. The final selection equation is identical to (7).

SIZE GROUP B_3

In sample localities with a population of 2,000 - 9,999, the stage of selecting a sample of wards was skipped since the numbers of wards within the sample localities were quite small. Dwelling units within each sample locality were divided into blocks of approximately 100 dwellings each by using the list of buildings prepared for the 1975 Population Census, and two blocks were selected from this list.

SIZE GROUP C

In this case also, the stage of selecting wards was skipped. In addition, from each of the two sample localities in this group only one block was selected, since the expected sample take per locality was expected to be small.

SUBSAMPLING FOR THE TFS

Two-thirds of the wards (in strata A, B_1 and B_2) or of localities (in strata B_3 and C combined) were selected systematically, and within each selected area one of the two TDS sample blocks was selected. Within each selected block, new segments of dwelling units were selected using the same sampling fraction as for the TDS sample.

4. SAMPLING IN RURAL AREAS

THE TDS SAMPLE

It was decided to make the sampling procedure in rural areas as simple as possible since the TDS interviewers were expected to do a part of the selection in the field. In place of selecting villages with PPS and then subsampling with varying fractions, villages within each regional/subregional stratum were divided into four size groups. Sample selection was made in two stages: in the first stage, sample rural localities were selected in the office with a probability k_i (constant for a size group i); in the second stage, a sample of households was selected in the field by the interviewers from lists prepared by them as the first operation of the actual enumeration. The probability of selection in the second stage, h_i, was again constant for a size group and determined such that

$$f = k_i \times h_i = 1/400$$

The size groups were as follows:

i	size group (1970 population)	k_i	h_i	$f = k_i \cdot h_i$
1	K_1 1500-1999	1/100	1/4	1/400
2	K_2 1000-1499	3/400	1/3	1/400
3	K_3 500- 999	1/200	1/2	1/400
4	K_4 - 500	1/400	1	1/400

Within each group, villages were selected systematically from lists in which geographical ordering had been retained.

SUBSAMPLING FOR THE TFS

The subsampling procedure was adopted so as to achieve a more equal sample take per PSU between the urban and rural domains, as well as between different size strata in the latter domain. As in the urban domain, the overall subsampling rate from the TDS to the TFS was 1 in 3. In size groups K_1 and K_2, all villages from the TDS sample were retained and the second stage sampling rate (h_i)was reduced by a factor of 3; new segments of households were selected from the available lists. Similarly in size group K_3, two-thirds of the villages were retained, with the second stage sampling rate reduced by a factor of 2. In group K_4, the TDS involved a multiround survey of the entire villages, and it was not possible to use a different set of households unless completely new villages were selected. However, it was not feasible to do so if a new sample of villages involved an additional operation for listing and mapping of households. Hence the following compromise was adopted: one half of the TDS villages in the size group 251-499 were retained (with the second stage sampling fraction = 2/3), even though that involved visiting the same households; a sample of new villages was selected in the size group 0-250 (with 1/3 the TDS sampling probability for the group), and all households in the selected villages were enumerated in the TFS.

5. SAMPLE OUTCOME

The selected sample for the TFS consisted of 6,393 'addresses' - 4,085 dwelling units in urban areas and 2,308 households in rural areas. As many as 360 (5.6 per cent) could not be located in the field and were reported as "non-existent" or "non-housing units", this proportion being greater in urban than in rural areas. This reflects the failure to update the frame for the movement of households between listing and interviewing; it is also likely that the TDS listers did not accurately record descriptions, maps and addresses in all cases. The problem was most serious in metropolitan areas, particularly in Istanbul.

This overall loss of around 7 per cent in the sample size is due to defects in the sampling frame some of which were caused by the mere presence of "blanks" in the list. Aside from this, a total of 6,033 households were identified, of which 5,142 (85.2 per cent) were successfully interviewed.

The timing of the fieldwork contributed substantially to non-response, particularly in urban areas. Fieldwork had to be completed prior to the onset of winter, which unfortunately resulted in the interviewing period coinciding with vacation months. Moreover, in some regions such as the Black Sea (Region IV), dwellings were rather scattered making call-backs and sometimes even location of the house difficult for the interviewer. Exactly the same problems, in fact, have been faced in previous Turkish surveys, though their magnitude could have been reduced with more careful updating of the frame. The table below gives a breakdown of individual and household response by region and type of place. (See Table D-6).

Among the interviewed households, 4,769 eligible women were identified of whom 4,431 (92.9 per cent) were successfully interviewed and analyzed. The main reason for non-response was women being away for social or work reasons.

The overall response rate for the individual interview is the product of the response rate at the household interview stage (85.2 per cent) and at the individual interview stage (92.9 per cent), i.e., 79.2 per cent. Table D-7 gives a breakdown of response rates by region and type of place. The response rate for the Black Sea urban region was found to be the lowest (65.3 per cent) as shown in Table D-7. This reflects the problems encountered during the fieldwork of the survey and this region. As can be seen from Table D-6, there was a high household non-response in the region. This high rate originates mainly from respondents being away at work, as stated earlier. The table also shows the sample weights which will need to be applied to different domains to compensate for differences in response rates. Since these weights depend upon differential non-response rather than the overall level per se, the range of weights encountered is not large. Hence, the complexity introduced by weighting an otherwise self-weighting design would not be justified in the present case, and all data in the TFS report are unweighted.

TABLE D-6: DISTRIBUTION OF INDIVIDUAL AND HOUSEHOLD RESPONSE

	REGION								
	I			II	III		IV	V	
	Istanbul	Izmir	Rest		Ankara	Rest			All Turkey
Eligible Women Interviewed	354	74	508	329	220	526	232	398	2,641
Eligible Women Household Completed	363	78	534	355	231	561	261	415	2,798
Household Found	446	97	639	414	259	587	275	410	3,127
Eligible Women Interviewed	566	114	747	487	312	697	374	469	3,766
Eligible Women Household Completed	-	-	410	184	-	467	259	470	1,790
Household Found	-	-	415	199	-	519	310	528	1,971
Eligible Women Interviewed	-	-	470	250	-	517	295	483	2,015
Eligible Women Household Completed	-	-	509	280	-	586	348	544	2,267
Household Found	354	74	918	513	220	993	491	868	4,431
	363	78	949	554	231	1,080	571	943	4,769
	446	97	1,109	664	259	1,114	570	893	5,142
	566	114	1,256	767	312	1,283	722	1,013	6,033

TABLE D-7: OVERALL RESPONSE RATES FOR THE INDIVIDUAL INTERVIEW

Region	I			II	III		IV	V	
	Istanbul	Izmir	Rest		Ankara	Rest			All
Urban	78.6	80.7	81.4	78.8	79.1	79.0	65.3	83.8	78.4
Rural	-	-	91.2	82.5	-	79.4	70.8	79.0	80.7
All	76.8	80.7	85.4	80.2	79.1	79.8	67.9	81.1	79.2
	Sample weights implied by different non-response*								
Urban	1.03	.98	0.97	1.00	1.00	1.00	1.21	0.94	1.01
Rural	-	-	0.87	0.96	-	1.00	1.12	1.00	0.98
All	1.03	0.98	0.93	0.99	1.00	0.99	1.17	0.98	1.00

* Computed as $\bar{R}/R_i$ where $\bar{R}$ is the overall response rate (79.2 per cent) and R_i the response rate in a domain. In the report, data are in fact not weighted.

APPENDIX E SAMPLING ERRORS FOR SELECTED VARIABLES

1. INTRODUCTION

Sampling errors for the Turkish Fertility Survey 1978 have been computed for 27 selected variables. Results are presented for subclasses defined as Current Age, Urban and Rural Domains by Regions, Size of Place, Women's Work Status, and Husbands' Education.

The following statistics were derived and presented for the total sample:

- r = Sample estimate of ratio, mean, or proportion.
- SE = Standard error of r, for the clustered sample.
- n = Unweighted sample size.
- SR = Standard error computed on the assumption that the sample of individuals was selected by simple random sampling.
- s = Standard deviation, defined as $s = SR\sqrt{n}$
- DEFT = Design effect, DEFT = SE/SR
- ROH = Rate of Homogeneity, defined as $ROH = (DEFT^2-1) / (\bar{b} - 1)$
- SE/r = Relative Standard Error
- $r \pm 2SE$ = The 95 per cent Confidence Interval
- $\bar{b}$ = Average Cluster Size

Only some of these statistics were presented in the report.

INTERPRETATION OF SAMPLING ERRORS

A probability sample is obtained in the survey. The estimates derived from different samples would differ from each other. The estimates considered in this study are approximately unbiased, apart from non-sampling errors and bias. This means that the population value of interest is approximated by an average of the estimates from the various possible samples. This average obtained from different samples is called the expected value. The sampling error or standard error of an estimate is a measure of the difference between the observed sample estimate and the expected value of the estimate. The standard error measures the size of the expected deviation of the sample estimate from the true population values.

A common and convenient criterion asserts that the true value lies within a range of twice the standard error on either side of the sample value. The range (sample mean) $\pm$ 2 (standard error) is called the 95 per cent Confidence Interval. The odds are only one in twenty that the true value lies outside this range.

COMPUTATION OF SAMPLING ERRORS

A probability sample such as the present one has an advantage that the sampling errors can be estimated from the results of the one sample that is available. The actual sample structure is taken into account during the computation procedure, namely the fact that the sample is a stratified, multistage, clustered sample. The results given in this appendix have been computed by using the WFS package programme CLUSTERS. An outline of the procedure for estimating sampling errors is given in Section 3 below.

SAMPLING ERRORS FOR SUBCLASSES

The sampling errors for each of the 27 important variables have to be computed over various subclasses of the sample in order to be useful in the interpretation of the results presented in the form of detailed cross-tabulations. A subclass is taken as a subset of the sample cases defined in terms of characteristics such as current age or size groups by socio-economic background, etc. Due to smaller sample bases involved, sampling errors for individual subclasses obviously tend to be larger than the error in an estimate based on the entire sample.

The computation formulae given in Section 3 also apply for estimates computed over a particular subclass of the sample. Individuals or PSUs not belonging to the subclass are ignored in the computation. Interpretation of the standard error in terms of the 95 per cent confidence interval given above equally applies to any particular sample subclass as well as to the whole sample.

EFFECT OF CLUSTERING

In the sample, the individuals interviewed are clustered into a number of sample areas. Clustering tends to reduce efficiency of the sample, compared to a sample of individuals selected entirely at random. This is due to the fact that individuals within a cluster tend to be more uniform compared to individuals in the sample (or the population) as a whole. Less new information is obtained by interviewing a number of individuals from the same sample area as compared to that obtained from an entirely random sample of the same size.

Design effect or DEFT is a measure which is used in comparing the standard error of an estimate from the actual clustered sample with what the error would have been had the sample been selected entirely at random -

$$DEFT = SE/SR \qquad (1)$$

where SE is the standard error for the clustered sample (computed from equation (2) given in Section 3), and SR is the standard error computed as if the sample had been selected entirely at random (equation (3) in Section 3).

DEFT is a measure of the loss of sampling precision due to clustering of the sample for a particular sample design, cluster size and variable. Within these clusters, the two main factors on which its magnitude depends are the relative homogeneity and the average cluster size. DEFT can be expected to approach unity for samples with very small clusters, or for variables with little within cluster homogeneity. This implies that no sampling precision has been lost by means of clustering.

This is particularly relevant where the main concern is the sampling errors for sample subclasses rather than for the sample as a whole. The cluster sizes for sample subclasses can be much smaller than the cluster sizes for the total sample. This makes the DEFT smaller, that is, it makes the loss in sampling efficiency due to clustering less significant than would be the case if estimates based on the total sample were the main objective of the survey.

2. DISCUSSION OF THE RESULTS

Sampling errors have been computed by CLUSTERS Programme for 27 selected variables over 38 subclasses.

DEFINITION OF THE VARIABLES

The following 27 variables have been considered during the computation of sampling errors. Variables numbered 1 and 2 relate to Nuptiality and Exposure. Variables 3 to 8 relate to Fertility Behaviour, variables 9 to 12 to Fertility Preferences, and variables 13 to 18 to Knowledge of Contraception, and 19 to 27 to the Use of Contraception.

1. Exposed - Proportion of ever-married women (aged 15 to 49) who are "exposed", i.e. are currently married, non-pregnant, and fecund, including sterilization.
2. Age at Marriage - Mean age at first marriage for those currently aged 25 or over who married before age 25.
3. Currently Pregnant - Proportion of currently married women who are currently pregnant.
4. Children Ever-born - Mean number of children born to all ever-married women.
5. Living Children - Mean number of living children for all ever-married women.
6. Births in First 5 Years - Mean number of births before or during first five years of first marriage, for women married at least five years ago.
7. Births in Past 5 Years - Mean number of births during the past five years, for women who have been continuously in the married state for the past five years.
8. Children Dead - Proportion dead of children ever-born.
9. Child Unwanted - Of ever-married women with at least one birth (including any current pregnancy), the proportion who did not want their last child.
10. Want No More Children - Proportion of currently married fecund women who want no more children.
11. Prefer Boy - Of currently married fecund non-pregnant women wanting another child and expressing sex preference, the proportion who prefer a boy.
12. Desired Family Size - Mean total of children desired by currently married women.
13. Know Pill - Proportion of ever-married women who have heard of the pill.
14. Know IUD - Proportion of ever-married women who have heard of the IUD.
15. Know Douche - Proportion of ever-married women who have heard of the douche.
16. Know Condom - Proportion of ever-married women who have heard of the condom.
17. Know Withdrawal - Proportion of ever-married women who have heard of withdrawal.
18. Know Any Method - Proportion of ever-married women who have heard of any method of contraception.
19. Ever-used Pill - Proportion of ever-married women who have ever-used the pill.
20. Ever-used IUD - Proportion of ever-married women who have ever-used the IUD.
22. Ever-used Condom - Proportion of ever-married women who have ever-used the condom.
23. Ever-used Withdrawal - Proportion of ever-married women who have ever-used withdrawal.
24. Ever-used Any Method - Proportion of ever-married women who have ever-used any method of contraception, including sterilization.
25. Used Efficient Method - Proportion of ever-married women who have ever used any efficient ('modern') method of contraception (see Chapter IX).

26. Using Any Method - Proportion of exposed women who are currently using any method of contraception, including sterilization.

27. Using Efficient Method - Proportion of exposed women who are currently using an efficient method of contraception.

The 27 variables for which sampling errors have been computed and analyzed are presented in Table E-1. Variables for sampling error calculations are defined as means or proportions.[1]

Sample size (n) varies from variable to variable, so does average cluster size $\bar{b}$ (max 20.7). Of the 27 variables considered, the standard error over the total sample is under 1 per cent of the mean for three, between 1-3 per cent for fifteen, between 3-4 per cent for three, and above 4 per cent of the mean for two variables. Absolute values of the standard error (SE) were smaller than 0.02 for all variables presented as proportions. On the other hand, SE/R for proportions were higher than those for means, and range from 0.023 to 0.069 especially for variables concerning the use of contraception.

The value for DEFT ranged from 1.088 to 1.776. The highest DEFT values occurred for variables concerning the knowledge of contraception, and the average value was 1.713.

The ROH values were low for most variables. A few values indicating highly clustered items, varied from 0.100 to 0.123. For variable No. 11, the average cluster size ($\bar{b}$) is 5.4. The ROH value for this variable is supressed by the package programme where the average cluster size is smaller than 6.1, and is indicated by "****".

The mean ROH values for five grouped variables are shown in Table E-2.

TABLE E-2: MEAN ROHS BY SIX VARIABLES FOR THE TOTAL SAMPLE

		N	ROH
1.	Nuptiality and Exposure	2	0.0395
2.	Fertility Behaviour	6	0.0490
3.	Fertility Preferences	4	0.0517
4.	Knowledge of Contraception	6	0.0980
5.	Use of Contraception	9	0.0661
	All Variable Types	27	0.0653

(N denotes the number of variables selected for sampling error computations in the survey)

For each variable, sampling errors were computed for a number of subclasses. The subclasses may be divided into three groups:

(i) Cross-Classes, such as age groups and other demographic subclasses which are generally well distributed over sample clusters.

(ii) Mixed-Classes, such as occupational and educational groups and other socio-economic subclasses which tend to be geographically more concentrated. (For example, higher educational categories are over-represented in clusters in urban and Western areas).

(iii) Segregated Classes, i.e. geographical domains, in which a whole sample cluster either belongs or does not belong to the subclass.

[1] In the main body of this report these proportions have been presented as percentages.

Table E -1: Sampling Errors for 27 Variables for the Total Sample

	R	SE	N	SER	SD	DEFT	ROH	SE/R	R-2SE	R+2SE	B
1. EXPOSED	0.726	0.007	4431.0	0.007	0.446	1.088	0.009	0.010	0.711	0.741	20.7
2. AGE AT MARRIAGE	17.217	0.072	3159.0	0.051	2.868	1.402	0.070	0.004	17.073	17.360	14.8
3. CURRENTLY PREGNANT	0.123	0.006	4257.0	0.005	0.329	1.183	0.021	0.048	0.111	0.135	19.9
4. CHILDREN EVER-BORN	3.936	0.060	4431.0	0.045	2.968	1.351	0.042	0.015	3.815	4.056	20.7
5. LIVING CHILDREN	3.060	0.044	4431.0	0.033	2.177	1.352	0.042	0.014	2.971	3.148	20.7
6. BIRTHS IN FIRST 5 YRS.	1.862	0.025	3541.0	0.019	1.133	1.292	0.043	0.013	1.812	1.911	16.5
7. BIRTHS IN PAST 5 YRS.	0.899	0.025	3376.0	0.017	0.996	1.462	0.077	0.028	0.849	0.949	15.8
8. CHILDREN DEAD	0.223	0.006	4431.0	0.004	0.266	1.536	0.069	0.028	0.210	0.235	20.7
9. CHILD UNWANTED	0.382	0.010	4126.0	0.008	0.486	1.353	0.045	0.027	0.361	0.402	19.3
10. WANT NO MORE CHILDREN	0.571	0.010	3742.0	0.008	0.495	1.281	0.039	0.018	0.550	0.591	17.5
11. PREFER BOY	0.425	0.017	1161.0	0.015	0.495	1.203	****	0.041	0.390	0.460	5.4
12. DESIRED FAMILY SIZE	3.031	0.045	3970.0	0.025	1.599	1.776	0.123	0.015	2.941	3.121	18.6
13. KNOW PILL	0.807	0.010	4431.0	0.006	0.394	1.672	0.091	0.012	0.787	0.827	20.7
14. KNOW IUD	0.684	0.013	4431.0	0.007	0.465	1.792	0.112	0.018	0.659	0.709	20.7
15. KNOW DOUCHE	0.490	0.012	4431.0	0.008	0.500	1.662	0.089	0.025	0.465	0.515	20.7
16. KNOW CONDOM	0.515	0.013	4431.0	0.008	0.500	1.766	0.107	0.026	0.488	0.541	20.7
17. KNOW WITHDRAW.	0.654	0.012	4431.0	0.007	0.476	1.664	0.090	0.018	0.630	0.678	20.7
18. KNOW ANY METHOD	0.863	0.008	4431.0	0.005	0.321	1.720	0.099	0.009	0.867	0.900	20.7
19. EVER-USED PILL	0.246	0.009	4430.0	0.006	0.431	1.352	0.042	0.036	0.229	0.264	20.7
20. EVER-USED IUD	0.075	0.005	4424.0	0.004	0.263	1.303	0.036	0.069	0.064	0.085	20.7
21. EVER-USED DOUCHE	0.187	0.009	4426.0	0.006	0.390	1.483	0.061	0.047	0.169	0.204	20.7
22. EVER-USED CONDOM	0.109	0.007	4426.0	0.005	0.312	1.509	0.065	0.065	0.095	0.124	20.7
23. EVER-USED WITHDRAW.	0.320	0.011	4425.0	0.007	0.467	1.617	0.082	0.035	0.298	0.343	20.7
24. EVER-USED ANY METHOD	0.551	0.013	4431.0	0.007	0.497	1.724	0.100	0.023	0.525	0.577	20.7
25. USED EFFICIENT METHOD	0.341	0.011	4431.0	0.007	0.474	1.481	0.061	0.031	0.320	0.362	20.7
26. USING ANY METHOD	0.503	0.014	3217.0	0.009	0.500	1.591	0.109	0.028	0.475	0.531	15.0
27. USING EFFICIENT METHOD	0.177	0.008	3217.0	0.007	0.382	1.244	0.039	0.047	0.161	0.194	15.0

$R = y/x$

$SE = SE(R)$

N = Sample Size

$SER = SR = SD/\sqrt{N}$

$SD = SR\sqrt{N}$

$DEFT = SE/SR$

$ROH = (DEFT^2-1)/(B-1)$

SE/R = Relative SE

$R \pm 2SE$ = Conf. Int.

B = Av. Cluster Size

PATTERN BY CROSS-CLASSES AND MIXED CLASSES

The pattern of the results for sample subclasses is derived from the computed results for selected variables. For a number of cross-classes and mixed classes (see below), standard errors for six selected variables were plotted against actual subclass size (n_s). A simple linear relationship has been assumed between the variables and a regression line was drawn. Table E-3 was constructed on the basis of the line and found to give an excellent approximation to the detailed results actually computed for the various subclasses. The following subclasses were employed.

TABLE E-3: APPROXIMATE VALUE OF STANDARD ERROR AND SUBCLASS SIZE (n_s)

	Variable	30-50	51-100	101-200	201-400	401-700	701-1,000	1,001-1,500	1,501-2,000	2,001-3,000
1.	Exposed	0.0250	0.0245	0.0240	0.0225	0.0206	0.0188	0.0155	0.0120	0.0040
3.	Currently Pregnant	0.0250	0.0245	0.0240	0.0225	0.0205	0.0160	0.0160	0.0126	0.0050
8.	Children Dead	0.0250	0.0245	0.0240	0.0225	0.0205	0.0190	0.0155	0.0120	0.0040
11.	Perfer Boy	0.0248	0.0245	0.0236	0.0220	0.0206	0.0180	0.0170	0.0121	0.0060
13.	Know Pill	0.0250	0.0245	0.0240	0.0224	0.0206	0.0190	0.0155	0.0120	0.0040
26.	Using Any Method	0.0250	0.0245	0.0232	0.0220	0.0204	0.0187	0.0157	0.0121	0.0060

A. Cross Classes: The following subclasses have been defined by current age:

Six subclasses : <20, 20-24, 25-29, 30-34, 35-39, 40-44.
Four subclasses : <25, 25-34, 35-44, 45-49.
Two subclasses : <35, 35-49.

Sampling errors for 27 variables over all subclasses are given in Table E-4 at the end of this Appendix.

The DEFT values for most variables were low. The variable group of knowledge of contraception showed the highest values for some age classes as expected. Some selected values are shown below:

For ages <25 average DEFT = 1.301
For ages 35-44 average DEFT = 1.317
For ages <35 average DEFT = 1.429
For ages 35-49 average DEFT = 1.419

The general conclusion is that as the subclasses become smaller, the values of DEFT tend to become smaller.

B. Mixed Classes: For women's work status, the following subclasses were defined - a) Not Working, b) Working, c) Working in Agriculture, d) Working in Non-agriculture. For these subclasses, the sampling errors were computed for 27 variables and presented in Table E-5. High values of DEFT have been observed for Knowledge of Contraception variables. The averages were 1.578 for working women and 1.603 for women working in agriculture.

The following subclasses were defined for Husbands' education - a) Illiterate, b) Literate, c) Primary Completed, d) Higher. Husbands who have primary completed showed higher values of DEFT for the knowledge and use of contraception. The values ranged from 1.192 to 1.549. The average cluster size is 10.1 for this subclass. This average cluster size for the subclass is in fact higher than the other three of Husbands' Education subclasses (see Table E-6).

PATTERN BY SEGREGATED CLASSES (GEOGRAPHICAL DOMAINS)

The sample was divided into eight subclasses according to Size of Place. The classification is as follows:

0	Metropolitan	4	Towns
1	Large Cities	5	Large Villages
2	Medium Cities	6	Medium Villages
3	Small Cities	7	Small Villages

Sampling errors for 27 variables computed over eight size groups are shown in Table E-7. DEFT's for Knowledge and Use of Contraceptive Variables were the highest. They ranged from 1.420 to 2.13 for medium cities, while ranging from 1.053 to 2.457 for small villages.

Further, the sample was divided into ten subclasses by Regions and Type of Place, as shown in Table E-8. Types of Places (Urban and Rural domains) are given by Regions - West, South, Centre, North and East.

DEFT for the Knowledge of Contraception variable group was the highest. Average DEFT was 2.173 for Rural West, and 1.846 for Rural North. The values are smaller for other subclasses.

The results obtained in the analysis of the standard errors and the associated DEFT indicate that the sample is relatively efficient although a clustered design was used. Especially when subclasses are compared, the loss of efficiency of the present design is not serious.

3. TECHNICAL CONSIDERATIONS

The procedure for estimating sampling errors for a stratified clustered sample is summarized below:

A ratio statistics $r = y/x$ is being considered, where y and x are two variables the ratio of which is being estimated. (This procedure also applies to estimates like means, proportions or percentages which can be the special cases of ratios). Let suffix "j" represent an individual, suffix "i" the PSU to which the individual belongs, and suffix "h" the stratum in which the PSU lies. Furthermore,

y_{hij} = value of variable y for the individual j, in PSU i and stratum h,

w_{hij} = sample weight for the individual (in the present self-weighting sample, $w_{hij} = 1$ for all cases)

$y_{hi} = \Sigma_j w_{hij} y_{hij}$, the weighted sum of y's for all individuals in PSU,

$y_h = \Sigma_i y_{hi}$, the sum of y_{hi} for all PSUs in the stratum, and

$y = \Sigma_h y_h$, the sum of y_h for all strata in the sample.

Other expressions of the same nature can be defined for variable x. The variance ($= SE^2$, square of the standard error) of the ratio estimate $r = y/x$ is estimated as

$$SE^2 = \text{var}(r) = \frac{1-f}{\bar{x}^2} \sum_{h=1}^{H} \left[\frac{m_h}{m_h - 1} \left(\sum_{i=1}^{m_h} z_{hi}^2 - \frac{z_h^2}{m_h} \right) \right] \qquad (2)$$

where

f = overall sampling fraction,
m_h = the number of PSUs in stratum h,
H = the number of strata in the sample,
r = ratio of the two sample aggregates y and x,
$z_{hi} = y_{hi} - r \cdot x_{hi}$, and
$z_h = \Sigma z_{hi} = y_h - r \cdot x_h$

The PSUs were sampled systematically in the present sample, i.e., by applying a predetermined sampling interval with a random start to an ordered list of PSUs. This selection procedure is equivalent to implicit stratification. Adjacent sample PSUs can generally be paired to form strata for sampling error computations. (The computation formula requires at least two PSUs for stratum, i.e. $m_h > 2$).

For estimates computed over a particular subclass of the sample equation (2) is also applicable. PSUs or strata or individuals not belonging to the subclass are ignored in the computation.

The standard error (SR) of a ratio estimate r corresponding to an equivalent sample selected at random is required to estimate DEFT = SE/SR, and is given by equation (3).

$$SR^2 = \frac{1-f}{n-1} \left(\Sigma w_{hij} z^2_{hij} / \Sigma w_{hij} \right) \qquad (3)$$

where

$$z_{hij} = (y_{hij} - r \cdot x_{hij}),$$

$$r = y/x = \Sigma w_{hij} y_{hij} / \Sigma w_{hij} x_{hij}$$

"Σ" is the sum for all individuals over the sample and "n" is the total sample size.

Table E -4: Sampling Errors for 27 Variables for: (A) Six Subclasses of Current Age

< 20

	R	SE	N	SD	DEFT
1. EXPOSED	0.684	0.026	345.0	0.466	1.050
2. AGE AT MARRIAGE	0.0	0.0	0.0	0.0	0.0
3. CURRENTLY PREGNANT	0.302	0.027	338.0	0.460	1.078
4. CHILDREN EVER-BORN	0.670	0.044	345.0	0.789	1.042
5. LIVING CHILDREN	0.557	0.037	345.0	0.689	1.005
6. BIRTHS IN FIRST 5 YRS.	1.400	0.227	15.0	0.910	0.966
7. BIRTHS IN PAST 5 YRS.	1.857	0.265	14.0	1.027	0.964
8. CHILDREN DEAD	0.169	0.021	345.0	0.450	0.873
9. CHILD UNWANTED	0.057	0.015	247.0	0.232	1.026
10. WANT NO MORE CHILDREN	0.104	0.016	338.0	0.305	0.941
11. PREFER BOY	0.495	0.036	200.0	0.501	1.022
12. DESIRED FAMILY SIZE	2.828	0.093	325.0	1.491	1.129
13. KNOW PILL	0.774	0.025	345.0	0.419	1.128
14. KNOW IUD	0.536	0.032	345.0	0.499	1.184
15. KNOW DOUCHE	0.368	0.029	345.0	0.483	1.096
16. KNOW CONDOM	0.380	0.030	345.0	0.486	1.140
17. KNOW WITHDRAW.	0.522	0.031	345.0	0.500	1.167
18. KNOW ANY METHOD	0.858	0.022	345.0	0.350	1.159
19. EVER-USED PILL	0.093	0.016	345.0	0.291	1.051
20. EVER-USED IUD	0.017	0.007	345.0	0.131	0.992
21. EVER-USED DOUCHE	0.072	0.013	345.0	0.260	0.951
22. EVER-USED CONDOM	0.020	0.007	345.0	0.141	0.980
23. EVER-USED WITHDRAW.	0.140	0.021	344.0	0.347	1.100
24. EVER-USED ANY METHOD	0.241	0.024	345.0	0.428	1.036
25. USED EFFICIENT METHOD	0.116	0.017	345.0	0.321	1.014
26. USING ANY METHOD	0.216	0.027	236.0	0.412	0.995
27. USING EFFICIENT METHOD	0.093	0.019	236.0	0.291	1.008

20-24

	R	SE	N	SD	DEFT
1. EXPOSED	0.748	0.014	811.0	0.434	0.928
2. AGE AT MARRIAGE	0.0	0.0	0.0	0.0	0.0
3. CURRENTLY PREGNANT	0.228	0.014	795.0	0.420	0.930
4. CHILDREN EVER-BORN	1.809	0.055	811.0	1.307	1.209
5. LIVING CHILDREN	1.512	0.048	811.0	1.096	1.256
6. BIRTHS IN FIRST 5 YRS.	1.903	0.056	383.0	0.978	1.114
7. BIRTHS IN PAST 5 YRS.	1.711	0.056	374.0	0.904	1.191
8. CHILDREN DEAD	0.164	0.010	811.0	0.296	0.975
9. CHILD UNWANTED	0.190	0.016	716.0	0.393	1.116
10. WANT NO MORE CHILDREN	0.296	0.018	788.0	0.457	1.100
11. PREFER BOY	0.412	0.026	408.0	0.493	1.076
12. DESIRED FAMILY SIZE	2.797	0.055	755.0	1.300	1.154
13. KNOW PILL	0.821	0.016	811.0	0.383	1.217
14. KNOW IUD	0.666	0.020	811.0	0.472	1.200
15. KNOW DOUCHE	0.476	0.021	811.0	0.500	1.193
16. KNOW CONDOM	0.499	0.020	811.0	0.500	1.131
17. KNOW WITHDRAW.	0.670	0.020	811.0	0.471	1.188
18. KNOW ANY METHOD	0.885	0.014	811.0	0.319	1.230
19. EVER-USED PILL	0.241	0.017	810.0	0.428	1.138
20. EVER-USED IUD	0.067	0.009	809.0	0.250	1.037
21. EVER-USED DOUCHE	0.156	0.015	810.0	0.363	1.144
22. EVER-USED CONDOM	0.065	0.009	810.0	0.247	1.079
23. EVER-USED WITHDRAW.	0.297	0.017	811.0	0.457	1.076
24. EVER-USED ANY METHOD	0.499	0.020	811.0	0.500	1.127
25. USED EFFICIENT METHOD	0.295	0.017	811.0	0.456	1.084
26. USING ANY METHOD	0.422	0.021	607.0	0.494	1.049
27. USING EFFICIENT METHOD	0.168	0.015	607.0	0.374	0.971

25-29

	R	SE	N	SD	DEFT
1. EXPOSED	0.812	0.014	840.0	0.391	1.067
2. AGE AT MARRIAGE	17.633	0.106	813.0	2.824	1.071
3. CURRENTLY PREGNANT	0.161	0.014	824.0	0.368	1.075
4. CHILDREN EVER-BORN	2.991	0.071	840.0	1.715	1.191
5. LIVING CHILDREN	2.495	0.053	840.0	1.389	1.105
6. BIRTHS IN FIRST 5 YRS.	1.917	0.043	725.0	1.023	1.119
7. BIRTHS IN PAST 5 YRS.	1.398	0.040	706.0	0.954	1.122
8. CHILDREN DEAD	0.166	0.009	840.0	0.225	1.181
9. CHILD UNWANTED	0.306	0.017	801.0	0.461	1.022
10. WANT NO MORE CHILDREN	0.494	0.020	815.0	0.500	1.154
11. PREFER BOY	0.389	0.026	301.0	0.488	0.917
12. DESIRED FAMILY SIZE	2.879	0.049	785.0	1.204	1.151
13. KNOW PILL	0.863	0.013	840.0	0.344	1.074
14. KNOW IUD	0.737	0.016	840.0	0.441	1.079
15. KNOW DOUCHE	0.519	0.017	840.0	0.500	0.980
16. KNOW CONDOM	0.579	0.018	840.0	0.494	1.082
17. KNOW WITHDRAW.	0.727	0.015	840.0	0.446	1.006
18. KNOW ANY METHOD	0.918	0.009	840.0	0.275	0.959
19. EVER-USED PILL	0.311	0.016	840.0	0.463	1.028
20. EVER-USED IUD	0.088	0.010	838.0	0.284	1.027
21. EVER-USED DOUCHE	0.178	0.014	839.0	0.382	1.056
22. EVER-USED CONDOM	0.130	0.012	839.0	0.336	1.066
23. EVER-USED WITHDRAW.	0.343	0.019	840.0	0.475	1.184
24. EVER-USED ANY METHOD	0.615	0.020	840.0	0.487	1.169
25. USED EFFICIENT METHOD	0.408	0.019	840.0	0.492	1.097
26. USING ANY METHOD	0.512	0.022	682.0	0.500	1.123
27. USING EFFICIENT METHOD	0.186	0.016	682.0	0.390	1.059

30-34

	R	SE	N	SD	DEFT
1. EXPOSED	0.823	0.017	682.0	0.382	1.164
2. AGE AT MARRIAGE	17.246	0.144	654.0	2.973	1.239
3. CURRENTLY PREGNANT	0.099	0.012	659.0	0.298	1.014
4. CHILDREN EVER-BORN	4.283	0.109	682.0	2.354	1.214
5. LIVING CHILDREN	3.403	0.081	682.0	1.769	1.192
6. BIRTHS IN FIRST 5 YRS.	1.909	0.047	671.0	1.113	1.096
7. BIRTHS IN PAST 5 YRS.	1.050	0.044	646.0	1.007	1.113
8. CHILDREN DEAD	0.205	0.010	682.0	0.240	1.085
9. CHILD UNWANTED	0.414	0.020	655.0	0.493	1.064
10. WANT NO MORE CHILDREN	0.692	0.018	626.0	0.462	0.995
11. PREFER BOY	0.479	0.043	144.0	0.501	1.040
12. DESIRED FAMILY SIZE	3.166	0.079	626.0	1.750	1.132
13. KNOW PILL	0.848	0.015	682.0	0.360	1.067
14. KNOW IUD	0.754	0.019	682.0	0.431	1.127
15. KNOW DOUCHE	0.532	0.024	682.0	0.499	1.268
16. KNOW CONDOM	0.576	0.024	682.0	0.495	1.283
17. KNOW WITHDRAW.	0.704	0.022	682.0	0.457	1.272
18. KNOW ANY METHOD	0.912	0.012	682.0	0.283	1.137
19. EVER-USED PILL	0.328	0.021	682.0	0.470	1.145
20. EVER-USED IUD	0.114	0.016	682.0	0.318	1.340
21. EVER-USED DOUCHE	0.194	0.019	681.0	0.396	1.242
22. EVER-USED CONDOM	0.151	0.015	682.0	0.358	1.097
23. EVER-USED WITHDRAW.	0.393	0.022	680.0	0.489	1.170
24. EVER-USED ANY METHOD	0.644	0.024	682.0	0.479	1.294
25. USED EFFICIENT METHOD	0.443	0.023	682.0	0.497	1.191
26. USING ANY METHOD	0.615	0.025	561.0	0.487	1.197
27. USING EFFICIENT METHOD	0.246	0.022	561.0	0.431	1.208

Sampling Errors for 27 Variables for: (A) Six Subclasses of Current Age (Continued)

35-39

	R	SE	N	SD	DEFT
1. EXPOSED	0.828	0.014	644.0	0.378	0.969
2. AGE AT MARRIAGE	16.793	0.132	628.0	2.855	1.157
3. CURRENTLY PREGNANT	0.045	0.009	616.0	0.208	1.078
4. CHILDREN EVER-BORN	5.483	0.134	644.0	2.786	1.221
5. LIVING CHILDREN	4.230	0.103	644.0	2.100	1.242
6. BIRTHS IN FIRST 5 YRS.	1.900	0.054	640.0	1.205	1.128
7. BIRTHS IN PAST 5 YRS.	0.694	0.042	612.0	0.873	1.186
8. CHILDREN DEAD	0.229	0.009	644.0	0.213	1.128
9. CHILD UNWANTED	0.517	0.022	630.0	0.500	1.119
10. WANT NO MORE CHILDREN	0.840	0.016	561.0	0.367	1.041
11. PREFER BOY	0.362	0.057	69.0	0.484	0.984
12. DESIRED FAMILY SIZE	3.232	0.111	570.0	1.986	1.329
13. KNOW PILL	0.811	0.018	644.0	0.392	1.193
14. KNOW IUD	0.714	0.021	644.0	0.452	1.173
15. KNOW DOUCHE	0.517	0.023	644.0	0.500	1.180
16. KNOW CONDOM	0.512	0.024	644.0	0.500	1.200
17. KNOW WITHDRAW.	0.660	0.022	644.0	0.474	1.190
18. KNOW ANY METHOD	0.890	0.014	644.0	0.313	1.140
19. EVER-USED PILL	0.270	0.019	644.0	0.444	1.076
20. EVER-USED IUD	0.093	0.014	643.0	0.291	1.219
21. EVER-USED DOUCHE	0.252	0.019	644.0	0.434	1.107
22. EVER-USED CONDOM	0.120	0.013	643.0	0.325	1.036
23. EVER-USED WITHDRAW.	0.377	0.021	642.0	0.485	1.100
24. EVER-USED ANY METHOD	0.630	0.022	644.0	0.483	1.155
25. USED EFFICIENT METHOD	0.382	0.021	644.0	0.486	1.084
26. USING ANY METHOD	0.546	0.025	533.0	0.498	1.179
27. USING EFFICIENT METHOD	0.167	0.016	533.0	0.373	1.006

40-44

	R	SE	N	SD	DEFT
1. EXPOSED	0.658	0.019	611.0	0.475	1.006
2. AGE AT MARRIAGE	17.131	0.122	589.0	2.820	1.050
3. CURRENTLY PREGNANT	0.024	0.006	578.0	0.154	0.999
4. CHILDREN EVER-BORN	5.956	0.154	611.0	3.110	1.221
5. LIVING CHILDREN	4.413	0.102	611.0	2.229	1.128
6. BIRTHS IN FIRST 5 YRS.	1.838	0.052	610.0	1.259	1.028
7. BIRTHS IN PAST 5 YRS.	0.372	0.036	576.0	0.721	1.210
8. CHILDREN DEAD	0.459	0.011	611.0	0.238	1.133
9. CHILD UNWANTED	0.532	0.020	592.0	0.499	0.970
10. WANT NO MORE CHILDREN	0.916	0.014	416.0	0.278	1.021
11. PREFER BOY	0.360	0.108	25.0	0.490	1.103
12. DESIRED FAMILY SIZE	3.182	0.076	521.0	1.735	1.005
13. KNOW PILL	0.753	0.020	611.0	0.432	1.149
14. KNOW IUD	0.664	0.024	611.0	0.473	1.267
15. KNOW DOUCHE	0.498	0.023	611.0	0.500	1.157
16. KNOW CONDOM	0.483	0.024	611.0	0.500	1.177
17. KNOW WITHDRAW.	0.614	0.021	611.0	0.487	1.070
18. KNOW ANY METHOD	0.845	0.017	611.0	0.363	1.141
19. EVER-USED PILL	0.224	0.019	611.0	0.417	1.116
20. EVER-USED IUD	0.069	0.011	609.0	0.254	1.031
21. EVER-USED DOUCHE	0.223	0.020	609.0	0.417	1.188
22. EVER-USED CONDOM	0.108	0.014	609.0	0.311	1.104
23. EVER-USED WITHDRAW.	0.346	0.022	610.0	0.476	1.153
24. EVER-USED ANY METHOD	0.591	0.025	611.0	0.492	1.262
25. USED EFFICIENT METHOD	0.340	0.022	611.0	0.474	1.129
26. USING ANY METHOD	0.560	0.024	402.0	0.497	0.984
27. USING EFFICIENT METHOD	0.164	0.019	402.0	0.371	1.026

Sampling Errors for 27 Variables for: (B) Four Subclasses of Current Age

< 25

	R	SE	N	SD	DEFT
1. EXPOSED	0.729	0.012	1156.0	0.445	0.928
2. AGE AT MARRIAGE	0.0	0.0	0.0	0.0	0.0
3. CURRENTLY PREGNANT	0.250	0.012	1131.0	0.433	0.953
4. CHILDREN EVER-BORN	1.469	0.039	1156.0	1.287	1.020
5. LIVING CHILDREN	1.227	0.034	1156.0	1.084	1.069
6. BIRTHS IN FIRST 5 YRS.	1.884	0.056	398.0	0.979	1.149
7. BIRTHS IN PAST 5 YRS.	1.716	0.056	388.0	0.908	1.223
8. CHILDREN DEAD	0.165	0.010	1156.0	0.325	1.006
9. CHILD UNWANTED	0.156	0.014	963.0	0.363	1.164
10. WANT NO MORE CHILDREN	0.238	0.014	1126.0	0.426	1.101
11. PREFER BOY	0.439	0.021	608.0	0.497	1.044
12. DESIRED FAMILY SIZE	2.807	0.050	1080.0	1.360	1.211
13. KNOW PILL	0.807	0.015	1156.0	0.395	1.325
14. KNOW IUD	0.627	0.019	1156.0	0.484	1.341
15. KNOW DOUCHE	0.444	0.019	1156.0	0.497	1.331
16. KNOW CONDOM	0.464	0.018	1156.0	0.499	1.203
17. KNOW WITHDRAW.	0.625	0.018	1156.0	0.484	1.277
18. KNOW ANY METHOD	0.877	0.013	1156.0	0.328	1.331
19. EVER-USED PILL	0.197	0.013	1155.0	0.398	1.136
20. EVER-USED IUD	0.052	0.007	1154.0	0.222	1.020
21. EVER-USED DOUCHE	0.131	0.012	1155.0	0.337	1.165
22. EVER-USED CONDOM	0.052	0.007	1155.0	0.222	1.095
23. EVER-USED WITHDRAW.	0.250	0.015	1155.0	0.433	1.162
24. EVER-USED ANY METHOD	0.422	0.017	1156.0	0.494	1.152
25. USED EFFICIENT METHOD	0.241	0.014	1156.0	0.428	1.108
26. USING ANY METHOD	0.364	0.018	843.0	0.481	1.074
27. USING EFFICIENT METHOD	0.147	0.012	843.0	0.354	1.016

25-34

	R	SE	N	SD	DEFT
1. EXPOSED	0.817	0.012	1522.0	0.387	1.232
2. AGE AT MARRIAGE	17.461	0.095	1467.0	2.897	1.257
3. CURRENTLY PREGNANT	0.134	0.010	1483.0	0.340	1.116
4. CHILDREN EVER-BORN	3.570	0.072	1522.0	2.125	1.319
5. LIVING CHILDREN	2.902	0.052	1522.0	1.634	1.237
6. BIRTHS IN FIRST 5 YRS.	1.913	0.036	1396.0	1.066	1.253
7. BIRTHS IN PAST 5 YRS.	1.232	0.033	1352.0	0.995	1.238
8. CHILDREN DEAD	0.187	0.008	1522.0	0.240	1.278
9. CHILD UNWANTED	0.354	0.014	1456.0	0.478	1.109
10. WANT NO MORE CHILDREN	0.580	0.015	1441.0	0.494	1.181
11. PREFER BOY	0.418	0.026	445.0	0.494	1.092
12. DESIRED FAMILY SIZE	3.006	0.052	1411.0	1.478	1.330
13. KNOW PILL	0.856	0.010	1522.0	0.351	1.086
14. KNOW IUD	0.744	0.014	1522.0	0.436	1.254
15. KNOW DOUCHE	0.525	0.016	1522.0	0.500	1.245
16. KNOW CONDOM	0.578	0.017	1522.0	0.494	1.322
17. KNOW WITHDRAW.	0.717	0.014	1522.0	0.451	1.254
18. KNOW ANY METHOD	0.915	0.008	1522.0	0.279	1.164
19. EVER-USED PILL	0.319	0.014	1522.0	0.466	1.173
20. EVER-USED IUD	0.100	0.009	1520.0	0.300	1.169
21. EVER-USED DOUCHE	0.165	0.012	1520.0	0.388	1.238
22. EVER-USED CONDOM	0.139	0.011	1521.0	0.346	1.207
23. EVER-USED WITHDRAW.	0.365	0.016	1520.0	0.482	1.301
24. EVER-USED ANY METHOD	0.628	0.018	1522.0	0.483	1.423
25. USED EFFICIENT METHOD	0.424	0.016	1522.0	0.494	1.276
26. USING ANY METHOD	0.558	0.019	1243.0	0.497	1.350
27. USING EFFICIENT METHOD	0.213	0.015	1243.0	0.410	1.141

Sampling Errors for 27 Variables for: (B) Four Subclasses of Current Age (Continued)

	35-44					45-49				
	R	SE	N	SD	DEFT	R	SE	N	SD	DEFT
1. EXPOSED	0.745	0.011	1255.0	0.436	0.924	0.394	0.022	498.0	0.489	0.993
2. AGE AT MARRIAGE	16.956	0.099	1217.0	2.842	1.220	17.128	0.141	475.0	2.785	1.101
3. CURRENTLY PREGNANT	0.035	0.006	1194.0	0.184	1.049	0.004	0.003	449.0	0.067	0.999
4. CHILDREN EVER-BORN	5.713	0.117	1255.0	2.957	1.400	6.303	0.181	498.0	3.261	1.235
5. LIVING CHILDREN	4.319	0.084	1255.0	2.165	1.372	4.625	0.122	498.0	2.275	1.193
6. BIRTHS IN FIRST 5 YRS.	1.870	0.039	1250.0	1.231	1.134	1.678	0.049	497.0	1.154	0.942
7. BIRTHS IN PAST 5 YRS.	0.538	0.031	1188.0	0.819	1.289	0.143	0.019	448.0	0.425	0.927
8. CHILDREN DEAD	0.244	0.008	1255.0	0.228	1.261	0.266	0.012	498.0	0.243	1.111
9. CHILD UNWANTED	0.525	0.016	1222.0	0.500	1.133	0.555	0.024	485.0	0.498	1.069
10. WANT NO MORE CHILDREN	0.872	0.012	977.0	0.334	1.118	0.904	0.022	198.0	0.295	1.066
11. PREFER BOY	0.362	0.053	94.0	0.483	1.054	0.429	0.144	14.0	0.514	1.051
12. DESIRED FAMILY SIZE	3.208	0.079	1091.0	1.870	1.393	3.250	0.087	388.0	1.724	0.993
13. KNOW PILL	0.782	0.016	1255.0	0.413	1.368	0.721	0.023	498.0	0.449	1.153
14. KNOW IUD	0.690	0.018	1255.0	0.463	1.394	0.618	0.025	498.0	0.486	1.153
15. KNOW DOUCHE	0.508	0.018	1255.0	0.500	1.278	0.450	0.024	498.0	0.498	1.088
16. KNOW CONDOM	0.498	0.019	1255.0	0.500	1.348	0.482	0.024	498.0	0.500	1.066
17. KNOW WITHDRAW.	0.637	0.016	1255.0	0.481	1.210	0.568	0.025	498.0	0.496	1.131
18. KNOW ANY METHOD	0.868	0.012	1255.0	0.339	1.305	0.839	0.019	498.0	0.368	1.160
19. EVER-USED PILL	0.248	0.014	1255.0	0.432	1.135	0.137	0.017	498.0	0.344	1.119
20. EVER-USED IUD	0.081	0.010	1252.0	0.274	1.242	0.032	0.009	498.0	0.177	1.175
21. EVER-USED DOUCHE	0.238	0.015	1253.0	0.426	1.232	0.193	0.018	498.0	0.395	0.992
22. EVER-USED CONDOM	0.114	0.011	1252.0	0.318	1.200	0.139	0.018	498.0	0.346	1.171
23. EVER-USED WITHDRAW.	0.362	0.017	1252.0	0.481	1.280	0.241	0.020	498.0	0.428	1.031
24. EVER-USED ANY METHOD	0.611	0.019	1255.0	0.488	1.354	0.464	0.023	498.0	0.499	1.026
25. USED EFFICIENT METHOD	0.362	0.016	1255.0	0.481	1.178	0.269	0.024	498.0	0.444	1.189
26. USING ANY METHOD	0.552	0.020	935.0	0.498	1.231	0.515	0.034	196.0	0.501	0.955
27. USING EFFICIENT METHOD	0.166	0.012	935.0	0.372	1.019	0.138	0.026	196.0	0.346	1.037

Sampling Errors for 27 Variables for: (C) Two Subclasses of Current Age

	<35					35-49				
	R	SE	N	SD	DEFT	R	SE	N	SD	DEFT
1. EXPOSED	0.779	0.009	2678.0	0.415	1.115	0.645	0.010	1753.0	0.479	0.869
2. AGE AT MARRIAGE	17.461	0.055	1467.0	2.897	1.257	17.005	0.088	1692.0	2.826	1.284
3. CURRENTLY PREGNANT	0.184	0.008	2614.0	0.388	1.074	0.027	0.004	1643.0	0.161	1.062
4. CHILDREN EVER-BORN	2.663	0.053	2678.0	2.089	1.322	5.881	0.111	1753.0	3.057	1.515
5. LIVING CHILDREN	2.179	0.041	2678.0	1.647	1.291	4.406	0.078	1753.0	2.201	1.479
6. BIRTHS IN FIRST 5 YRS.	1.907	0.032	1794.0	1.047	1.309	1.815	0.031	1747.0	1.213	1.065
7. BIRTHS IN PAST 5 YRS.	1.340	0.032	1740.0	0.996	1.326	0.430	0.025	1636.0	0.753	1.247
8. CHILDREN DEAD	0.182	0.007	2678.0	0.271	1.319	0.251	0.008	1753.0	0.233	1.409
9. CHILD UNWANTED	0.275	0.011	2419.0	0.447	1.211	0.533	0.014	1707.0	0.499	1.172
10. WANT NO MORE CHILDREN	0.430	0.012	2567.0	0.495	1.243	0.877	0.012	1175.0	0.328	1.221
11. PREFER BOY	0.430	0.018	1053.0	0.495	1.146	0.370	0.052	108.0	0.485	1.110
12. DESIRED FAMILY SIZE	2.920	0.043	2491.0	1.431	1.498	3.219	0.067	1479.0	1.832	1.412
13. KNOW PILL	0.835	0.009	2678.0	0.371	1.318	0.765	0.015	1753.0	0.424	1.468
14. KNOW IUD	0.694	0.014	2678.0	0.461	1.522	0.670	0.017	1753.0	0.470	1.470
15. KNOW DOUCHE	0.490	0.013	2678.0	0.500	1.361	0.491	0.016	1753.0	0.500	1.381
16. KNOW CONDOM	0.528	0.014	2678.0	0.499	1.461	0.493	0.017	1753.0	0.500	1.462
17. KNOW WITHDRAW.	0.677	0.013	2678.0	0.468	1.456	0.618	0.016	1753.0	0.486	1.363
18. KNOW ANY METHOD	0.899	0.009	2678.0	0.302	1.459	0.860	0.011	1753.0	0.347	1.370
19. EVER-USED PILL	0.266	0.011	2677.0	0.442	1.275	0.216	0.010	1755.0	0.412	1.044
20. EVER-USED IUD	0.079	0.006	2674.0	0.270	1.166	0.067	0.007	1750.0	0.251	1.222
21. EVER-USED DOUCHE	0.161	0.010	2675.0	0.368	1.364	0.225	0.012	1751.0	0.418	1.220
22. EVER-USED CONDOM	0.102	0.008	2676.0	0.302	1.311	0.121	0.011	1750.0	0.326	1.371
23. EVER-USED WITHDRAW.	0.316	0.013	2675.0	0.465	1.457	0.327	0.015	1750.0	0.469	1.306
24. EVER-USED ANY METHOD	0.539	0.015	2678.0	0.499	1.536	0.569	0.016	1753.0	0.495	1.321
25. USED EFFICIENT METHOD	0.345	0.013	2678.0	0.475	1.385	0.335	0.013	1753.0	0.472	1.138
26. USING ANY METHOD	0.480	0.016	2086.0	0.500	1.468	0.546	0.018	1131.0	0.498	1.236
27. USING EFFICIENT METHOD	0.186	0.010	2086.0	0.390	1.220	0.161	0.012	1131.0	0.368	1.053

Table E -5: Sampling Errors for 27 Variables Computed Over Four Subclasses defined by Women's Work Status

NOT WORKING

	R	SE	N	SD	DEFT
1. EXPOSED	0.753	0.010	2212.0	0.431	1.085
2. AGE AT MARRIAGE	17.522	0.094	1452.0	2.921	1.232
3. CURRENTLY PREGNANT	0.132	0.008	2152.0	0.339	1.081
4. CHILDREN EVER-BORN	3.371	0.070	2212.0	2.671	1.228
5. LIVING CHILDREN	2.726	0.055	2212.0	2.032	1.271
6. BIRTHS IN FIRST 5 YRS.	1.873	0.032	1658.0	1.062	1.218
7. BIRTHS IN PAST 5 YRS.	0.916	0.037	1599.0	0.999	1.488
8. CHILDREN DEAD	0.191	0.006	2212.0	0.264	1.047
9. CHILD UNWANTED	0.359	0.013	2039.0	0.480	1.217
10. WANT NO MORE CHILDREN	0.546	0.013	1950.0	0.498	1.158
11. PREFER BOY	0.436	0.021	645.0	0.496	1.076
12. DESIRED FAMILY SIZE	2.936	0.063	2051.0	1.588	1.797
13. KNOW PILL	0.846	0.011	2212.0	0.361	1.479
14. KNOW IUD	0.742	0.013	2212.0	0.438	1.449
15. KNOW DOUCHE	0.547	0.016	2212.0	0.498	1.487
16. KNOW CONDOM	0.587	0.016	2212.0	0.493	1.496
17. KNOW WITHDRAW.	0.684	0.015	2212.0	0.465	1.469
18. KNOW ANY METHOD	0.902	0.010	2212.0	0.297	1.544
19. EVER-USED PILL	0.287	0.013	2211.0	0.453	1.352
20. EVER-USED IUD	0.089	0.007	2209.0	0.284	1.231
21. EVER-USED DOUCHE	0.206	0.012	2208.0	0.404	1.369
22. EVER-USED CONDOM	0.139	0.010	2210.0	0.346	1.304
23. EVER-USED WITHDRAW.	0.335	0.015	2209.0	0.472	1.510
24. EVER-USED ANY METHOD	0.598	0.017	2212.0	0.490	1.674
25. USED EFFICIENT METHOD	0.402	0.015	2212.0	0.490	1.417
26. USING ANY METHOD	0.533	0.019	1666.0	0.499	1.519
27. USING EFFICIENT METHOD	0.214	0.012	1666.0	0.410	1.169

WORKING

	R	SE	N	SD	DEFT
1. EXPOSED	0.699	0.010	2219.0	0.459	1.026
2. AGE AT MARRIAGE	16.557	0.090	1707.0	2.797	1.329
3. CURRENTLY PREGNANT	0.114	0.008	2105.0	0.318	1.095
4. CHILDREN EVER-BORN	4.499	0.086	2219.0	3.138	1.295
5. LIVING CHILDREN	3.392	0.061	2219.0	2.265	1.269
6. BIRTHS IN FIRST 5 YRS.	1.852	0.034	1883.0	1.192	1.229
7. BIRTHS IN PAST 5 YRS.	0.883	0.030	1777.0	0.994	1.281
8. CHILDREN DEAD	0.246	0.009	2219.0	0.259	1.614
9. CHILD UNWANTED	0.404	0.013	2087.0	0.491	1.227
10. WANT NO MORE CHILDREN	0.598	0.014	1792.0	0.491	1.244
11. PREFER BOY	0.411	0.026	516.0	0.492	1.191
12. DESIRED FAMILY SIZE	3.133	0.052	1919.0	1.605	1.428
13. KNOW PILL	0.768	0.014	2219.0	0.422	1.615
14. KNOW IUD	0.627	0.018	2219.0	0.484	1.782
15. KNOW DOUCHE	0.434	0.016	2219.0	0.496	1.488
16. KNOW CONDOM	0.443	0.016	2219.0	0.497	1.538
17. KNOW WITHDRAW.	0.624	0.015	2219.0	0.484	1.444
18. KNOW ANY METHOD	0.864	0.012	2219.0	0.342	1.600
19. EVER-USED PILL	0.205	0.011	2219.0	0.404	1.251
20. EVER-USED IUD	0.060	0.006	2215.0	0.238	1.166
21. EVER-USED DOUCHE	0.168	0.011	2218.0	0.374	1.350
22. EVER-USED CONDOM	0.080	0.007	2216.0	0.271	1.301
23. EVER-USED WITHDRAW.	0.306	0.015	2216.0	0.461	1.546
24. EVER-USED ANY METHOD	0.504	0.016	2219.0	0.500	1.467
25. USED EFFICIENT METHOD	0.280	0.013	2219.0	0.449	1.320
26. USING ANY METHOD	0.471	0.018	1551.0	0.499	1.427
27. USING EFFICIENT METHOD	0.138	0.010	1551.0	0.345	1.189

WORKING IN AGRICULTURE

	R	SE	N	SD	DEFT
1. EXPOSED	0.693	0.011	1783.0	0.461	0.991
2. AGE AT MARRIAGE	16.630	0.087	1381.0	2.623	1.235
3. CURRENTLY PREGNANT	0.121	0.009	1711.0	0.326	1.110
4. CHILDREN EVER-BORN	4.902	0.094	1783.0	3.156	1.261
5. LIVING CHILDREN	3.657	0.067	1783.0	2.292	1.231
6. BIRTHS IN FIRST 5 YRS.	1.896	0.040	1534.0	1.238	1.265
7. BIRTHS IN PAST 5 YRS.	0.933	0.033	1468.0	1.015	1.263
8. CHILDREN DEAD	0.254	0.010	1783.0	0.249	1.682
9. CHILD UNWANTED	0.419	0.014	1692.0	0.494	1.192
10. WANT NO MORE CHILDREN	0.615	0.016	1443.0	0.487	1.286
11. PREFER BOY	0.413	0.029	395.0	0.493	1.170
12. DESIRED FAMILY SIZE	3.261	0.062	1535.0	1.671	1.447
13. KNOW PILL	0.727	0.017	1783.0	0.445	1.620
14. KNOW IUD	0.566	0.021	1783.0	0.496	1.818
15. KNOW DOUCHE	0.367	0.018	1783.0	0.482	1.552
16. KNOW CONDOM	0.372	0.018	1783.0	0.483	1.548
17. KNOW WITHDRAW.	0.581	0.017	1783.0	0.494	1.478
18. KNOW ANY METHOD	0.838	0.014	1783.0	0.369	1.603
19. EVER-USED PILL	0.179	0.012	1783.0	0.383	1.292
20. EVER-USED IUD	0.040	0.006	1780.0	0.196	1.207
21. EVER-USED DOUCHE	0.144	0.012	1783.0	0.351	1.425
22. EVER-USED CONDOM	0.043	0.006	1780.0	0.203	1.234
23. EVER-USED WITHDRAW.	0.277	0.017	1782.0	0.448	1.618
24. EVER-USED ANY METHOD	0.445	0.017	1783.0	0.497	1.469
25. USED EFFICIENT METHOD	0.225	0.013	1783.0	0.418	1.357
26. USING ANY METHOD	0.408	0.020	1236.0	0.492	1.431
27. USING EFFICIENT METHOD	0.166	0.010	1236.0	0.308	1.186

WORKING IN NON-AGRICULTURE

	R	SE	N	SD	DEFT
1. EXPOSED	0.722	0.024	436.0	0.448	1.132
2. AGE AT MARRIAGE	18.340	0.195	326.0	3.076	1.144
3. CURRENTLY PREGNANT	0.086	0.016	394.0	0.281	1.109
4. CHILDREN EVER-BORN	2.851	0.161	436.0	2.451	1.375
5. LIVING CHILDREN	2.312	0.111	436.0	1.780	1.300
6. BIRTHS IN FIRST 5 YRS.	1.656	0.055	349.0	0.939	1.100
7. BIRTHS IN PAST 5 YRS.	0.647	0.058	309.0	0.850	1.199
8. CHILDREN DEAD	0.189	0.016	436.0	0.319	1.063
9. CHILD UNWANTED	0.342	0.028	395.0	0.475	1.184
10. WANT NO MORE CHILDREN	0.527	0.027	349.0	0.500	1.020
11. PREFER BOY	0.405	0.051	121.0	0.493	1.131
12. DESIRED FAMILY SIZE	2.622	0.070	384.0	1.177	1.168
13. KNOW PILL	0.936	0.013	436.0	0.245	1.069
14. KNOW IUD	0.874	0.020	436.0	0.332	1.253
15. KNOW DOUCHE	0.706	0.021	436.0	0.456	0.976
16. KNOW CONDOM	0.732	0.030	436.0	0.444	1.403
17. KNOW WITHDRAW.	0.800	0.024	436.0	0.400	1.277
18. KNOW ANY METHOD	0.972	0.009	436.0	0.164	1.202
19. EVER-USED PILL	0.314	0.022	436.0	0.465	0.992
20. EVER-USED IUD	0.145	0.018	435.0	0.352	1.055
21. EVER-USED DOUCHE	0.267	0.021	435.0	0.443	0.968
22. EVER-USED CONDOM	0.229	0.025	436.0	0.421	1.232
23. EVER-USED WITHDRAW.	0.422	0.026	434.0	0.494	1.106
24. EVER-USED ANY METHOD	0.748	0.025	436.0	0.435	1.189
25. USED EFFICIENT METHOD	0.507	0.028	436.0	0.501	1.154
26. USING ANY METHOD	0.717	0.030	315.0	0.451	1.170
27. USING EFFICIENT METHOD	0.263	0.026	315.0	0.441	1.061

Table E -6: Sampling Errors for 27 Variables Computed Over Four Subclasses Defined by Husbands' Education

ILLITERATE

	R	SE	N	SD	DEFT
1. EXPOSED	0.609	0.019	578.0	0.488	0.922
2. AGE AT MARRIAGE	16.057	0.131	504.0	2.726	1.079
3. CURRENTLY PREGNANT	0.108	0.012	547.0	0.310	0.889
4. CHILDREN EVER-BORN	5.550	0.138	578.0	3.285	1.006
5. LIVING CHILDREN	4.306	0.095	578.0	2.423	0.939
6. BIRTHS IN FIRST 5 YRS.	1.859	0.064	540.0	1.273	1.174
7. BIRTHS IN PAST 5 YRS.	0.884	0.043	508.0	1.005	0.975
8. CHILDREN DEAD	0.276	0.011	578.0	0.237	1.118
9. CHILD UNWANTED	0.483	0.024	557.0	0.500	1.118
10. WANT NO MORE CHILDREN	0.696	0.024	411.0	0.461	1.060
11. PREFER BOY	0.476	0.062	82.0	0.502	1.118
12. DESIRED FAMILY SIZE	3.636	0.127	467.0	2.211	1.243
13. KNOW PILL	0.595	0.027	578.0	0.491	1.330
14. KNOW IUD	0.467	0.027	578.0	0.499	1.282
15. KNOW DOUCHE	0.294	0.023	578.0	0.456	1.221
16. KNOW CONDOM	0.270	0.028	578.0	0.444	1.496
17. KNOW WITHDRAW.	0.450	0.025	578.0	0.498	1.205
18. KNOW ANY METHOD	0.735	0.023	578.0	0.442	1.255
19. EVER-USED PILL	0.133	0.018	578.0	0.340	1.289
20. EVER-USED IUD	0.052	0.013	577.0	0.222	1.393
21. EVER-USED DOUCHE	0.104	0.014	578.0	0.305	1.075
22. EVER-USED CONDOM	0.031	0.007	578.0	0.174	0.969
23. EVER-USED WITHDRAW.	0.205	0.018	577.0	0.404	1.099
24. EVER-USED ANY METHOD	0.356	0.025	578.0	0.479	1.234
25. USED EFFICIENT METHOD	0.187	0.022	578.0	0.390	1.370
26. USING ANY METHOD	0.347	0.031	352.0	0.477	1.239
27. USING EFFICIENT METHOD	0.114	0.019	352.0	0.318	1.094

LITERATE

R	SE	N	SD	DEFT
0.697	0.014	926.0	0.460	0.935
16.760	0.105	784.0	2.752	1.068
0.096	0.010	883.0	0.295	1.002
5.204	0.120	926.0	3.018	1.210
3.918	0.089	926.0	2.194	1.234
1.956	0.047	847.0	1.238	1.116
0.882	0.042	805.0	1.021	1.158
0.247	0.009	926.0	0.238	1.119
0.446	0.018	856.0	0.497	1.093
0.662	0.022	730.0	0.473	1.266
0.411	0.041	175.0	0.494	1.086
3.278	0.081	805.0	1.720	1.342
0.765	0.018	926.0	0.424	1.282
0.614	0.021	926.0	0.487	1.343
0.425	0.022	926.0	0.495	1.381
0.451	0.020	926.0	0.495	1.255
0.597	0.019	926.0	0.491	1.207
0.856	0.013	926.0	0.351	1.118
0.198	0.014	926.0	0.398	1.085
0.061	0.010	925.0	0.239	1.230
0.172	0.014	924.0	0.378	1.124
0.068	0.009	925.0	0.252	1.137
0.301	0.020	925.0	0.459	1.342
0.496	0.020	926.0	0.500	1.187
0.266	0.017	926.0	0.442	1.171
0.433	0.021	645.0	0.496	1.098
0.118	0.012	645.0	0.323	0.966

PRIMARY COMPLETED

	R	SE	N	SD	DEFT
1. EXPOSED	0.750	0.011	2155.0	0.433	1.134
2. AGE AT MARRIAGE	17.469	0.090	1428.0	2.798	1.214
3. CURRENTLY PREGNANT	0.135	0.009	2081.0	0.342	1.223
4. CHILDREN EVER-BORN	3.462	0.059	2155.0	2.644	1.035
5. LIVING CHILDREN	2.753	0.047	2155.0	1.995	1.085
6. BIRTHS IN FIRST 5 YRS.	1.852	0.028	1643.0	1.089	1.038
7. BIRTHS IN PAST 5 YRS.	0.578	0.034	1574.0	1.007	1.343
8. CHILDREN DEAD	0.205	0.007	2155.0	0.267	1.241
9. CHILD UNWANTED	0.349	0.012	2000.0	0.477	1.152
10. WANT NO MORE CHILDREN	0.537	0.014	1898.0	0.499	1.205
11. PREFER BOY	0.424	0.022	642.0	0.495	1.107
12. DESIRED FAMILY SIZE	2.941	0.052	1966.0	1.480	1.548
13. KNOW PILL	0.834	0.011	2155.0	0.372	1.314
14. KNOW IUD	0.699	0.014	2155.0	0.459	1.450
15. KNOW DOUCHE	0.491	0.015	2155.0	0.500	1.375
16. KNOW CONDOM	0.521	0.017	2155.0	0.500	1.549
17. KNOW WITHDRAW.	0.668	0.015	2155.0	0.471	1.499
18. KNOW ANY METHOD	0.902	0.010	2155.0	0.297	1.527
19. EVER-USED PILL	0.264	0.012	2155.0	0.441	1.243
20. EVER-USED IUD	0.075	0.007	2153.0	0.264	1.216
21. EVER-USED DOUCHE	0.180	0.011	2154.0	0.384	1.368
22. EVER-USED CONDOM	0.095	0.008	2152.0	0.293	1.192
23. EVER-USED WITHDRAW.	0.319	0.014	2152.0	0.466	1.361
24. EVER-USED ANY METHOD	0.565	0.016	2155.0	0.496	1.498
25. USED EFFICIENT METHOD	0.349	0.014	2155.0	0.477	1.333
26. USING ANY METHOD	0.502	0.019	1617.0	0.500	1.496
27. USING EFFICIENT METHOD	0.183	0.012	1617.0	0.387	1.218

HIGHER

R	SE	N	SD	DEFT
0.781	0.016	772.0	0.414	1.093
18.531	0.151	443.0	2.788	1.138
0.134	0.014	746.0	0.341	1.122
2.231	0.074	772.0	1.889	1.085
1.955	0.062	772.0	1.555	1.104
1.740	0.040	511.0	0.895	1.014
0.665	0.052	489.0	0.875	1.319
0.124	0.010	772.0	0.263	1.051
0.309	0.018	673.0	0.462	1.005
0.494	0.019	703.0	0.500	1.016
0.420	0.028	262.0	0.494	0.906
2.616	0.039	732.0	1.062	0.993
0.942	0.009	772.0	0.234	1.073
0.890	0.012	772.0	0.313	1.098
0.712	0.018	772.0	0.453	1.106
0.780	0.017	772.0	0.415	1.113
0.835	0.014	772.0	0.371	1.062
0.974	0.006	772.0	0.159	1.052
0.341	0.018	771.0	0.474	1.027
0.107	0.011	769.0	0.309	0.964
0.286	0.017	770.0	0.452	1.070
0.258	0.018	771.0	0.438	1.169
0.433	0.019	771.0	0.496	1.092
0.724	0.021	772.0	0.447	1.326
0.526	0.020	772.0	0.500	1.110
0.672	0.024	603.0	0.470	1.246
0.264	0.019	603.0	0.441	1.046

Table E -7: Sampling Errors for 27 Variables Computed by Size of Place

METROPOLITAN

	R	SE	N	SD	DEFT
1. EXPOSED	0.767	0.019	648.0	0.423	1.135
2. AGE AT MARRIAGE	18.043	0.190	468.0	3.052	1.348
3. CURRENTLY PREGNANT	0.087	0.013	619.0	0.282	1.180
4. CHILDREN EVER-BORN	2.914	0.111	648.0	2.124	1.334
5. LIVING CHILDREN	2.472	0.084	648.0	1.658	1.296
6. BIRTHS IN FIRST 5 YRS.	1.715	0.057	512.0	0.982	1.308
7. BIRTHS IN PAST 5 YRS.	0.581	0.054	482.0	0.817	1.463
8. CHILDREN DEAD	0.151	0.011	648.0	0.258	1.061
9. CHILD UNWANTED	0.377	0.019	599.0	0.485	0.976
10. WANT NO MORE CHILDREN	0.621	0.020	551.0	0.486	0.970
11. PREFER BOY	0.359	0.042	153.0	0.481	1.067
12. DESIRED FAMILY SIZE	2.564	0.039	603.0	0.990	0.976
13. KNOW PILL	0.948	0.008	648.0	0.223	0.941
14. KNOW IUD	0.894	0.017	648.0	0.309	1.415
15. KNOW DOUCHE	0.719	0.028	648.0	0.450	1.582
16. KNOW CONDOM	0.759	0.027	648.0	0.428	1.600
17. KNOW WITHDRAW.	0.847	0.017	648.0	0.360	1.205
18. KNOW ANY METHOD	0.989	0.004	648.0	0.103	1.081
19. EVER-USED PILL	0.316	0.018	648.0	0.465	0.962
20. EVER-USED IUD	0.135	0.013	645.0	0.342	0.960
21. EVER-USED DOUCHE	0.269	0.021	644.0	0.444	1.226
22. EVER-USED CONDOM	0.205	0.025	648.0	0.404	1.567
23. EVER-USED WITHDRAW.	0.449	0.023	646.0	0.498	1.188
24. EVER-USED ANY METHOD	0.759	0.023	648.0	0.428	1.356
25. USED EFFICIENT METHOD	0.509	0.025	648.0	0.500	1.191
26. USING ANY METHOD	0.698	0.026	497.0	0.460	1.282
27. USING EFFICIENT METHOD	0.276	0.018	497.0	0.447	0.905

LARGE CITIES

R	SE	N	SD	DEFT
0.740	0.015	697.0	0.439	0.928
17.864	0.170	472.0	2.917	1.263
0.131	0.013	657.0	0.338	0.959
3.033	0.111	697.0	2.326	1.264
2.485	0.093	697.0	1.784	1.370
1.866	0.051	525.0	0.996	1.180
0.828	0.066	488.0	0.933	1.553
0.161	0.013	697.0	0.265	1.270
0.359	0.021	637.0	0.480	1.116
0.537	0.017	602.0	0.499	0.845
0.448	0.040	212.0	0.498	1.181
2.889	0.083	632.0	1.479	1.412
0.897	0.011	697.0	0.305	0.982
0.839	0.017	697.0	0.368	1.242
0.604	0.025	697.0	0.489	1.325
0.660	0.024	697.0	0.474	1.363
0.704	0.027	697.0	0.457	1.573
0.941	0.012	697.0	0.235	1.309
0.328	0.026	696.0	0.470	1.463
0.108	0.014	696.0	0.310	1.182
0.214	0.024	697.0	0.410	1.520
0.172	0.018	696.0	0.378	1.281
0.341	0.030	696.0	0.474	1.654
0.643	0.036	697.0	0.480	2.009
0.452	0.028	697.0	0.498	1.492
0.583	0.037	516.0	0.493	1.698
0.258	0.020	516.0	0.438	1.050

MEDIUM CITIES

	R	SE	N	SD	DEFT
1. EXPOSED	0.766	0.019	350.0	0.424	0.830
2. AGE AT MARRIAGE	17.437	0.247	231.0	2.754	1.361
3. CURRENTLY PREGNANT	0.108	0.016	342.0	0.311	0.927
4. CHILDREN EVER-BORN	3.343	0.215	350.0	2.601	1.544
5. LIVING CHILDREN	2.709	0.136	350.0	1.921	1.329
6. BIRTHS IN FIRST 5 YRS.	1.959	0.069	271.0	0.979	1.164
7. BIRTHS IN PAST 5 YRS.	0.779	0.108	263.0	0.931	1.880
8. CHILDREN DEAD	0.190	0.016	350.0	0.290	1.052
9. CHILD UNWANTED	0.360	0.026	325.0	0.481	0.970
10. WANT NO MORE CHILDREN	0.595	0.030	305.0	0.492	1.059
11. PREFER BOY	0.538	0.067	93.0	0.501	1.285
12. DESIRED FAMILY SIZE	2.636	0.062	330.0	0.984	1.151
13. KNOW PILL	0.894	0.031	350.0	0.308	1.903
14. KNOW IUD	0.843	0.030	350.0	0.364	1.560
15. KNOW DOUCHE	0.597	0.042	350.0	0.491	1.612
16. KNOW CONDOM	0.680	0.053	350.0	0.467	2.130
17. KNOW WITHDRAW.	0.771	0.040	350.0	0.421	1.789
18. KNOW ANY METHOD	0.937	0.023	350.0	0.243	1.799
19. EVER-USED PILL	0.326	0.036	350.0	0.469	1.436
20. EVER-USED IUD	0.129	0.027	350.0	0.335	1.524
21. EVER-USED DOUCHE	0.243	0.031	350.0	0.429	1.354
22. EVER-USED CONDOM	0.169	0.042	349.0	0.375	2.108
23. EVER-USED WITHDRAW.	0.411	0.047	350.0	0.493	1.790
24. EVER-USED ANY METHOD	0.683	0.061	350.0	0.466	2.465
25. USED EFFICIENT METHOD	0.471	0.046	350.0	0.500	1.721
26. USING ANY METHOD	0.649	0.060	268.0	0.478	2.047
27. USING EFFICIENT METHOD	0.250	0.038	268.0	0.434	1.422

SMALL CITIES

R	SE	N	SD	DEFT
0.761	0.025	318.0	0.427	1.032
17.627	0.238	228.0	3.037	1.184
0.111	0.012	305.0	0.315	0.677
3.616	0.241	318.0	2.896	1.481
2.858	0.200	318.0	2.120	1.681
1.659	0.042	249.0	1.107	0.597
0.874	0.100	238.0	0.973	1.583
0.210	0.012	318.0	0.260	0.801
0.411	0.042	292.0	0.493	1.459
0.587	0.038	276.0	0.493	1.286
0.403	0.058	77.0	0.494	1.025
2.801	0.061	296.0	1.094	0.966
0.868	0.029	318.0	0.339	1.551
0.764	0.045	318.0	0.425	1.906
0.582	0.047	318.0	0.494	1.682
0.626	0.049	318.0	0.485	1.793
0.758	0.029	318.0	0.429	1.208
0.934	0.021	318.0	0.249	1.536
0.277	0.019	318.0	0.448	0.760
0.675	0.019	318.0	0.265	1.267
0.233	0.037	317.0	0.424	1.571
0.167	0.029	318.0	0.373	1.370
0.407	0.031	317.0	0.492	1.132
0.648	0.038	318.0	0.478	1.425
0.399	0.032	318.0	0.491	1.174
0.583	0.046	242.0	0.494	1.463
0.169	0.024	242.0	0.376	0.991

TOWNS

	R	SE	N	SD	DEFT
1. EXPOSED	0.983	0.018	628.0	0.466	0.972
2. AGE AT MARRIAGE	16.820	0.221	451.0	2.578	1.824
3. CURRENTLY PREGNANT	0.147	0.019	599.0	0.354	1.290
4. CHILDREN EVER-BORN	4.156	0.178	628.0	3.110	1.436
5. LIVING CHILDREN	3.197	0.126	628.0	2.305	1.375
6. BIRTHS IN FIRST 5 YRS.	1.889	0.070	504.0	1.130	1.396
7. BIRTHS IN PAST 5 YRS.	1.004	0.056	476.0	1.050	1.166
8. CHILDREN DEAD	0.231	0.012	628.0	0.249	1.164
9. CHILD UNWANTED	0.378	0.029	584.0	0.485	1.453
10. WANT NO MORE CHILDREN	0.561	0.030	517.0	0.497	1.367
11. PREFER BOY	0.407	0.039	162.0	0.493	1.002
12. DESIRED FAMILY SIZE	3.065	0.090	552.0	1.540	1.373
13. KNOW PILL	0.820	0.026	628.0	0.384	1.700
14. KNOW IUD	0.674	0.037	628.0	0.469	1.973
15. KNOW DOUCHE	0.485	0.035	628.0	0.500	1.731
16. KNOW CONDOM	0.487	0.040	628.0	0.500	1.990
17. KNOW WITHDRAW.	0.637	0.029	628.0	0.481	1.491
18. KNOW ANY METHOD	0.881	0.020	628.0	0.325	1.540
19. EVER-USED PILL	0.247	0.029	628.0	0.432	1.694
20. EVER-USED IUD	0.061	0.014	628.0	0.239	1.483
21. EVER-USED DOUCHE	0.197	0.025	628.0	0.398	1.560
22. EVER-USED CONDOM	0.088	0.018	627.0	0.283	1.566
23. EVER-USED WITHDRAW.	0.278	0.029	627.0	0.448	1.594
24. EVER-USED ANY METHOD	0.529	0.032	628.0	0.500	1.608
25. USED EFFICIENT METHOD	0.320	0.036	628.0	0.467	1.945
26. USING ANY METHOD	0.483	0.039	429.0	0.500	1.622
27. USING EFFICIENT METHOD	0.170	0.032	429.0	0.376	1.770

LARGE VILLAGES

	R	SE	N	SD	DEFT
1. EXPOSED	0.734	0.023	497.0	0.442	1.178
2. AGE AT MARRIAGE	17.166	0.211	367.0	2.838	1.421
3. CURRENTLY PREGNANT	0.113	0.019	486.0	0.317	1.303
4. CHILDREN EVER-BORN	4.650	0.158	497.0	3.097	1.139
5. LIVING CHILDREN	3.610	0.120	497.0	2.359	1.138
6. BIRTHS IN FIRST 5 YRS.	1.910	0.051	413.0	1.222	0.845
7. BIRTHS IN PAST 5 YRS.	0.943	0.073	405.0	1.024	1.432
8. CHILDREN DEAD	0.224	0.013	497.0	0.242	1.187
9. CHILD UNWANTED	0.373	0.032	467.0	0.484	1.428
10. WANT NO MORE CHILDREN	0.564	0.036	420.0	0.496	1.468
11. PREFER BOY	0.459	0.044	133.0	0.500	1.025
12. DESIRED FAMILY SIZE	3.344	0.142	439.0	1.763	1.688
13. KNOW PILL	0.765	0.029	497.0	0.425	1.535
14. KNOW IUD	0.592	0.048	497.0	0.492	2.183
15. KNOW DOUCHE	0.412	0.044	497.0	0.493	2.004
16. KNOW CONDOM	0.417	0.054	497.0	0.493	2.457
17. KNOW WITHDRAW.	0.632	0.046	497.0	0.483	2.139
18. KNOW ANY METHOD	0.863	0.029	497.0	0.344	1.870
19. EVER-USED PILL	0.199	0.033	497.0	0.400	1.826
20. EVER-USED IUD	0.038	0.009	497.0	0.192	1.053
21. EVER-USED DOUCHE	0.173	0.025	497.0	0.379	1.464
22. EVER-USED CONDOM	0.063	0.021	496.0	0.242	1.947
23. EVER-USED WITHDRAW.	0.329	0.043	496.0	0.470	2.035
24. EVER-USED ANY METHOD	0.467	0.046	497.0	0.499	1.927
25. USED EFFICIENT METHOD	0.245	0.038	497.0	0.430	1.994
26. USING ANY METHOD	0.436	0.049	365.0	0.497	1.888
27. USING EFFICIENT METHOD	0.132	0.028	365.0	0.338	1.562

MEDIUM VILLAGES

	R	SE	N	SD	DEFT
1. EXPOSED	0.688	0.022	734.0	0.464	1.269
2. AGE AT MARRIAGE	16.389	0.148	532.0	2.696	1.267
3. CURRENTLY PREGNANT	0.165	0.019	705.0	0.371	1.381
4. CHILDREN EVER-BORN	4.838	0.102	734.0	3.359	0.819
5. LIVING CHILDREN	3.555	0.105	734.0	2.465	1.150
6. BIRTHS IN FIRST 5 YRS.	1.915	0.087	603.0	1.289	1.663
7. BIRTHS IN PAST 5 YRS.	1.110	0.054	575.0	1.069	1.205
8. CHILDREN DEAD	0.265	0.017	734.0	0.253	1.834
9. CHILD UNWANTED	0.427	0.024	691.0	0.495	1.264
10. WANT NO MORE CHILDREN	0.565	0.029	621.0	0.496	1.438
11. PREFER BOY	0.398	0.054	181.0	0.491	1.487
12. DESIRED FAMILY SIZE	3.319	0.096	653.0	1.887	1.275
13. KNOW PILL	0.767	0.030	734.0	0.455	1.793
14. KNOW IUD	0.501	0.039	734.0	0.500	2.124
15. KNOW DOUCHE	0.313	0.027	734.0	0.464	1.588
16. KNOW CONDOM	0.331	0.030	734.0	0.471	1.733
17. KNOW WITHDRAW.	0.533	0.037	734.0	0.499	2.023
18. KNOW ANY METHOD	0.811	0.025	734.0	0.392	1.752
19. EVER-USED PILL	0.189	0.016	734.0	0.392	1.113
20. EVER-USED IUD	0.045	0.014	733.0	0.207	1.822
21. EVER-USED DOUCHE	0.097	0.019	734.0	0.296	1.733
22. EVER-USED CONDOM	0.027	0.007	733.0	0.163	1.128
23. EVER-USED WITHDRAW.	0.232	0.027	734.0	0.422	1.724
24. EVER-USED ANY METHOD	0.409	0.025	734.0	0.492	1.389
25. USED EFFICIENT METHOD	0.234	0.020	734.0	0.424	1.306
26. USING ANY METHOD	0.343	0.026	505.0	0.475	1.208
27. USING EFFICIENT METHOD	0.099	0.016	505.0	0.299	1.173

SMALL VILLAGES

	R	SE	N	SD	DEFT
1. EXPOSED	0.707	0.024	559.0	0.456	1.227
2. AGE AT MARRIAGE	16.729	0.218	410.0	2.653	1.666
3. CURRENTLY PREGNANT	0.101	0.016	544.0	0.302	1.241
4. CHILDREN EVER-BORN	4.733	0.274	559.0	3.167	2.043
5. LIVING CHILDREN	3.499	0.176	559.0	2.234	1.860
6. BIRTHS IN FIRST 5 YRS.	1.888	0.071	464.0	1.221	1.245
7. BIRTHS IN PAST 5 YRS.	0.978	0.083	449.0	1.015	1.722
8. CHILDREN DEAD	0.241	0.023	559.0	0.267	2.027
9. CHILD UNWANTED	0.365	0.039	531.0	0.482	1.841
10. WANT NO MORE CHILDREN	0.553	0.039	450.0	0.498	1.662
11. PREFER BOY	0.420	0.049	150.0	0.495	1.215
12. DESIRED FAMILY SIZE	3.462	0.278	485.0	2.131	2.876
13. KNOW PILL	0.599	0.040	559.0	0.490	1.932
14. KNOW IUD	0.438	0.035	559.0	0.497	1.670
15. KNOW DOUCHE	0.268	0.043	559.0	0.443	2.316
16. KNOW CONDOM	0.242	0.030	559.0	0.428	1.633
17. KNOW WITHDRAW.	0.431	0.029	559.0	0.496	1.392
18. KNOW ANY METHOD	0.742	0.034	559.0	0.438	1.834
19. EVER-USED PILL	0.113	0.017	559.0	0.317	1.253
20. EVER-USED IUD	0.016	0.006	557.0	0.126	1.060
21. EVER-USED DOUCHE	0.114	0.025	559.0	0.319	1.683
22. EVER-USED CONDOM	0.023	0.008	559.0	0.151	1.274
23. EVER-USED WITHDRAW.	0.197	0.028	559.0	0.398	1.638
24. EVER-USED ANY METHOD	0.345	0.036	559.0	0.476	1.798
25. USED EFFICIENT METHOD	0.145	0.019	559.0	0.352	1.242
26. USING ANY METHOD	0.294	0.039	395.0	0.456	1.699
27. USING EFFICIENT METHOD	0.056	0.014	395.0	0.230	1.197

Table E -8: Sampling Errors for 27 Variables - by Region and Type of Place

WEST

URBAN

	R	SE	N	SD	DEFT
1. EXPOSED	0.786	0.012	863.0	0.411	0.878
2. AGE AT MARRIAGE	18.284	0.142	620.0	2.893	1.222
3. CURRENTLY PREGNANT	0.080	0.008	825.0	0.271	0.863
4. CHILDREN EVER-BORN	2.795	0.094	863.0	2.172	1.274
5. LIVING CHILDREN	2.333	0.064	863.0	1.654	1.136
6. BIRTHS IN FIRST 5 YRS.	1.677	0.041	654.0	0.937	1.122
7. BIRTHS IN PAST 5 YRS.	0.577	0.035	617.0	0.774	1.121
8. CHILDREN DEAD	0.165	0.012	863.0	0.265	1.359
9. CHILD UNWANTED	0.349	0.016	788.0	0.477	0.913
10. WANT NO MORE CHILDREN	0.575	0.018	744.0	0.495	0.998
11. PREFER BOY	0.315	0.035	238.0	0.466	1.147
12. DESIRED FAMILY SIZE	2.584	0.045	795.0	1.034	1.222
13. KNOW PILL	0.932	0.009	863.0	0.253	1.080
14. KNOW IUD	0.856	0.015	863.0	0.351	1.261
15. KNOW DOUCHE	0.737	0.021	863.0	0.441	1.399
16. KNOW CONDOM	0.747	0.025	863.0	0.435	1.673
17. KNOW WITHDRAW.	0.831	0.016	863.0	0.375	1.284
18. KNOW ANY METHOD	0.976	0.005	863.0	0.154	0.956
19. EVER-USED PILL	0.332	0.019	862.0	0.471	1.197
20. EVER-USED IUD	0.086	0.011	860.0	0.281	1.129
21. EVER-USED DOUCHE	0.288	0.019	861.0	0.453	1.220
22. EVER-USED CONDOM	0.190	0.019	863.0	0.393	1.386
23. EVER-USED WITHDRAW.	0.463	0.025	862.0	0.499	1.497
24. EVER-USED ANY METHOD	0.760	0.021	863.0	0.427	1.420
25. USED EFFICIENT METHOD	0.476	0.021	863.0	0.500	1.241
26. USING ANY METHOD	0.701	0.027	678.0	0.458	1.512
27. USING EFFICIENT METHOD	0.240	0.014	678.0	0.428	0.853

RURAL

R	SE	N	SD	DEFT
0.716	0.024	483.0	0.451	1.155
17.490	0.253	367.0	2.458	1.969
0.091	0.016	462.0	0.288	1.226
3.596	0.127	483.0	2.287	1.219
2.870	0.081	483.0	1.717	1.041
1.800	0.061	411.0	0.972	1.263
0.617	0.066	394.0	0.872	1.504
0.202	0.025	483.0	0.251	2.162
0.357	0.028	456.0	0.480	1.252
0.670	0.034	388.0	0.471	1.424
0.293	0.054	99.0	0.457	1.166
2.696	0.095	424.0	1.022	1.915
0.776	0.044	483.0	0.417	2.329
0.538	0.050	483.0	0.499	2.215
0.513	0.049	483.0	0.500	2.166
0.433	0.045	483.0	0.496	2.441
0.644	0.035	483.0	0.479	1.627
0.886	0.033	483.0	0.318	2.253
0.284	0.036	483.0	0.451	1.739
0.017	0.007	483.0	0.128	1.204
0.240	0.036	483.0	0.428	1.847
0.053	0.023	483.0	0.291	1.729
0.395	0.036	483.0	0.489	1.597
0.625	0.039	483.0	0.485	1.747
0.333	0.043	483.0	0.472	1.992
0.601	0.043	346.0	0.490	1.634
0.153	0.034	346.0	0.361	1.774

SOUTH

URBAN

	R	SE	N	SD	DEFT
1. EXPOSED	0.748	0.024	290.0	0.435	0.923
2. AGE AT MARRIAGE	17.753	0.219	215.0	3.146	1.022
3. CURRENTLY PREGNANT	0.112	0.021	278.0	0.315	1.099
4. CHILDREN EVER-BORN	3.407	0.245	290.0	2.449	1.702
5. LIVING CHILDREN	2.762	0.205	290.0	1.962	1.778
6. BIRTHS IN FIRST 5 YRS.	1.879	0.085	231.0	1.056	1.230
7. BIRTHS IN PAST 5 YRS.	0.827	0.108	220.0	0.940	1.709
8. CHILDREN DEAD	0.189	0.017	290.0	0.239	1.188
9. CHILD UNWANTED	0.358	0.035	268.0	0.480	1.185
10. WANT NO MORE CHILDREN	0.569	0.032	248.0	0.496	1.005
11. PREFER BOY	0.514	0.064	74.0	0.503	1.087
12. DESIRED FAMILY SIZE	3.019	0.084	267.0	1.626	0.845
13. KNOW PILL	0.886	0.031	290.0	0.318	1.645
14. KNOW IUD	0.786	0.035	290.0	0.411	1.445
15. KNOW DOUCHE	0.531	0.057	290.0	0.500	1.930
16. KNOW CONDOM	0.603	0.048	290.0	0.490	1.658
17. KNOW WITHDRAW.	0.693	0.041	290.0	0.462	1.510
18. KNOW ANY METHOD	0.928	0.021	290.0	0.260	1.396
19. EVER-USED PILL	0.317	0.042	290.0	0.466	1.532
20. EVER-USED IUD	0.128	0.021	290.0	0.334	1.059
21. EVER-USED DOUCHE	0.141	0.038	290.0	0.349	1.863
22. EVER-USED CONDOM	0.181	0.035	288.0	0.385	1.535
23. EVER-USED WITHDRAW.	0.303	0.042	290.0	0.461	1.563
24. EVER-USED ANY METHOD	0.628	0.059	290.0	0.484	2.069
25. USED EFFICIENT METHOD	0.469	0.053	290.0	0.500	1.789
26. USING ANY METHOD	0.571	0.049	217.0	0.496	1.446
27. USING EFFICIENT METHOD	0.276	0.044	217.0	0.448	1.459

RURAL

R	SE	N	SD	DEFT
0.655	0.069	223.0	0.477	2.169
17.621	0.345	177.0	2.866	1.603
0.167	0.061	210.0	0.374	2.367
4.466	0.295	223.0	3.044	1.445
3.709	0.280	223.0	2.909	1.668
1.917	0.081	180.0	1.118	0.970
1.083	0.149	168.0	1.046	1.844
0.170	0.019	223.0	0.203	1.384
0.347	0.056	216.0	0.477	1.729
0.470	0.058	181.0	0.500	1.572
0.264	0.077	53.0	0.445	1.263
3.475	0.344	177.0	1.934	2.363
0.632	0.049	223.0	0.483	1.527
0.417	0.066	223.0	0.494	1.996
0.206	0.047	223.0	0.406	1.729
0.220	0.059	223.0	0.415	2.137
0.399	0.067	223.0	0.491	2.028
0.753	0.038	223.0	0.432	1.323
0.085	0.035	223.0	0.280	1.884
0.027	0.015	223.0	0.162	1.343
0.063	0.028	223.0	0.243	1.723
0.009	0.006	223.0	0.094	0.984
0.224	0.058	223.0	0.418	2.064
0.305	0.070	223.0	0.461	2.279
0.103	0.037	223.0	0.305	1.805
0.336	0.066	146.0	0.474	1.694
0.048	0.025	146.0	0.214	1.394

CENTRE

	URBAN					RURAL				
	R	SE	N	SD	DEFT	R	SE	N	SD	DEFT
1. EXPOSED	0.724	0.018	627.0	0.447	0.995	0.688	0.016	586.0	0.464	0.835
2. AGE AT MARRIAGE	17.268	0.201	419.0	2.833	1.453	16.288	0.189	423.0	2.559	1.517
3. CURRENTLY PREGNANT	0.161	0.013	601.0	0.327	1.006	0.124	0.015	573.0	0.330	1.099
4. CHILDREN EVER-BORN	3.061	0.111	627.0	2.203	1.493	4.754	0.211	586.0	3.426	1.490
5. LIVING CHILDREN	2.478	0.057	627.0	1.615	1.508	3.420	0.148	586.0	2.349	1.505
6. BIRTHS IN FIRST 5 YRS.	1.749	0.058	494.0	1.394	1.307	1.813	0.076	477.0	1.267	1.276
7. BIRTHS IN PAST 5 YRS.	0.690	0.075	467.0	0.938	1.726	0.565	0.076	463.0	1.054	1.549
8. CHILDREN DEAD	0.156	0.010	627.0	0.282	0.900	0.287	0.019	536.0	0.269	1.744
9. CHILD UNWANTED	0.350	0.023	583.0	0.477	1.175	0.471	0.023	548.0	0.500	1.087
10. WANT NO MORE CHILDREN	0.594	0.019	527.0	0.492	0.887	0.586	0.030	474.0	0.494	1.309
11. PREFER BOY	0.442	0.038	554.0	0.498	0.968	0.413	0.053	450.0	0.494	1.314
12. DESIRED FAMILY SIZE	2.621	0.066	583.0	0.994	1.606	3.035	0.091	538.0	1.481	1.419
13. KNOW PILL	0.915	0.015	627.0	0.278	1.346	0.788	0.025	536.0	0.409	1.477
14. KNOW IUD	0.868	0.021	627.0	0.339	1.572	0.677	0.033	536.0	0.468	1.698
15. KNOW DOUCHE	0.656	0.028	627.0	0.476	1.462	0.364	0.040	536.0	0.487	1.967
16. KNOW CONDOM	0.956	0.034	627.0	0.436	1.788	0.782	0.031	536.0	0.486	1.555
17. KNOW WITHDRAW.	0.745	0.023	627.0	0.436	1.318	0.563	0.028	536.0	0.496	1.350
18. KNOW ANY METHOD	0.965	0.011	627.0	0.184	1.488	0.872	0.021	536.0	0.334	1.528
19. EVER-USED PILL	0.316	0.020	627.0	0.465	1.051	0.200	0.022	586.0	0.400	1.309
20. EVER-USED IUD	0.163	0.014	626.0	0.361	0.981	0.081	0.018	583.0	0.272	1.627
21. EVER-USED DOUCHE	0.271	0.026	624.0	0.445	1.466	0.131	0.043	586.0	0.338	1.630
22. EVER-USED CONDOM	0.163	0.022	627.0	0.369	1.523	0.036	0.010	586.0	0.186	1.331
23. EVER-USED WITHDRAW.	0.356	0.022	623.0	0.479	1.144	0.212	0.030	586.0	0.409	1.750
24. EVER-USED ANY METHOD	0.687	0.028	627.0	0.464	1.511	0.423	0.029	586.0	0.494	1.404
25. USED EFFICIENT METHOD	0.477	0.020	627.0	0.500	0.980	0.266	0.026	586.0	0.442	1.411
26. USING ANY METHOD	0.642	0.037	454.0	0.480	1.627	0.342	0.039	403.0	0.475	1.644
27. USING EFFICIENT METHOD	0.291	0.021	454.0	0.455	0.963	0.129	0.025	403.0	0.336	1.492

NORTH

	URBAN					RURAL				
	R	SE	N	SD	DEFT	R	SE	N	SD	DEFT
1. EXPOSED	0.759	0.030	133.0	0.429	0.800	0.709	0.024	358.0	0.455	0.985
2. AGE AT MARRIAGE	18.222	0.331	90.0	2.808	1.118	16.900	0.156	250.0	2.585	0.952
3. CURRENTLY PREGNANT	0.164	0.037	128.0	0.372	1.130	0.157	0.020	344.0	0.364	1.035
4. CHILDREN EVER-BORN	3.165	0.211	133.0	2.234	1.087	4.897	0.222	358.0	3.146	1.333
5. LIVING CHILDREN	2.752	0.128	133.0	1.856	0.793	3.729	0.196	358.0	2.438	1.527
6. BIRTHS IN FIRST 5 YRS.	2.019	0.120	104.0	1.005	1.220	1.990	0.113	292.0	1.094	1.498
7. BIRTHS IN PAST 5 YRS.	0.890	0.171	100.0	0.973	1.755	1.219	0.072	278.0	1.084	1.094
8. CHILDREN DEAD	0.114	0.029	133.0	0.203	1.645	0.238	0.026	358.0	0.261	1.909
9. CHILD UNWANTED	0.407	0.040	122.0	0.494	0.872	0.404	0.043	334.0	0.491	1.604
10. WANT NO MORE CHILDREN	0.590	0.040	122.0	0.494	0.889	0.558	0.039	334.0	0.497	1.370
11. PREFER BOY	0.447	0.073	38.0	0.504	0.927	0.495	0.043	308.0	0.502	0.869
12. DESIRED FAMILY SIZE	2.746	0.093	126.0	1.058	0.988	3.660	0.167	345.0	1.937	1.527
13. KNOW PILL	0.904	0.011	133.0	0.298	0.621	0.740	0.045	358.0	0.439	1.939
14. KNOW IUD	0.417	0.047	133.0	0.488	1.222	0.536	0.046	358.0	0.499	1.728
15. KNOW DOUCHE	0.759	0.049	133.0	0.429	1.357	0.413	0.036	358.0	0.493	1.453
16. KNOW CONDOM	0.902	0.025	133.0	0.298	1.304	0.682	0.032	358.0	0.467	1.335
17. KNOW WITHDRAW.	0.902	0.025	133.0	0.298	0.948	0.682	0.054	358.0	0.467	2.188
18. KNOW ANY METHOD	0.946	0.018	133.0	0.227	1.092	0.860	0.045	358.0	0.347	2.434
19. EVER-USED PILL	0.660	0.041	133.0	0.477	1.001	0.140	0.024	358.0	0.347	1.319
20. EVER-USED IUD	0.293	0.040	133.0	0.457	0.962	0.053	0.027	358.0	0.224	2.043
21. EVER-USED DOUCHE	0.263	0.053	133.0	0.442	1.033	0.142	0.024	357.0	0.350	1.434
22. EVER-USED CONDOM	0.526	0.056	133.0	0.501	1.389	0.042	0.015	358.0	0.201	1.384
23. EVER-USED WITHDRAW.	0.526	0.048	133.0	0.501	1.288	0.116	0.043	358.0	0.466	1.755
24. EVER-USED ANY METHOD	0.757	0.036	133.0	0.404	1.370	0.344	0.049	358.0	0.498	1.879
25. USED EFFICIENT METHOD	0.526	0.053	101.0	0.501	0.823	0.201	0.040	358.0	0.401	1.900
26. USING ANY METHOD	0.743	0.033	101.0	0.439	1.176	0.402	0.049	254.0	0.491	1.590
27. USING EFFICIENT METHOD	0.257	0.021	101.0	0.439	0.483	0.094	0.020	254.0	0.293	1.095

Sampling Errors for 27 Variables - by Region and Type of Place (Continued)

EAST

		R	SE	N	SD	DEFT
	URBAN					
1.	EXPOSED	C.713	0.034	317.0	0.453	1.328
2.	AGE AT MARRIAGE	16.752	0.355	306.0	2.924	1.742
3.	CURRENTLY PREGNANT	0.177	0.019	299.0	0.383	0.849
4.	CHILDREN EVER-BORN	4.351	0.223	317.0	3.344	1.188
5.	LIVING CHILDREN	3.423	0.150	317.0	2.480	1.075
6.	BIRTHS IN FIRST 5 YRS.	2.268	0.078	245.0	1.131	1.073
7.	BIRTHS IN PAST 5 YRS.	1.351	0.058	229.0	1.032	1.437
8.	CHILDREN DEAD	0.221	0.011	317.0	0.232	0.826
9.	CHILD UNWANTED	C.449	0.032	296.0	0.498	0.893
10.	WANT NO MORE CHILDREN	C.570	0.023	279.0	0.496	0.766
11.	PREFER BOY	C.576	0.062	85.0	0.497	1.146
12.	DESIRED FAMILY SIZE	3.238	0.116	281.0	1.494	1.239
13.	KNOW PILL	C.868	0.032	317.0	0.395	1.421
14.	KNOW IUD	C.719	0.044	317.0	0.450	1.730
15.	KNOW DOUCHE	C.429	0.033	317.0	0.496	1.193
16.	KNOW CONDOM	C.555	0.045	317.0	0.498	1.610
17.	KNOW WITHDRAW.	C.603	0.051	317.0	0.490	1.861
18.	KNOW ANY METHOD	C.858	0.034	317.0	0.350	1.713
19.	EVER-USED PILL	C.259	0.025	317.0	0.439	1.370
20.	EVER-USED IUD	C.069	0.025	317.0	0.255	1.752
21.	EVER-USED DOUCHE	C.120	0.033	317.0	0.325	1.359
22.	EVER-USED CONDOM	C.237	0.052	317.0	0.426	1.771
23.	EVER-USED WITHDRAW.	C.454	0.058	317.0	0.499	2.156
24.	EVER-USED ANY METHOD	C.331	0.046	317.0	0.471	2.068
25.	USED EFFICIENT METHOD	C.363	0.062	317.0	0.482	1.749
26.	USING ANY METHOD	0.155	0.032	226.0	0.363	1.929
27.	USING EFFICIENT METHOD					1.315
	RURAL					
1.	EXPOSED	0.711	0.020	551.0	0.454	1.029
2.	AGE AT MARRIAGE	16.020	0.145	392.0	2.708	1.059
3.	CURRENTLY PREGNANT	C.147	0.012	537.0	0.355	0.783
4.	CHILDREN EVER-BORN	3.457	0.150	551.0	3.579	1.245
5.	LIVING CHILDREN	2.969	0.118	551.0	2.597	1.064
6.	BIRTHS IN FIRST 5 YRS.	2.020	0.075	453.0	1.388	1.148
7.	BIRTHS IN PAST 5 YRS.	1.283	0.053	441.0	1.013	1.101
8.	CHILDREN DEAD	0.277	0.014	551.0	0.239	1.337
9.	CHILD UNWANTED	C.365	0.035	518.0	0.482	1.824
10.	WANT NO MORE CHILDREN	C.482	0.040	471.0	0.500	1.715
11.	PREFER BOY	C.528	0.053	169.0	0.500	1.372
12.	DESIRED FAMILY SIZE	3.993	0.297	459.0	2.507	2.539
13.	KNOW PILL	C.574	0.039	551.0	0.495	1.837
14.	KNOW IUD	C.419	0.046	551.0	0.494	2.210
15.	KNOW DOUCHE	C.434	0.030	551.0	0.496	1.671
16.	KNOW CONDOM	C.258	0.034	551.0	0.438	1.813
17.	KNOW WITHDRAW.	C.412	0.042	551.0	0.493	1.994
18.	KNOW ANY METHOD	C.688	0.036	551.0	0.464	1.839
19.	EVER-USED PILL	C.116	0.017	551.0	0.321	1.250
20.	EVER-USED IUD	C.024	0.006	551.0	0.152	0.960
21.	EVER-USED DOUCHE	C.060	0.016	551.0	0.238	1.561
22.	EVER-USED CONDOM	C.045	0.005	550.0	0.120	0.897
23.	EVER-USED WITHDRAW.	C.155	0.028	551.0	0.362	1.792
24.	EVER-USED ANY METHOD	0.265	0.029	551.0	0.442	1.565
25.	USED EFFICIENT METHOD	C.143	0.015	551.0	0.351	1.019
26.	USING ANY METHOD	C.194	0.031	392.0	0.396	1.557
27.	USING EFFICIENT METHOD	C.048	0.017	392.0	0.215	1.582

APPENDIX F GLOSSARY IN TURKISH ENGLISH, FRENCH AND SPANISH

ENGLISH	TURKISH
BACKGROUND VARIABLES	SOSYO EKONOMİK ÖZELLİKLER
TYPE OF LOCALITY	YERLEŞİM YERİ BÜYÜKLÜĞÜ
Metropolitan	Metropol
Large City	Büyük Kent
Medium City	Orta Büyüklükte Kent
Small City	Küçük Kent
Town	Kasaba
Large Village	Büyük Köy
Medium Village	Orta Büyüklükte Köy
Small Village	Küçük Köy
WOMAN'S EDUCATION	KADININ EĞİTİMİ
Illiterate	Okuryazar değil
Literate	Okuryazar
Primary (Completed)	İlkokul bitirmiş
Higher (Than Primary)	İlkokul üstü eğitimi var
HUSBAND'S EDUCATION	KOCANIN EĞİTİMİ
Illiterate	Okuryazar değil
Literate	Okuryazar
Primary (Completed)	İlkokul bitirmiş
Higher (than Primary)	İlkokul üstü eğitimi var
COUPLE'S LITERACY	EŞLERİN OKUR YAZARLIĞI
Neither Literate	Eşlerin ikisi de okuryazar değil
Only One Literate	Eşlerden biri okuryazar
Both Literate	Eşlerin ikisi de okuryazar
WOMAN'S OCCUPATION	KADININ MESLEĞİ
No Work	Çalışmıyor
Family Farm	Kendi tarlasında çalışıyor
Other Farming	Başkasının tarlasında çalışıyor
Services	Hizmet kesiminde çalışıyor
Industry	Sanayi kesiminde çalışıyor
HUSBAND'S WORK STATUS	KOCANIN ÇALIŞMA DURUMU
Unpaid Family Worker	Ücretsiz Aile işçisi
Employee	Ücretli, maaşlı
Self-Employed	Kendi işinde çalışıyor
Employer	İşveren
Never Worked	Çalışmıyor

FRENCH	SPANISH
CARACTERISTIQUES SOCIO-ECONOMIQUES	CARACTERISTICAS SOCIO-ECONOMICAS
NATURE DE LA ZONE DE RÉSIDENCE	TIPO DE LOCALIDAD
Métropole	Area Metropolitana
Grande ville	Ciudad grande
Ville moyenne	Ciudad intermedia
Petite ville	Ciudad pequena
Ville	Pueblo
Grand village	Aldea grande
Village moyen	Aldea mediana
Petit village	Aldea pequena
NIVEAU D'EDUCATION DE LA FEMME	NIVEL DE EDUCACION DE LA MUJER
Analphabète	Analfabeta
Sait lire et écrire	Que sabe leer y escribir
Primaire complet	Primaria completa
A dépassé le primaire	Secundaria o más
NIVEAU D'EDUCATION DU MARI	NIVEL DE EDUCACION DEL MARIDO
Analphabète	Analfabeto
Sait lire et écrire	Que sabe leer y escribir
Primaire complet	Primaria - completada
A dépasse lé primaire	Secundaria o más
DEGRE D'ALPHABETISATION DU COUPLE	GRADO DE ALFABETISMO DE LA PAREJA
Aucun des deux ne sait lire et écrire	Ambos analfabetos
Un des deux seulement sait lire et écrire	Solamente un analfabeto
Tous les deux savent lire et écrire	Embos saben leer y escribir
ACTIVITE PROFESSIONNELLE DE LA FEMME	OCUPACION DE LA MUJER
Ne traveille pas	No trabaja
Travaille dans l'exploitation agricole familiale	Trabaja en la finca familiar
Autre exploitation agricole	Otro trabajo agrícola
Services	Servicios
Industrie	Industria
SITUATION PROFESSIONNELLE DU MARI	STATUS DE TRABAJO DEL MARIDO
Travailleur familial non rémunéré	Trabajador familiar no remunerado
Employé	Trabaja para otra persona
Travaille à son compte	Trabaja por su cuenta
Patron	Patrón
N'a jamais travaillé	Nunca trabajō

TYPE OF PLACE OF RESIDENCE

Urban
Rural

REGIONS

West
South
Central
North
East

AGE, NUPTIALITY, AND EXPOSURE TO CHILDBEARING

Age at first marriage
Age cohort
Calendar year of birth
Continuously in the married state for the past five years
Continuously in the married state since first marriage
Current age
Current marital status:
Married
Widowed
Separated
Currently married
- and "fecund"
- fecund and wants no more children
- and non-pregnant
Ever-married
- with at least two live births (including current pregnancy)
Exposure status
"Exposed"
- with at least one live birth
- and wants no more children
- and wants another child and states sex preference

First marriage dissolved
- and remarried
First married at least five years ago
First married before age 25

Interval from first marriage to first birth
Marriage cohort
Marriage dissolution and remarriage
Number of times married
Status of first marriage
Times since first marriage spent in the married state
Years since first marriage

YERLEŞİM YERİ

Kent
Kır

BÖLGELER

Batı Anadolu
Akdeniz Bölgesi
İç Anadolu
Karadeniz
Doğu ve Güneydoğu Anadolu

YAŞ, EVLENME DURUMU VE GEBELİK RİSKİ

İlk evlenme yaşı
Yaş kuşağı
Doğumdaki takvim yılı
Son beş yıl içinde sürekli evli
İlk evliliğinden bu yana sürekli evli
Şimdiki yaşı
Evliliğin şimdiki durumu:
Evli
Dul
Ayrılmış
Halen evli
- ve "doğurgan"
- doğurgan ve daha fazla çocuk istemiyor
- ve gebe değil
Evlenmiş
- en az iki canlı doğum yapmış (şimdiki gebelik dahil)
Gebelik riski durumu
"Gebelik riski altında"
- en az bir canlı doğum yapmış
- ve daha fazla çocuk istemiyor
- ve başka çocuk istiyor ve cinsiyet tercihini bildiriyor

İlk evliliği sona ermiş
- ve yeniden evlenmiş
En az beş yıl önce ilk kez evlenmiş
Yirmibeş yaşından önce ilk kez evlenmiş
İlk evlilikle ilk doğum arasındaki süre
Evlilik kuşağı
Evliliğin sona ermesi ve yeniden evlenme
Evlenme sayısı
İlk evlilik durumu
İlk evlilikten bu yana evli olarak geçen süre
İlk evlilikten bu yana geçen yıllar

NATURE DE LIEU DE RESIDENCE

Urbain
Rural

REGIONS
Ouest
Sud
Centre
Nord
Est

AGE, NUPTIALITÉ ET EXPOSITION AU RISQUE DE GROSSESSE

Age au premier mariage
Cohorte d'âge
Millésime de naissance
Toujours mariée durant les cinq dernières années
Toujours mariée depius son premier mariage
Age actuel
Etat matrimonial actuel:
Mariée
Veuve
Séparée
Actuellement mariée
- et "fertile"
- fertile et ne veut plus d'autres enfants
- et non-enceinte
Non-célibataire
- avec au moins deux naissances vivantes (y compris grossesse actuelle)
Statut d'exposition au risque de grossesse
"Exposée"
- avec au moins une naissance vivante
- et ne veut plus d'autres enfants avec préférence pour le sexe

Premier mariage dissous
- et remariée
Mariee pour la première fois il y a au moins 5 ans
Mariée pour la première fois avant d'atteindre 25 ans
Intervalle entre le premier mariage et la première naissance
Cohorte des mariages
Dissolution de mariage at remariage

Nombre de mariages
Statut du premier mariage
Durée écoulée depuis le premier mariage en état de femme mariée
Années écoulées depius le premier mariage

TIPO DE LUGAR DE RESIDENCIA

Urbano
Rural

REGIONES
Oeste
Sur
Centro
Norte
Este

EDAD, NUPCIALIDAD Y EXPOSICIÓN AL RIESGO DE EMBARAZO

Edad al primer matrimonio
Cohorte de edad
Año calendario de nacimiento
Ha estado continuamente casada durante los ultimo cinco años
Ha estado continuamente casada desde su primer matrimonio
Edad actual
Estado civil actual:
Casada
Viuda
Separada
Actualmente casada:
- y "fértil"
- fértil y no desea tener más hijos
- y no-embarazada
Alguna vez casada:
- tiene al menos dos nacidos vivos (incluyendo embarazo actual)

Exposición al riesgo de embarazo:
"Expuesta"

- tiene al menos un nacido vivo
- y no desea tener más hijos
- y desea tener otro hijo e indica preferencia por un sexo determinado
Primer matrimonio disuelto
- y se ha vuelto a casar
Casada por primera vez hace por lo menos cinco años
Casada por primera vez antes de los 25 anos de edad
Intérvalo entre el primer matrimonio y el primer nacimiento
Cohorte de matrimonio
Disolución del matrimonio y matrimonio en segundas nupcias
Número de veces que ha estado casada
Situatión del primer matrimonio
Tiempo transcurrido en estado matrimonial, desde su primer matrimonio
Años transcurridos desde el primer matrimonio

KNOWLEDGE AND USE OF CONTRACEPTION

Contraceptive method being used
Contraceptive use (excluding sterilization) in the open interval
Contraceptive use in the last closed interval
Currently using contraception (any method)
Currently using an efficient method of contraception
Ever used contraception (any method)
Ever used an efficient method of contraception
Ever used a specified contraceptive
Heard of at least one efficient method of contraception
Heard of specified contraceptive methods
Pattern of contraceptive use:

Currently using
Contraceptively sterilized

Using some other method
Past but not current user

Used in open interval
Used in last closed interval
Used only in an earlier interval
Never used any method
Intends future use
Does not intend future use

Specific contraceptive method:
Pill
IUD
Condom
Female Sterilization

Male Sterilization

Other female scientific methods
Rhythm
Withdrawal
Abstinence
Douche

GEBELİĞİ ÖNLEME KONUSUNDA BİLGİ VE UYGULAMA

Gebeliği önleyici yöntem kullanılmakta
Gebeliği önleyici yöntemin açık doğum aralıklarında kullanılması (sterilizasyon hariç)
Gebeliği önleyici yöntemin son kapalı doğum aralığında kullanılması
Halen gebeliği önleyici yöntem kullanıyor (herhangi bir yöntem)
Halen gebeliği önleyici etkin bir yöntem kullanıyor
Gebeliği önleyici yöntem kullanmış (herhangi bir yöntem)
Gebeliği önleyici etkin bir yöntem kullanmış
Belirtilen gebeliği önleyici bir yöntem kullanmış
Gebeliği önleyici en az bir etkin yöntem duymuş
Belirtilen gebeliği önleyici yöntemleri duymuş
Gebeliği önleyici yöntem kullanma örüntüsü:
Halen kullanılıyor
Gebeliği önleyici biçimde kısırlaştırılmış (sterilizasyon)
Diğer bazı yöntemleri kullanıyor
Geçmişte bazı yöntemler kullanmış fakat şimdi kullanmıyor
Açık doğum aralığında kullanmış
Son kapalı doğum aralığında kullanmış
Yalnızca daha önceki bir doğum aralığında kullanmış
Hiç bir yöntem kullanmamış
Gelecekde kullanmayı düşünüyor
Gelecekde kullanmayı düşünmüyor

Belirtilen gebeliği önleyici yöntemler:
Hap
Rahim içi araç
Kaput
Kadının kısırlaştırılması (sterilizasyon)
Erkeğin kısırlaştırılması (sterilizasyon)
Kadına ait diğer bilimsel yöntemler
Takvim yöntemi
Geri çekme
Cinsi münasebette bulunmama
Duş

CONNAISSANCE ET PRATIQUE DE LA CONTRACEPTION	CONOCIMIENTO Y USO DE ANTICONCEPCIÓN
Méthode contraceptive actuellement utilisée	Método anticonceptivo que usa actualmente
Méthode contraceptive (stérilisation exclue) utilisée dans l'intervalle ouvert	Uso de anticoncepción (excluyendo esterilización) en el intérvalo abierto
Méthode contraceptive utilisée dans le dernier intervalle fermé	Uso de anticoncepción en el ultimo intervalo cerrado
Pratique actuellement la contraception (quelle que soit la méthode)	Usa anticoncepción actualmente (cualquier método)
Utilise actuellement une méthode contraceptive efficace	Usa actualmente un método anticonceptive eficaz
A deja utilise une méthode contraceptive (quelle què soit la méthode)	Ha usado anticoncepción alguna vez (cualquier método)
A deja utilise une méthode contraceptive efficace	Ha usado alguna vez un método anticonceptivo eficaz
A deja utilise des methodes précises de contraception	Usó de métodos anticonceptivos especificos
A entendu parler d'au moins une méthode contraceptive efficace	Ha oido hablar de por lo menos un método anticonceptivo eficaz
A entendu parler de méthodes précises de contraception	Métodos anticonceptivos especificos de los que ha oido hablar
Type de partique contraceptive:	Patron de uso de métodos anticonceptivos:
Pratique actuellement	Usa actualmente
A subi une sterilisation volontaire	Esterilizada por razones anticonceptivas
Utilisé d'autres méthodes	Usa otro método
A pratique dans le passe mais ne pratiqué pas actuellement	Ha usado en el pasado per no actualmente
A pratiqué durant l'intervalle ouvert	Usó en el intérvalo abierto
A pratiqué dans le dernier intervalle fermé	Usó en el ultimo intérvalo cerrado
A pratiqué seulement dans un intervalle anterieur	Usó solamente en un intérvalo cerrado anterior
N'a jamais pratiqué	Nunca ha usado anticoncepción
Pense pratiquer dans le futur	Piensa usar en el futuro
Ne pense pas pratiquer dans le futur	No tiene intenciones de usar en el futuro
Méthode contraceptive:	Métodos anticonceptivos especificos:
Pilule	Píldora
DIU ou sterilet	Dispositivo intra-uterin (DIU)
Préservatif	Condón
Ligature des trompes	Esterilización femenina
Vasectomie	Esterilización masculina
Autres méthodes scientifiques féminines	Otros métodos cientificos femeninos
Continence périodique	Ritmo
Retrait	Retiro
Abstention	Abstinencia
Douche	Ducha

Type of contraceptive method:
Efficient methods
Inefficient methods

FERTILITY AND CHILD MORTALITY

Age at birth of child in single years
Birth history
- Temporal distribution of births
Birth Order
Birth Intervals
- Length of the open interval
- Length of the last closed interval
Breastfeeding
- Breastfeeding in the last closed interval
- Last closed interval begins with a live birth, is longer than 32 months, with the child surviving at least 24 months
Calendar year of birth of child
Child mortality by age at death
Child's age at death
Children born before or within first 5 years of first marriage
Children born in past 5 years
Children ever born (number of)
Children ever born plus current pregnancy
Current pregnancy
Duration since first marriage at birth of child
Initial fertility
Interval between first marriage and first birth
Live births in past 5 years

Living children
Living children plus current pregnancy
Living children 5 years ago
Living daughters
Living sons
Male children born in past 5 years
Month of current pregnancy
Post-partum amenorrhea

Gebeliği önleyici yöntemlerin tipleri:
Etkin yöntemler
Etkin olmayan yöntemler

DOĞURGANLIK VE ÇOCUK ÖLÜMÜ

Tek yıllara göre çocuğun doğuştaki yaşı
Doğum tarihçesi
- Doğumların geçici olarak dağılımı
Doğum sırası
Doğum aralıkları
- Açık doğum aralığının süresi
- Son kapalı doğum aralığının süresi
Emzirme
- Son kapalı doğum aralığındaki emzirme
- Bir canlı doğumla başlayan, 32 aydan daha uzun süren ve en az 24 ay yaşayan çocuklu kadınlarda son kapalı doğum aralığında emzirme
Çocuğun doğumdaki takvim yılı
Ölüm yaşına göre çocuk ölümlüğü
Çocuğun ölümdeki yaşı
İlk evliliğin ilk 5 yılı içinde ya da daha önce doğan çocuklar
Son 5 yıl içinde doğan çocuklar
Canlı doğan çocuk sayısı
Canlı doğan çocuklar artı şimdiki gebelik
Şimdiki gebelik
İlk evlilikle çocuğun doğumu arasında geçen süre
Başlangıçtaki doğurganlık
İlk evlilikle ilk doğum arası
Son 5 yıl içindeki canlı doğumlar
Yaşayan çocuklar
Yaşayan çocuklar artı şimdiki gebelik
5 yıl önceki yaşayan çocuklar
Yaşayan kız çocuklar
Yaşayan erkek çocuklar
Son 5 yıl içinde doğan erkek çocuklar
Şimdiki gebeliğin ayı
Doğum sonrası ilk adeti görme süresi

Type de méthode contraceptive:	Tipo de método anticonceptivo:
Méthodes efficaces	Métodos eficientes
Méthodes inefficaces	Métodos ineficientes
FÉCONDITÉ ET MORTALITÉ INFANTILE	FECUNDIDÁD Y MORTALIDÁD INFANTIL
Année d'âge de la mère à la naissance de l'enfant	Edad al tener el hijo, en años
Historique des naissances	Historia de nacimientos
- distribution des naissances dans le temps	- Distribución temporal de los nacimientos
Rangs de naissances	Orden de nacimiento
Intervalles génésiques	Intérvalos genésicos
- Longueur de l'intervalle ouvert	- Duración del intervalo abierto
- Longueur du dernier intervalle fermé	- Duración del último intérvalo cerrado
Allaitement	Lactancia
- Allaitement dans le dernier intervalle fermé	- Lactancia en el último intérvalo cerrado
- Dernier intervalle fermé commençant avec une naissance vivante, ayant une durée supérieure à 32 mois et dont l'enfant a surveçu au moins 24 mois	- El último intérvalo cerrado comienza con un nacido vivo, dura más de 32 meses y el niño sobrevivió por lo menos 24 meses
Millésime de naissance de l'enfant	Año calendario de nacimiento del niño
Mortalité infantile par age au décès	Mortalidád infantil por edad al morir
Age au décès	Edad del niño al morir
Nombre d'enfants nés avant ou durant les 5 premières années du premier mariage	Hijos nacidos antes o durante los primeros 5 años de matrimonio
Nombre d'enfants nés durant les 5 dernieres années	Hijos nacidos en los últimos 5 años
Nombre d'enfants déjà nés (descendance actuelle)	Número de hijos tenidos
Nombre d'enfants déjà nés plus la grossesse actuelle	Número de hijos tenidos, más embarazo actual
Grossesse actuelle	Embarazo actual
Durée acoulée entre le premier mariage et la naissance de l'enfant	Duración del matrimonio al nacimiento del hijo
Fécondité initiale du mariage	Fecundidád inicial
Intervalle entre premier mariage et premiere naissance	Intérvalo entre el primer matrimonio y el primer nacimiento
Nombre de naissances vivantes au cours des 5 dernieres années	Nacidos vivos en los ultimos 5 años
Nombre d'enfants vivants	Hijos actualmente vivos
Nombre d'enfants vivants plus la grossesse actuelle	Número de hijos actualmente vivos mas embarazo actual
Nombre d'enfants vivants il y a 5 ans	Número de hijos vivos hace 5 años
Nombre de filles vivantes	Número de hijas mujeres actualmente vivas
Nombre de garçons vivants	Número de hijos varones actualmente vivas
Nombre de garçons nes au cours des 5 dernières années	Hijos varones nacidos en los ultimos 5 años
Mois de la grossesse actuelle	Meses de embarazo del embarazo actual
Amenorrhée gravidique	Amenorrea gravídica

Recent Fertility	Son doğurganlık
Survivorship status	Hayatta kalma durumu
Years ago birth occurred (in 5 year groups)	Doğumların meydana gelmesinden önceki yıllar (5 yıllık gruplarda)
Years since birth occurred (in single years)	Doğumların meydana gelmesinden sonra geçen yıllar (tek yıllarda)
PREFERENCES FOR NUMBER AND SEX OF CHILDREN	ÇOCUK SAYISI VE CİNSİYET TERCİHİ
Additional children wanted (number of)	İlave istenen çocuk sayısı
Desire for more children	Daha fazla çocuk istemek
Desire to cease childbearing	Çocuk doğurmama isteği
Desired family size	İstenilen aile büyüklüğü
- exceeds number of living children	- yaşayan çocukların sayısını geçiyor
Desires fewer than number living	Yaşayan çocuklarının sayısından daha az çocuk istiyor
Desires the same as number living	Yaşayan çocuklarının sayısı kadar çocuk istiyor
Desires more than number living	Yaşayan çocuklarından daha fazla çocuk istiyor
FERTILITY PREFERENCES AND THE USE OF CONTRACEPTION	DOĞURGANLIK TERCİHLERİ VE GEBELİĞİN ÖNLENMESİ
Last child not wanted	Son çocuğun istenmemesi
Prefers a boy	Erkek çocuk tercihi
Prefers a girl	Kız çocuk tercihi
Preference concerning the sex of children	Çocuğun cinsiyeti konusundaki tercihler
Total number of children desired	İstenen toplam çocuk sayısı
Wants another child	Başka çocuk istiyor
- and states sex preference	- ve cinsiyet tercihi yapıyor
Wants no more children	Başka çocuk istemiyor

Fécondité récente du mariage	Fecundidád reciente
Survivants	Supervivencia
Années écoulées depuis la naissance (par groups quinquennaux)	Cuantos años hace que ocurrío el nacimiento (en grupos quinquenales)
Années écoulées depius la naissance (par année)	Cuantos años hace que ocurrío el nacimiento (en años cumplidos)
PRÉFÉRENCE RELATIVES AU NOMBRE ET AU SEXE DES ENFANTS	PREFERENCIA POR NÚMERO Y SEXO DE LOS HIJOS
Nombres d'enfants supplémentaires desirés	Número de hijos adicionales deseados
Désire avoir d'autres enfants	Deseo de más hijos
Désire ne plus avoir d'enfants	Deseo de no tener mas hijos
Dimension désirée de la famille	Tamaño de familia deseado
- dépasse le numbre d'enfants vivants	- excede el número de hijos vivos
Autrait désiré avoir moins d'enfants que le nombre de ses enfants actuellement vivants	Desea menos hijos de que los que tiene
Désire avoir un nombre d'enfants égal a celui de ses enfants actuellement vivants	Desea el mismo número de hijos que tiene
Désire avoir plus d'enfants que le nombre de ses enfants actuellement vivants	Desea más hijos que los que tiene
PREFERENCES QUANT A LA FECONDITE ET PRATIQUE DE LA CONTRACEPTION	PREFERENCIAS PARA LA FECUNDIDAD
Dernier enfant non désire	Ultimo hijo no deseado
Préfère avoir un garçon	Prefiere un hijo varon
Préfère avoir une fille	Prefiere una hija mujer
Préférence concernant le sexe des enfants	Preferencia de sexo de los hijos
Nombre total d'enfants désirés	Número total de hijos deseados
Désire avoir un autre enfant	Desea otro hijo
Désire avoir un autre enfant et a une preference pour le sexe	Desea otro hijo e indica preferencia por el sexo
Ne désire plus avoir d'enfants	No desea más hijos

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