1988 turkish population and health survey

Hacettepe University
Institute of Population Studies

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PREFACE

With this report,the Institute of Population Studuies (HIPS) is presenting the results of the fifth quinquennial nationwide survey since 1968 and has finished a series of studies for the period of 25 years which will enable trend analyses to be made.

The first survey which HIPS conducted, was the "1968 Social Survey on Family Structure and Population Problems in Turkey", when information on fertility, family structure and population problems such as migration, urbanisation, labour force and income were collected. In 1973 a "Survey on Population Structure and Problems in Turkey" was carried out. This survey was parallel to the 1968 Survey in its purpose and questions. "1978 Turkish Fertility Survey" was carried out in collaboration with the World Fertility Survey. Data were obtained on nuptiality, fertility, infant and child mortality and contraceptive usage. The"Turkish Fertility,Contraceptive Prevalence and Family Health Status Survey" was carried out in 1983. In addition, data on fertility and contraceptive usage, information on health status of families, mother and child care, availability and accessibility of family planning services regarding delivery were also collected. This 1988 Survey, which is conducted with financial and technical supports of USAID and Center For Disease Control (CDC) Atlanta; is prepared with the help and support of the State Planning Organization and the Ministry of Health and Social Assistance as were the preceding four surveys.

One of the main characteristics of the "1988 Population and Health Survey" is that the nationally representative sample is selected by HIPS, whereas the samples of the four surveys before 1988 were all selected by the State Planning Organization. Being the third survey (after 1968 and 1973 Surveys) which collected information about husbands' knowledge, attitude and behaviour on fertility with the help of a husband's questionnaire is also another important point about the 1988 Survey. Finally, evaluation and comments related to the findings of the Survey by an objective expert, Shea O. RUTSTEIN from the Institute for Resource Development Inc., is presented in the last chapter of the report for an overall assessment of the results by the prospective users.

In the book, parallel to the questionnaires, results are given under different chapters, such as female, male and household findings. In each chapter, first, background characteristics, then other findings are given. The first chapter "Methodology" was prepared by Dr.Mahir ULUSOY,Research Assistants Turgay UNALAN and Banu AKADLI ERGOCMEN. The "Nuptiality" section of "Chapter II-Findings from the Woman's Questionnaire" was prepared by Prof.Dr.Aykut TOROS. The "Background Characteristics", "Fertility" and "Infant Mortality" sections of the same chapter were prepared by Assoc.Prof.Sevil CERIT; "Fertility Preference" by Research Assistant Turgay UNALAN; "Knowledge and Use of Contraception" by Research Assistant Isik KULU; "Health in Childhood" and "Abortion' by Research Assistant Banu AKADLI ERGOCMEN; "Consanguineous Marriages" by Dr. Mahir ULUSOY. Chapter III- Findings from the Husband's Questionnaire was prepared by Research Assistant Isik KULU and Chapter IV-"Household Findings" by Dr. Mahir ULUSOY and Turgay UNALAN. Finally, Chapter V "Preliminary Evaluation of Data Quality of the 1988 Turkish Fertility and Health Survey" was prepared by Dr. Shea Oscar RUTSTEIN.

In spite of the fact that different sections of this report have been prepared by different authors, all the academic staff of HIPS have great effort to accomplish the Survey working at every stage, since planning and preparation began in December 1986. Only six months after completion of the field work in September 1988, this book has been printed. Therefore, here I would like to express my appreciation for the generous efforts of the academic and administrative staff which enabled us to complete the Survey in such a short time.

I would like to acknowledge our appreciation to the President of the High Education Council, Prof.Dr.Ihsan DOGRAMACI for his encouragement and realisation of the Survey and also express our

gratitude to the Rector of Hacettepe University, Prof.Dr.Yuksel BOZER, for his continuous support for the Survey.

I wish to thank the Technical Advisory Committee of the Survey composed of representatives of the State Planning Organization and the Ministry of Health and Social Assistance for their valuable suggestions especially during the preparatory work. I would also like to thank to the Turkish Electricity Board (TEK) for their valuable help and cooperation during the preparation of sampling lists. Special thanks goes to the Ministry of the Interior, governors and local administrators who extended all possible assistance during the field work stage.

I would also like to acknowledge our appreciation to Mr.Howard GOLDBERG from the Division of Reproductive Health, Center for Health Promotion and Education, Center for Disease Control, for his efforts and consultancy at all phases of the Survey. And also special thanks to the consultant of CDC, sociologist Ms.Sevgi ARAL for her support and assistance, to UNICEF, Turkey and especially to Mrs.Sarojini ABRAHAM for their support and the very important contribution they made when we had serious financial problems. I also wish to thank Mr.Carl MATTHEWS,of the United States Embassy, Ankara; who helped us in every stage of the Survey. Finally, I would like to extend our special thanks and appreciation to Dr. Shea Oscar RUTSTEIN, from the Institute for Resource Development Inc. who provided valuable contributions through vivid discussions, suggestions, and revisions during the final stage of report writing.

Prof. Dr. Ergül TUNÇBİLEK

Director

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METHODOLOGY

CHAPTER I

METHODOLOGY

I.1 PREPARATORY ACTIVITIES

THE QUESTIONNAIRES

Three questionnaires were used in the 1988 Turkish Demographic and Health Survey : for the Household, the Woman's and the Husband's . Each of these questionnaires was prepared using the WFS (World Fertility Survey) and the DHS (Demographic Health Survey) modules. To meet the specific needs and interests, however, each questionnaire was adjusted or expanded.

THE HOUSEHOLD QUESTIONNAIRE

The household questionnaire was applied to each sample household and served several purposes. All members of the household were listed,starting with the head of the household. Therefore, the de jure population of the survey was determined and the eligible respondents were identified for the individual interviews. Also, information on the relationship to the head of the household, sex, age, marital status, literacy and educational level, occupational status, social security and health insurance status was collected. To have data on orphans, the survival status of the parents of each member was also asked. Another part of the household questionnaire contained some general questions about the house such as ownership, number of rooms, whether the house has a kitchen, bathroom, and toilet, toilet facilities, sources of illumination, heating and water, and the existence of some household effects. The questionnaire also included a cover sheet which contained information on identification and field and administrative controls.

The information required in the household questionnaire was obtained by interviewing any usual responsible adult member of the household. Normally, this was the head of the household or his spouse. Non-usual members of the household were not accepted as suitable respondents for the household questionnaire.

THE WOMAN'S QUESTIONNAIRE

The woman's questionnaire was assigned for each ever-married women aged under 50 in the household questionnaire. It was divided into four sections which covered the following topics :

- Respondent background characteristics
- Fertility and fertility preferences
- Contraceptive knowledge and practice
- Polygamous marriages

THE HUSBAND'S QUESTIONNAIRE

Only in half of the clusters, in addition to the eligible women, were their husbands (if the women were currently married) interviewed. Regardless of the husband's age, if the woman and the husband were on the household list, the husband's questionnaire was administered. This consisted of four sections :

- Respondent background characteristics
- Marriage, fertility and fertility preferences
- Contraceptive knowledge and practice
- General attitude and behaviour

PRE-TEST

The pre-test for the questionnaires was administered in and around Ankara in mid-June 1988. The objectives of the pre-test were to find out whether the pre-coded categories were mean-

ingful and adequate, if the flow of the interview was logical and if, in spite of the length of the questionnaire, the respondent's interest and motivation to answer questions could be maintained, and as the average duration of the interview is long, if the so-called sensitive questions caused resistance or embarrassment.

Two field teams, each with five male and five female interviewers participated in the pre-test after having intensive training about the questionnaires. The pre-test was carried out in locations that were not included in the sample. A total of 200 household interviews were completed during the pre-test. Each interviewer interviewed at least five individuals in these households.

The pre-test generally indicated that there were no major problems in the structure of the questionnaires. The wording of some questions needed to be modified but the length and complexity of the questionnaires did not present problems. The reaction of the respondents was favourable and no major problems with the so-called sensitive questions were encountered.

RECRUITMENT AND TRAINING OF FIELD STAFF

Among approximately 200 applicants, 120 interviewers (80 females and 40 males) were selected and trained for 10 days between July 28 and August 7, 1988, in Ankara. All interviewers were university students. Team leaders were chosen among interviewers and no special training was given, but they were required to have previous experience in similar surveys and be older than the other interviewers in the team. The training began with a three-day classroom training in which they were given some background knowledge on research methodology, interviewing techniques and information on human reproduction and contraception. During the following days, they were first divided into six groups and given extensive training on questionnaires. In order to get field experience, the last phase of the training was devoted to field practice which was conducted both in and outside Ankara. At the end of the training, those with a good performance and the above mentioned characteristics were chosen as team leaders. Team leaders were also expected to interview where required. Some of the academic staff of HIPS were also used as team leaders, especially in some metropolitan areas which are thought to be rather more problematical. Two of the academic staff from HIPS acted as field controllers. In order to establish rapport with the respondent, females conducted the woman's questionnaires and males conducted the husband's questionnaires. Overall, 18 teams were used in the survey each with at least two males and four females. Istanbul, the biggest metropolitan area, required three teams to handle it.

I.2 SAMPLING PLAN

Hacettepe Institute of Population Studies (HIPS) carried out 4 nationwide demographic and social surveys and other small scale surveys whose sample designs were made by the State Institute of Statistics. As an academic institution HIPS felt the need to make sample designs by itself that would, at least, be a theoretical and practical exercise for its researchers.

The first criterion for stratification is region. In the previous surveys the Institute conducted, division of Turkey into five regions was used as the first stratification criterion.

The second criterion for stratification is the size of settlement. Population size groups were defined as follows:

1. Metropolitan cities (Istanbul, Ankara, Izmir, Adana) 2. 100 000 + 3. 50 000-99 999 4. 25 000-49 999 5. 10 000-24 999 6. 2 000-9 999 7. 1 000-1 999 8. 500-999 9. 1-499

With 5 regions and 9 population groups, 45 strata are obtained. The last three size groups are set for selection purposes, they will be combined in the analysis as places with populations less than 1000.

PROJECTION OF 1985 CENSUS POPULATIONS OF SETTLEMENT PLACES TO SEPTEMBER 1988.

1970, 1975 and 1985 population census results of every settlement were entered into the computer without any detail, that is, only the total populations of the settlements were entered.

Correctness of the data was proved by computing district totals, and checking these with census totals. Also province totals calculated from the files were compared with the source data to en-

sure that the whole districts were included in the files.

For population projection, a population size grouping was done:

500000 and over, 100000-499999, 50000-99999 10000-49999, 5000-9999, 2000-4999, 1000-1999 500-999, 1-499

For each region, 1985 populations of settlements were classified according to the above groups, and the total population for each group was calculated for 1970 and 1985 populations. Settlements which did not appear in 1970 or 1985 were not included in the totals. Using these figures r (rate of growth of population) for each size group was calculated.In calculating r, the compound interest formula was used $P(n) = P(0)Exp(rt)$. $(t = 180)$. At the end of this process 10 r's were obtained for each region. Using these r's and 1985 populations and setting $t = 35$, September 1988 populations were estimated for each of the settlements.

FIRST STAGE SELECTION

At the strata named metropolitan cities, there is no selection, that is, they were included in the sample with certainty. In the strata with population over 10 000, a predetermined number of settlements was selected.

SECOND STAGE SELECTION

In this stage clusters were selected from the PSU's selected in the first stage. This is done with separate methods in urban and rural areas. Rural is defined as the settlements with populations less than 10 000.

a) In urban areas:

In this survey customer lists of TEK (Turkey's Electicity Board) are used. TEK lists contain the addresses and names of customers. There is also information to differentiate households from other customers.

All the information about customers was loaded on to the computer media.

For ease of field work, lists of dwellings each containing n addresses were obtained from TEK files. The first address is the beginning point of the cluster, if not found or if it belongs to another "mahalle" far from the "mahalle" containing most of the addresses in the list, the next address is accepted as the beginning point of the cluster. Increasing door numbers of households will determine the direction of the route to be followed. The interviewing team is instructed to visit all the dwellings whether listed in the TEK list or not, until n households are interviewed (n being the cluster size).

TEK files could be used to select households from settlement places with populations less than 10000, if it was certain that all the households are customers of TEK and if they are all recorded in the TEK files.

Systematic random sampling was done for selection of a point from TEK files, and n households following this point were listed.

b) In rural areas:

Second stage selection in the strata with populations less than 10 000 inhabitants was the village selection. Because of financial constraints, it was decided to select villages administratively connected to the settlements selected in the second stage and metropoli. The selection procedure applied in the selection of settlements with populations 10 000 and over in the first stage was applied for the selection of villages. But this time, the universe was not all villages in Turkey, but the villages which are administratively connected to settlements selected in the first stage and metropoli.

THIRD STAGE SELECTION.

Third stage selection was carried out in the villages selected in the second stage. The list of household heads exists in each village, using this, one of the households and neighbouring n households on the clockwise route to it were selected. (n is the cluster size).

RELATED FORMULAS

Since the sample was selfweighted, and the number of households to be included in the sample was around 7000, then sampling fraction f is 7000/Total number of hh in Turkey. That is also the probability of selection of a household. For simplicity $f = 1/1500$ is accepted as the sampling fraction.

The probability of selection of a household at strata where two stage sampling was done is:

$$p = f = [m(i)*A(i)/ \Sigma A(i)] * [m(i,j)/M(i,j)]$$

where i is the index of strata, while j is the index of settlement place m(i) is the number of settlements to be selected at the stratum A(i) is the average number of households selected in the stratum Σ A(i) is the total number of households in the stratum m(i,j) is the number of households to be selected in the second stage from j'th settlement place M(i,j) is the total number of households in selected settlements.

In this formula m(i) is a predetermined figure while m(i,j)will be calculated, since it is the only unknown term in the formula.

The probability of selection of a household at strata where single stage sampling was done is:

$$p = f = m(i)/M(i)$$

where i is the index of settlement places in stratum metropoli m(i) is the number of households to be selected from a settlement M(i) is the total number of households in a settlement.

The probability of selection of a household at strata where three stage sampling was done is:

$$p = f = [m(i)*A(i)/\Sigma A(i)] * [m(i,j)*A(i,j)/ \Sigma A(i,j)] * [m(i,j,k)/M(i,j,k)]$$

where i is the index of settlement places selected in the first stage, j is the index of settlements selected in the second stage, k is the index of households selected in the third stage.

m(i) is the number of settlement places to be selected at the first stage, A(i) is the average number of households in the settlements selected at the first stage, Σ A(i) is the total number of households in the stratum m(i,j) is the number of settlement places to be selected in the second stage A(i,j) is the average number of households in selected settlement places at the second stage, m(i,j,k) is the number of households to be selected in the third stage M(i,j,k) is the total number of households in selected settlement places selected in the third stage.

Since the population of all the settlement places is known there is no need to use averages in the above formulae. Then formulae for two and three stage selections become as follows:

$$p = f = [\overset{h}{\Sigma} (A(i)/ \overset{I}{\Sigma} A(i)] *[m(i,j)/M(i,j)]$$

where h = m(i) , number of settlement places selected at the first stage, I is the total number of settlement places in the stratum i for three stage selection:

$$p = f = [\overset{h}{\Sigma} A(i) / \overset{I}{\Sigma} A(i)] *[\overset{n}{\Sigma} A(i,j)/ \overset{q}{\Sigma} A(i,j) * [m(i,j,k)/M(i,j,k)]$$

where n = m(i,j), the number of settlement places selected in the second stage, and q is the total number of settlement places subject to selection in the second stage.

CLUSTER SIZE

Since HIPS intended to select more points in space, the cluster size is going to be small. 18 households per cluster seems a reasonable cluster size since it is easily handled by teams of four female and two male interviewers.

Distribution of the number of settlement places in 5 regions and according to size groups and the number of settlements to be selected was given in the Table I.2.1.

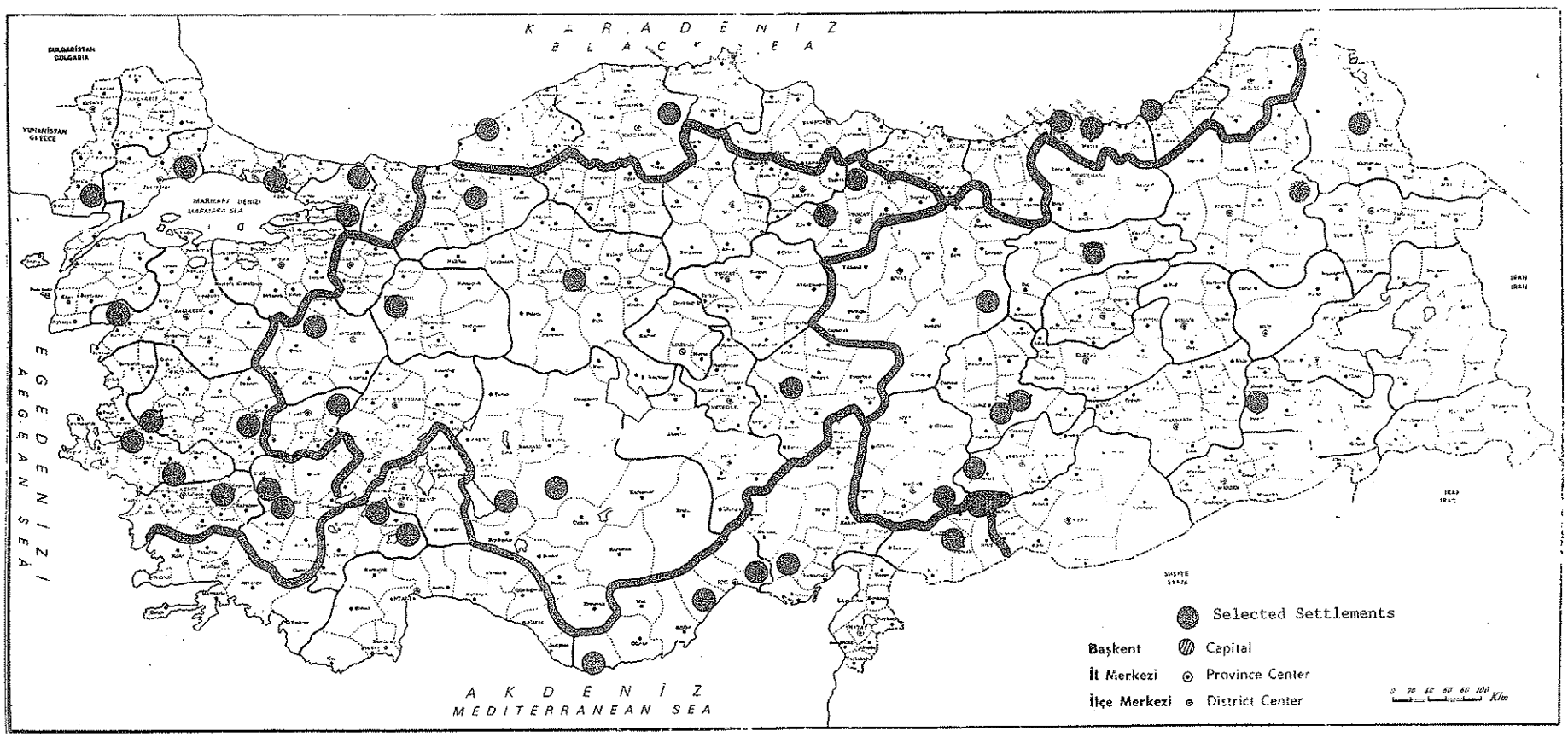
After the selection of settlement places in the first stage, the universe of settlement places with populations less than 10,000 which are administratively connected to settlements selected in the first stage, is defined. Table I.2.2 is the distribution of the number and populations of settlements with populations less than 10,000 over regions.

I.2.1 PROBLEMS ENCOUNTERED IN IMPLEMENTING THE SAMPLING PLAN

Totally 405 clusters were chosen out of 143 settlement places. Address lists of clusters for Manisa, Burdur, Erbaa and Malatya were re-selected and old lists were invalidated, because the original lists belonged to some other settlement place. One cluster in Gaziantep was re-selected, since the inhabitants of the original cluster refused to be interviewed.

The head of the Izmir team had the impression that 8 of 16 clusters of Izmir were too close to each other. Also the same team could not find the

Figure I-2.1. Settlements Where Interviews Were Held in the 1988 Turkish Fertility and Health Survey



6(a)

TABLE I.2.1: Distribution of the Number of Settlement Places by Region, Size Group and Number of Settlements to be Selected

Size group	Western Anatolia No. of Places	Western Anatolia No. of places to be select	Southern Anatolia No. of Places	Southern Anatolia No. of places to be select	Central Anatolia No. of Places	Central Anatolia No. of places to be select
1 -499	3463	7	1694	3	5442	6
500 -999	1827	8	1111	4	2298	6
1000 -1999	771	7	615	4	847	5
2000 -9999	417	5	310	3	569	4
10000 -24999	65	4	32	2	54	3
25000 -49999	17	3	12	2	20	2
50000 -99999	15	3	7	1	14	2
100000 +	7	2	8	2	7	2
Metropols	2	2	1	1	1	1
TOTAL	6584	41	3790	22	9252	31

Size Group	Northern Anatolia No. of Places	Northern Anatolia No. of places to be select	Eastern Anatolia No. of Places	Eastern Anatolia No. of places to be select
1 -499	2767	3	6841	6
500 -999	1577	3	3049	6
1000 -1999	825	3	1156	6
2000 -9999	242	3	378	5
10000 -24999	39	2	53	3
25000 -49999	7	1	21	2
50000 -99999	6	1	11	2
100000 +	4	1	9	2
Metropols	0	0	0	0
TOTAL	5467	17	11518	32

TABLE I.2.2: Distribution of the Number and Population of Settlements with Population Less Than 10,000 by Region

Size group	WESTERN		SOUTHERN		CENTRAL		NORTHERN		EASTERN	
	No vl	Total pop'n	No vl	Total pop'n	No vl	Total pop'n	No vl	Total pop'n	No vl	Total pop'n
1 -499	186	53947	200	58154	324	83274	140	40525	175	47225
500 -999	123	87168	146	105685	139	98339	69	48695	102	72540
1000 -1999	81	105559	60	84667	43	55835	37	51860	49	65200
2000 -9999	42	145637	19	53812	24	79387	11	42099	19	68673
TOTAL	432	392311	425	302318	482	316835	257	183179	345	253638

house with number specified for one cluster although the street was found. In that case they accepted the house as a beginning point with the number closest to the given number.

The Istanbul team also claimed that some of the clusters were too close to each other.

I.2.2. SAMPLE OUTCOME

The overall response rate for the household questionnaire is 92.62 %. Highest response rate was attained in Eastern Region (97.29 %) and the lowest rate in Western Region (90.45%). Response rate increases as we go from West to East.

The same trend in response rates for eligible women and husbands is observed as we go from West to East. Overall 77.47 % of eligible husbands were interviewed. The response rates for eligible women is 87.97. Response rates are quite low for husbands.

The smallest response rate is attained in the Southern Region both for women and husbands, and in other regions, the response rates are close to each other.

I.2.3 PERFORMANCE IN THE FIELD

Field work began on 8 August 1988 and 99.09 % of the work was completed between August 8 and September 11, 35 working days.

Individual woman's and husband's questionnaires were applied at the same time the household questionnaires were applied.

TABLE I.2.3: Distribution of Target Number of Households, Households Interviewed and Response Rate at Household Level

		METR.	100000+	500000 99999	25000 49999	100000 24999	2000 9999	1000 1999	500 999	1 499	Total
WEST	Interviewed	1177	263	155	92	151	211	143	180	139	2511
	Target	1369	287	176	98	160	220	146	181	139	2776
	Response r.	85.98	91.64	88.07	93.88	94.38	95.91	97.95	99.45	100.0	90.45
SOUTH	Interviewed	100	234	57	55	74	107	90	84	52	853
	Target	122	261	57	63	76	118	90	84	52	923
	Response r.	81.97	89.66	100.0	87.30	97.37	90.68	100.0	100.0	100.0	92.42
CENTER	Interviewed	304	252	135	100	110	224	122	174	152	1573
	Target	365	284	139	102	121	224	125	174	157	1691
	Response r.	83.29	88.73	97.12	98.04	90.91	100.0	97.60	100.0	98.62	93.02
NORTH	Interviewed	–	74	41	28	64	85	105	105	72	574
	Target	–	89	51	31	76	85	105	105	72	614
	Response r.	–	83.15	80.39	90.32	84.21	100.0	100.0	100.0	100.0	93.49
EAST	Interviewed	–	220	75	74	79	121	135	179	158	1041
	Target	–	232	79	74	81	122	135	189	158	1070
	Response r.	–	94.83	94.94	100.0	97.53	99.18	100.0	94.71	100.0	97.29
TOTAL	Interviewed	1581	1043	463	349	478	748	595	722	573	6552
	Target	1856	1153	502	368	514	769	601	733	578	7074
	Response r.	85.18	90.46	92.23	94.84	93.00	97.27	99.00	98.50	99.13	92.62

TABLE I.2.4: Distribution of the Eligible Women and Interviewed Women and Response Rates for Eligible Women

		METR.	100000+	50.000 99 999	25 000 49 999	10 000 24 999	2000 9999	1000 1999	500 999	1 - 499	TOTAL
WEST	Interviewed	810	204	121	67	114	172	119	149	102	1858
	Target	859	198	124	70	122	173	120	151	102	1919
	Response R.	94.30	103.03	97.58	95.71	93.44	99.42	99.17	98.68	100.00	96.82
SOUTH	Interviewed	66	193	50	36	63	94	75	74	53	704
	Target	70	210	49	41	65	99	84	77	53	748
	Response r.	94.29	91.90	102.04	87.80	96.92	94.95	89.29	96.10	100.00	94.12
CENTRAL	Interviewed	219	204	111	83	93	188	111	137	109	1255
	Target	232	217	115	84	99	202	127	137	120	1333
	Response r.	94.40	94.01	96.52	98.81	93.94	93.07	87.40	100.00	90.83	94.15
NORTH	Interviewed	–	62	35	26	59	90	112	125	67	576
	Target	–	64	35	25	63	93	119	137	68	604
	Response r.	–	96.88	100.00	104.00	93.65	96.77	94.12	91.24	98.53	95.36
EAST	Interviewed	–	181	66	53	65	103	108	164	124	864
	Target	–	190	71	54	69	109	118	176	144	931
	Response r.	–	95.26	92.96	98.13	94.20	94.50	91.53	93.18	86.11	92.80
TOTAL	Interviewed	1095	844	383	265	394	647	525	649	455	5257
	Target	1161	879	394	274	418	676	568	678	487	5535
	Response r.	94.32	96.02	97.21	96.72	94.26	95.71	92.43	95.72	93.43	94.98

TABLE I.2.5: Overall Response Rates for Eligible Women

	METR.	100000+	50 000 99 999	25 000 49 999	10 000 24 999	2000 9999	1000 1999	500 999	1 - 499	TOTAL
WEST	81.08	91.64	85.94	89.85	88.19	95.35	97.14	98.14	100.00	87.57
SOUTH	77.29	82.40	100.00	76.65	94.37	86.10	89.29	96.10	100.00	86.99
CENTRAL	78.63	83.42	93.74	96.87	85.40	93.07	85.30	100.00	87.94	87.58
NORTH	–	80.56	80.39	90.32	78.86	96.77	94.12	91.24	98.53	89.15
EAST	–	90.34	88.26	98.13	91.87	93.73	91.53	88.25	86.11	90.29
TOTAL	80.34	86.86	89.66	91.73	87.66	93.10	91.51	94.28	92.62	87.97

I.3. CODING

The questions were prepared in a pre-coded style in order to shorten the data processing time. However, there were a number of open-ended questions that required coding. The coding process began as the interviewers were in the field. When the interviews of a cluster were completed, questionnaires were sent to the Institute. Questionnaires that arrived were counted and registered. Then, after coding their identification numbers, the woman's, husband's and household questionnaires were separated because they were processed one after the other. First, the woman's questionnaire was coded and following this the husband's and household questionnaires were handled.

In the woman's questionnaire, apart from the identification page, 23 questions were coded. Besides, before undergoing the data entering process 9 filter questions were manually edited. In the husband's questionnaire, in addition to filter questions, 14 questions were coded. Finally, in the household questionnaire there were only 2 questions that required coding.

The coding process of the woman's questionnaire started one week after the commencement of the survey, continued during the survey and was finished one week after the arrival of the last team from the field. Each question was coded by one person. However, questions of the same kind -such as occupation and kinship questions- were also coded by one person. Once the coding process of a cluster of questionnaires was completed, that cluster was put into the process for the data entry phase. Following the woman's questionnaire, the husband's and household questionnaires underwent the same procedures.

I.4 DATA ENTRY

Data entry of all questionnaires applied in the 1988 Survey were made by a general purpose data entry computer program developed at HIPS. Four Personal Computers were devoted to the purpose, but not all four were used at all days of data entry. Two shifts worked each day. Each computer had two users.

The date, and time of data entry were also included in the records the program created. Both the time at the beginning and at the end of data entry of a questionnaire were included on a record created for a questionnaire.

The data entry program works with files external to the program which contain parameters for the questionnaire type being punched. It automatically makes a structural check for the questionnaire being entered since it skips questions according to skip instructions. It creates an ASCII file that is usable and editable by any editor program.

The program uses a file that contains minimum and maximum values of the variables in the questionnaire. Use of this file program makes range check for each variable as soon as the value of the variable is entered.

Another external file the program uses is the internal consistency file. This file contains the internal consistency relations among the variables of the questionnaire.

Data entry of the women's questionnaires began on 1st. September and ended on 9th October 1988. It was completed in 30 working days with 4 PC computers.

TABLE I.2.6: Distribution of Eligible Husbands and Interviewed Husbands and Response Rates for Husband's Questionnaire

		METR.	100000 +	50 000 99 999	25 000 49 999	I0 000 24 999	2000 9999	I000 I999	500 999	I-499	TOTAL
WEST	Interviewed	3I6	84	54	30	58	73	56	65	53	789
	Target	4II	92	67	35	66	84	60	52	55	922
	Response r.	76.89	9I.30	80.60	85.7I	87.88	86.90	93.33	I00.00	96.36	85.77
SOUTH	Interviewed	24	83	3I	II	32	40	37	28	30	3I6
	Target	32	II2	32	I5	36	48	46	40	36	397
	Response r.	75.00	74.II	96.88	73.33	88.89	83.33	80.43	70.00	83.33	79.60
CENTRAL	Interviewed	92	75	48	33	48	70	39	57	47	509
	Target	II2	I03	5I	35	53	79	62	65	53	6I3
	Response r.	82.I4	72.82	94.I2	94.29	90.57	88.6I	62.90	87.69	88.68	83.03
NORTH	Interviewed	-	22	22	I2	3I	38	59	54	40	278
	Target -		30	26	I2	34	39	67	62	47	3I7
	Response r.	-	73.33	84.62	I00.00	9I.I8	97.44	88.06	87.I0	85.II	87.70
EAST	Interviewed	-	79	2I	23	34	52	49	73	4I	372
	Target -		95	34	26	43	56	50	I00	54	458
	Response r.	-	83.I6	6I.76	88.46	79.07	92.86	98.00	73.00	75.93	8I.22
TOTAL	Interviewed	432	343	I76	I09	203	273	240	277	2II	2264
	Target	555	432	2I0	I23	232	306	285	3I9	245	2707
	Response r.	77.84	79.40	83.8I	88.62	87.50	89.22	84.2I	86.83	86.I2	83.64

TABLE I.2.7: Overall Response Rates for Husband's Questionnaire in Strata

	METR.	100000+	50 000 99 999	25 000 49 999	10 000 24 999	2000 9999	1000 1999	500 999	1-499	TOTAL
WEST	66.11	83.67	70.98	80.46	82.94	83.35	91.42	99.45	96.36	77.40
SOUTH	61.48	66.45	96.88	64.02	86.55	75.56	80.43	70.00	83.33	73.57
CENTRAL	68.41	64.61	91.41	92.44	82.34	88.61	61.39	87.69	85.86	77.23
NORTH	–	60.97	68.03	90.32	76.78	97.44	88.06	87.10	85.11	81.99
EAST	–	78.86	58.63	88.46	77.12	92.10	98.00	69.14	75.93	79.02
TOTAL	66.30	71.83	77.30	84.05	81.38	86.78	83.37	85.53	85.37	77.47

The average number of questionnaires punched per day in the first week of data entry was 125 and increased to 294 per day in the last week.

98.36% of the data entry of the husband's questionnaires was completed in 7 working days (between October 7-13, 1988). Household questionnaires were completed in 8 days (October 24-November 1, 1988).

Data entry of household members' questionnaires began on November 1, 1988 and ended on 21 November. It was completed in 19 working days.

I.5. RECODING OF VARIABLES

Once the survey data files had been completely created, new data files were created containing the actual variables to be used for analysis. A basic language program was developed and applied to the data. Since the individual questions asked in a survey often do not correspond one-for-one to the variables required for analysis, new files were created containing all the variables that were going to be used repeatedly for analytical purposes. Separate recorded files were prepared for the woman's and the husband's questionnaires but not for the household questionnaires. These recoded files simplified the production of the tables for this report. The basic variables in these files were mostly the same was the World Fertility Survey Standard Recode File. But, in addition to the WFS standard variables, some new variables were added to the recoded files.

I.6. TABULATIONS

A statistical Package for Social Sciences (SPSS) was used for making tabulations. The first versions were not the same as the final versions decided for publication. After the first versions of tables were examined, necessary amendments, modifications, and deletions were made and the final set of tables and their format for inclusion in the report were specified. Although the tabulation software provided for recoding variables while the data are being read, the prior production of recoded files containing all variables in exactly the form required for the tables simplified table production.

TABLE I.2.8: Percentage Distribution of Target Household Population and Percentage Distribution of Household Population Interviewed

		Metr.	1.00000+	50 000 99 999	25 000 49 999	10 000 24 999	2000 9999	1l000 1999	500 999	1-499	TOTAL
WEST	Target	15.14	3.18	1.94	1.14	1.87	2.85	1.89	2.33	1.78	32.11
	Int'd	13.94	3.16	1.95	1.08	2.08	3.05	1.93	2.67	2.02	31.88
SOUTH	Target	1.65	3.52	0.77	0.74	0.89	2.01	1.54	1.46	0.89	13.46
	Int'd	1.26	3.83	0.69	0.80	1.04	2.09	1.90	1.49	1.10	14.19
CENTRAL	Target	4.54	3.52	1.72	1.27	1.50	3.69	2.07	2.88	2.56	23.77
	Int'd	3.72	3.40	1.86	1.41	1.57	4.19	2.27	2.55	2.30	23.26
NORTH	Target	-	1.19	0.69	0.43	1.07	1.64	2.03	2.03	1.40	10.50
	Int'd	-	1.08	0.53	0.43	0.97	1.55	2.04	2.29	1.29	10.18
EAST	Target	-	3.69	1.26	1.30	1.41	2.54	2.79	3.93	3.25	20.16
	Int;d		4.22	1.24	1.23	1.38	2.51	2.73	4.04	3.14	20.48
TOTAL	**Target**	**21.32**	**15.11**	**6.39**	**4.88**	**6.74**	**12.72**	**10.32**	**1l2.63**	**9.89**	**100.00**
	Int'd	**18.92**	**15.68**	**6.27**	**4.95**	**7.04**	**13.39**	**10.87**	**13.04**	**9.85**	**100.00**

TABLE I.2.9: The Number of Questionnaires for which Interview Duration can be Calculated and Average Interview Duration in Minutes.

Household		Women		Husbands	
Number	Int. Dur.	Number	Int. Dur	Number	Int. Dur.
6286	9.83	5086	22.87	2196	18.50

TABLE I.4.1: Data Entry of Women's Questionnaire and Average Number Punched per Day

	No of Q	Av. No of Q
AUG. 31	6	6
SEPT. 1-3	123	41
SEPT. 5-10	749	125
SEPT. 12-16	1057	211
SEPT. 19-24	1585	264
SEPT. 26-30	1468	294
OCT. 3 +	267	33
TOTAL	**5255**	**155**

FINDINGS FROM THE WOMAN'S QUESTIONNAIRE

CHAPTER II

FINDINGS FROM THE WOMAN'S QUESTIONNAIRE

II.1. BACKGROUND CHARACTERISTICS OF THE WOMEN'S QUESTIONNAIRE RESPONDENTS

In this Survey, 5257 women were interviewed for the Women's Questionnaire. These were ever-married, less than 50 years old,who were living in the households selected by the sampling procedures and had completed the Household Questionnaire on which eligible women (ever-married women less than 50 years old) had been marked. Thus, 5535 women were found to have the necessary characteristics for interview for the Women's Questionnaire. Of these owing to various reasons, it was not possible to interview 278.

In Table II.1.1, the number and percentage distribution of ever-married women interviewed is given by region and stratum. Urban areas are categorised as localities with 10,000 and over population, and rural areas as localities with a population of less than 10,000. Of the total women, 56.7 percent live in urban areas, 43.3 percent in rural areas. The proportion of urban women in the Western Region is 70.8 percent; in the Southern Region 57.9 percent; in the Central Region 56.6 percent; in the Northern Region 31.6 percent and in the Eastern Region 42.1 percent. The percentages of urban women in the Northern and Eastern Regions are below the national average.

In Table II.1.2, the number and percentage distribution of ever-married women interviewed is given by age and type of residence. Contrary to the average for Turkey, for women less than 20 years old, the percentage for rural residence is higher than urban residence. But, for all the other age categories, the opposite is true. The reason for this is most probably the lower age at first marriage for women living in rural areas.

In Table II.1.3, the number and percentage distribution of ever-married women by age and region is given. Of the total women, only 4.3 percent are less than 20 years old. This percentage is lowest in the Western Region (3.2 percent) and highest in the Eastern Region (5.8 percent) owing to the difference in age at first marriage for women.The percentage of women more than 35 years old is 38.9 for total Turkey. The highest percentage is in the Western Region (41.8 percent), the lowest in the Northern Region (34.5 percent). this difference is most probably due to the composition of households: while in the Western Region nuclear families are predominant; in the Northern Region, households containing two generations predominate.

Table II.1.4 gives us the marital status of ever-married women interviewed by age. Of the total ever-married women, 96.8 percent are currently married, .8 percent are widowed, .3 percent are divorced and 2.1 percent are separated. If the separated and divorced categories were put together, 2.4 percent might be regarded as the proportion of marriages dissolved. The proportion of dissolution increases by age. Of the women aged 45 and over, only 90.3 percent are currently married.

TABLE II.1.1 : Number and Percentage Distribution of Ever-Married Women By Region and Stratum

SIZE OF PLACE	URBAN					RURAL		
Region	50,000 <	25,000-49,999	10,000-24,999	2,000-9,999	1,000-1,999	500-999	< 500	Total
I								
WEST	1135	67	114	172	119	149	102	1858
	61.1	3.6	6.1	9.3	6.4	8.0	5.5	100.0
II	309	36	63	94	75	74	53	704
SOUTH	43.9	5.1	8.9	13.4	10.7	10.5	7.5	100.0
III	534	83	93	188	111	137	109	1255
CENTRAL	42.6	6.6	7.4	15.0	8.8	10.9	8.7	100.0
IV	97	26	59	90	112	125	67	576
NORTH	16.9	4.5	10.2	15.6	19.4	21.7	11.6	100.0
V	247	53	65	103	108	164	124	864
EAST	28.5	6.1	7.5	11.9	12.5	19.0	14.4	100.0
	2322	**265**	**394**	**647**	**525**	**649**	**455**	**5257**
	44.2	**5.0**	**7.5**	**12.3**	**10.0**	**12.3**	**8.7**	**100.0**
TOTAL								
	2981			**2276**				**5257**
	56.7			**43.3**				**100.0**

TABLE II.1.2: Number and Percentage Distribution of Ever-Married Women By Age and Type of Place of Residence

AGE OF WOMEN	URBAN	RURAL	TOTAL
Less than 20	95 41.7	133 58.3	228 100.0
20-24	489 54.8	403 45.2	892 100.0
25-29	621 57.9	451 42.1	1072 100.0
30-34	631 61.9	388 38.1	1019 100.0
35-39	469 56.9	355 43.1	824 100.0
40-44	377 56.5	290 43.5	667 100.0
45-49	297 54.1	252 45.9	549 100.0
TOTAL	**2979** **56.7**	**2272** **43.3**	**5251** **100.0**

The following tables II.1.5,6 and 7 give information on the educational status of ever- married women by region, stratum and age.

In Table II.1.5, the number and percentage distribution of ever-married women is given by region. For total Turkey, 27.1 percent of women are illiterate, 46.9 percent are primary school graduates and 14.6 percent have secondary school or higher education. The proportion of illiterate women is lowest in the Western Region and highest in the Eastern Region. The percentage of women who have secondary or higher education is 20.6 percent in the Western Region, 15.1 percent in the Southern Region, 13.0 percent in the Central Region, 10.7 percent in the Northern Region and 5.9 percent in the Eastern region. The regional differences are quite apparent.

As seen in Table II.1.6, the percentage of illiterate women is highest in rural areas, decreasing as the size of place of residence increases. The percentage of women who have secondary or more education is 33.6 percent in the metropolitan areas; 18 percent in localities with a population more than 50,000; 18.4 percent in localities with a population between 10,000-50,000 and 2.5 percent in localities with a population less than 10,000 which are categorised as rural.

This shows the existence of a great difference in the educational status of women by stratum.

As seen in Table II.1.7, among the ever-married women, older women have less education than younger women. Of the women who are less than 20 years old, only 14.0 percent are illiterate, while for women aged 45-49 this proportion rises to 47.0 percent. But for women aged less than 20, the percentage of high school graduation is 3.9 percent which is less than the percentage for women aged 45-49. This is because these women were married off quite young, before they could attain further education.

But if we consider the 25-29 age group, the percentage of women among them having secon-

TABLE II.1.3: Number and Percentage Distribution of Ever-Married Women By Age and Region

AGE OF WOMEN	WEST	SOUTH	CENTRAL	NORTH	EAST	TOTAL
Less than 20	60	35	61	22	50	228
	3.2	5.0	4.9	3.8	5.8	4.3
20-24	273	140	219	101	159	892
	14.7	19.9	17.5	17.6	18.4	17.0
25-29	386	138	233	144	171	1072
	20.8	19.6	18.6	25.1	19.8	20.4
30-34	361	127	245	109	177	1019
	19.4	18.0	19.6	19.0	20.5	10.4
35-39	316	114	187	67	140	824
	17.0	16.2	14.9	11.7	16.2	15.7
40-44	244	89	176	65	93	667
	13.1	12.6	14.1	11.3	10.8	12.7
45-49	217	61	131	66	74	549
	11.7	8.7	10.5	11.5	8.6	10.5
TOTAL	**1857**	**704**	**1252**	**574**	**864**	**5251**
	100.0	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

TABLE II.1.4: Number and Percentage Distribution of Ever-Married Women By Age And Marital Status

Age of Women	Currently Married	Widowed	Divorced	Separated	Row Total
Less than 20	227	-	-	1	228
	99.6	-	-	.4	100.0
20-24	883	6	1	2	892
	99.0	.7	.1	.2	100.0
25-29	1054	7	3	8	1072
	98.3	.7	.3	.7	100.0
30-34	998	7	2	12	1019
	97.9	.7	.2	1.2	100.0
35-39	794	8	5	17	824
	96.4	1.0	.6	2.1	100.0
40-44	632	8	1	26	667
	94.8	1.2	.1	3.9	100.0
45 +	496	6	4	43	549
	90.3	1.1	.7	7.8	100.0
COLUMN TOTAL	**5084**	**42**	**17**	**108**	**5251**
	96.8	**.8**	**.3**	**2.1**	**100.0**

TABLE II.1.5: Number and Percentage Distribution of Ever-Married Women By Region and Educational Status

REGION	ILLITERATE	LITERATE	PRIMAREY SCHOOL	SECONDARY SCHOOL	HIGH SCHOOL	UNIVERSITY	TOTAL
West	304	165	1004	112	225	46	1856
	16.4	8.9	54.1	6.0	12.1	2.5	100.0
South	286	65	246	35	60	11	703
	40.7	9.2	35.0	5.0	8.5	1.6	100.0
Central	282	143	666	45	101	18	1255
	22.5	11.4	53.1	3.6	8.0	1.4	100.0
North	164	113	237	23	37	2	576
	28.5	19.6	41.1	4.0	6.4	.3	100.0
East	386	116	310	16	32	3	863
	44.7	13.4	35.9	1.9	3.7	.3	100.0
TOTAL	**1422**	**602**	**2463**	**231**	**455**	**80**	**5253**
	27.1	**11.5**	**46.9**	**4.4**	**8.7**	**1.5**	**100.0**

TABLE II.1.6: The Number and Percentage Distribution of Ever-Married Women By Stratum and Educational Status

STRATA	ILLITERATE	LITERATE	PRIMAREY SCHOOL	SECONDARY SCHOOL	HIGH SCHOOL	UNIVERSITY	TOTAL
Metro-politan	131 12.0	90 8.2	505 46.2	96 8.8	217 19.8	55 5.0	1094 100.0
50,000 +	295 24.1	133 10.9	577 47.1	60 4.9	143 11.7	17 1.4	1255 100.0
10,000 - 49,999	151 22.9	57 8.6	330 50.1	42 6.4	71 10.8	8 1.2	659 100.0
10,000	845 37.1	322 14.2	1051 46.2	33 1.4	24 1.1	- -	2275 100.0
TOOTAL	**1422** **27.1**	**602** **11.5**	**2463** **46.9**	**231** **4.4**	**455** **8.7**	**80** **1.5**	**5253** **100.0**

TABLE II.1.7: Number and Percentage Distribution of Ever-Married Women By Age

AGE OF WOMEN	ILLITERATE	LITERATE	PRIMAREY SCHOOL	SECONDARY SCHOOL	HIGH SCHOOL	UNIVERSITY	TOTAL
Less than 20	32 14.0	22 9.6	155 68.0	10 4.4	9 3.9	- -	228 100.0
20-24	148 16.6	56 6.3	538 60.3	54 6.1	91 10.2	5 .6	892 100.0
25-29	199 18.6	81 7.6	597 55.7	43 4.0	122 11.4	30 2.8	1072 100.0
30-34	255 25.0	101 9.9	497 48.8	48 4.0	99 9.7	19 1.9	1019 100.0
35-39	267 32.4	124 15.1	308 37.4	42 5.1	68 8.3	14 1.7	823 100.0
40-44	259 39.0	114 17.2	226 34.0	21 3.2	39 5.9	5 8	664 100.0
45-49	258 47.0	102 18.6	142 25.9	13 2.4	27 4.9	7 1.3	549 100.0
TOTAL	**1418** **27.0**	**600** **11.4**	**2463** **46.9**	**231** **4.4**	**455** **8.7**	**80** **1.5**	**5247** **100.0**

dary school or higher education is 18.2 percent. This is a quite high proportion in comparison with the women in the 45-49 age group, of whom only 8.6 percent have secondary school or higher education.

This is proof of the gradual improvement of the educational status of women in Turkey.

II.2. NUPTIALITY

II.2.1. INTRODUCTION

GENERAL CONCEPTS :

The importance of marriage and family formation on childbearing and childrearing are well established in demographic literature. Family is taken as "the institution" which is responsible for not only bearing but also rearing children. Thus it is the basic unit by which the population replenishes itself and ensures its survival.

Almost without exception, population policies aim to change fertility within the family. This leads eventually to unintentional as well as intentional changes in the family. Marriage and family are two phenomena through which many aspects of organized social life interact.Therefore, policies aiming at improving the fertility situation in Turkey have to consider factors associated with establishment as well as survival of the family.

II.2.2. CURRENT MARITAL STATUS BY AGE

Marriage in Turkey is considered to be universal.However, there seem to be little but some slight changes in "universality". The results of the survey imply that during the last five years there is about 1 percent increase in the proportion of never married by the age 45-49 (Table II.2.1). In absolute terms, this proportion may be trivial but in relative terms, especially when compared with previous trends (that is the increase between 1978-1983) there may be some changes in the depths of society in the proportion of women remaining single by the end of their reproductive lives. Such a small but significant increase in the proportion of never married, reminds us of the historical pattern of changes in nuptiality rates, especially in Western societies. This proportion finds more support in the chapter "Fertility Regulation",where a considerable increase in contraceptive use is documented.

Table II.2.1 shows that proportion of single women increased at all ages with no exception; the highest increase being in the age group 20-24 and the next highest in the age group 25-29. Does this imply that the younger sisters of the women we mention in the paragraph above are extending what they have seen among their older sisters? A closer look at the proportion remaining single by age reveals increasing progression rates for the younger cohorts. (See chapter V)

The proportion of married women in the reproductive age groups dropped by 9 percent to 60 by the year 1988. Four out of ten women of reproductive age are not currently married.This is quite an important trend and this drop can not be explained by the change in age distribution (higher proportion of females of reproductive but premarital age) only.

II.2.3. UNREGISTERED UNIONS : POLYGAMY AND CONSENSUAL UNIONS

The "1988 Turkish Population and Health Survey" considered all unions which are socially recognized as "unions acceptable for procreation" as eligible for the establishment of a family and considered the members as eligible for interviewing . The findings of this report (in this chapter as well as in others) do not differentiate unregistered unions from registered ones.

The prevalence of consensual unions and poligamy are among the nuptiality issues for which there is no, or very limited, data in Turkey. Especially discussions and debates on poligamy rest on theoretical considerations and personal observations| The 1988 Survey provides data on a national basis for the first time.

A. POLYGAMY :

This Survey finds that only 1.6% of all ever-married women between the ages 15-49 are or once were in poligamous marriages. Thus it may be claimed that poligamous marriages are not as widespread as some people think. However it is important to notice that there are some striking variations by rural/urban, geographical and other socio-economic characteristics.

TABLE II.2.1: Distribution of Women by Age and Current Marital Status

	SINGLE			CURRENTLY MARRIED			WIDOWED			DIVORCED			SEPARATED		
AGE	1978	1983	1988	1978	1983	1988	1978	1983	1988	1978	1983	1988	1978	1983	1988
18-19	77.8	70.0	85.4	21.7	29.7	14.4	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.0	0.1
20-24	26.2	34.2	39.3	72.1	64.5	59.7	0.9	0.3	0.1	0.4	0.4	0.8	0.4	0.6	0.1
25-29	7.5	8.5	12.2	90.5	89.9	86.2	1.3	0.6	0.7	0.2	0.6	0.6	0.5	0.3	0.2
30-34	2.6	3.4	4.5	93.5	94.6	93.0	3.1	1.2	1.7	0.3	0.5	0.6	0.5	0.3	0.2
35-39	0.9	2.6	2.9	95.2	93.4	93.9	2.9	3.0	1.9	0.5	0.7	0.8	0.5	0.2	0.6
40-44	1.6	1.0	2.8	92.7	92.0	92.3	4.4	5.9	4.4	0.4	1.1	0.8	0.9	0.1	0.3
45-49	0.7	0.8	1.8	89.4	88.8	90.0	8.9	8.2	7.4	0.5	1.6	0.5	0.5	0.6	0.3
15-49	**26.0**	**28.4**	**38.0**	**70.9**	**68.8**	**59.9**	**2.3**	**1.9**	**1.4**	**0.3**	**0.5**	**0.5**	**0.5**	**0.3**	**0.2**

TABLE II.2.2: PERCENTAGE OF WOMEN EVER IN POLYGAMOUS MARRIAGE (BY RURAL/URBAN DIVISION)

	IN POLIGAMOUS MARRIAGE	NOT IN POLY-GAMOUS MARRIAGE	TOTAL
URBAN	1.1	98.9	100.0
RURAL	2.2	97.8	100.0
TOTAL	1.6	98.4	100.0

TABLE II.2.3: Percentage of Women Ever in Polygamous Marriages By Region

REGION	IN POLYGAMOUS MARRIAGE	NOT IN POLY-GAMOUS MARRIAGE	TOTAL
WEST	0.6	99.4	100.0
SOUTH	1.6	98.4	100.0
CENTRAL	2.2	97.8	100.0
NORTH	1.7	98.3	100.0
EAST	2.9	97.1	100.0
TOTAL	**1.6**	**98.4**	**100.0**

TABLE II.2.4: Percent of Women Ever in Polygamous Marriages by Current Age of Women

AGE OF WOMEN	IN POLYGAMOUS MARRIAGE	NOT IN POLY-GAMOUS MARRIAGE	TOTAL
15-19	none	100.0	100.0
20-24	0.2	99.8	100.0
25-29	0.9	99.1	100.0
30-34	1.9	98.1	100.0
35-39	2.3	97.7	100.0
40-44	3.1	96.9	100.0
45-49	2.4	97.6	100.0
TOTAL	**1.6**	**98.4**	**100.0**

TABLE II.2.5: Type of Marriage by Region

	Civil	Civil + Religious	Only Religious	Other	Total
EST	13.9	82.9	3.2	100.0	
SOUTH	6.8	81.5	11.4	100.0	
CENTRAL	9.9	84.4	5.3	100.0	
NORTH	6.3	85.2	8.5	100.0	
EAST	11.3	65.7	20.8	100.0	
TOTAL	**10.7**	**80.5**	**8.3**	**100.0**	

TABLE II.2.6: Type of Marrriage (Rural / Urban)

	Civil	Civil + Religious	Only Religious	Other	Total
URBAN	13.2	81.9	4.5	0.4	100.0
RURAL	7.5	78.6	13.1	0.7	100.0
TOTAL	**10.7**	**80.5**	**8.3**	**0.5**	**100.0**

The prevalence of polygamous marriages is found to be less than expected. However, geographical variations are as expected. Polygamous marriages are most widespread in Eastern and Central Anatolia, medium in the South and North and least widespread in the West. Can this be taken as grounds for the fading out of poligamy? In modern Turkey, our expectation is probably "yes", because as depicted in Table II.2.4, the younger the cohorts are, the smaller is the proportion of women ever in polygamy.We feel that it is more usual to have women of different ages in poligamy, therefore had there been no downward trend in polygamy, we would have found about equal proportions of women in polygamy at all ages. So,probably women who are now in the later years of childbearing are the younger wives of the older cohorts (A decline observed in the last age group is probably due to reporting error which is very common for this age group in this kind of survey).

Distribution of women in polygamy by educational attainment are as expected,the highest being among those who have no formal education (3.3% among illiterates and 2.3% among those who are literate but did not finish primary school) and lowest among those who have formal education (0.9 among primary school graduates ; 0.9% among high school graduates and almost none among those with higher education)

B. RELIGIOUS (CONSENSUAL) UNIONS

The definition of consensual union (de facto union) "Socially recognized stable union with little or no legal standing" is a good definition for marriages with religious ceremonies with no civil registration in Turkey.The 1988 Survey results imply that prevalence of such marriages is of a sizeable magnitude. Among all marital unions in Turkey, 8.3 percent (almost 1 in 10 women when "other" category is added to this group) are founded only by religious ceremonies. These unions are not legally recognized and the partners are deprived of their institutional rights within the family. These are very important rights like inheritance or parental rights on education of their children.

Most women who have no institutional rights for their family (those who do not have civil registration) live in rural areas. Whereas 4 percent of urban women live in consensual unions three times as many live in urban areas. Civil + religious ceremonies seem to be the general pattern of family formation where deviations from this pattern are towards "only civil ceremonies" in urban areas and "only religious ceremonies" in rural areas (Both of these deviations are 13 percent).

II.2.4. AGE AT FIRST MARRIAGE

The 1988 Survey results imply an unprecedented change in mean age at marriage in Turkey. In 1973, mean age at marriage was estimated to be 17.7 years which remained the same in 1978. But, as shown in Table IV.1, there was a slight decrease in mean age at marriage (about one tenth of a year) between 1978 and 1983 and this increased to over 18 years in 1988. Most of this increase is observed in the East (which is almost one year) and the least in the West with about 0.3 years which seems quite natural because women usually marry after age 18 in the West but around 16 in the East. The Table also implies a widening gap in age at marriage between rural and urban women, especially due to the rather faster increase observed in the urban areas.

The level of educational attainment seems to be a differentiating factor for mean age at first marriage, but implies a rather interesting relationship of change since 1978. As Table II.2.8 shows, since 1978, not only women with higher education married later than women with lower education, but also the increase in age at marriage shows smoothly increasing differences as educational status rises between 1983 and 1988. Also, the comparison of third column (education of husband) with the fourth column (education of wife) implies that the low level of education of the husband is more important than the woman's own education in lowering the age at first marriage among women.

The tendency among the younger cohorts to marry later than the older ones seems quite obvious as depicted by Table II.2.8, last column. There is exactly one year's difference in age at first marriage between cohorts born in 1940-44 and 1960-64. We feel that all this can not be ex-

plained by the truncation effect (those who are at age 25-29 can not have age at marriage as 30 or over, but those who are at age 30 or over can!) and at least a portion of this change should be due to changing attitudes and be haviour.

II.2.5. MARRIAGE DISSOLUTION RATES

Survival of the marriage unions shows the spectacular strength of the family institution in Turkey (Table II.2.10) . In 1988 Marriage dissolutions are extremely low and lower than the rates in 1983. Whereas 92 percent of marriages were found to be surviving in 1983, 97 percent were surviving in 1988 with both partners alive and surviving. Of those marriages which were established 30-39 years ago, 94 percent are still surviving at the time of the survey. Widowhood rates are about twice the separation rates. Mortality of one of the partners is a more common cause than "mortality" of the union itself. As expected, mortality of the husband shows a big jump at the 25th year of marriage, which approximately corresponds to the middle 40's where the age pattern of mortality starts to increase also.

II.2.6. AGE DIFFERENCES BETWEEN HUSBAND AND WIFE

Seventy-eight percent of women married husbands older than themselves and 18% of women had husbands of the same age or younger (in fact 7% of women had younger husbands) . The mean age difference between husband and wife (at the first marriage) is 4.4 . Thus,the mean age of husbands at first marriage should be 22.6 (18.2 + 4.4).

The fact that urban women picked husbands about one year older than rural women chose; is interesting and probably explained by the higher proportion of more arranged marriages in rural areas. Also, a somewhat U shape curve observed among successive birth cohorts can be explained by changes in factors conducive to early and late marriages over the years.

TABLE II.2.7: Mean Age at First Marriage by Region and by Place of Residence

	1978	1983	1988
REGION			
West	18.5	18.4	18.7
South	18.2	17.7	18.3
Central	17.2	17.2	17.6
North	17.7	17.7	18.3
East	16.8	16.3	17.3
PLACE OF RESIDENCE			
Urban	18.2	17.8	18.5
Rural	17.2	17.2	17.8
TOTAL	17.7	17.6	18.2

Note: Table shows the mean age at marriage of women over age 24 but married before or at age24.

TABLE II.2.8: Mean Age at First Marriage by Education

Educational Attainment	Education of Husband 1978	1983	1988	Education of Wife 1988
Illiterate	16.6	16.2	16.5	17.1
Literate	17.3	16.8	17.2	17.6
Primary	18.0	17.5	18.0	18.5
Higher	18.9	18.7	19.4	20.3
TOTAL	**17.7**	**17.6**	**20.3**	**18.2**

TABLE II.2.9: Mean Age at First Marriage by Birth Cohort of Women

BIRTH COHORT	1978	1983	1988
1930-34	17.6	-	-
1935-39	17.6	17.5	-
1940-44	17.6	17.4	17.6
1945-49	17.7	17.3	17.9
1950-54	18.1	17.8	18.0
1955-59	-	17.9	18.4
1960-64	-	-	18.5
TOTAL (AGE 25-49)	17.7	17.6	18.2

TABLE II.2.10: Duration and Dissolution of Marriages

DURATION OF MARRIAGE	DIVORCED	WIDOWED	TOTAL
0-5	0.8	0.2	1.0
5-9	0.8	0.3	1.1
10-14	1.1	1.9	3.0
15-19	1.2	2.8	4.0
20-24	2.1	3.4	5.6
25-29	0.9	7.0	7.9
30-39	0.6	5.5	6.1
TOTAL	1.1	2.0	3.1

TABLE II.2.11: Mean Differences in Husbands' and Wives' Ages at First Marriage

	MEAN DIFFERENCE		
AGE OF WOMEN	URBAN	RURAL	TOTAL
< 20	6.5	5.4	5.9
20-24	4.8	3.9	4.3
25-29	4.4	3.7	4.1
30-34	4.4	3.6	4.1
35-39	4.8	4.1	4.5
40-44	4.7	4.4	4.5
45-49	5.2	3.9	4.6
ALL WOMEN	4.7	3.8	4.4

TABLE II.2.12: **Of all Women in an Age Cohort, the Cumulative Percentage Married before a Specified Age**

AGE COHORT		15-19	20-24	25-29	30-34	35-39	40-44	45-49
	1978	4	10	12	17	21	17	15
15	1983	2.8	7.9	9.2	11.8	14.3	13.8	16
	1988	4.0	7.1	10.5	12.7	15.3	17.6	23
	1978		18	21	29	35	29	28
16	1983		14.5	17.9	21.8	24.9	26.8	26.8
	1988		14.6	20.6	22.6	27.5	30.7	35.4
	1978		30	34	41	48	42	43
17	1983		23.8	28.5	33.2	38.9	39.7	39.4
	1988		23.0	30.6	35.0	42.1	43.9	47.3
	1978		41	46	53	61	55	54
18	1983		33.5	39.4	44.1	52.5	50.2	51.3
	1988		32.3	44.2	46.7	54.5	56.6	59.8
	1978		52	58	65	71	64	67
19	1983		41.1	51.4	55.7	63.2	61.1	61.1
	1988		41.5	53.7	56.8	65.3	64.6	66.3
	1978		60	67	71	79	75	76
20	1983		50.8	62.5	65.6	72.6	71.3	70.2
	1988		50.1	63.0	67.7	73.7	74.5	78.4
	1978			74	79	86	83	83
21	1983			69.7	75.5	79.4	78.7	77.6
	1988			69.4	74.5	79.0	79.7	82.2
	1978			80	84	90	88	88
22	1983			77.6	81.9	84.6	86.5	82.8
	1988			74.7	80.4	84.1	85.3	86.9
	1978			84	88	93	92	91
23	1983			83.1	85.6	87.9	90.7	87.3
	1988			79.0	84.7	87.5	88.8	90.0
	1978			87	91	95	94	93
24	1983			86.3	88.9	90.2	92.7	91.3
	1988			82.6	87.8	90.1	90.1	91.8
	1978			90	93	97	95	95
25	1983			88	91.6	92.2	94.3	94.2
	1988			85.7	90.3	92.3	91.7	93.1
	1978				97	98	98	97
30	1983				96	96	98.8	97.6
	1988				95	96.7	95.8	96.9
% ever-	'78	15.7	73.8	92.5	97.4	99.1	98.4	99.3
married	'83	17.0	65.8	91.5	96.6	97.4	99.0	99.2
at present	'88	14.6	60.7	87.8	95.5	97.1	97.2	98.2

II.3. CONSANGUINEOUS MARRIAGES

Of the 5257 interviewed ever-married women, 157 made a second marriage. 21.06% of 5414 marriages are consanguineous. This rate increases to 30.76% in Eastern Anatolia and decreases to 12.83 % in Western Anatolia. The proportion of consanguineous marriages is very close to the total Turkey figure in Central Anatolia while the proportion in the South is very close to the Eastern figure.

The first degree consanguineous marriage is defined as the marriage between the first cousins and the second degree is defined as the marriage between second cousins. In other types of consanguineous marriages the spouses are remote relatives.

The proportion of first and second degree consanguineous marriages in total consanguineous marriages is the highest at the 25-34 age group, 87.19%; and lowest at age group 35+, 79.3% (Table II.3.2)

Education, as in other surveys, seems to be an important determinant of consanguineous marriages. Among women who have at most primary education, more than 20% made consanguineous marriages, while women with secondary or higher education have a proportion of about 10% consanguineous marriages. In other words, among the women who made consanguineous marriages with education primary or less, the proportion of first and second degree consanguineous marriages is over 80%, but the proportion drops to 70% among women with secondary or higher education (Table II.3.3).

When compared with the 1983 survey results, the proportion of overall consanguineous marriages decreased by 2% in 5 years. The fall in the proportion of 1st and 2nd degree consanguineous marriages is much higher; it dropped from 20.9% to 17.6%, by 3.3%. In Table II.3.4, 1988 figures are the distribution of last marriage.

TABLE II.3.1: Distribution of Types of Marriage by Regions

	Not Relat.	1st d. Cons.	2nd d. Cons.	3rd d. Cons.	4th d. Cons.	Remote	Total
	1665	161	36	28	4	16	1910
WEST	87.17	8.43	1.88	1.47	0.21	0.84	100.00
	38.96	20.33	22.93	23.73	15.38	34.04	35.28
	515	146	28	27	4	11	731
SOUTH	70.45	19.97	3.83	3.69	0.55	1.50	100.00
	12.05	18.43	17.83	22.88	15.38	23.40	13.50
	1034	180	41	29	12	9	1305
CENTRAL	79.23	13.79	3.14	2.22	0.92	0.69	100.00
	24.19	22.73	26.11	24.58	46.15	19.15	24.10
	450	106	9	11	2	9	587
NORTH	76.66	18.06	1.53	1.87	0.34	1.53	100.00
	10.53	13.38	5.73	9.32	7.69	19.15	10.84
	610	199	43	23	4	2	881
EAST	69.24	22.59	4.88	2.61	0.45	0.23	100.00
	14.27	25.13	27.39	19.49	15.38	4.26	16.27
	4274	792	157	118	26	47	5414
TURKEY	78.94	14.63	2.90	2.18	0.48	0.87	100.00

TABLE II.3.2: Distribution of Consanguineous Marriages by the Current Age of Women.

	1st d. Cons.	Other Cons.	Total
-24	225 83.03	46 16.97	271 100.00
25-34	381 87.19	56 12.81	437 100.00
35 +	341 79.30	89 20.20	430 100.00
Unknown	2 100.00	- -	2 100.00
Total	949 83.25	191 16:75	1140 100.00

TABLE II.3.3: Distribution of Marriages According to the Type and Education of Women.

	Not Relat.	Cons.	Total
Illiterate	1122 71.79	441 28.21	1563 100.00
Can read and write	401 78.32	111 21.68	512 100.00
Primary	2035 80.02	508 19.98	2543 100.00
Secondary	217 90.04	24 9.96	241 100.00
High school	417 88.35	55 11.65	472 100.00
Univ.	80 98.77	1 1.23	81 100.00
Unknown	2 100.00	0 -	2 100.00
Total	4274 78.94	1140 21.06	5414 100.00

TABLE II.3.4: Comparison of 1983 and 1988 Percentage Distribution in Consanguineous Marriages

	1st. deg.	2nd deg.	3d deg	4th deg.	Other	No.Cons.	Total
1983	16.9	4.0	0.6	1.2	0.3	76.9	100.00
1988	14.7	2.9	2.2	0.5	0.9	78.9	100.00

II.4.FERTILITY

II.4.1. FERTILITY

Of the 5257 ever-married women, 7.7 percent are found to be pregnant, 3.2 percent currently not married, 1.7 percent sterilized and 10.0 percent currently infecund and the remaining 77.4 percent exposed. The number and percentage distribution of ever-married women by exposure status and age is given in Table 1.

As seen in Table II.4.1, 24.1 percent of women aged less than 20 who are pregnant, while the age of the women increases, the proportion of being pregnant decreases. Opposite to this, as the age of women increases, the proportion of being currently infecund also increases.For the 45-49 age group, the percentage of currently infecund women is 44.4 percent, almost half of the women.

In Table II.4.2, the number of current pregnancies by years since first marriage is given. As seen in Table II.4.2, almost half of the pregnancies occur during the first 5 years of marriage and 73.0 percent in the first ten years of marriage.

In Table II.4.3, total pregnancies (Completed + Current) for ever-married women by age, region and type of residence is given. As seen in Table II.4.3, the average number of total pregnancies is 4.05 for all Turkey, 3.79 for urban areas and 4.38 for rural areas. Among the regions, the Western Region has the lowest average, while the Eastern Region has the highest. Women aged 45-49 in the Western Region, has an average of 5.22 pregnancies, while in the Eastern region it is 8.43 .

The following tables give the average number of total pregnancies, separately for current and completed pregnancies,number of wasted pregnancies (abortions and still births), number of children ever-born alive, number of children which survived and the number of children who died, by the age of women according to the type of residence, region, duration of marriage and educational status of the women. Tables II.4.4,5 and 6 are for total women, while tables 7-21 are for ever-married women.

As seen in Table II.4.4, for total women for all Turkey, women aged 45-49 has an average of 6.03 completed pregnancies, of which 1.17 are wasted and 4.86 turned out to be fertile. The proportion of wasted pregnancies is 19.34 percent. The same women had on average 4.91 children ever-born, 3.91 children survived and 1.00 children died. The proportion of children who died is 20.37 percent.

As seen in Table II.4.5, for total women for urban areas, women aged 45-49 had on average 5.46 completed pregnancies, which 1.37 became wasted and 4.09 turned out to be fertile. The proportion of wasted pregnancies is 25.12 percent. The same women had on average 4.14 children ever-born, 3.51 children survived and .63 children died. The proportion of children who died is 15.18 percent

As seen in Table II.4.6, for total women in rural areas, women aged 45-49 had on average 6.71 completed pregnancies of which .92 became wasted and 5.79 turned out to be fertile. The proportion of wasted pregnancies is 13.68 percent. The same women had on average 5.85 children ever-born, 4.39 children survived and 1.46 children died. The proportion of children who died is 24.92 percent.

In urban areas, the proportion of wasted pregnancies is higher, almost double that in rural areas, while in rural areas the proportion of children died is higher.

According to Table II.4.7, for total Turkey, ever-married women aged 45-49 had on average 6.15 completed pregnancies,and 1.19 wasted pregnancies, 4.96 fertile pregnancies, whose outcome was 5.01 children ever-born, 3.99 children survived and 1.02 children died. The proportion of wasted pregnancies is 19.34 and the proportion of children died 20.44 percent.

According to Table II.4.8, in urban areas, ever-married women aged 45-49 had on average 5.63 completed pregnancies, 1.41 wasted pregnancies, 4.22 fertile pregnancies whose outcome was 4.26 children ever-born, 3.62 children survived, .65 children died. The proportion of wasted pregnancies is 25.11 percent and the proportion of children died 15.18 percent.

According to Table II.4.9, in rural areas, ever-married women aged 45-49 had on average 6.76 completed pregnancies, .92 wasted pregnancies, 5.83 fertile pregnancies whose outcome was 5.89 children ever-born, 4.42 children survived,1.47

TABLE II.4.1 : The Number and Percentage Distribution of the Exposure Status of Ever-Married Women by Age

AGE OF WOMEN	PREGNANT	CURRENTLY NOT MARRIED	STERLIZED	CURRENTLY INFECUND	EXPOSED	TOTAL
Less than 20	55	1		1	171	228
	24.1	.4		.4		100.0
20-24	160	9	1	12	710	892
	17.9	1.0	.1	1.3	79.6	100.0
25-29	108	18	12	19	915	1072
	10.1	1.7	1.1	1.8	85.4	100.0
30-34	59	21	15	49	875	1019
	5.8	2.1	1.5	4.8	85.9	100.0
35-39	16	30	20	75	683	824
	1.9	3.6	2.4	9.1	82.9	100.0
40-44	7	35	21	126	478	667
	1.0	5.2	3.1	18.9	71.7	100.0
45-49	-	53	22	244	230	549
		9.7	4.0	44.4	41.9	100.0
TOTAL	**405**	**167**	**91**	**526**	**4026**	**5251**
	7.7	**3.2**	**1.7**	**10.0**	**77.4**	**100.0**

children died. The proportion of wasted pregnancies is 13.69 percent and the proportion of children died 24.93 percent.

As in the case for total women, also for ever-married women in urban areas, the proportion of wasted pregnancies is higher and the proportion of children died lower than rural areas.

As seen in Table II.4.10 , for ever-married women living in the Western Region, women aged 45-49 had on average 5.22 completed pregnancies,1,35 wasted pregnancies 3.87 fertile pregnancies whose outcome was 3.90 children ever-born, 3.30 children survived, .60 children died. The proportion of wasted pregnancies is 25.86 percent and the proportion of children died 15.49 percent.

As seen in Table II.4.11 , for ever-married women living in the Southern Region, women aged 45-49 had on average 7.67 completed pregnancies, 1.36 wasted pregnancies,6.31 fertile pregnancies whose outcome was 6.41 children ever-born, 5.03 children survived,1.38 children died. The proportion of wasted pregnancies is 17.74 percent and the proportion of children died 21.48 percent.

As seen in Table II.4.12 , for ever-married women living in the Central Region, women aged 45-49 had on average 6.21 completed pregnancies, 1.21 wasted pregnancies,4.92 fertile pregnancies whose outcome was 4.94 children ever-born, 3.76 children survived,1.18 children died. The proportion of wasted pregnancies is 19.70 percent and the proportion of children died 23.95 percent.

As seen in Table II.4.13 , for ever-married women living in the Northern Region, women aged 45-49 had on average 5.27 completed pregnancies, .61 wasted pregnancies,4.67 fertile pregnancies whose outcome was 4.73 children ever-born, 3.79 children survived, .94 children died. The proportion of wasted pregnancies is 11.49 percent and the proportion of children died 19.86 percent.

As seen in Table II.4.14 , for ever-married women living in the Eastern Region, women aged 45-49 had on average 8.43 completed pregnancies, 1.07 wasted pregnancies,7.37 fertile pregnancies whose outcome was 7.49 children ever-born, 5.73 children survived,1.76 children died. The proportion of wasted pregnancies is 12.67 percent and the proportion of children died 23.46 percent.

For women 45-49, the highest number of completed pregnancies is in the Eastern Region (8.43 completed pregnancies). This is .76 pregnancies higher than the Southern Region; 2.31 pregnancies higher than the Central Region; 3.16 pregnancies higher than the Northern Region and 3.21 pregnancies higher than the Western Region. The decrease in the number of completed pregnancies is the effect of the use of contraceptives and/or the increase of age at first marriage for women.

For women aged 45-49, the highest number of children ever-born is in the Eastern Region (7.49). This is 1.08 children ever-born higher than the Southern Region, 2.55 than the Central Region, 2.76 more than the Northern Region, and 3.59 higher than the Western Region.

The highest proportion of wasted pregnancies for women aged 45-49 is in the Western Region (25.86 percent), while the lowest is in the Southern Region (11.49 percent). The highest proportion of children died (23.95 percent) is in the Central Region, and the lowest (15.49 percent) in the Western Region.

In Table II.4.15, the duration of marriage is taken as the variable to study cumulative fertility. For women married 30 or more years, women on average has 7.09 completed pregnancies, 1.27 wasted pregnancies, 5.82 fertile pregnancies whose outcome was 5.84 children ever-born, 4.42 children survived and 1.42 children died.

When the duration of marriage is less than 5 years, the proportion of wasted pregnancies is 18.50 percent and the proportion of children died 6.45 percent. When the duration of marriage is 5-9 years, the proportion of wasted pregnancies is 20.52 percent and the proportion of children died 9.68 percent. When the duration of marriage is 10-14 years, the proportion of wasted pregnancies is 18.40 percent and the proportion of children died 15.27 percent. When the duration of marriage is 15-19 years, the proportion of wasted pregnancies is 23.30 percent and the proportion of children died 14.33 percent. When the duration of marriage is 20-24 years, the proportion of wasted

pregnancies is 24.15 percent and the proportion of children died 17.11 percent. When the duration of marriage is 25-29 years, the proportion of wasted pregnancies is 21.94 percent and the proportion of children died 20.37 percent.When the duration of marriage is 30 or more years, the proportion of wasted pregnancies is 17.88 percent and the proportion of children died 24.31 percent.

The proportion of wasted pregnancies is highest (24.15 percent) when the duration of marriage is 20-24 years. Next comes 23.30 percent when the duration of marriage is 15-19 years. This means that abortion gains importance after the family reaches a certain number of children, and abortion is used more than it was in the past.

The proportion of children died shows a steady increase as the duration of marriage increases. As most child deaths take place in infancy, this shows that child mortality has gradually declined.

Tables II.4.16-22 study the relation of education and fertility.

As seen in Table II.4.16 , among ever-married women illiterate, those aged 45-49 has on average 7.42 completed pregnancies, 1.12 wasted pregnancies,6.19 fertile pregnancies whose outcome was 6.24 children ever-born, 4.88 children survived,1.39 children died. The proportion of wasted pregnancies is 15.16 percent and the proportion of children died 22.16 percent.

As seen in Table II.4.17 , among the ever-married women who are literate but did not complete any school, women aged 45-49 has on average 5.50 completed pregnancies, .84 wasted pregnancies,4.66 fertile pregnancies whose outcome was 4.70 children ever-born, 3.75 children survived, .95 children died. The proportion of wasted pregnancies is 15.33 percent and the proportion of children died 20.25 percent.

As seen in Table II.4.18 , among the ever-married women who are primary school graduates, those aged 45-49 has on average 5.09 completed pregnancies, 1.28 wasted pregnancies,3.82 fertile pregnancies whose outcome was 3.85 children ever-born, 3.18 children survived, .68 children died. The proportion of wasted pregnancies is 25.04 percent and the proportion of children died 17.55 percent.

As seen in Table II.4.19 , among the ever-married women who are secondary school graduates, women aged 45-49 has on average 4.54 completed pregnancies, 1.85 wasted pregnancies,2.69 fertile pregnancies whose outcome was 2.69 children ever-born, 2.54 children survived, .15 children died. The proportion of wasted pregnancies is 40.68 percent and the proportion of children died 5.72 percent.

As seen in Table II.4.20 , among the ever-married women who are high school graduates, women aged 45-49 has on average 3.41 completed pregnancies, 1.30 wasted pregnancies,2.11 fertile pregnancies whose outcome was 2.15 children ever-born, 1.85 children survived, .30 children died. The proportion of wasted pregnancies is 38.04 percent and the proportion of children died 13.78 percent.

As seen in Table II.4.21 , among the ever-married women who are university graduates, those aged 45-49 has on average 3.71 completed pregnancies, 1.57 wasted pregnancies,2.14 fertile pregnancies whose outcome was 2.14 children ever-born, 2.00 children survived, .14 children died. The proportion of wasted pregnancies is 42.30 percent and the proportion of children died 6.67 percent.

In Turkey, as the average of educational attainment increases, fertility decreases, the proportion of wasted pregnancies increases and the proportion of children died decreases.

Education increases the age at first marriage for women as seen in Table II.4.22. Between university-educated and illiterate women there exists, on average difference of 6.46 years in age at first marriage. Primary school graduates marry, on average 1.33 years later than illiterates. Secondary school graduates marry, on average 2.24 years later than illiterate women. Between illiterates and high school graduates, this gap is 4.18 years.

Since the fertile period of a woman ends by the age of 50, the postponement of marriage affects the fertility performance of a woman by reducing the number of years she is at risk of pregnancy.

II.4.2. CHILDLESSNESS

Of the 5257 women interviewed for the Women's Questionnaire,447 declared that they had not had a live birth. The ratio of infertility is 8.5 percent. But since some of this childlessness is voluntary, only related to postponement of the first birth, the ratio of childlessness for women aged 45-49 should be taken as an indication of real infertility. In Table 23, the proportion of childless women decreases as the age of women increases. For the women aged 15-19 , this proportion is 46.0 percent, but for women aged 45-49, only 4.05 percent.

Differences between regions and type of settlement do not seem important, especially for older women.

II.4.3. CURRENT FERTILITY

Number of live births for 1987-1988 is 752, which will be used to calculate current fertility of Turkey. In Table 24, the numerical distribution of births is given by age of the mother, region and stratum and sex of the child.

No. of live births for the 1987-1988 period is 752, which will be used to calculate the current fertility of Turkey.

In Table II.4.24, the numerical distribution of births is given by age of the mother, by region and stratum and by sex of the child.

Using the data given in Table II.4.24, for overall Turkey, marital total fertility rate (MTFR) is found to be 5.15 and total fertility rate (TFR), 3.04. If the results of the previous surveys conducted by the Institute of Population Studies are taken into consideration, these rates can be regarded as being too low. According to the surveys done by HIPS, TFR for 1978 was found to be 4.33 and for 1983, 4.05, thus the annual average rate of decline in TFR between 1978-1983 is .01337. If this rate of decline remained the same, the TFR for 1988 is expected to be around 3.8.

The fertility data from the 1988 survey clearly shows us that fertility is declining in Turkey. This conclusion is also in accordance with the rise in the age at first marriage for women and the increase in the contraceptive practice according to the results of the 1988 survey (See Chapter V).

In Table II.4.25, marital age specific fertility rates and marital total fertility rates are given by type of residencen and region.

When Table II.4.25 is studied, the discrepancies in the data becomes more apparent. Especially in the Eastern region and in rural areas fertility seems to be underestimated. because MTFR for the Eastern region is less than the rate for the Southern region, and the difference between urban and rural areas is very small. According to the results of the 1983 survey, MTFR for the Eastern region was 8.66 and for rural areas was 7.39. Thus in a five year period, a decline of 3.32 children in the Eastern region and 1.87 children in rural areas seems to take place. Especially the decline estimated for the Eastern region seems to be unacceptably high.

Thus, though it can be said without any hesitation that fertility is declining in Turkey, extent of this decline most probably is not as wide as indicated in Table II.4.25.

Further analyses are needed to get a clearer picture of fertility in Turkey. Thus care should be taken when making comparisons with the results of the previous surveys, using the contents of Table II.4.25.

TABLE II.4.2 : Number of Current Pregnancies by Years Since First Marriage for Currently Married Women

YEARS SINCE FIRST MARRIAGE	NUMBER OF CURRENT PREGNANCIES	PERCENTAGE
Less than 5	197	48.6
5-9 years	99	24.4
10-14 years	76	18.8
15-19 years	24	5.9
20-24 years	7	1.7
25+ years	2	.5
TOTAL	405	100.0

TABLE II.4.3 : Total Pregnancies (Completed+Current) for Ever-Married Women According to Age by Region and Type of Residence

AGE OF WOMEN	REGION					TYPE OF RESIDENCE		
	WEST	SOUTH	CENTRAL	NORTH	EAST	URBAN	RURAL	TURKEY
15-19	933	1.029	1.066	864	1.160	.958	1.075	1.026
20-24	1.692	2.107	1.927	1.673	2.289	1.804	2.060	1.919
25-29	2.661	3.464	3.275	2.840	3.667	2.879	3.361	3.082
30-34	3.532	4.622	4.302	3.881	5.305	3.924	4.644	4.198
35-39	4.617	6.175	5.278	4.552	6.764	4.930	5.887	5.342
40-44	4.660	6.551	6.131	5.600	8.150	5.504	6.365	5.879
45-49	5.221	7.672	6.122	5.273	8.432	5.630	6.758	6.147
AVERAGE	3.528	4.476	4.140	3.559	4.996	3.794	4.376	4.046

TABLE II.4.4 : Mean Number of Total Pregnancies,Wasted Pregnancies, Completed Fertile Pregnancies, Children Ever-Born, Children Survived and Children Died for Total Women (Turkey)

Age of Women	Total Pregnancies		Wasted Pregnan.	Completed Fertile Pregnan.	Children Ever-Born	Children Survived	Children Died
	Completed + Current	Completed					
15-19	151	.116	.023	.093	.094	.082	.012
20-24	1.170	1.061	.180	.881	.881	.815	.072
25-29	2.713	2.624	.496	2.188	2.188	1.920	.245
30-34	4.013	3.957	.793	3.164	3.164	2.763	.444
35-39	5.187	5.168	1.242	3.933	3.933	3.344	.669
40-44	5.741	5.730	1.253	4.477	3.477	3.748	.776
45-49	6.025	6.025	1.165	4.860	4.860	3.906	1.004
AVERAGE	2.849	2.795	.578	2.218	2.218	1.905	.344

TABLE II.4.5 : Mean Number of Total Pregnancies,Wasted Pregnancies, Completed Fertile Pregnancies, Children Ever-Born, Children Survived and Children Died for Total Women (Urban)

Age of Women	Total Pregnancies		Wasted Pregnan.	Completed Fertile Pregnan.	Children Ever-Born	Children Survived	Children Died
	Completed + Current	Completed					
15-19	.119	.088	.013	.075	.075	.073	.001
20-24	1.094	.988	.190	.799	.805	.749	.056
25-29	2.522	2.449	.537	1.911	1.942	1.739	.203
30-34	3.725	3 673	.867	2.806	2.835	2.499	.336
35-39	4.741	4.728	1.445	3.294	3.389	2.959	.430
40-44	5.315	5.305	1.516	3.788	3.815	3.336	.479
45-49	5.462	5.462	1.372	4.090	4.136	3.508	.628
AVERAGE	2.729	2.679	.685	1.996	2.024	1.782	.242

TABLE II.4.6: Mean Number of Total Pregnancies,Wasted Pregnancies, Completed Fertile Pregnancies, Children Ever-Born, Children Survived and Children Died for Total Women (Rural)

Age Of Women	Total Pregnancies		Wasted Pregnancies	Completed Fertile Pregnancies	Children Ever-Born	Children Survived	Children Died
	Completed + Current	Completed					
15-19	.181	.142	.032	.110	.111	.090	.021
20-24	1.265	1.150	.168	.982	.987	.896	.091
25-29	2.978	2.868	.440	2.429	2.474	2.171	.303
30-34	4.489	4.429	.673	3.758	3.822	3.199	624
35-39	5.792	5.765	.967	4.797	4.858	3.867	.992
40-44	6.305	6.295	.901	5.393	5.469	4.297	1.172
45-49	6.709	6.709	.918	5.790	5.846	4.389	1.457
AVERAGE	**2.999**	**2.939**	**.445**	**2.494**	**2.528**	**2.058**	**.469**

TABLE II.4.7: Mean Number of Total Pregnancies,Wasted Pregnancies, Completed Fertile Pregnancies, Children Ever-Born, Children Survived and Children Died for Ever-Married Women (Turkey)

Age Of Women	Total Pregnancies		Wasted Pregnancies	Completed Fertile Pregnancies	Children Ever-Born	Children Survived	Children Died
	Completed + Current	Completed					
15-19	1.026	.785	.153	.632	.636	.557	.079
20-24	1.919	1.740	.295	1.445	1.454	1.336	.118
25-29	3.082	2.981	.564	2.417	2.459	2.181	.278
30-34	4.198	4.140	.830	3.310	3.354	2.890	.464
35-39	5.342	5.323	1.279	4.051	4.113	3.444	.689
40-44	5.879	5.868	1.283	4.585	4.633	3.838	.795
45-49	6.147	6.147	1.189	4.958	5.009	3.985	1.024
AVERAGE	**4.046**	**3.969**	**.821**	**3.149**	**3.193**	**2.705**	**.488**

TABLE II.4.8: Mean Number of Total Pregnancies,Wasted Pregnancies, Completed Fertile Pregnancies, Children Ever-Born, Children Survived and Children Died for Ever-Married Women (Urban)

Age Of Women	Total Pregnancies		Wasted Pregnancies	Completed Fertile Pregnancies	Children Ever-Born	Children Survived	Children Died
	Completed + Current	Completed					
15-19	.958	.705	.105	.600	.600	.589	.011
20-24	1.804	1.630	.313	1.317	1.327	1.235	.092
25-29	2.879	2.796	.613	2.182	2.217	1.985	.232
30-34	3.924	3.869	.913	2.956	2.986	2.632	.354
35-39	4.930	4.917	1.503	3.426	3.524	3.077	.447
40-44	5.504	5.493	1.570	3.923	3.950	3.454	.496
45-49	5.630	5.630	1.414	4.216	4.263	3.616	.647
AVERAGE	**3.794**	**3.725**	**.952**	**2.775**	**2.814**	**2.478**	**.336**

TABLE II.4.9: Mean Number of Total Pregnancies,Wasted Pregnancies, Completed Fertile Pregnancies, Children Ever-Born, Children Survived and Children Died for Ever-Married Women (Rural)

Age Of Women	Total Pregnancies		Wasted Pregnancies	Completed Fertile Pregnancies	Children Ever-Born	Children Survived	Children Died
	Completed + Current	Completed					
15-19	1.075	.842	.188	.654	.662	.534	.128
20-24	2.060	1.873	.273	1.600	1.608	1.459	.149
25-29	3.361	3.237	.497	2.741	2.792	2.450	.342
30-34	4.644	4.582	.696	3.887	3.954	3.309	.645
35-39	5.887	5.859	.983	4.876	4.938	3.930	1.008
40-44	6.365	6.355	.910	5.445	5.521	4.338	1.183
45-49	6.758	6.758	.925	5.833	5.889	4.421	1.468
AVERAGE	**4.376**	**4.288**	**.649**	**3.639**	**3.688**	**3.003**	**.685**

TABLE II.4.10: Mean Number of Total Pregnancies,Wasted Pregnancies, Completed Fertile Pregnancies, Children Ever-Born, Children Survived and Children Died for Ever-Married Women (West)

Age Of Women	Total Pregnancies		Wasted Pregnancies	Completed Fertile Pregnancies	Children Ever-Born	Children Survived	Children Died
	Completed + Current	Completed					
15-19	.933	.683	.133	.550	.550	.533	.017
20-24	1.692	1.553	.308	1.245	1.256	1.187	.069
25-29	2.661	2.585	.567	2.018	2.044	1.850	.194
30-34	3.532	3.493	.856	2.637	2.659	2.393	.266
35-39	4.617	4.598	1.481	3.117	3.183	2.778	.405
40-44	4.660	4.656	1.426	3.229	3.324	2.902	.332
45-49	5.221	5.221	1.350	3.871	3.389	3.295	.604
AVERAGE	3.528	3.473	.931	2.542	2.568	2.283	.285

TABLE II.4.11: Mean Number of Total Pregnancies,Wasted Pregnancies, Completed Fertile Pregnancies, Children Ever-Born, Children Survived and Children Died for Ever-Married Women (South)

Age Of Women	Total Pregnancies		Wasted Pregnancies	Completed Fertile Pregnancies	Children Ever-Born	Children Survived	Children Died
	Completed + Current	Completed					
15-19	1.029	.743	.171	.571	.571	.571	
20-24	2.107	1.914	.200	1.714	1.721	1.507	.214
25-29	3.464	3.312	.543	2.768	2.870	2.485	.385
30-34	4.622	4.504	.646	3.858	3.937	3.323	.614
35-39	6.175	6.140	1.237	4.903	5.017	4.246	.771
40-44	6.551	6.528	1.292	5.236	5.371	4.371	1.000
45-49	7.672	7.672	1.361	6.311	6.410	5.033	1.377
AVERAGE	**4.476**	**4.364**	**.753**	**3.611**	**3.690**	**3.091**	**.599**

TABLE II.4.12: Mean Number of Total Pregnancies,Wasted Pregnancies, Completed Fertile Pregnancies, Children Ever-Born, Children Survived and Children Died for Ever-Married Women (Central)

Age Of Women	Total Pregnancies		Wasted Pregnancies	Completed Fertile Pregnancies	Children Ever-Born	Children Survived	Children Died
	Completed + Current	Completed					
15-19	1.066	.820	.115	.705	.705	.623	.082
20-24	1.927	1.731	.329	1.402	1.415	1.297	.118
25-29	3.275	3.184	.669	2.515	2.545	2.236	.309
30-34	4.302	4.249	1.053	3.196	3.237	2.759	.478
35-39	5.278	5.267	1.278	4.021	4.091	3.192	.899
40-44	6.131	6.131	1.284	4.847	4.892	3.841	1.051
45-49	6.122	6.122	1.206	4.916	4.939	3.756	1.183
AVERAGE	**4.140**	**4.065**	**.889**	**3.181**	**3.217**	**2.630**	**.587**

TABLE II.4.13: Mean Number of Total Pregnancies,Wasted Pregnancies, Completed Fertile Pregnancies, Children Ever-Born, Children Survived and Children Died for Ever-Married Women (North)

Age Of Women	Total Pregnancies		Wasted Pregnancies	Completed Fertile Pregnancies	Children Ever-Born	Children Survived	Children Died
	Completed + Current	Completed					
15-19	.864	.682	.136	.545	.545	.454	.091
20-24	1.673	1.545	.228	1.317	1.317	1.297	.020
25-29	2.840	2.722	.479	2.243	2.299	2.062	.237
30-34	3.881	3.826	.633	3.193	3.220	2.807	.413
35-39	4.552	4.537	.895	3.642	3.716	3.179	.537
40-44	5.600	5.585	1.108	4.477	4.554	3.861	.693
45-49	5.273	5.273	.606	4.667	4.727	3.788	.939
AVERAGE	**3.559**	**3.486**	**.587**	**2.899**	**2.944**	**2.550**	**.394**

TABLE II.4.14: Mean Number of Total Pregnancies, Wasted Pregnancies, Completed Fertile Pregnancies, Children Ever-Born, Children Survived and Children Died for Ever-Married Women (East)

Age Of Women	Total Pregnancies		Wasted Pregnancies	Completed Fertile Pregnancies	Children Ever-Born	Children Survived	Children Died
	Completed + Current	Completed					
15-19	1.160	.940	.220	.720	.740	.540	.200
20-24	2.289	2.044	.352	1.692	1.698	1.522	.176
25-29	3.667	3.550	.503	3.047	3.082	2.708	.374
30-34	5.305	5.243	.723	4.520	4.599	3.825	.774
35-39	6.764	6.743	1.043	5.700	5.814	4.757	1.057
40-44	8.150	8.118	1.021	7.097	7.161	5.763	1.398
45-49	8.432	8.432	1.068	7.365	7.486	5.730	1.756
AVERAGE	**4.996**	**4.896**	**.696**	**4.200**	**4.262**	**3.513**	**.749**

TABLE II.4.15: Mean Number of Total Pregnancies,Wasted Pregnancies, Completed Fertile Pregnancies, Children Ever-Born, Children Survived and Children Died for Ever-Married Women (Turkey) by Duration of Marriage

Age Of Women	Total Pregnancies		Wasted Pregnancies	Completed Fertile Pregnancies	Children Ever-Born	Children Survived	Children Died
	Completed + Current	Completed					
15-19	1.317	1.119	.207	.911	.915	.856	.059
20-24	2.780	2.676	.549	2.127	2.159	1.950	.209
25-29	4.706	4.657	.857	3.800	3.864	3.274	.590
30-34	5.038	5.004	1.166	3.846	3.894	3.336	.558
35-39	5.857	5.843	1.411	4.432	4.507	3.736	.771
40-44	6.128	6.122	1.343	4.779	4.826	3.843	.983
45-49	7.091	7.091	1.268	5.823	5.841	4.421	1.420
AVERAGE	**4.046**	**3.949**	**.821**	**3.149**	**3.192**	**2.706**	**.486**

TABLE II.4.16: **Mean Number of Total Pregnancies,Wasted Pregnancies, Completed Fertile Pregnancies, Children Ever-Born, Children Survived and Children Died for Ever-Married Women (Illiterate)**

Age Of Women	Total Pregnancies		Wasted Pregnancies	Completed Fertile Pregnancies	Children Ever-Born	Children Survived	Children Died
	Completed + Current	Completed					
15-19	1.156	.844	.125	.719	.719	.500	.219
20-24	2.453	2.209	.223	1.986	2.000	1.784	.216
25-29	4.327	4.201	.608	3.593	3.663	3.121	.542
30-34	5.588	5.510	.737	4.772	4.867	3.965	.902
35-39	6.640	6.603	1.022	5.580	5.652	4.461	1.191
40-44	7.235	7.216	1.124	6.093	6.162	4.907	1.255
45-49	7.419	7.419	1.125	6.194	6.644	4.876	1.388
AVERAGE	**5.824**	**5.750**	**.864**	**4.886**	**4.954**	**3.980**	**.974**

TABLE II.4.17: Mean Number of Total Pregnancies,Wasted Pregnancies, Completed Fertile Pregnancies, Children Ever-Born, Children Survived and Children Died for Ever-Married Women (Literate)

Age Of Women	Total Pregnancies		Wasted Pregnancies	Completed Fertile Pregnancies	Children Ever-Born	Children Survived	Children Died
	Completed + Current	Completed					
15-19	.864	.773	.227	.545	.545	.500	.045
20-24	2.232	2.054	.214	1.839	1.821	1.571	.250
25-29	3.568	3.481	.642	2.839	2.864	2.543	.321
30-34	4.842	4.762	.970	3.792	3.861	3.247	.614
35-39	5.847	5.839	1.193	4.645	4.774	3.823	.951
40-44	6.184	6.184	1.263	4.921	4.974	4.009	.965
45-49	5.500	5.500	.843	4.657	4.696	3.745	.951
AVERAGE	**4.852**	**4.806**	**.905**	**3.900**	**3.957**	**3.244**	**.713**

TABLE II.4.18: Mean Number of Total Pregnancies,Wasted Pregnancies, Completed Fertile Pregnancies, Children Ever-Born, Children Survived and Children Died for Ever-Married Women (Primary School)

Age Of Women	Total Pregnancies		Wasted Pregnancies	Completed Fertile Pregnancies	Children Ever-Born	Children Survived	Children Died
	Completed + Current	Completed					
15-19	1.0581	.819	.168	.652	.658	.593	.065
20-24	1.929	1.769	.349	1.420	1.431	1.331	.100
25-29	2.965	2.869	.556	2.313	2.347	2.100	.247
30-34	3.805	3.761	.787	2.974	2.996	2.656	.340
35-39	4.578	4.562	1.377	3.204	3.299	2.919	.380
40-44	4.788	4.783	1.363	3.420	3.451	3.057	.394
45-49	5.091	5.091	1.275	3.817	3.852	3.176	.676
AVERAGE	3.280	3.195	.751	2.447	2.479	2.202	.277

TABLE II.4.19: Mean Number of Total Pregnancies,Wasted Pregnancies, Completed Fertile Pregnancies, Children Ever-Born, Children Survived and Children Died for Ever-Married Women (Secondary School)

Age Of Women	Total Pregnancies		Wasted Pregnancies	Completed Fertile Pregnancies	Children Ever-Born	Children Survived	Children Died
	Completed + Current	Completed					
15-19	.800	.500	-	.500	.500	.500	
20-24	1.648	1.500	.333	1.167	1.167	1.111	.056
25-29	2.488	2.349	.628	1.791	1.791	1.651	.140
30-34	3.396	3.312	1.167	2.167	2.167	2.062	.105
35-39	4.595	4.595	1.857	2.738	2.738	2.238	.095
40-44	4.000	4.000	1.714	2.333	2.333	2.238	.095
45-49	4.538	4.538	1.846	2.692	2.692	2.538	.154
AVERAGE	3.043	2.525	1.035	1.918	1.939	1.844	.095

TABLE II.4.20: Mean Number of Total Pregnancies,Wasted Pregnancies, Completed Fertile Pregnancies, Children Ever-Born, Children Survived and Children Died for Ever-Married Women (High School)

Age Of Women	Total Pregnancies		Wasted Pregnancies	Completed Fertile Pregnancies	Children Ever-Born	Children Survived	Children Died
	Completed + Current	Completed					
15-19	.667	.333	-	.333	.333	.333	-
20-24	1.033	.813	.132	.681	.692	.670	.022
25-29	1.934	1.836	.500	1.336	1.385	1.303	.082
30-34	2.677	2.626	1.000	1.626	1.626	1.596	.030
35-39	3.618	3.618	1.588	2.029	2.073	1.912	.16
40-44	3.744	3.718	1.744	1.974	1.974	1.872	.10
45-49	3.407	3.407	1.296	2.111	2.148	1.852	.29
AVERAGE	**2.385**	**2.294**	**.842**	**1.453**	**1.477**	**1.393**	**.08**

TABLE II.4.21: Mean Number of Total Pregnancies,Wasted Pregnancies, Completed Fertile Pregnancies, Children Ever-Born, Children Survived and Children Died for Ever-Married Women (University)

Age Of Women	Total Pregnancies		Wasted Pregnancies	Completed Fertile Pregnancies	Children Ever-Born	Children Survived	Children Died
	Completed + Current	Completed					
15-19	-	-	-		-	-	-
20-24	.600	.600	-	.600	.600	.600	-
25-29	1.367	1.333	.400	.933	.933	.900	.033
30-34	2.368	2.368	.737	1.632	1.737	1.526	.211
35-39	3.786	3.796	1.643	2.143	2.214	2.214	-
40-44	3.400	3.400	1.200	2.200	2.200	2.200	-
45-49	3.714	3.714	1.571	2.143	2.143	2.000	.143
AVERAGE	**2.312**	**2.300**	**.825**	**1.475**	**1.512**	**1.437**	**.075**

TABLE II.4.22 : Age at First Marriage by Year of Marriage and Educational Level of Women

Year of Marriage	Illiterate	Literate	Primary School	Secondary School	High School	University	Total
1984-88	19.93	18.80	19.46	20.33	22.39	242	20.10
1979-83	17.81	18.62	18.90	19.24	21.37	23.20	19.12
1974-78	17.84	18.92	18.61	19.64	21.74	24.00	18.89
1969-73	17.28	18.09	18.33	19.83	21.22	-*	18.28
1964-68	17.25	17.57	18.35	19.30	19.94	-*	17.95
1959-63	16.95	17.16	17.60	-*	19.33	-	17.25
1954-58	15.02	15.75	15.98	-*	-*	-	15.44
1949-53	-*	-*	-*	-	-	-	12.73
AVERAGE	**17.35**	**17.85**	**18.68**	**19.59**	**21.53**	**23.81**	**18.60**

-* Less than 15 women

TABLE II.4.23 : The Proportion of Childlessness for Ever-Married Women by Age, Region and Type of Settlement

Age of Women	West	South	Central	North	East	Urban	Rural	Turkey
15-19	53.33	45.87	42.62	54.55	46.00	46.32	49.62	48.25
20-25	20.15	13.57	19.18	13.86	20.75	20.86	15.14	18.27
25-29	7.25	5.07	4.72	9.72	5.26	7.57	4.88	6.44
30-34	3.32	5.51	3.27	4.59	2.82	4.28	2.58	3.63
35-39	3.48	2.63	3.74	5.97	.71	3.20	3.10	3.16
40-44	4.10	2.25	1.70	7.69	1.08	2.39	4.14	3.15
45-49	4.13	4.92	2.24	4.41	4.05	3.68	3.91	3.78
AVERAGE	**8.45**	**8.24**	**7.97**	**9.90**	**8.68**	**8.55**	**8.44**	**8.50**

TABLE II.4.24: Number of Live Births for1987-1988by the Age of Mother, Region, Stratum and Sex of Child

	WEST		SOUTH		CENTRAL		NORTH		EAST		URBAN		RURAL		TURKEY	
WOMEN	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
15-19	12	6	7	5	9	13	2	3	8	6	19	15	19	18	38	33
20-24	50	35	22	35	33	34	12	24	16	23	71	78	62	73	133	151
25-29	36	35	24	24	25	22	9	18	16	15	58	53	52	61	110	114
30-34	16	10	10	10	10	9	4	6	21	13	24	27	37	21	61	48
35-39	5	6	7	3	2	4	1	1	9	9	11	13	13	10	24	23
40-44	2	1	2	2	1	1	1	1	1	1	3	4	4	2	7	6
45-49	1	0	0	0	0	1	0	1	1	0	2	0	0	2	2	2
TOTAL	**122**	**93**	**72**	**79**	**80**	**84**	**29**	**54**	**72**	**67**	**188**	**190**	**187**	**187**	**375**	**377**

TABLE II.4.25 : Marital Age-Specific Fertility Rates and Marital Total Fertility Rate by Type of Residence and Region

	15-19	20-24	25-29	30-34	35-39	40-44	45-49	MTFR
Type of Residence								
Urban	.35789	.30470	.17874	.08241	.05117	.01857	.00673	5.00
Rural	.27820	.33499	.25055	.14691	.06479	.02069	.00794	5.52
Region								
West	.30000	.31136	.18394	.06925	.03481	.01230	.00459	4.58
South	.34286	.40714	.34783	.15748	.08772	.04494	-	6.94
Center	.36066	.30594	.20172	.07755	.03209	.01136	.00746	4.98
North	.22727	.35644	.18750	.09174	.02985	.03077	.01471	4.69
East	.28000	.24528	.19129	.19774	.12857	.02151	.01351	5.34
TURKEY	**.31140**	**.31839**	**.20896**	**.10697**	**.05704**	**.01949**	**.00729**	5.15

II.5. FERTILITY PREFERENCES

Respondents in the survey were asked a number of questions regarding their future fertility intentions and their family size ideals ; desire for additional children, desired sex of future children, timing of the next birth, desire for last pregnancy and desired family size.

II.5.1. DESIRE FOR ADDITIONAL CHILDREN

All ever-married women who believed themselves biologically capable of having (more) children were asked about whether they wanted to have another child in addition to the children that they might already have had. Those who said that they wanted another child were asked when they would like to have their next birth and the sex preference for this child. Their responses to these questions were used to examine the level of interest in limiting and spacing births as well as their preference for the sex of their future children.

Of all these women, 23.9 percent answered affirmatively and 76.1 percent did not want more children. More than 3/4 of these women wanted to limit their family size. Table II.5.1 presents the percentage distribution of all ever-married and fecund women by their desire for additional children and some background characteristics.

Among all ever-married and fecund women, 16.1 percent wanted one more child, 5.9 percent wanted two additional children and 1.6 percent wanted three or more. There is no apparent differentiation among regions and places of residence with respect to the desire for more children. However, the desire for additional children decreases as the women's ages increase. The percentage wanting no more children is very low in young age groups and increases rapidly with age since younger women have less children and they could not have had time to achieve their desired number. More than 90 percent of the women aged 30-39, and almost all of the women aged 40-49 show a desire for no more children.

With increasing level of education, it is clear from Table II.5.1 that the percentages of women wanting no more children decreases. Although we might expect the opposite that educated women should have a stronger desire for stopping their childbearing, we end up with a decreasing trend since they tend to have late marriages and are more likely to space their children.

Table II.5.2 presents the percentages of women by their desire for future births according to their number of living children (including any current pregnancy). As the number of living children increases, the proportion of women who want more children declines. This decrease is more pronounced for women who have two living children meaning that after having two children, most of them (83.7 percent) want to limit their fertility.

Table II.5.3 presents the age, urban-rural, regional and educational differentials in the percentages wanting no more children classified by the current number of living children (including any current pregnancy). The results suggest that there are no differentiations in high parities (3 and more) and slight differentiations for women with one or two children. For example, 89 percent of the women in the West with two living children say that they do not want more children compared to 66.7 percent in the East with the same number of children. Overall, women living in the Eastern and Southern regions are shown to be less likely than women in the other regions to want to limit their family in almost all categories. Urban women, in all parities, are more willing than rural women not to have more children. Generally, the more children a woman has, the fewer additional children she wants.

With respect to the women's educational level, the greatest differentials are observed for women, again, at lower parities. The percentage wanting no more children among women with one living child and no education is 25.8, whereas it is 45.2 for university graduates. Among women with two living children, the percentage wanting no more declines from 92.8 percent among women in the highest educational category to 71.9 among illiterate women.

As shown in Table II.5.3, the percentage wanting no more is strongly and positively related to the woman's age as well as number of living children. Even at low parities, with increasing age, the percentages of women wanting no more are increasing sharply.

Generally, differentials in the percentage desiring no more children tend to narrow as the number of living children increases.

The mean number of additional children wanted by those women who expressed a desire to have more children is summarized in Table II.5.4. Women who want more children want 1.44 more on average. Although women in urban areas and in more developed regions have a desire for less additional children, there is no clear differentiation among regions and places of residence. The mean number of additional children desired decreases with increasing age except for the women aged 40-49. These are the women who have reached or are about to reach the end of their reproductive period and therefore have a stronger desire to have children before their reproductive life is over.

Education is found to be positively related with the mean number of additional children desired. As women or their husbands become more educated they tend to want less additional children. With respect to the number of living children (including any current pregnancy), the mean number of additional children wanted does not show a significant relationship. Women who have no living children want to have 2.13 children on average.

Table II.5.5 examines the current use of any contraceptive method among exposed women by their desire for future birth. Among women who desired future birth and who are exposed, 41.8 percent were not using a method of contraception. The rest were using contraception probably with the aim of spacing future births. 84 percent of the exposed women who do not want a future birth were using contraception, but 16 percent were not using any method at all. These women constituted 9.1 percent of all ever-married women in the survey. They expressed a desire for no more children but were not doing anything about it.

TABLE II.5.1 : Percentage Distribution of Ever-Married and Fecund Women According to Number of Additional Children Wanted by some Background Variables

	No More	1	2	3+	Wants future birth but gives indefinite answer	Total
TURKEY	76.1	16.1	5.9	1.6	0.3	100.0
West	76.7	17.4	4.9	0.8	0.3	100.0
South	70.7	15.8	8.6	4.3	0.7	100.0
Central	78.3	14.4	6.6	0.5	0.3	100.0
North	76.8	17.7	4.3	1.1	-	100.0
East	75.4	15.2	6.0	3.2	0.1	100.0
Urban	75.6	17.2	5.8	1.3	0.2	100.0
Rural	76.7	14.7	6.1	2.1	0.4	100.0
Illiterate	86.0	6.9	3.9	2.6	0.6	100.0
Literate	85.7	7.8	3.5	2.8	0.2	100.0
Primary	73.1	18.8	6.7	1.0	0.2	100.0
Secondary	66.5	26.6	5.9	1.0	-	100.0
High	60.3	29.4	9.5	0.8	-	100.0
University	64.8	25.4	8.5	1.4	-	
< 20	16.3	40.4	29.3	12.5	1.4	100.0
20-29	57.9	29.9	9.7	2.0	0.4	100.0
30-39	93.6	4.5	1.2	0.5	0.1	100.0
40-49	98.9	0.7	0.3	0.1	-	100.0

TABLE II.5.2: Percentage Distribution of Ever-Married Women According to their Desire for Future Birth by Number of Living Children (Including any Current Pregnancy)

		Desire For More Children			
		Yes	No	Not Sure	Total
Living Children	0	92.5	7.0	0.5	100.0
	1	72.3	21.8	5.9	100.0
	2	12.8	83.7	3.5	100.0
	3	5.7	93.0	1.3	100.0
	4	3.1	96.3	0.6	100.0
	5+	2.0	97.8	0.2	100.0

TABLE II.5.3 : Percentages of Currently Married Fecund Women who want no more Children by Number of Living Children (Including any Current Pregnancy) and some Background Variables

	Living Children					
	0	1	2	3	4	5+
TURKEY	4.5	20.8	83.8	92.9	96.2	97.8
West	7.7	24.8	89.0	98.9	98.5	97.8
South	5.3	12.5	73.1	76.9	93.0	96.2
Center	2.0	19.2	86.9	94.5	96.3	98.3
North	-	23.4	83.6	91.5	100.0	100.0
East	2.6	16.1	66.7	89.0	93.3	98.1
Urban	5.4	22.3	85.8	94.6	97.6	98.4
Rural	3.4	17.8	80.2	90.6	95.0	97.4
Illiterate	3.8	25.8	71.9	89.1	96.2	96.6
Literate	5.6	16.7	81.0	94.7	98.9	100.0
Primary	3.1	16.8	83.8	94.5	94.7	100.0
Secondary	11.1	16.7	87.2	88.6	100.0	100.0
High	7.3	27.0	92.8	91.7	100.0	100.0
University		45.2	88.9	100.0		
< 25	0.7	11.7	71.6	80.2	96.8	100.0
25-34	5.1	25.6	83.5	91.7	92.9	95.7
35-44	44.4	76.7	96.3	98.2	98.6	98.9
45-49	66.7	100.0	100.0	100.0	100.0	98.7

II.5.2. TIME FOR NEXT CHILDREN

Table II.5.6 shows that among currently married and fertile women wanting additional children, 26.5 percent of women would like to have another child immediately or within a year. About 2/3 of the women want to delay their next birth. There was no differentiation in terms of the type of residence. The women in the South tend to delay their next child beyond one year and approximately half of the women in the North want to have their next child after four or more years.

Considering the women's age , the proportion of women who want another child within one year increased with age. Younger women want to space their next birth whereas older women prefer to have their first child immediately. About half of the women without children want to have their first child immediately while women with children tend to postpone their next child. In terms of educational status, although the trend is not clear, educated women seem to want their next child later than less educated women.

II.5.3 SEX PREFERENCES

In the survey, women who were pregnant or who desired to have more children were asked whether they would like their next child to be a boy or a girl. Table II.5.7 shows the preferences for the sex of the next child expressed by women who desired additional births or who were currently pregnant according to the number of living children.

Of all exposed women wanting another child and all currently pregnant women, 38.8 percent preferred a boy, 29.2 percent a girl , and the remaining 32 percent stated no preference. As the number of living children increases, the proportion preferring their next child to be a boy is increasing. Among those with no children, more than half of them gave no preference. The proportion preferring a girl is decreasing with the increasing number of living children. For women with one child, there is no preferred sex since after having a child of one sex, women may desire to have a child of the opposite sex or they may still be indifferent. Overall, the percentages preferring a son is higher for all parities, and the difference widens as the number of living children increases. For women with four or more children, the preference for female children is very low and preference for a male child decreases compared to other parities, but the proportion indifferent increases to 39.1 percent since most of these women have children of both sexes by biological chance. Compared to the "1978 Turkish Fertility Survey" results, the proportion indifferent is the same, but the proportion wanting a male child is decreasing whereas the preference for a girl is increasing in 1988 (corresponding percentages in 1978 were 42 percent for male preference, 26 percent for female preference and 32 percent with no preference).

Table II.5.8 presents the desired sex of future children in terms of both living children and living sons. It is apparent from the Table that although son preference is not very strong among women who have no children, as women have children and not a boy, the percentage who want a son increases. But, if they have sons in previous births, the desire turns to a girl. 73.7 percent of women with only one male child, and 87.3 percent of women with only two male children want to have a female child in next birth. If the women have children of both sexes (one boy and one girl), the percentage of indifferent reaches 56.8 , but still more women want a son rather than a daughter. When the women reach at least two boys and one girl, sex preference disappears. Therefore, it can be concluded that women in Turkey prefer children of both sexes but a slightly stronger desire exists for a son.

II.5.4. DESIRE FOR LAST PREGNANCY

For women who had at least one live birth during the five years preceding the survey the percentage distribution of whether the pregnancy of the last live birth was wanted is given in Table II.5.9. Overall, 63.2 percent of these women wanted their last pregnancy, 26.7 percent did not and 10.1 percent declared their pregnancy was mistimed. The percentage of women who did not want the pregnancy of their last birth increased as the woman's age and number of living children increased. Mis-timed pregnancies decreased with increasing age and number of living children.

Urban women tend to have more mis-timed pregnancies and less unwanted births than rural women. With respect to the regions, no differen-

TABLE II.5.4 : **Mean Number of Additional Children wanted for Ever-Married Fertile Women Desiring more Children by some Background Variables**

		Mean Number of Additional Children Wanted
	TURKEY	1.44
Region	West	1.32
	South	1.67
	Central	1.36
	North	1.29
	East	1.65
Place of Residence	Urban	1.39
	Rural	1.52
Age	<20	1.73
	20-29	1.38
	30-39	1.43
	40-49	1.63*
Woman's Education	Illiterate	1.91
	Literate	1.75
	Primary	1.36
	Secondary	1.25
	High	1.28
	University	1.32
Husband's Education	Illiterate	1.87
	Literate	1.61
	Primary	1.52
	Secondary	1.35
	High	1.33
	University	1.30
Couple's Literacy	Neither Literate	1.86
	One Literate	1.92
	Both Literate	1.36
Living Children	0	2.13
	1	1.25
	2	1.30
	3+	1.48

** Number of cases less than 10.*

tiation exists except for the East. Unwanted pregnancies are very common in the East than in other regions. The West, on the other hand, has the lowest unwanted pregnancy percentage compared to other regions. In terms of educational level, the percentage of women who wanted the pregnancy of their last birth increases whereas unwanted pregnancies decrease as education increases. As women become more educated, it is clear that their unwanted pregnancies decline.

II.5.5. IDEAL NUMBER OF CHILDREN

Before presenting the results of the data analysis on desired family size, an explanation of how this concept was measured would be helpful. All women in the woman's questionnaire were asked "If you could start your marital life over again and could freely choose the number of children, how many would that be?" Only 0.6 percent did not give numerical answer to this question.

The mean desired family size, or the ideal number of children, which was 3.03 and 2.7 in the 1978 and 1983 surveys respectively, was found to be 2.14 in 1988. Within 10 years, the mean number of desired children decreased by one child. Table II.5.10 summarizes the results on the mean desired family size by some background variables. There are no considerable differences in the mean number of children desired among regions and places of residence. The mean number of children desired is found to increase as the number of living children and age of the women increases and decrease as the educational status of the woman or her husband increases.

According to Table II.5.11, 59.8 percent of all ever-married women stated that they desire two children, and 17.4 percent desire three children. Therefore, more than 3/4 of the women in Turkey have a desire for two and three children. Only 9 percent of women prefer not to have any children. Compared to urban areas, women living in rural areas have similar ideals, but in terms of regions less women in the Southern and the Eastern regions desire two children. Generally, their ideal numbers are higher than in other regions.

With respect to the woman's age, the proportion of women who do not want any children tend to decrease with age. In other words, mostly younger women prefer to be childless. As the

TABLE II.5.5 : Percentage Distribution of Exposed Women According to their Desire for Future Birth by Current Use of any Contraceptive Method

	Current Use of Contraception			
	Not Using	Using Efficient	Using Inefficient	Total
Desire Future Birth	41.8	30.8	27.4	100.0
Do Not Want Future Birth	16.0	44.0	40.0	100.0
Not Sure	13.8	35.6	50.6	100.0

TABLE II.5.6 : Percentage Distribution of Currently Married Fertile Women who want to have more Children According to the Timing of the Next Birth by some Background Variables

		Timing of the Next Birth				
		As Soon As Or Within a Year	2-3 Years	4+ Years	Other	Total
TURKEY		26.5	34.3	35.4	3.8	100.0
West		26.9	33.4	36.4	3.3	100.0
South		18.2	39.0	34.0	8.8	100.0
Central		29.0	36.9	32.2	1.9	100.0
North		30.0	20.0	47.0	3.0	100.0
East		28.3	37.0	31.8	2.9	100.0
Urban		26.3	32.9	38.3	2.6	100.0
Rural		26.9	36.4	31.3	5.4	100.0
< 20		26.7	33.3	36.4	3.6	100.0
20-24		20.6	32.2	43.8	3.4	100.0
25-29		25.8	39.1	31.7	3.3	100.0
30-34		49.3	36.6	7.0	7.0	100.0
35+		69.0	24.1	-	6.9	100.0
	0	45.9	25.8	23.0	5.3	100.0
LIVING	1	17.4	36.5	43.4	2.7	100.0
CHILDREN	2	19.0	37.4	39.5	4.1	100.0
	3+	26.4	47.2	22.2	4.2	100.0
Illiterate		34.3	43.1	15.3	7.3	100.0
Literate		34.9	36.5	19.0	9.5	100.0
Primary		22.9	31.6	41.8	3.7	100.0
Secondary		21.2	37.9	40.9	-	100.0
Higher		30.6	34.1	34.7	0.6	100.0

woman's age increases the number of children she wants increases. Here, the rationalization effect of existing children may have influenced the responses of the women. Educational status is also correlated with the ideal number of children. The percentage of women desiring less children is greater among educated women and also, the percentage of women desiring a high number of children is greater among less educated women. A similar trend exists in terms of the couple's literacy; educated women tend to prefer fewer children.

II.5.6 EXCESS FERTILITY

Excess fertility is said to exist when the number of living children is greater than the desired number. Overall, 43.8 percent of all ever-married women in the survey have (or will have if they are currently pregnant) more children than their ideal or desired number. As it can be seen from Table II.5.12, the number of children a woman has is greatly affected by her age. Even for the youngest age group, the proportion of women who have more living children than their ideal is 23.2 percent. The same proportion increases with age and reaches over 60 percent in the 45-49 age group. Table II.5.13 presents the same figures in terms of educational status. It is very clear that as women become better educated, the proportion whose number of living children is greater than their desired number decreases sharply. Education, therefore, is a very strong factor in determining excess fertility. The women who have more living children than their ideal number also have some distinct characteristics compared to other women; they have lower mean ages at marriage and a longer time since the first marriage (Table II.5.14).

TABLE II.5.7 : Percentage Distribution of Pregnant or Exposed Women who Desire More Children According to Sex Preference by Number of Living Children

	Number Of Living Children					
	0	1	2	3	4+	Total
Preferring male	28.6	37.2	47.3	65.3	45.3	38.8
Preferring female	17.2	39.5	26.1	18.1	15.6	29.2
No preference	54.2	23.3	26.6	16.7	39.1	32.0
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

TABLE II.5.8 : Percentage Distribution of Pregnant or Exposed Women who Desire More Children According to Sex Preference by Number of Living Children and Living Sons

Number of Living Children	Number of Living Sons	Percentage Who Want a Son	Percentage Who Want a Daughter	Either	Total
0	0	28.6	17.2	54.2	100.0
1	0	71.0	3.2	25.8	100.0
	1	5.3	73.7	21.0	100.0
2	0	89.2	-	10.8	100.0
	1	36.5	6.8	56.8	100.0
	2	5.5	87.3	7.3	100.0
3+	0	100.0	-	-	100.0
	1	75.0	-	25.0	100.0
	2	20.7	27.6	51.7	100.0
	3+	15.2	45.5	39.4	100.0

TABLE II.5.9 : Percentage Distribution of Women According to Desire for the Pregnancy of the last Birth by some Background Variables (Among Women who had a Live Birth during the Five Years Preceding the Survey)

		Wanted	Mis-timed	Un-wanted-	Total
TURKEY		63.2	10.1	26.7	100.0
West		69.7	11.7	18.6	100.0
South		64.2	11.0	24.8	100.0
Center		61.2	10.7	28.1	100.0
North		69.2	8.4	24.4	100.0
East		52.0	7.1	40.9	100.0
Urban		63.5	12.3	24.2	100.0
Rural		62.8	7.4	29.8	100.0
< 20		79.5	15.4	5.1	100.0
20-24		72.3	15.1	12.6	100.0
25-29		67.4	10.3	22.3	100.0
30-34		56.4	8.7	34.9	100.0
35-39		49.5	1.8	48.7	100.0
40 +		32.9	0.7	66.4	100.0
Illiterate		51.2	4.2	44.6	100.0
Literate		55.1	9.4	35.5	100.0
Primary		68.2	11.5	20.3	100.0
Secondary		66.1	13.0	20.9	100.0
High		73.8	17.6	8.6	100.0
University		81.4	16.3	2.3	100.0
Living Children	0	96.4	-	3.6	100.0
	1	86.7	11.5	1.8	100.0
	2	69.3	18.9	11.8	100.0
	3	56.4	4.6	39.0	100.0
	4	43.7	2.6	53.7	100.0
	5 +	29.7	2.2	68.2	100.0

TABLE II.5.10 : Mean Desired Family Size by some Background Variables

		Mean Number
	TURKEY	2.14
Region	West	2.05
	South	2.42
	Central	2.05
	North	2.02
	East	2.34
Place of Residence	Urban	211l
	Rural	2.19
Age	LT 20	1.74
	20-29	1.90
	30-39	2.24
	40-49	2.48
Woman's Education	Illiterate	2.57
	Literate	2.39
	Primary	2.15
	Secondary	2.03
	High	1.93
	University	1.97
Husband's Education	Illiterate	2.46
	Literate	2.25
	Primary	2.03
	Secondary	1.94
	High	1.81
	University	1.85
Couple's Literacy	Neither literate	2.69
	One literate	2.4l
	Both literate	2.02
Living Children (Incl. Current)	0	2.20
	1	1.75
	2	1.94
	3	2.24
	4	2.30
	5 +	2.69

TABLE II.5.11 : Percentage Distribution of Ever-Married Women According to the Number of Children Desired by some Background Variables

	Ideal Number Of Children						
	0	1	2	3	4	5+	Total
ALL	9.0	4.9	59.8	17.4	7.3	1.6	100.0
West	6.7	6.4	67.7	14.9	3.7	0.7	100.0
South	13.8	2.7	40.8	19.5	19.0	4.2	100.0
Central	8.8	4.6	64.2	17.6	4.0	0.9	100.0
North	8.2	6.8	64.6	16.1	3.5	0.9	100.0
East	11.0	2.8	48.6	22.0	12.7	2.9	100.0
Urban	8.3	5.4	62.2	17.1	5.8	1.2	100.0
Rural	10.0	4.3	56.6	17.9	9.2	2.0	100.0
< 20	22.8	5.3	54.4	10.5	5.7	1.3	100.0
20-29	14.4	5.2	62.7	12.5	4.6	0.7	100.0
30-39	5.2	4.8	62.2	19.0	7.1	1.6	100.0
40-49	3.5	4.5	52.6	24.4	12.1	3.0	100.0
Illiterate	9.6	4.0	43.8	22.8	15.4	4.3	100.0
Literate	7.0	4.2	56.1	23.3	7.9	1.5	100.0
Primary	9.0	4.3	66.7	15.5	4.1	0.4	100.0
Secondary	9.1	6.1	70.1	10.8	3.9	-	100.0
High	10.5	9.0	70.3	8.1	1.3	0.7	100.0
University	5.0	18.8	65.0	8.8	2.5	-	100.0
Couple's Literacy :							
Neither literate	8.7	3.4	38.2	23.7	19.8	6.3	100.0
One literate	9.6	4.1	45.4	22.8	14.1	3.9	100.0
Both literate	8.8	5.3	65.8	15.3	4.3	0.5	100.0

TABLE II.5.12 : Percent Age Distribution of Women by Age and Whether the Actual Family Size Equals the Desired Number

Age	Number Living Greater than Desired	Number Living Equal to or Less Than Desired	Total
< 20	23.2	76.8	100.0
20-24	26.9	73.1	100.0
25-29	34.2	65.8	100.0
30-34	45.9	54.1	100.0
35-39	55.6	44.4	100.0
40-44	56.5	43.5	100.0
45-49	61.4	38.6	100.0
ALL	**43.8**	**56.2**	**100.0**

TABLE II.5.13 : Percent Age Distribution of Women by Educational Status and Whether the Actual Family Size Equals the Desired Number

Education	Number Living Greater than Desired	Number Living Equal to or Less Than Desired	Total
Illiterate	64.2	35.8	100.0
Literate	60.0	40.0	100.0
Primary	35.9	64.1	100.0
Secondary	24.7	75.3	100.0
High	18.2	81.8	100.0
University	8.8	91.3	100.0
ALL	**43.8**	**56.2**	**100.0**

TABLE II.5.14 : Mean Age at First Marriage and Mean Years Since First Marriage by Whether Actual Family Size Equals the Desired Number

	Number Living Greater than Desired	Number Living Equal to or Less Than Desired	Total
Mean Age at First Marriage	17.7	19.3	18.6
Mean Years Since First Marriage	15.0	10.4	12.4

II-6. KNOWLEDGE AND USE OF CONTRACEPTION

II.6.1. INTRODUCTION :

The 1988 Survey questionnaire involves, among other questions, a series of questions on the knowledge, ever-use and current use of contraceptive methods besides the questions on intentions for future use for non-users, problems with methods, source of availability, reasons for using traditional methods and no method at all, and the first method used by the respondent.

The questionnaire not only contains a list of twelve specific contraceptive methods, but also allows the respondent to specify other methods not mentioned. The contraceptive methods in the list are classified into two major types:

I) "Modern" or "efficient" methods include the pill, IUD, condom, diaphragm, other female scientific methods (such as foam tablets,creams, jelly), female and male sterilization and finally injectables (mentioned by the respondent among "other" methods). 2) "Traditional" or "inefficient" methods include withdrawal, rhythm, douche, abstinence and "other" methods.

In this chapter, only findings on knowledge and use of contraception are summarized. By no means is full exploitation of the set of data collected in the survey attempted here. Further specialized analyses will explore the topic in greater depth. The objective of this chapter is to give a general idea on the levels of knowledge and use of contraceptive methods and review differentials by some background variables.

II.6.2. KNOWLEDGE OF CONTRACEPTIVE METHODS :

It is a well known fact that knowledge of contraceptive methods is a "necessary" condition while it is not "sufficient" for use. In the survey, "knowledge" of contraceptive methods is defined as having heard of any method to avoid or delay pregnancy; the respondent is not interviewed on how to use a method.

Knowledge of contraceptive methods is ascertained in two stages. The first is the "spontaneous" knowledge and is obtained by asking the direct question: "As you know, there are various ways that a couple can delay a pregnancy or avoid it if they want no more children. These are called family planning methods. Which of these methods do you know?" Each method mentioned by the woman was marked and those not mentioned were described by the interviewer and the respondent was then asked: "Have you heard of this method?" Descriptions were included in the questionnaire for the twelve methods mentioned above. In addition, other methods mentioned by the respondent such as herbs, chicken feather, aspirin, etc. were recorded. For any method that the women recognized, she was asked whether she had ever used it and for those methods she mentioned as having used it, the respondent was asked if she was currently using this method.

Knowledge of contraceptive methods is analysed according to ever-married and currently married women below :

II.6.2.1. EVER-MARRIED WOMEN

As shown in Table II.6.1. knowledge of at least one method is almost universal among ever- married women. 98 percent know about at least one contraceptive method. Knowledge of modern methods is also universal, 97.5 percent of all ever-married women are aware of at least one modern contraceptive method whereas those who know only traditional methods are almost negligible (0.7 percent). Table II.6.1. also indicates that, in general, knowledge of modern contraceptive methods has increased by 11 % over a period of ten years.

Table II.6.2 shows that knowledge of pill and IUD are both close to universal with 94 percent of ever-married women either spontaneously mentioning them or indicating recognition when the method was described and probed by the interviewer. Condom is also widely known (76%) though to a lesser extent than the pill and IUD. In contrast, familiarity with male sterilization is rather low and with diaphragm and injection only minor. For traditional methods, withdrawal is the most widely known method followed by douche. Table II.6.2 also shows the trends in the knowledge of specific contraceptive methods. When compared with 1983 figures, the highest increase in knowledge is for female sterilization, followed by the condom

TABLE II.6.1: Percentage Distribution of Ever-Married Women Reporting Knowledge of any Method

Knowledge of Any Method	1978 Turkish Fertility Survey	1983 Turkish Fertility Contraceptive Prevalence and Family Health Status Survey	1988 Turkish Fertility and Health Survey
No method known	11.7	6.3	1.8
Any method known	88.3	93.7	98.2
Knowledge of some modern method	86.2	90.8	97.5
Knowledge of only traditional methods	2.1	2.9	0.7

and IUD. The very high level of knowledge for douche in the 1988 survey draws attention. The low level of reporting knowledge for douche in the 1983 Survey can be explained by the fact that only spontaneous reporting was obtained.However, in the 1978 Survey, both spontaneous and probed knowledge was obtained. During l978 Survey, while spontaneous reporting was obtained, the interviewer both wrote down the methods the respondent mentioned and circled that method in the list at the same time. During the editing process at the office it was observed that performing an ablution after the sexual intercourse was confused with scientific douche. Therefore, those who reported ablution to mean scientific douche were dropped. In the 1988 Survey, a description of douche was given by the interviewer, but reporting of spontaneous knowledge was only circled in the list and not written down. The very high level of reporting of knowledge of douche in the 1988 Survey makes one strongly doubt that scientific douche was reported instead of performing an ablution.

Table II.6.3 shows the percentage of ever-married women who have heard of modern contraceptives by current age. The level of knowledge by woman's age follows the usual pattern where knowledge is higher among women in the intermediate age groups and lower among the young and old. The least known methods for all age groups appear to be diaphragm and injection, while pill and IUD appear to be the most widely known.

Table II.6.4 presents rural-urban differentials in knowledge of contraceptive methods among ever-married women by whether the respondent mentioned the method spontaneously or indicated knowledge after the interviewer's description.Although the pill and IUD are the most widely known methods both in urban and rural areas, spontaneous knowledge is higher in urban areas. The highest difference in the knowledge of modern methods is for male sterilization being higher by 25 % in urban areas, which is followed by female sterilization with a difference of 22%, female scientific methods (18%), and condom (16%) also being more familiar to those women in urban areas. When traditional methods are considered, rhythm is more widely known in urban areas than rural areas with a difference of 32%, though the level of knowledge is less than withdrawal in both urban and rural areas. In urban areas, diaphragm and abstinence are the least spontaneously known methods as well as sterilization and injection, while knowledge of female sterilization increases after probing more than the other methods. In rural areas, spontaneous knowledge for diaphragm, abstinence and male sterilization is almost negligible while probed knowledge is highest for female sterilization similar to urban areas.

Table II.6.5. shows the regional distribution of ever-married women according to knowledge of contraceptive methods. It is observed that in all regions, over 90 percent of women know at least one modern method. Knowledge of only tradition-

TABLE II.6.2 Trends in the Level of Contraceptive Knowledge among Ever-Married Women

	MODERN METHODS (%)							TRADITIONAL METHODS (%)					
	PILL	IUD	Condom	Female Scient.	Female Steril.	Male Steril.	Diaphragm	Injection	Withdrawal	Rhythm	Douche	Abstinence	Other
1978 Survey	81	68	52	32	39	9	*	6*	65	23	5	10	24
1983 Survey	85	75	55	50	28	19	*	5*	75	23	4*	*	13
1988 Survey	94	94	76	63	65	28	6	5*	85	38	60	10	11

** No probing done*

TABLE II.6.3: Percentage of Ever-Married Women who have heard of Modern Methods of Contraception by Age

	AGE		
METHOD	**<25**	**25-34**	**35+**
Pill	93.4	96.I	92.5
IUD	93.9	96.9	92.0
Condom	68.7	81.3	73.7
Female Scientific	55.2	69.8	61.2
Female Sterilization	63.3	68.5	63.6
Male Sterilization	26.7	31.4	25.9
Diaphragm	4.2	7.2	6.5
Injection	6.5	4.7	4.6

TABLE II.6.4: Percentage of Ever-Married Women by Spontaneous and Probed Knowledge of Specific Contraceptive Methods and Place of Residence

METHOD	URBAN			RURAL		
	Spon-taneous	Probed	Total	Spon-taneous	Probed	Total
Pill	80.0	16.8	96.8	67.7	22.8	90.5
IUD	77.7	19.1	96.8	61.6	29.6	91.2
Condom	39.9	42.5	82.4	28.1	38.6	66.7
Female Scientific	25.9	45.4	71.3	18.1	34.8	52.9
Female Sterilization	9.1	66.1	75.2	4.5	48.4	52.9
Male Sterilization	2.5	36.7	39.2	0.6	13.2	13.8
Diaphragm	1.7	7.6	9.3	0.3	2.1	2.4
Injection*	3.5	-	3.5	7.1	-	7.1
Withdrawal	39.4	48.7	88.1	33.1	47.1	80.2
Rhythm	10.9	40.9	51.8	1.7	18.3	20.0
Douche	4.7	64.3	69.0	3.1	44.7	47.8
Abstinence	0.7	11.3	12.0	0.4	6.4	6.8
Other*	11.4	-	11.4	10.0		10.0

** No probing done*

al methods is highest in the North by 2.6 percent, as well as the percentage of women who are not familiar with any kind of contraceptive method (4 percent).

Table II.6.6. shows the regional differentials in the level of knowledge of specific modern methods. Level of knowledge of the pill and IUD is well over 90% in all regions except the North. Condom and female scientific methods are most widely known in the West, while the least familiarity with these methods is in the Eastern region. Female sterilization appears to be most widely known in the South and least in the East.

Table II.6.7 presents the knowledge of specified contraceptive methods by education. It is observed that an increasing level of education increases knowledge for both modern and traditional methods. The only exceptions to this are injection and "other" methods where some fluctuations are observed with increasing level of education. This might be connected with the fact that these two methods were not described by the interviewer if the respondent did not mention them spontaneously, i.e. there was no probing. The level of knowledge of the pill and IUD are highest with increasing level of education followed by the condom. The very low level of diaphragm among illiterate women increases to 50 percent among university graduates. Knowledge of male sterilization and rhythm follows the same trend, i.e. very low among illiterate women and increasing to 89 percent and 99 percent respectively among university graduates. Of the traditional methods, withdrawal has the highest level of knowledge for all educational levels, thus the difference of level of knowledge between the lowest and highest educational groups (24 percent) is lower compared to other traditional methods.

II.6.2.2. CURRENTLY MARRIED WOMEN

Level of knowledge for various methods of contraception for ever-married and currently married women are compared in Table II.6.8. It is observed that the level of knowledge of contraceptive methods among currently married women is very similar to those of ever- married women. The closeness of bases for ever-married and currently married women (n = 5257 and 5090 respectively) explain this similarity.

Table II.6.9 shows the percentages of currently married women by whether reporting of knowledge was spontaneous or probed. It is seen that probing played an important role in increasing the levels of knowledge for all the specified methods. The highest level of spontaneous

knowledge was reported for the pill and IUD, while the lowest was for abstinence followed by the diaphragm, male sterilization, injection and female sterilization. Almost negligible spontaneous knowledge of abstinence is most probably combined with the fact that it is not considered as a contraceptive method by the respondents. It is observed that description of the method by the interviewer played a significant role in reporting familiarity with it for female sterilization in the first place followed by the douche, withdrawal, condom and female scientific methods. The low level of spontaneous reporting for withdrawal (37 percent) which is the most widely practised contraceptive method (see following sections), might be due to the shyness of women in reporting this method.

Table II.6.10. shows level of knowledge of various contraceptive methods for currently married women by age. The level of contraceptive knowledge among currently married women shows a similar pattern to that of ever-married women, i.e. highest among intermediate age groups, lower among women at young and old ages.

II.6.3. EVER USE OF CONTRACEPTION

For each method that the respondent said she had heard of (regardless of whether it was spontaneous or probed), she was also asked whether she had ever used it. Questions on ever-use of contraception served as a transition between questions on knowledge of methods and current use. Findings on ever- use of contraception are presented on the basis of ever-married women.

Table II.6.11 shows percentages of ever-married women who have ever-used contraceptive methods and the trends in ever-use. Findings of the 1988 Survey show that 87.5 percent of ever-married women have used a method of contraception at some time of their reproductive span, while 60 percent have tried at least one modern method.Of ever-married women, 27.4 percent have ever-used only traditional methods and never tried a modern method of contraception. When these figures are compared with those of the 1983 Turkish Fertility, Contraceptive Prevalence and Family Health Status Survey , it is observed that there is an increase of 16.5 percent in the level of ever-use of contraceptives (71 percent vs 87.5 percent). There is an increase in the level of ever-use of both modern and traditional methods. The percentage of women who practised only traditional methods increased by 7.4 percent and those who tried at least one modern method by 9 percent. These figures show that increases in the levels of ever-use of modern and traditional methods are very close to each other.

It is observed from Table II.6.11 that withdrawal is still the most widely ever-used method (53 percent) as it was in previous years. The next most widely used methods are the pill,IUD, douche and condom with respectively 38,25, 25 and 23 percent of ever-married women reporting use. Much smaller proportions of women report having used other methods. Comparisons with the 1983 Survey show increases in the percentages of ever-use of IUD and condom. Increase in the use of the pill is relatively small in the last five years. When traditional methods are considered, a 7 percent increase in withdrawal and 4.8 percent increase in the use of rhythm is observed. The high level of increase for douche between 1983 and 1988 is most probably due to the fact that, in the 1983 Survey, there was no probing for douche which resulted in reporting a low level for its use.

Table II.6.12 presents trends in level of ever-use by current age. It is observed that in the 1983 Survey, the pattern of ever-use by current age displayed an inverted "U" with a peak at intermediate ages and lower levels of ever-use in young and old age groups. Findings of the 1988 Survey indicate that this pattern has changed so that the level of ever-use increases with increasing age. (see Fig. II.6.1). It can be argued that the inverted "U" pattern is a transition stage for achieving higher levels of ever-use; the level of ever-use displayed the inverted "U" pattern for many years (results of the 1978 Survey also indicate the same pattern) and finally a change is observed. i.e. Increasing level of ever-use as age increases. In fact, this indicates that,women representing the right half of the inverted "U" shape drop out of the sample (i.e. women at oldest ages with lower levels of ever- use). In addition, among the cohort of women at ages 40-44 in 1983, the level of ever-use increases (by 21.4 percent) when they are 45-

TABLE II.6.5: Percentage Distribution of Ever-Married Women According to Knowledge of Contraceptive Methods

	No Method Known	Knows Only Traditional Methods	Knows At Least One Modern Method
West	1.8	0.6	97.6
South	1.3	0.3	98.4
Central	1.0	0.5	98.6
North	4.0	2.6	93.4
East	2.2	0.3	97.5

TABLE II.6.6: Percentage of Ever-Married Women who have heard of Modern Methods of Contraception by Region

	REGION				
METHOD	WEST	SOUTH	CENTRAL	NORTH	EAST
Pill	95.5	95.3	95.4	87.8	92.5
IUD	95.2	95.9	95.5	89.0	93.3
Condom	81.6	73.7	76.3	71.6	66.1
Female Scientific	71.0	61.8	59.7	62.2	53.9
Female Sterilization	66.2	80.1	60.9	56.8	64.5
Male Sterilization	39.7	25.3	23.6	21.6	17.2
Diaphragm	9.2	6.3	4.0	3.7	5.1
Injection	1.8	13.9	3.7	0.2	10.0

TABLE II.6.7: Percentage of Ever-Married Women who have heard of Contraceptive Methods by Woman's Educational Level

	Illiterate	Literate	Primary School	Secondary School	High School	University
Pill	87.5	92.5	96.7	99.6	99.3	100.0
IUD	87.8	92.2	97.1	99.1	99.6	100.0
Condom	58.7	71.6	80.2	92.2	96.3	100.0
Female Scientific	52.7	56.8	65.2	77.5	82.0	93.8
Female Sterilization	53.3	57.5	66.3	87.0	92.7	98.8
Male Sterilization	11.0	16.9	27.4	59.7	74.5	88.8
Diaphragm	1.9	2.0	3.1	17.3	29.3	50.0
Injection	8.9	4.7	4.0	0.9	1.8	3.8
Withdrawal	74.5	80.9	88.1	95.2	96.1	98.8
Rhythm	15.6	22.4	39.3	77.9	90.8	98.8
Douche	46.7	57.1	62.4	70.6	80.2	85.0
Abstinence	5.5	6.5	9.5	11.7	23.1	37.5
Other	9.0	12.6	11.0	10.8	13.0	12.5

TABLE II.6.8: Percentage of Ever-Married and Currently Married Women who have heard of Various Contraceptive Methods

	MODERN METHODS								TRADITIONAL METHODS				
	PILL	IUD	Condom	Female Scient	Female Steril.	Male Steril.	Diaphragm	Injection	Withdrawal	Rhythm	Douche	Abstinence	Other
Ever-Married	94.1	94.4	75.6	63.3	65.5	28.2	6.3	5.0	84.7	38.0	59.8	9.8	10.8
Currently Married	94.3	94.6	76.0	63.5	65.6	28.2	6.1	5.1	85.2	38.0	60.1	9.8	11.0

TABLE II.6.9: Percentage of Currently Married Women by Spontaneous and Probed Knowledge of Specific Contraceptive Methods

	MODERN METHODS								TRADITIONAL METHODS				
	PILL	IUD	Condom	Female Scient	Female Steril.	Male Steril.	Diaphragm	Injection	Withdrawal	Rhythm	Douche	Abstinence	Other
Spontaneous	75.0	71.2	35.2	22.8	7.1	1.7	1.0	5.12	37.2	6.7	4.0	0.6	11.0
Probed	19.3	23.4	40.8	40.7	58.5	26.5	5.1	*	48.0	31.3	56.1	9.2	*
TOTAL	94.3	94.6	76.0	63.5	65.6	28.2	6.1	5.1	85.2	38.0	60.1	9.8	11.0

** No probing done*

TABLE II.6.10: Percentage of Currently Married Women who have heard of Various Contraceptive Methods by Age

METHOD	AGE < 25	25-34	35+
Pill	93.3	96.2	92.9
IUD	93.9	97.0	92.4
Condom	68.7	81.4	74.5
Female Scientific	55.4	69.8	61.7
Female Sterilization	63.2	68.6	63.7
Male Sterilization	26.8	31.2	25.8
Diaphragm	4.1	7.2	6.3
Injection	6.6	4.7	4.8
Withdrawal	81.0	89.0	83.4
Rhythm	34.2	43.2	34.5
Douche	49.5	63.0	63.2
Abstinence	9.5	10.2	9.4
Other	7.1	11.6	12.5

TABLE II.6.11: Trends in the Ever-use of Various Contraceptive Methods for Ever-Married Women(%)

				MODERN METHODS							
	Never Used Any	Used Only Traditional Methods	Used Some Modern Method	Pill	IUD	Condom	Female Scient.	Female Steril.	Male Steril.	Diaphragm	Injection
1978	45	21	34	25	7	11	3	-		-	1
1983	29	20	51	34	15	16	12	1	-	-	1
1988	12.5	27.4	60.1	37.9	25.2	23	13.6	1.9	0.1	0.1	1.0

	TRADITIONAL METHODS				
	Withdrawal	Rhythm	Douche	Abstinence	Other
1978	32	5	19	-	-
1983	46	6	3	-	4
1988	53.3	10.8	25.0	1.4	3.6

TABLE II.6.12: Percentage of Ever-Married Women who have Ever-Used Contraceptive Methods by Current Age

	1983 SURVEY			1988 SURVEY			
	Never Used Any	Used Only Traditional	Used Some Modern	Never Used Any	Used Only Traditional	Used Some Modern	
<20	60.6	19.5	19.9	52.2	28.9	18.9	< 20
20-24	38.2	20.7	41.1	25.4	28.1	46.4	20-24
25-29	24.5	18.4	57.1	12.2	20.7	67.1	25-29
30-34	19.5	17.2	63.3	6.3	23.2	70.6	30-34
35-39	20.2	20.4	59.4	6.3	23.3	70.4	35-39
40-44	25.8	23.4	50.8	5.8	32.7	61.5	40-44
45-49	34.1	26.4	39.5	4.4	45.4	50.3	45-49

TABLE II.6.13: Regional Differentials in the Level of Ever-use of a Method of Contraception among Ever-Married Women (%)

	Never Used Any	Used Only Traditional	Used Some Modern
West	8.0	26.0	66.0
South	20.9	23.3	55.8
Central	9.5	26.8	63.7
North	9.9	40.8	49.3
East	21.3	25.6	53.1
TURKEY	12.5	27.4	60.1

Figure II.6.1 Percentage of Ever-Married Women by Ever-use and Age (1983-1988)

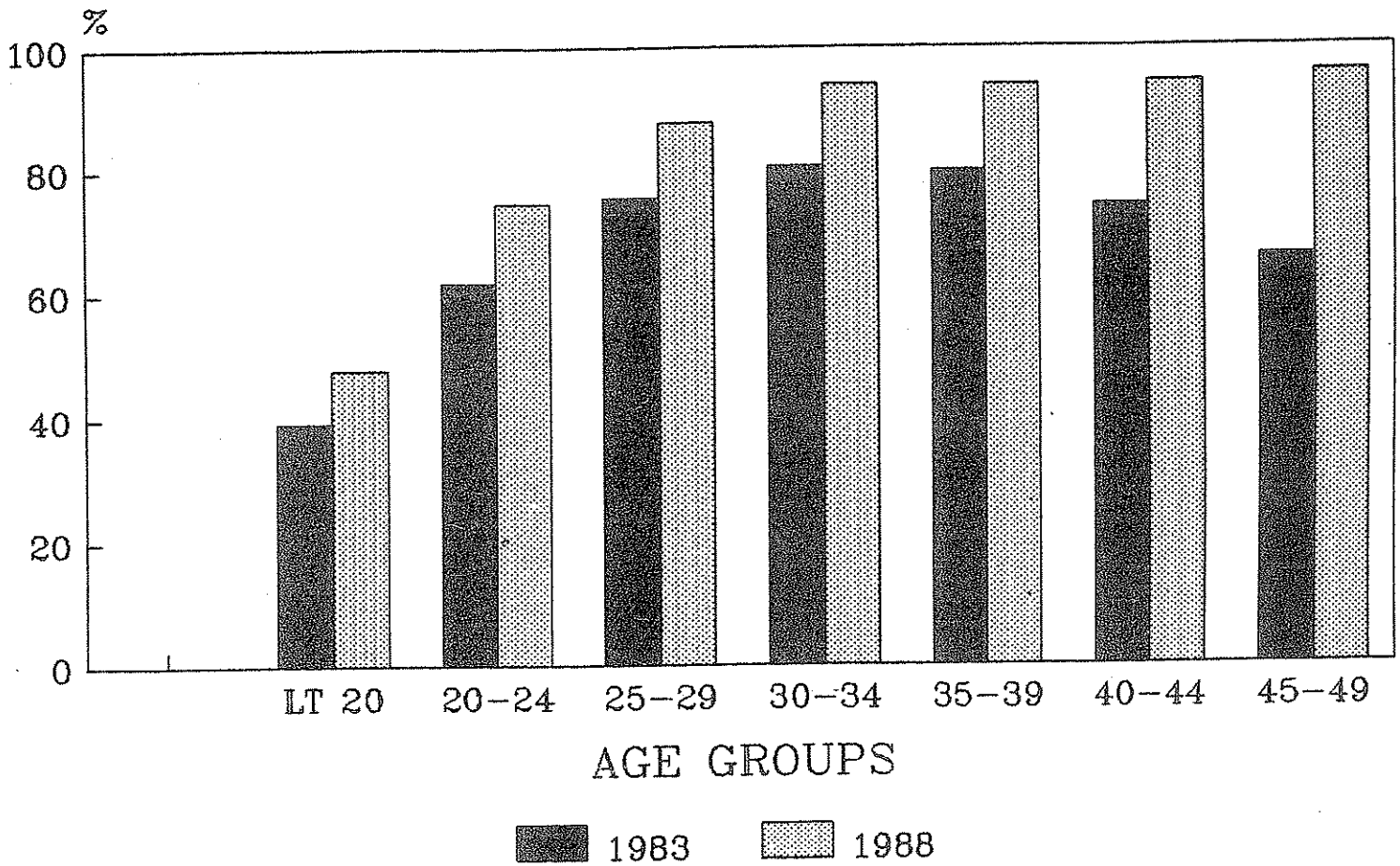


TABLE II.6.14: Percentage of Ever-Married Women who have Ever-Used Various Contraceptive Methods by Background Variables

	MODERN METHODS								TRADITIONAL METHODS				
	Pill	IUD	Condom	Female Scient.	Female Steril.	Male Steril.	Diaph.	Injection	Withdra.	Rhythm	Douche	Abstin.	Other
TURKEY	37.9	25.2	23.0	13.6	1.9	0.1	0.1	1.0	53.3	10.8	25.0	1.4	3.6
REGION													
West	41.6	26.1	25.7	15.4	2.5	0.1	0.1	0.4	57.3	14.4	30.1	1.6	2.7
South	34.5	28.2	19.9	13.8	1.3	0.1	0.1	2.6	41.1	9.9	20.5	1.6	2.7
Central	40.7	26.8	25.9	14.2	1.4	0.2	0.2	1.3	57.1	11.5	29.7	1.6	5.3
North	26.6	18.6	20.5	11.8	2.1	0.2	-	-	59.0	6.3	15.8	0.5	6.4
East	36.1	22.9	17.0	10.2	1.7	-	0.2	1.5	45.5	5.9	16.9	1.4	1.7
TYPE OF PLACE OF RESIDENCE													
Urban	40.0	31.0	27.4	16.4	2.2	0.1	0.2	0.8	56.0	16.1	28.8	1.5	3.0
Rural	35.1	17.6	17.1	10.0	1.5	0.1	0.0	1.4	49.8	4.0	19.9	1.4	4.3
WOMAN'S EDUCATION													
Illiterate	33.8	19.6	11.5	9.0	2.6	0.1	0.1	1.8	42.5	2.7	21.2	1.5	4.1
Literate	41.5	20.8	19.9	11.5	2.5	-	-	1.3	55.1	4.3	25.1	1.3	5.6
Primary	40.9	25.9	25.1	15.2	1.3	0.1	0.1	0.7	57.5	8.9	26.9	1.3	3.5
Secondary or higher	32.5	36.6	39.6	19.1	2.0	0.3	0.4	0.4	58.6	37.3	26.0	1.7	1.2

TABLE II.6.14: (Continued)

	MODERN METHODS								TRADITIONAL METHODS				
	Pill	IUD	Condom	Female Scient.	Female Steril.	Male Steril.	Diaph.	Injection	Withdra.	Rhythm	Douche	Abstin.	Other
HUSBAND'S EDUCATION													
Illiterate	31.0	17.2	9.5	5.5	1.8	-	-	2.2	35.8	2.2	19.7	1.8	4.4
Literate	37.3	17.8	14.7	8.4	1.9	-	0.2	-	43.9	2.4	23.9	1.9	4.8
Primary	39.8	23.0	19.9	13.3	2.0	0.1	0.1	1.3	53.8	5.8	25.6	1.2	4.0
Secondary or higher	35.4	33.4	34.5	17.7	1.8	0.3	0.2	0.6	58.2	25.0	24.9	1.8	2.2
COUPLE'S LITERACY													
Neither Literate	29.2	17.0	6.1	4.7	1.4	-	-	2.8	30.2	2.4	16.0	1.4	4.2
Only one Literate	34.7	20.0	12.8	9.7	2.8	0.2	0.1	1.6	45.2	2.7	22.6	1.7	4.2
Both Literate	39.4	27.4	27.3	15.5	1.6	0.1	0.2	0.7	57.4	14.0	26.3	1.4	3.3
NUMBER OF LIVING CHILDREN													
0	6.4	2.1	4.9	1.9	0.4	0.2	-	-	15.0	7.6	6.0	0.2	0.8
1	21.6	20.8	24.2	7.1	0.7	-	-	0.7	54.7	13.9	20.0	1.3	2.7
2	42.3	31.2	30.7	18.9	1.6	0.1	0.3	0.8	59.2	16.3	29.4	1.8	4.2
3	48.3	29.7	25.2	16.8	2.1	0.3	-	1.1	62.1	10.3	29.8	1.6	4.7
4	45.7	27.2	19.1	15.2	2.8	0.2	-	1.1	59.3	6.3	27.5	0.9	3.5
5 +	47.5	25.9	18.7	13.2	3.6	-	0.2	2.2	48.8	3.6	25.9	1.9	3.5

49 in 1988. This also contributes to the changing pattern of ever-use of contraceptives.

The findings of the 1988 Survey show that the youngest women who have just entered marital life are not as keen on using contraceptive methods as their older counterparts. Of those who are using a method of contraception in the youngest ages more rely on traditional than modern methods. It is seen that,in the 1983 Survey, women under 20 years of age relied on modern and traditional methods to the same extent- 19.9 and 19.5 percent respectively. Thus, a decrease in the level of never- users in the youngest ages (from 60.6 percent in 1983 to 52.2 percent in 1988) is brought about by the increase in the percentages of women who experience traditional methods. On the other hand, ever-use of modern methods reaches a maximum at intermediate ages (30-39) and then a decline is observed. However, as the level of ever-use increases by age according to the 1988 Survey findings, this indicates increasing levels of ever-use of traditional methods at older ages. This fact shows that women at older ages rely on traditional methods as do the young women. Thus, this pattern of ever-use of traditional methods shows a "U" shaped pattern. Comparison of cohorts also shows that the proportion of women who experienced a traditional but never a modern method almost doubles among the cohort of women at 45-49 years of age (23.4 percent vs. 45.4 percent).

Table II.6.13 presents regional differentials in the level of ever-use among ever-married women. It is observed that the West has the highest level of ever-use of contraception as well as the highest proportion of women who have used at least one modern method. On the contrary, the East and South have the lowest levels of ever-use among ever-married women. In the West, while 92 percent of women have tried a method of contraception during their reproductive life, only about 79 percent of women in the South and East have ever-used a method. It is worth noting that in the North where the level of ever-use is over the national average, the percentage of women who have tried only traditional methods but never a modern method is highest and the percentage of those who have used some modern method is lowest among all regions.

Table II.6.14 shows differentials in ever-use of various contraceptive methods by background characteristics of ever-married women. In relation to regional differentials, when widely practised modern methods are considered, it is observed that the level of ever-use for the pill and condom are higher than the overall percentage for Turkey in the West and Central. On the other hand,the North and East have lower levels of ever-use for the IUD than the national average. Female scientific methods appear to be most widely practised in the West and least in the East. When ever-use of some specific modern methods is compared with the 1983 Survey, it is observed that in the East, ever-use of the pill, IUD, and condom has increased (by 15,16,11 percent respectively) (1). Increases for the ever-use of IUDs are also observed in the West and South (11 percent and 17 percent respectively). Ever-use of withdrawal increased in the North as well as in the East (by 14 percent in both regions).

As expected, ever-use of contraceptive methods be they modern or traditional, is higher among urban women. At the same time, among rural women, for almost all methods the level of practising specified contraceptive methods is lower than the national average. Ever-use of IUDs and condoms appears to be considerably lower among rural women when modern methods are considered.

Table II.6.14 also shows that increasing level of education results in increasing practice of contraceptive methods. When the woman's and husband's education are considered, it is seen that ever-use of the pill, IUD, condom, withdrawal and rhythm increase considerably with increasing education. It is interesting that when the women's education is taken into account, the highest difference of level of ever-use between illiterate women and women with secondary or higher education appears to be in the practice of rhythm (35 percent difference), while the husband's education leads to a difference in the level of use of condoms by 25 percent. The effect of education is also observed when the couple's literacy is considered. In general, the lowest percentages

(1) Hacettepe Institute of Population Studies, (1987), "1983 Turkish Population and Health Survey" Ankara, pp:93

for ever-use appear to be for couples where both the wife and the husband are illiterate while the highest prevail for those who are both literate.

Finally, variations in level of ever-use of contraceptives by number of living children are presented in Table II.6.14. It is observed that contraceptive experience is very low among childless women and increases significantly once the woman has a child. Women in the intermediate categories of family size have higher levels of use. Passing over small families, the pattern of ever-use reaches a maximum at intermediate family sizes of 2 to 3 children.

II-6.4. CURRENT USE OF CONTRACEPTION

In the women's questionnaire, all women who reported ever-use of contraception and were currently married and non-pregnant were asked about the current use of contraceptive methods. Those women who reported ever-use of specified methods were asked whether they were currently using that certain method. Thus, for all methods which ever-use was reported, current use was asked. During the recoding process at the office, the list of contraceptive methods in the questionnaire was taken into account and if there were two methods reported for current use, the one at the top of the list was considered the current method being used.

In discussing the findings of the survey on current use of contraceptives, women who are unexposed to the risk of conception are excluded. Accordingly, findings are based on women who are currently using a method of contraception (numerator) and who are currently married, non-pregnant and consider themselves to be fecund (denominator). These women are said to be "exposed". These are the only women in the sample who were "exposed" to the risk of conception at the time of the survey. Women who themselves or their husbands have been sterilized are treated as though they were "exposed" but currently using a method (number of exposed women = 4158). However, percentage distribution of "currently married" women according to the contraceptive method currently used is also presented in a table as it is also common to base estimates of the prevalence of current use on currently married women.

Of all exposed women, 77 percent report current use of a method (This ratio drops to 63.4 percent when currently married women are considered; see Table II-6.17). This shows an increase of 15.5 percent in the level of current use when compared with 1983 Survey findings. Of those who are currently using a method of contraception, 49 percent use a modern method and 51 percent a traditional method. Table II-6.I5 indicates that the distribution of current users by modern and traditional methods is becoming more even in time; i.e. among exposed women who are using a method of contraception, the proportion of women using traditional methods is declining and those who are using modern methods is increasing though the change is not rapid. Consequently, the 1988 Survey findings show that distribution of modern and traditional methods among women who are using a method of contraception is almost equal.

Table II.6.16 presents the trends in the percentage distribution of exposed women, according to the contraceptive method currently used. It is observed that the percentage of current users among exposed women has been increasing since 1978. The percentage of exposed women who are not using any method of contraception declined from 50 percent in 1978 to 38.5 percent in 1983 and to 23 percent in 1988. It is also observed that the percentage of exposed women using a modern method of contraception has increased by 20 percent in the course of 10 years (18 percent vs. 38 percent) while an increase of 7 percent is observed in the percentage of women using traditional methods. This shows the fact that not only use of modern methods, but also traditional methods has been increasing. However, it is important to note that when the distribution of exposed women using contraceptives is taken into account, long-time experience distribution in Turkey; i.e. use of traditional methods being higher than modern methods (32 percent vs. 18 percent in 1978 and 27 percent vs. 34 percent in 1983) has been changing and both proportions have become equal (39 percent vs. 38 percent). This fact might be considered as a hint indicating that the proportion of women using modern contraceptives among exposed women will increase in the future. But still, though the overall level of current use is quite high in Turkey, only 38 percent of exposed women are using a

TABLE II.6.15: Percentage Distribution of Current Users by Type of the Method used (Comparison of Three National Fertility Surveys)

	CURRENT USERS		
	MODERN METHODS	TRADITIONAL METHODS	TOTAL
1978	36	64	50.0
1983	44	56	61.5
1988	49	51	77.0

TABLE II.6.16: Percentage Distribution of Exposed Women According to the Contraceptive Method Currently used (Comparison of Three National Fertility Surveys)

	Not Using Any	Current Users	Modern Methods							
			Pill	IUD	Condom	Female Scientific	Female Sterilization	Male Sterilization	Injection	Total
1978 Survey	50.0	50.0	8.0	4.0	4.0	2.0	-	-	-	18.0
1983 Survey	38.5	61.5	9.0	8.9	4.9	2.9	1.3	-	0.2	27.2
1988 Survey	23.0	77.0	7.6	17.1	8.9	2.2	2.1	0.1	0.0	38.0

	TRADITIONAL METHODS					
	Withdrawal	Rhythm	Douche	Abstinence	Other	Total
1978 Survey	22.0	-	6.0	-	4.0	32.0
1983 Survey	30.1	1.4	1.9	-	0.8	34.2
1988 Survey	31.1	4.3	2.9	0.1	0.6	39.0

TABLE II.6.17: Percent Distribution of Currently Married Women by the Contraceptive Method Currently Used

Not using any method	36.6		
MODERN METHODS		TRADITIONAL METHODS	
Pill	6.2	Withdrawal	25.7
IUD	14.0	Rhythm	3.5
Condom	7.2	Douche	2.5
Female Scientific	1.8	Abstinence	0.1
Female Sterilization	1.7	Other	0.5
Male Sterilization	0.1		
Injection	0.1	TOTAL	32.3
TOTAL	31.0		

modern method. In fact, when the use of specific methods is examined in 1988, it is observed that withdrawal which has been the most widely used method among exposed women for many years still appears to maintain its first place; i.e. to say 31 percent of exposed women are currently using withdrawal to avoid or delay pregnancy. This level of current use for withdrawal is close to the level of use of all modern methods put together (31 percent vs. 38 percent). IUDs with 17 percent of exposed women using them appear to be the second most widely practised method. About a two-fold increase is observed in the use of IUDs between 1983 and 1988. IUDs are followed by the condom and the pill (8.9 percent and 7.6 percent respectively).

When the level of current use is examined by age, it is observed that women at intermediate ages are more likely to use a method of contraception than those at younger and older ages. However, women at the youngest ages are less likely to use a method of contraception. Of exposed women less than 20 years of age, only 34.5 percent use a method of contraception, while 71.8 percent of those in the 45-49 age group currently use a method.Table II.6.18 presents percentage distribution of exposed women according to the contraceptive method used by age in 10 year groups. It is observed that among intermediate age groups the level of current use is highest (82.2 percent in 25-34 age group and 83.9 percent in 35-44 age group). Current use of modern methods is highest between ages 25-34 (44.4 percent) and decreases as age increases. On the other hand, use of traditional methods becomes highest after reaching age 35 (about 46 percent respectively for age groups 35-44 and 45-49).

Table II.6.19 and Figure II.6.2 show regional and urban/rural differentials in the level of current use among exposed women. Percentages of exposed women who are using a method of contraception are below the national average in two regions, namely the South and the East. While of the exposed women in the West 83.6 percent use a method of contraception, this ratio declines to 62.8 percent and 67 percent respectively in the East and the South. When use of modern and traditional methods is examined among exposed women, it is observed that the highest difference in the use of modern and traditional methods is in the North. In the North, 48.3 percent of exposed women are using traditional methods while only 31.7 percent are using a modern method of contraception to avoid or delay pregnancy. It is also interesting to note that the level of current use of withdrawal in the North is considerably higher than the East and the South. In the other regions, the level of traditional and modern methods shows less variation; in the West, Central and East percentages of women using modern and traditional methods are very close to each other while in the South, users of modern methods are slightly higher by 4 percent.

Table II-6.19 also indicates that contraceptive use is more common among urban women than rural women. In urban areas, while only 17.6 percent of exposed women do not use a method of contraception, the ratio increases to 30.3 percent in rural areas. Use of modern methods is also higher among urban women.

Table II.6.20 presents current use of contraception by number of living children. It is observed that the association between number of living children and contraceptive practice is curvilinear. The level of current use of contraceptives is highest among couples with 2 to 3 children (as was the level of ever-use) compared to those with either more or less children. It is observed that current contraceptive practice is lowest among childless couples. Only 20 percent of those without children are current users of any method of contraception to avoid or delay pregnancy. This might imply that the concern to delay the first birth is not widely felt among childless couples though such a concern is not totally absent. It is also worthy of note that current users of contraceptives among childless couples rely on traditional methods rather than modern methods. The level of current use increases sharply to 75.6 percent among couples with one living child and to 84.9 percent among couples with two children. This fact might be accepted as an indication of widespread acceptance of the idea of spacing births at the earlier stages of family building. The lower percentages of exposed women currently practising a method of contraception among couples with more children might be a reflection of a selection process whereby couples who do not practise contraception are more likely to reach higher family sizes than those who do (this

TABLE II.6.18: Percentage Distribution of Exposed Women According to the Contraceptive Method Currently Used by Age

Age	Not Using Any	Modern Methods						Traditional Methods				
		PILL	IUD	Condom	Female Scientific	Female Steril.	Male Steril.	Injection	Withdrawal	Rhythm	Douche	Abstinence	Other
<25	41.6	7.1	12.5	6.8	1.0	0.1	-	-	25.7	2.7	1.7	0.1	0.6
25-34	17.8	9.3	22.2	9.0	2.5	1.3	0.1	-	30.5	4.5	2.4	0.1	0.4
35-44	16.1	6.3	15.3	10.4	2.7	3.2	0.2	0.2	35.5	5.6	3.7	0.2	0.7
45-49	28.2	2.4	4.8	7.9	2.4	8.7	-	-	33.3	3.2	7.9	0.4	0.8

TABLE II-6.19: Percentage Distribution of Exposed Women According to the Current Contraceptive Method Used by Region and Place of Residence

Age	Not Using Any	Modern Methods								Traditional Methods					
		PILL	IUD	Condom	Female Scientific	Female Steril.	Male Steril.	Injection	Total	Withdrawal	Rhythm	Douche	Abstinence	Other	Total
TURKEY	23.0	7.6	17.1	8.9	2.2	2.1	0.1	0.0	38.0	31.1	4.3	2.9	0.1	0.6	39.0
REGION															
West	16.4	8.4	19.4	9.3	2.0	2.6	0.1	0.1	41.9	32.0	5.6	3.4	0.1	0.5	41.6
South	33.0	5.3	18.9	7.3	2.4	1.7	-	-	35.6	23.8	3.9	3.2	0.2	0.2	31.3
Central	19.1	7.9	17.0	10.5	2.7	1.6	0.2	-	39.9	31.8	5.2	3.5	0.1	0.5	41.1
North	20.0	5.8	10.9	9.5	3.3	2.2	-	-	31.7	43.0	2.2	0.9	-	2.2	48.3
East	37.2	8.3	14.8	6.1	1.0	1.8	-	0.1	32.1	26.4	1.9	2.2	0.1	-	30.6
PLACE OF RESIDENCE															
Urban	17.6	6.5	20.5	10.8	2.5	2.5	0.1	0.1	43.0	29.4	6.3	3.2	0.2	0.3	39.4
Rural	30.3	9.0	12.4	6.2	1.8	1.5	0.1	-	31.0	33.5	1.6	2.6	0.1	1.0	38.8

Figure II.6.2 Percentage Distribution of Exposed Women Curr. Using Contraceptives

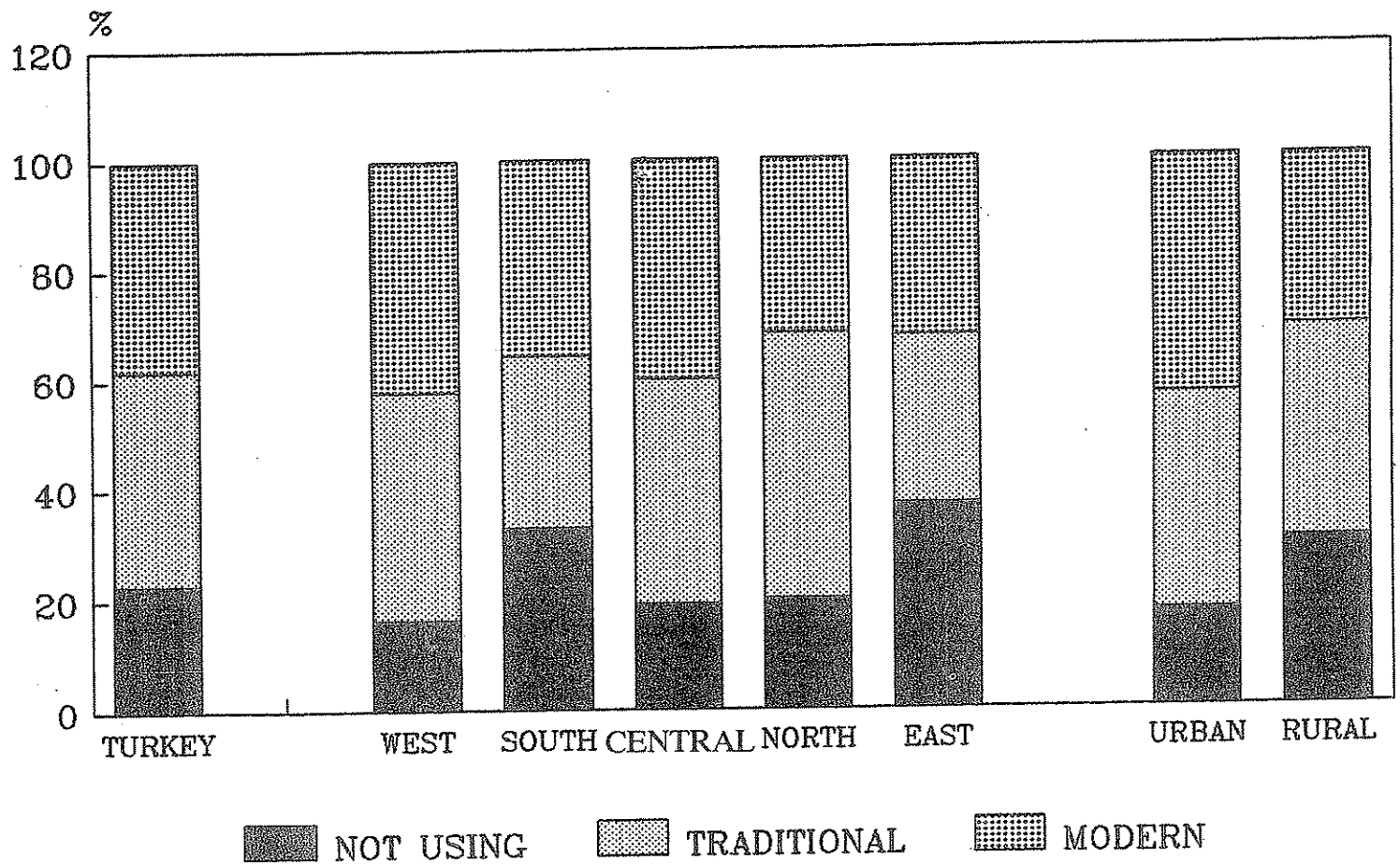


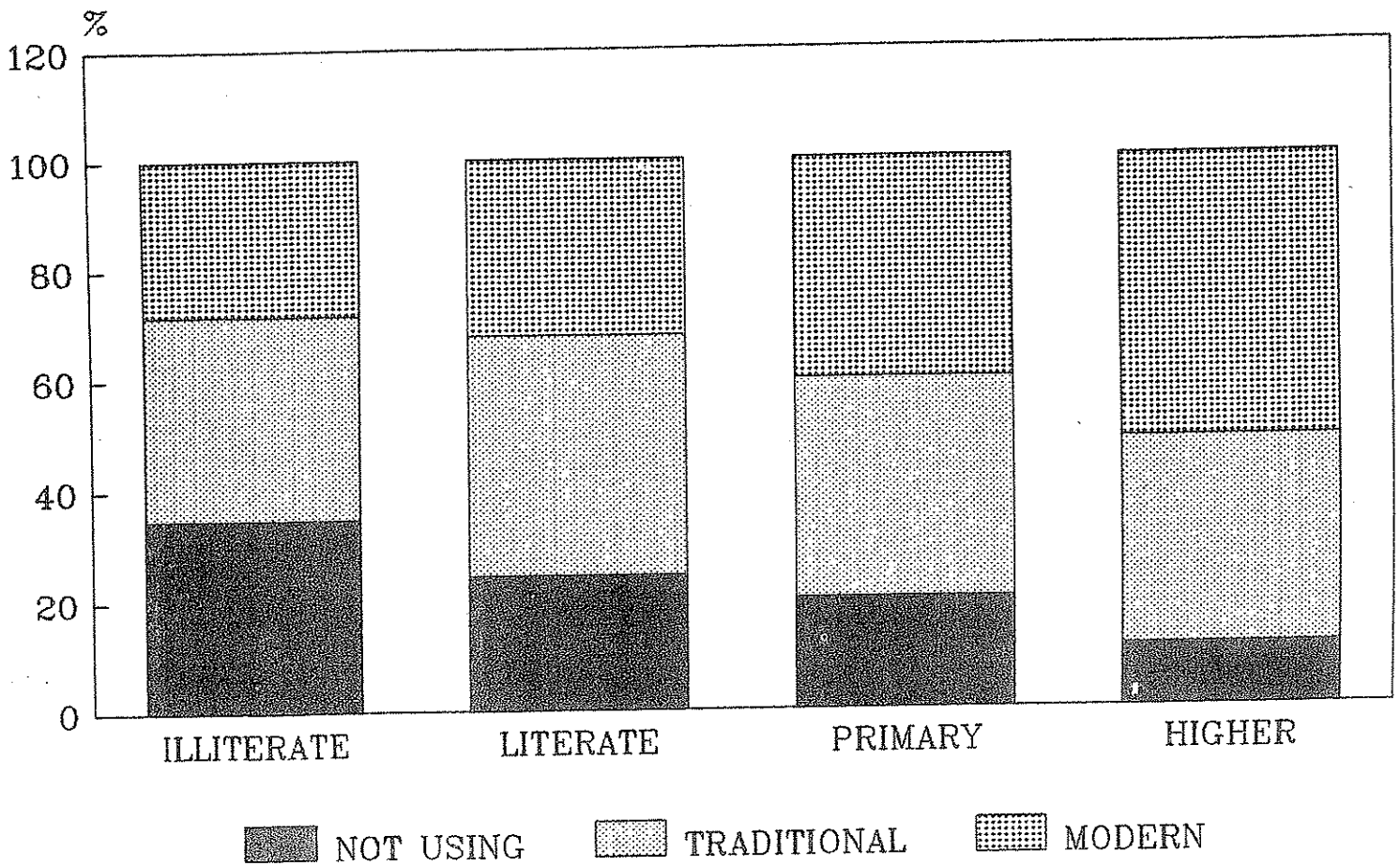
TABLE II.6.20: Percentage Distribution of Exposed Women According to the Contraceptive Method Currently Used and Number of Living Children

Number of Living Children	Not Using Any	Modern Methods							Traditional Methods				
		PILL	IUD	Condom	Female Scientific	Female Steril.	Male Steril.	Injection	Withdrawal	Rhythm	Douche	Abstinence	Other
0	80.1	2.0	2.0	2.0	-	-	-	-	7.3	5.7	0.4	0.4	-
1	24.4	5.3	18.0	11.2	1.0	0.6	-	-	31.7	5.9	1.5		0.4
2	15.1	9.4	20.2	10.9	3.3	1.8	0.1	0.1	28.9	6.0	3.4	0.2	0.8
3	16.1	10.0	17.3	9.5	2.5	2.3	0.2	-	34.5	3.7	3.1		0.8
4	17.5	8.2	17.9	6.2	1.8	3.2	0.2	-	39.0	2.2	3.6		0.2
5+	28.7	4.8	14.7	6.1	2.1	3.8	-	0.2	33.8	1.3	3.8	0.3	0.3

TABLE II.6.21: Percentage Distribution of Exposed Women According to Current Contraceptive Method Used by Woman's, Husband's and Couple's Education

	Not Using Any	Modern Methods							Traditional Methods				
		PILL	IUD	Condom	Female Scientific	Female Steril.	Male Steril.	Injection	Withdrawal	Rhythm	Douche	Abstinence	Other
WOMAN'S EDUCATION													
Illiterate	34.9	5.7	13.5	4.2	1.5	3.1	0.1	0.1	32.0	1.1	3.1	0.2	0.6
Literate	24.7	7.8	12.1	6.3	2.8	3.0	-	-	37.0	1.7	3.7	-	0.9
Primary	20.1	9.7	17.0	9.4	2.4	1.4	0.1	0.0	32.3	3.8	3.1	0.0	0.6
Secondary or higher	11.3	3.3	26.8	16.6	2.4	1.9	0.2	-	21.8	13.5	1.8	0.3	0.2
HUSBAND'S EDUCATION													
Illiterate	42.3	6.6	12.1	4.4	-	2.2	-	-	27.5	1.6	2.2	0.5	0.5
Literate	32.5	7.7	11.2	5.9	1.0	2.1	-	-	33.9	1.0	4.5	-	-
Primary	23.4	8.9	15.4	6.7	2.5	2.2	0.1	0.1	34.1	2.5	3.4	0.1	0.7
Secondary or higher	16.8	5.1	22.7	14.9	2.4	1.7	0.2	-	24.7	9.1	1.7	0.2	0.4
COUPLE'S LITERACY													
Neither literate	48.2	6.5	12.2	2.2	-	1.4	--	-	23.7	2.2	2.2	0.7	0.7
Only one literate	32.4	5.7	13.6	4.9	1.7	3.4	0.1	0.1	33.5	0.8	3.2	0.1	0.5
Both literate	18.9	8.2	18.4	10.4	2.5	1.7	0.1	0.0	30.8	5.5	2.9	0.1	0.6

Figure II.6.3 Percentage Dist.of Exposed Women by Current Use and Education



fact is also supported by the lower level of ever-use among couples with high numbers of living children). In addition, higher parity women are likely to be older and they might no longer perceive a need for contraception because of decreasing fecundity through ageing.

Table II.6.21 shows differentials of contraceptive practice by educational level. It is observed that there is a clear association between current use of contraceptives and education. When women's education is taken into account, it is seen that there is an important difference between the level of current users: while 35 percent of illiterate women do not practise any method of contraception, the ratio declines to only 11 percent among those with secondary or higher education. It is also important to note that practice of modern contraceptives gradually increases as the woman's and husband's education increases or when couples are both literate. For example,among women who are literate, while only 28 percent use modern contraceptives, the ratio increase to 40 percent among primary school graduates and to 51 percent among women with secondary or higher education (see Fig.II.6.3). Moreover, only 22 percent of couples who are both illiterate use a modern method of contraception, while 41 percent of couples who are both literate are users of a modern method.

II.6.5. REASONS FOR NON-USE

The findings of the 1988 Survey show that 77 percent of exposed women are currently using a method of contraception to avoid or delay pregnancy. Thus, it is of importance to identify the reasons why the rest of the exposed women (i.e. 23 percent) do not use any method. Such information is of potential value for policy-makers.

To identify the reasons why some women who are potentially capable of becoming pregnant but are not using any method, such a selection was made :

Of the exposed women who do not use any kind of contraception (23 percent), those who want to be pregnant and therefore do not use a method, (31.5 percent of exposed women who are non-users) were excluded. This exclusion left 68.5 percent of exposed women who do not use contraceptives and do not want to get pregnant. And finally,those women who do not feel any need for contraception were excluded (such as those who were breast-feeding, in confinement period, spouse being in military service or abroad, newly married etc.) Thus, this selection process was left with women who feel the need for contraception, i.e.49 percent of exposed women who are non-users and do not want to become pregnant (This group constitutes 6.7 percent of exposed women and 5.5 percent of currently married women).

Table II.6.22 shows the reasons for non-use among exposed women who are not contracepting, do not want to be pregnant and who feel the need to use contraceptives.It is observed that the most common reason stated overall was health reasons or health concerns related to using contraceptive methods.

The second mostly widely stated reason for non-use was husband's objection to use of a method of contraception. 23 percent of women stated that they do not use contraceptives because their husband is opposed to it. The third important reason appears to be lack of knowledge about contraceptives stated by 16.5 percent of women, followed by 8 percent of women stating difficulties in availability/accessibility. 6.5 percent considered use of contraceptives a sin, while 5 percent stated that they do not currently use a method of contraception because it is expensive.

II-6.6. SOURCE OF CONTRACEPTIVE METHODS

The source of contraceptive supplies or service is examined in Table II.6.23 for specific modern methods and the regional differentials are presented. It is observed that in general, the majority of women obtain the pills, female scientific methods and condoms from pharmacies and IUDs from private doctors. When regional differentials are examined, the general tendency is observed for the pill and in all regions well over 60 percent of women obtained the pills from pharmacies. In the West and the East, 85 and 83 percent of women obtained the pill from pharmacies. In the South, Central and North, Health Centers appear to be the second source for almost 20 percent of women using pills.

TABLE II.6.22: Percentage Distribution of Exposed Women who are Non-Contracepting, do not want to be Pregnant and who feel the need for Contraception According to Main Reasons for Non-Use

Illiteracy, lack of knowledge	16.5
"It's a sin"; "God determines number of children"	6.5
Health reasons/concerns	30.5
Husband does not want	22.9
Difficulties in availability, accessibility	8.2
Expensive	5.0
Afraid/ashamed	2.9
Inconvenient to use	1.4
Other	3.9
Don't Know	2.2
TOTAL	**100.0 (n=279)**

In relation to IUDs, in the West and South the first source of supply is the private doctor (48 and 42 percent of women respectively), in the Center private doctors and health centers are the first source, while in the North and East women obtain IUDs from the health centers in the first place (46 percent and 32 percent respectively).

In the West, South and North, over 70 % of women obtain condoms from the pharmacy. In the Central and the East, proportions of women obtaining condoms from pharmacies are lower (64.7 percent and 51.2 percent respectively). In the West , while only 15.6 percent of women obtain condoms from the health centers, the ratio increases to 39 percent in the East.

When the source of female scientific methods is considered, the pharmacies appear to be almost the only source, except for only 3 percent of women in the West who obtain female scientific methods from the government hospital and 6.7 percent in the North obtain it from the health center.

Table II.6.24 shows urban-rural differentials in the source of contraceptive methods. No big differentials are observed in relation to the source of pills; both in urban and rural areas pharmacies appear to be the first source followed by health centers. More pronounced differentials are observed in relation to the source of IUDs and condoms. In the urban areas, while private doctors appear to be the major source in rural areas, the majority of women obtain IUDs from the health centers. In urban areas, in contrast to the 45 percent of women obtaining IUDs from private doctors, only 27 percent in rural areas use this source. On the other hand, while only 25 percent of women in urban areas obtain IUDs from health centers, the ratio increases to 41 percent in rural areas. Government hospitals are the third source for IUDs in both areas with only a very little difference. When the source of condoms is considered, while about 76 percent of urban women obtain condoms from pharmacies, the ratio drops to 52 percent among rural women. However, only 18 percent of urban women obtain condoms from health centers while 35 percent of rural women obtain them from this source. In respect to the source of female scientific methods, for well over 95 percent of both urban and rural women, the first source is the pharmacies, while only very few obtain these methods from government hospitals in urban areas and from health centers in rural areas.

TABLE II.6.23: Percentage Distribution of Women Using Contraceptive Methods According to where the Method is Obtained and Region

	Pharmacy	Private Doctor	Private Hospital	Government Hospital	Health Center/house	Other	Total
PILL	78.6	2.6	0.6	2.3	12.6	3.2	100.0
West	85.2	2.5	-	1.6	7.4	3.3	100.0
South	77.8	3.7	-	-	18.5	-	100.0
Central	70.0	3.8	1.3	2.5	20.0	2.5	100.0
North	65.4	3.8	-	7.7	19.2	3.8	100.0
East	83.3	-	1.9	1.9	7.4	5.6	100.0
IUD	2.0	39.5	4.1	23.0	30.1	1.3	100.0
West	1.4	48.1	5.3	22.8	20.4	2.1	100.0
South	3.0	41.6	1.0	14.9	39.6	-	100.0
Central	1.7	34.1	4.6	23.1	34.7	1.7	100.0
North	-	28.0	-	26.0	46.0	-	100.0
East	4.0	28.3	5.1	30.3	32.3	-	100.0
CONDOM	68.6	1.4	-	2.3	23.1	4.6	100.0
West	74.2	--	-	2.3	15.6	7.8	100.0
South	74.3	--	-	2.9	22.9	-	100.0
Central	64.7	2.9	-	1.0	25.5	5.9	100.0
North	73.2	2.4	-	-	24.4	-	100.0
East	51.2	2.4	-	7.3	39.0	-	100.0
FEMALE SCIENTIFIC	97.8	-	-	1.1	1.1	-	100.0
West	96.7	-	-	3.3	-	-	100.0
South	100.0	-	-	-	-	-	100.0
Central	100.0	-	-	-	-	-	100.0
North	93.3	-		-	6.7	-	100.0
East	100.0	-		-	-	-	100.0

TABLE II.6.24: Percentage Distribution of Women Using Contraceptive Methods According to where the Method is Obtained and Place of Residence

	Pharmacy	Private Doctor	Private Hospital	Govern. Hospital	Health Center/House	Other
PILL						
Urban	79.4	3.2	0.6	3.2	12.3	1.2
Rural	77.9	1.9	0.6	1.3	13.0	5.2
IUD						
Urban	1.2	45.1	4.7	22.0	25.2	1.8
Rural	3.7	26.9	2.8	25.5	41.2	-
CONDOM						
Urban	75.6	1.7	-	2.1	17.8	2.9
Rural	52.4	1.0	-	2.9	35.2	8.6
FEMALE SCIENTIFIC						
Urban	98.4	-	-	1.6	-	
Rural	96.7	-	-	-	3.3	-

II.7. HEALTH AND MORTALITY IN CHILDHOOD

The infant mortality level is widely used as an indicator of general health and socio- economic status of the population and it is particularly sensitive to changes in environmental and social conditions. This chapter deals with the analysis of childhood mortality and indicators of infant and child health, including prenatal care, place of delivery, assistance at delivery, breast-feeding and treatment for diarrhoea.

II.7.1. INFANT MORTALITY

Number of births, number of infant deaths - categorized as neonatal and post-neonatal and male and female are given for the years 1982-1988 in Table 1.

As seen in Table II.7.1, the number of cases obtained from the Survey to study infant mortality is quite low.

1987-88 data was not used, because some of the babies born in that year were less than 1 year old at the time of the Survey and therefore,still at risk to infant mortality. 1985-87 data was used to calculate infant mortality rates.

Some slight adjustments were made in these calculations. Since it is understood that fertility is under reported especially in the Eastern Region, a correction was made in the number of births using M/F ratio (taking M/F ratio at birth as 1.05) in the Eastern Region. Seven births were found not reported. If all these children died in infancy, this means that seven infant deaths were also underreported in this region. Making this adjustment, - the addition of seven births and seven infant deaths to the Eastern Region data- infant mortality rates were calculated for the place of residence and for 5 regions as neonatal and post-neonatal rates. Out of seven infant deaths,one was allocated to neonatal deaths and six to post-neonatal deaths and the effect of this adjustment was transferred to rural areas and to all Turkey.

In Table II.7.2, adjusted infant mortality rates for 1985-87 are given.

As seen in Table II.7.2, the adjusted infant mortality rate for 1985-87 for total Turkey is around 78 per thousand.

In Table II.7.3, the survival ratios for children by age of the mother, region and stratum is given, according to the results of the 1988 Survey.

TABLE II.7.1 : Number of Births and Infant Deaths (1982-1988)

Year	Number of Births	Infant Deaths				
		Neonatal	Post-Neonatal	Male	Female	Total
1987-88	752	24	13	24	13	37
1986-87	654	18	26	18	26	44
1985-86	690	29	25	29	25	54
I984-85	732	20	25	25	20	45
I983-84	707	19	39	35	23	58
1982-83	832	33	36	38	31	69
TOTAL	**4367**	**143**	**164**	**169**	**138**	**307**

As seen in Table II.7.3, the proportion of surviving children is lower in rural areas than in urban areas. For women aged 45-49, the average proportion of surviving children for total Turkey is 80 percent, for rural areas 75 percent and for urban areas 85 percent. Among the regions, the Western Region has the highest survival proportions and the Central Region the lowest.

II.7.2. CHILD MORTALITY

The under-five mortality rate ($_5q_0$) has been calculated for 1988-83 period including exposure up to one calendar month preceding interview. It is estimated that, for the country overall the under-five mortality rate is 97.4 per 1000 (Table II. 7.4). The present rate is undoubdetly very high implying that overall, of 100 births 10 children did not reach their fifth birthday. Under five mortality rate has

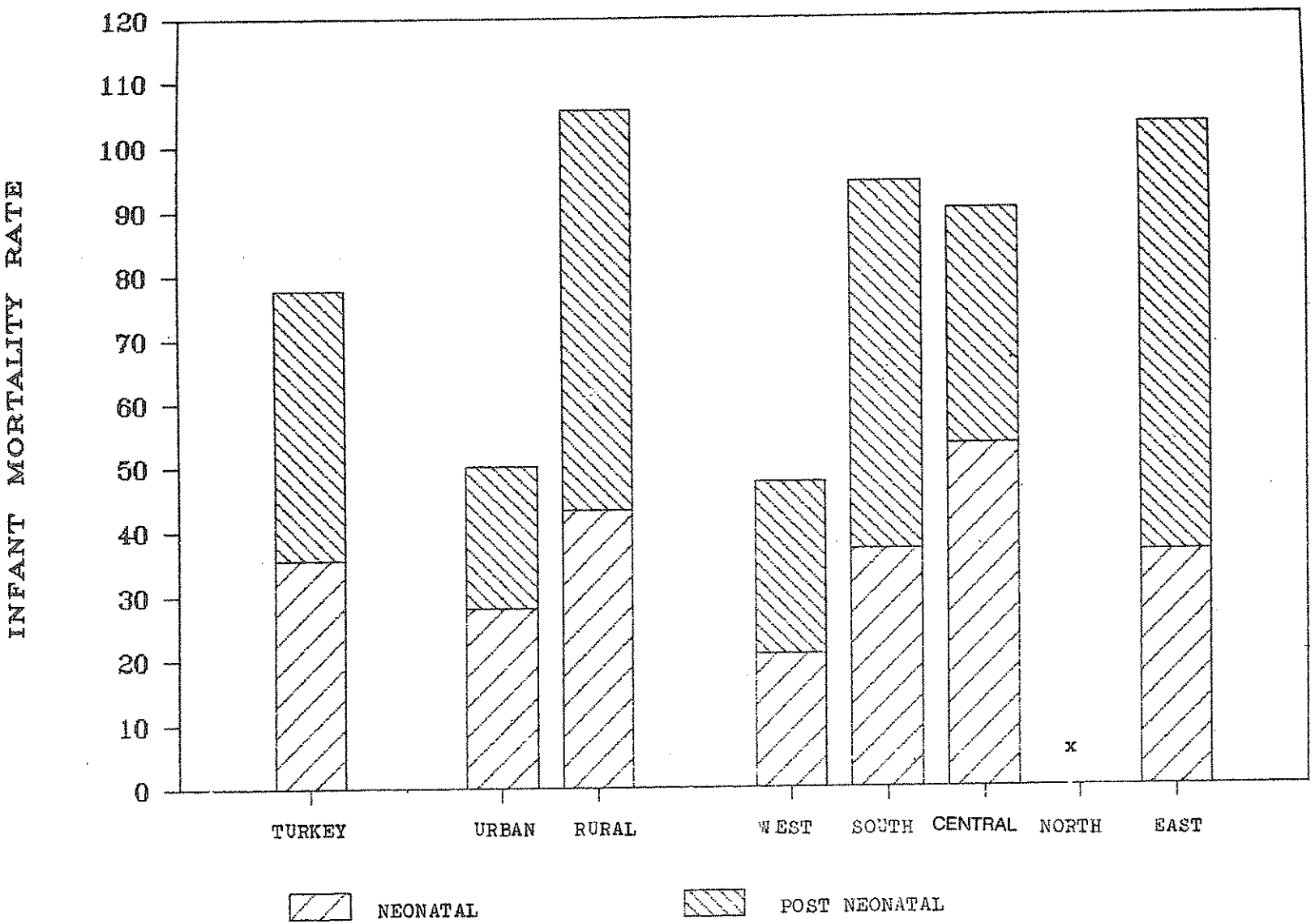
TABLE II.7.2 : Adjusted Infant Mortality Rates for 1985-1987

Place of Settlement	Neoatal Rate (%)	Post-Neonatal Rate (%)	Infant Mortality Rate (%)
Urban	27.98	22.09	50.07
Rural	43.15	62.50	105.65
REGION			
West	20.77	26.71	44.48
South	36.89	57.38	96.26
Central	53.33	36.67	90.00
North	-*	-*	-**
East	36.36	66.67	103.03
TURKEY	**35.53**	**42.19**	**77.72**

** Less than 5 observations*

*** Less than 10 observations*

FIGURE II.7.1. Infant Mortality Rates For Turkey For 1985-87



x No. of Observations is less than 10.

TABLE II.7.3 : Survival Ratios for Children , Age of Mother, Region and Stratum

Age of Mother	West	South	Center	North	East	Urban	Rural	Turkey
15-19	.96909	1.00000	.88369	.83303	.72973	.98167	.80665	.87579
20-25	.94506	.87565	.91661	.98481	.89635	.93067	.90734	.91884
25-29	.90509	.86585	.87859	.89691	.87865	.89535	.87751	.88695
30-34	.89996	.84404	.85233	.87174	.83170	.88145	.83687	.86166
35-39	.87276	.84632	.78025	.85549	.81820	.87316	.79587	.83329
40-44	.89734	.81381	.78516	.84783	.80478	.87443	.78573	.81840
45-49	.84509	.78518	.76048	.80135	.76543	.84823	.75072	.79557
TOTAL	**.88902**	**.81816**	**.81753**	**.86617**	**.82426**	**.88060**	**.81426**	**.84717**

been chosen by UNICEF as the most important indicator of the state of a nation's children and when the nations of the world are listed according to this indicator Turkey takes place among high under-five mortality rate countries where the rates differ between 95 and 170

With respect to place of residence, mortality of children under-five is substantially lower in urban areas than in rural (63.6 and 130.2 per 1000 respetively). According to regional differentiations, a sharp difference is observed between Western and Eastern regions (74,7 and 117.1 respectively).

Table II.7.4 Child mortality ($_5q_0$) by Place of Residence and Region (1988-83).

Turkey	97.4
Place of Residence	
Urban	63.6
Rural	130.2
Region	
West	74.7
South	97.9
Central	100.8
North	70.0*
East	117.1

II.7.3. PRE-NATAL CARE

The importance of pre-natal care is well known. Especially in reducing infant and maternal mortality it plays an important role. In this survey, women were asked, for each child born in the last five years before the survey, whether they consulted anyone during that particular pregnancy, whom they consulted and how many months pregnant they were at first consultation.

Table II.7.5. shows that 43 percent of women received prenatal care from medical or trained health personnel for their last births in the five years preceding the survey. Differentials by background variables are striking. There is a sharp difference by urban/ rural residence. The results indicate that approximately 6 in every 10 urban women seek for pre-natal care, whereas this ratio becomes 3 in 10 for rural women Equally , noteworthy are differentials by region. The percentage of women who received pre-natal care, is highest in the West and lowest in the East (61.8 and 22,4 percent respectively).

Examining the differences by age of mother ,it is observed that women under age 35 are more likely to seek pre-natal care than women over 35. Differences according to educational level of women apparently reveal the expected relation between level of educational attainment and the percentage who received pre-natal care. The percentage of women with educational level beyond high school who receive pre-natal care is about four times more than those with no education.

In most cases care was given by doctors (81.4 percent) and by trained nurse /midwives (15.2 percent) while traditional midwives and people other than health personnel provided care in the remainder of cases (Table II.7.6). This indicates that, although pre-natal care is low in general, women seek it from the right people. As seen in Table II.7.6, 97 percent of women received pre-natal care from medical or health personnel. The point that deserves attention is that, although pre-natal care is by health personnel,almost a quarter of those women (23.2 percent) who receive it do not deliver at a health unit (Table II.7.7)

Especially in Turkey, as results of 1983 Survey(1) showed, consulting a health professional during pregnancy or delivering in a health unit or with the assistance of health personnel does not reduce infant mortality when they are taken separately. But when the three factors are considered together, meaningful results emerge. In other words, consulting the health sector for partial service may not be enough. As observed in Table II.7.7 , 8.4 percent of women who consulted a health worker during pregnancy delivered in insanitary conditions without the assistance of qualified people.

On the other hand, women generally seek pre-natal care rather late, mostly in the last trimester of their pregnancy (Table II.7.8). In general, they usually consult for the first time when they are about 7 months pregnant. The difference by urban/rural residence is approximately one month.Rural women seek pre-natal care a little later than urban women. Regarding the age of mother, it is evident that, except for the 15-19 age

(1) TOROS, Aykut and KULU, Isik (1988) "Selected Factors Affecting Infant Mortality" in Infant Mortality In Turkey:Basic Factors,"ed. Ergül Tunçbilek, Ankara.

group; women under 35 are somewhat more likely to seek pre-natal care earlier than older women. Women above 35 receive care after they are 7 months pregnant. However, the younger age groups (20-34) seem to be more sensitive to pre-natal care. Women in the 15-19 age group show a similar pattern of behaviour to that of older age groups. Most probably due to their youth and low level of education, they are unaware of the importance of pre-natal care. Another factor that holds young women back from receiving pre-natal care may be shyness and forbearance. In terms of level of education, sharp differences are observed. Women with educational levels beyond high school seek pre-natal care when they are about 5.5 months pregnant whereas women with no education seek care when their pregnancy is more than 7 months.

TABLE II.7.5: Percentage Distribution of Women According to Receiving Pre-natal Care at the Last Live Birth in Last Five Years by Selected Background Variables

	Received Pre-Natal Care	Did Not Receive Pre-Natal Care	Total
TURKEY	42.6	57.4	100.0
URBAN/RURAL RESIDENCE			
Urban	55.7	44.3	100.0
Rural	26.9	73.1	100.0
REGION			
West	61.8	38.2	100.0
South	36.5	63.5	100.0
Central	42.4	57.6	100.0
North	37.4	62.6	100.0
East	22.4	77.6	100.0
AGE			
< 35	44.9	55.1	100.0
35 +	30.2	69.8	100.0
EDUCATION			
Illiterate	20.8	79.2	100.0
Literate	32.3	67.7	100.0
Primary	45.5	54.5	100.0
Secondary	70.4	29.6	100.0
High School	81.0	19.0	100.0
University	86.0	14.0	100.0

TABLE II.7.6: **Percentage Distribution of Women According to Person Giving Pre-natal Care at the Last Live Birth in the Last Five Years**

Person Giving Pre-Natal Care	%
Doctor	81.4
Midwife/Nurse	15.2
Traditional Midwife	1.1
Other	2.3
Total	**100.0**

A complete series of tetanus injections during pregnancy offers protection against neonatal tetanus, which is believed to be a major cause of perinatal mortality in many developing countries. Two injections are recommended. In this survey, women who had pregnancies in the five years preceding the survey, were asked for each pregnancy whether they had the tetanus toxoid injection.

When all pregnancies of the last five years are taken into consideration, in 8.4 percent of these pregnancies , the first injection (TT1) was done. Regarding the second injection (TT2), the percentage is 3.4 for all last five year pregnancies. This means that, as TT2 cannot be done before having TT1, in only 44.3 percent of women who had the first injection had the second one.

TABLE II.7.7: **Percentage of Women who Consulted Health Personnel by Place of Delivery and Assistance at Last Live Birth**

Place of Delivery	Assistance at Birth		
	Health Personnel	Other	Total
Health Unit	76.5	0.3	76.8
Other	14.8	8.4	23.2
TOTAL	**91.3**	**8.7**	**100.0**

The responses to tetanus questions are dependent on the woman's ability to recall events during pregnancy and to distinguish between tetanus toxoid and other injections.Going back in time percentages become smaller partly due to these drawbacks and partly to intensive practice of tetanus injection in recent years. Therefore, the rest of the analysis was performed for the last pregnancy of the last five years. In terms of last pregnancy, the percentage of women who had TT1 is 11.2 percent. However, women who had TT2 constitute only half of those who had TT1. Only 4.9 percent of women had both injections in their last pregnancy.

	%
Had TT1 In Last Pregnancy	11.2
Had TT2 In Lost Pregnancy	4.9

TABLE II.7.9 indicates some regional variations, but the most striking is the Southern region with the highest TT1 percentage among the regions. Age and level of education shows a marked impact on having tetanus toxoid injection. The percentage of having injections decreases as the age increases. In Table II.7.9, illiterate and literate groups are taken as one group under a "no education" label since their results were similar. Al-

TABLE II.7.8: **Mean Distribution of Pregestation Months at Receipt of First Pre-natal Care For the Last Live Birth In the Last Five Years by Selected Background Variables**

	MONTHS PREGNANT (MEAN)
TURKEY	6.99
URBAN/RURAL RESIDENCE	
Urban	6.69
Rural	7.40
REGION	
West	6.70
South	6.95
Central	7.08
North	7.19
East	7.41
AGE	
15-19	7.15
20-24	6.33
25-29	6.28
30-34	6.86
35-39	7.46
40-44	7.83
45-49	7.95
EDUCATION	
Illiterate	7.38
Literate	7.44
Primary	6.85
Secondary	6.24
High School	5.99
University	5.49

though women without education are more in need of tetanus injection as they are mostly in poor socio-economic levels and therefore more exposed to neonatal tetanus, their percentage of having TT1 is lower than the educated group.

On the other hand, a great majority of women (87.9 percent) had the injection when they were 6 or 7 months pregnant and 11 percent stated that they had the injection when they were about 5 months pregnant (Table II.7.10). However, these figures should be interpreted with caution as they most probably indicate a memory lapse.

The data suggests that tetanus toxoid injection is mostly practised in the health centres (77.5 percent) and this is followed by hospitals/maternity homes (Table II.7.11).

TABLE II.7.9: Percentage Distribution of Women According to Having First Tetanus Injection (TT1) During the Last Pregnancy In the Last Five Years by Selected Background Variables

	HAD TT1	NO INJECTION	TOTAL
TURKEY	11.2	88.8	100.0
URBAN/RURAL RESIDENCE			
Urban	11.7	88.3	100.0
Rural	10.6	89.4	100.0
REGION			
West	9.9	90.1	100.0
South	22.8	77.2	100.0
Central	7.4	92.6	100.0
North	8.9	91.1	100.0
East	9.6	90.4	100.0
AGE			
15-19	19.8	80.2	100.0
20-24	17.7	82.3	100.0
25-29	11.1	88.9	100.0
30-34	6.4	93.6	100.0
35-39	6.9	93.1	100.0
40-44	3.2	96.8	100.0
45-49	2.5	97.5	100.0
EDUCATION			
No education	7.2	92.8	100.0
Primary	13.3	86.7	100.0
Secondary +	13.4	86.6	100.0

TABLE II.7.10: Percentage Distribution of Women According to Month of Pregnancy Having First Tetanus Toxoid Injection (TT1) at the Last Pregnancy In the Last Five Years

Months Pregnant	HAD TT1 (%)
< 5	10.7
6 months	57.1
7 months	30.8
9 months	1.4
TOTAL	100.0

TABLE II.7.11: Percentage Distribution of Women According to Place of Receiving First Tetanus Toxoid Injection (TT1) at Last Pregnancy in the Last Five Years

Place of Injection	HAD TT1 (%)
Health Centre	77.5
Hospital/Maternity Home	8.4
Doctor's Office	0.6
Other	13.4
TOTAL	100.0

II.7.4. PLACE OF DELIVERY

The 1988 Survey provides data about the place of delivery for births occurring in the five years preceding the survey. In order to enable comparison with the results of 1983 Survey and moreover to minimize memory lapses, the analysis in this chapter has been limited to the last live birth.

The results in Table II.7.12 indicate that although the general picture is much better in comparison to five years before (2), an important portion of deliveries still take place under unsuitable conditions. In other words, 4 in every 10 women deliver at a place other than a health unit. It is striking that in the rural settlements more than half of the deliveries do not take place at a health unit. With regard to regional variations, the Eastern Region has the worst situation. In this region, only one third of the births are delivered at a health unit. Existing differentials according to level of education are also striking. Even in the relatively better educated groups, 15 percent of births still take place in unsuitable conditions.

II.7.5. ASSISTANCE AT DELIVERY

The results show that overall, two thirds of the last births are delivered by trained health personnel (Table II.7.13). When compared with the results of the 1983 Survey (3) a substantial increase is observed in the percentage of deliveries with the assistance of health professionals. Of the health personnel, trained midwives and nurses constitute a considerable part.

As seen in Table II.7.13 rural dwellers are more likely to be assisted by traditional midwives and people other than health personnel, in comparison to their urban counterparts. This is attributable largely to the availability of health facilities in urban areas. Regionally, delivery by a health professional is lowest in the East and South. Another striking point is the high percentage of non-health personnel assisting deliveries in the East. In this region, every 4 women out of 10 deliver without the assistance of health professionals. Concerning the level of educational attainment, the expected relationship can be observed. The percentage of mothers who are assisted at their deliveries by health personnel increases from 50.3 percent for the illiterate group to 100.0 percent for those with university education.

In general, almost 77 percent of the deliveries can be considered as taking place in suitable conditions because they are assisted by a health professional even if they do not take place in a health unit. The group which needs deliberate attention is the 23.6 percent of deliveries (Table II.7.7 and Table II.7.13) which take place in insanitary conditions without the assistance of health professionals.

II.7.6 BREAST-FEEDING

The survey results indicate that the percentage of breast-feeding the last child born in the last five years before the survey in 95 percent. Table II.7.14 presents the results for breast-feeding according to selected background variables. It is evident that breastfeeding is commonly practised throughout the country and the figures do not vary widely by region, urban/rural residence, respondent's age and level of education.

Mean duration of breast-feeding the last child is 10.3 months for the country overall (Table II.7.15). When compared with the findings of the 1983 Survey, there is a decline in the mean duration of breast-feeding. According to the 1983 Survey, the mean duration of breast-feeding the last child was 12.5 months. However, the percentage of women who breast-feed did not change at all.

With regard to regions, only in the Eastern region, is the mean duration of breast-feeding (12.7 months) longer compared to other regions. It is also evident that rural women breast-feed for a longer period than urban women (11.2 and 9.6 months respectively) There is a positive relationship between duration of breast-feeding and mother's age. The older the cohort, the longer the duration of breast-feeding. Regarding the level of education, a gradual decline is observed in the duration of breast-feeding with the increase in the level of educational attainment. As seen in Table II.7.15, mean duration of breast-feeding among university graduates is half that of the illiterate group.

(2) HIPS (1987), 1983 Turkish Population and Health Survey, Ankara pp. 76-77.

(3) HIPS (1987) 1983 Turkish population and Health Survey, Ankara, pp. 78-79.

TABLE II.7.12: Percentage Distribution of Women According to Place of Delivery at the Last Live Birth in Last Five Years by Selected Background Variables

	Place of Deliveriy		
	Health Unit	Other	Total
TURKEY	60.9	39.1	100.0
URBAN/RURAL RESIDENCE			
Urban	72.4	27.6	100.0
Rural	47.2	52.8	100.0
REGION			
West	72.4	27.6	100.0
South	54.8	45.2	100.0
Central	65.1	34.9	100.0
North	75.5	24.5	100.0
East	36.9	63.1	100.0
AGE			
15-19	68.4	31.6	100.0
20-24	66.3	33.7	100.0
25-29	62.2	37.8	100.0
30-34	58.6	41.4	100.0
35-39	56.3	43.7	100.0
40-44	40.4	59.6	100.0
45-49	30.6	69.4	100.0
EDUCATION			
Illiterate	37.7	62.3	100.0
Literate	53.2	46.8	100.0
Primary	67.3	32.8	100.0
Secondary +	85.2	14.8	100.0

TABLE II.7.13 : Percentage Distribution of Women According to Assistance at Delivery at Last Live Birth in Last Five Years by Selected Background Variables

	HEALTH PERSONNEL	OTHERS	TOTAL
TURKEY	76.4	23.6	100.0
URBAN/RURAL RESIDENCE			
Urban	86.1	13.9	100.0
Rural	64.6	35.4	100.0
REGION			
West	87.4	12.6	100.0
South	69.8	30.2	100.0
Central	79.6	20.4	100.0
North	83.5	16.5	100.0
East	57.9	42.1	100.0
AGE			
15-19	87.2	12.8	100.0
20-24	79.6	20.4	100.0
25-29	77.7	22.3	100.0
30-34	75.9	24.1	100.0
35-39	73.6	26.4	100.0
40-44	49.0	51.0	100.0
45-49	52.8	47.2	100.0
EDUCATION			
Illiterate	53.5	46.5	100.0
Literate	69.2	30.8	100.0
Primary	83.3	16.7	100.0
Secondary	96.6	3.4	100.0
High School	97.7	2.3	100.0
University	100.0	-	100.0

TABLE II.7.14 : Percentage Distribution of Women According to Breast-Feeding the Last Child Born in the Last Five Years by Selected Background Variables

	WOMEN BREAST-FEEDING(%)
TURKEY	95.0
URBAN/RURAL RESIDENCE	
Urban	94.4
Rural	95.6
REGION	
West	94.8
South	94.5
Central	95.4
North	97.2
East	94.0
AGE	
15-19	94.9
20-24	94.4
25-29	95.7
30-34	95.0
35-39	94.6
40-44	96.2
45-49	88.9
EDUCATION	
Illiterate	94.5
Literate	93.2
Primary	95.4
Secondary	97.4
High School	94.1
University	95.3

TABLE II.7.15 : Mean Duration of Breast-Feeding the Last Child Born in the Last Five Years by Selected Background Variables

	MEAN DURATION OF BREAST-FEEDING (months)
TURKEY	10.28
URBAN/RURAL RESIDENCE	
Urban	9.62
Rural	11.11
REGION	
West	9.48
South	11.04
Central	10.89
North	8.01
East	12.70
AGE	
15-19	4.0
20-24	8.30
25-29	9.83
30-34	11.47
35-39	11.56
40-44	17.21
45-49	16.73
EDUCATION	
Illiterate	12.97
Literate	12.83
Primary	9.96
Secondary	7.06
High School	6.61
University	5.66

II.7.7 DIARRHOEA PREVALENCE AND TREATMENT

Diarrhoea is a major contributory cause of death in infancy and childhood . In the survey, respondents were asked whether their children born in the last five years preceding the survey had diarrhoea 2 weeks prior to the survey. The attempt here, is not to estimate the diarrhoeal incidence as there is no information for this type of measurement. However, with the data obtained from the survey, a point prevalence can be estimated. Still, these estimates should be interpreted with caution because diarrhoea is seasonal and the survey was conducted during August and early September, when it is more commonly seen. Apart from prevalence,information on treatment practices were obtained as well.

Table II.7.16 shows that overall 24 percent of children were reported as experiencing diarrhoea within the preceding two weeks. Children in rural areas are more likely to experience an episode of diarrhoea, most probably due to poor environmental sanitation and poor personal hygiene in these areas. In terms of regional variations, except for the North where the prevalence of diarrhoea is distinctly lower, in all regions about a quarter of children under age 5 had an episode within the preceding two weeks.

When educational level of the mother is taken into consideration, it is seen that, in general, children of mothers who have secondary or higher education are less likely to experience diarrhoea compared to children of mothers who have no education or lower levels of education.

With respect to age of children ,there is a marked variation. It is evident that diarrhoea is most commonly seen in children of weaning age. An episode of of diarrhoea during the two weeks prior to the interview was highest among children 6-23 months, which is the time weaning occurs. Moreover, another important factor is that, at these ages children start crawling and walking which means getting into direct contact with a more contaminated environment. Children older than 2 years are less likely to experience diarrhoea partly due to acquired natural immunity by this time.

Of the mothers who were breast-feeding before diarrhoea started, 6 percent stopped breast-feeding when diarrhoea started. Mothers were also asked whether they made any change on solid and liquid food when diarrhoea started. As Table II.7.17 indicates, most of the mothers (65 percent) reported that they did not make any change in the amount of solid food given. Regarding liquid food, almost half of the mothers stated that they did not change the amount of liquid food given and almost the other half (44 percent) stated that they increased the amount. However, 6 percent of mothers either stopped or decreased the amount of liquid food.

For the treatment of diarrhoea, in almost half of the children ORS packets and homemade solution were used (Table II.7.20). Only a very small percentage of children with diarrhoea required IV, and the rest (55 %) were not given any special liquid. which indicates that although diarrhoea is widely experienced among children it is not severe.

It is also noteworthy that although most mothers are aware of the requirements in the treatment of this illness, unfortunately 49.1 percent of children with diarrhoea were given some kind of medicine such as antibiotic, antidarrhoeal etc.

TABLE II.7.16: Percentage Distribution of Children Under 5 Years of Age reported to have had diarrhoea in the Preceding Two Weeks by Selected Background Variables

	CHILDREN HAVE HAD DIARRHOEA (%)
TURKEY	24.2
URBAN/RURAL RESIDENCE	
Urban	23.3
Rural	25.3
REGION	
West	22.7
South	25.7
Central	28.2
North	14.6
East	25.4
EDUCATION	
Illiterate	26.6
Literate	26.7
Primary	23.5
Secondary	17.7
High School	21.0
University	4.2
AGE OF CHILDREN	
Under 6 months	26.2
6-11 months	46.3
12-23 months	45.3
24-35 months	28.0
36-47 months	18.0
48-59 months	9.7

TABLE II.7.17: Percentage Distribution of Children Born in the Last Five Years According to Food Given D uring Diarhoea

	Food Given					
	Stopped	Decreased	Did not Change	Increased	Other	TOTAL
Solid food	1.9	14.4	64.5	11.2	7.9	100.0
Liquid food	0.6	5.4	46.8	44.0	3.0	100.0

TABLE II.7.18: **Percentage Distribution of Children Born in the Last Five Years According to Liquids Given for the Treatment of Diarrhoea**

LIQUID GIVEN	%
ORS packets	22.6
Homemade solution	21.4
IV	1.4
None	54.6
TOTAL	100.0

II.8 ABORTIONS

II.8.1. GENERAL FINDINGS

Until 1983, induced abortion in Turkey was prohibited except for eugenic reasons and when the life of the pregnant woman was in danger. In May 1983, the "Law on Population Planning" was liberalized to provide abortion in a legal and safe manner. At present women may obtain abortion on request up to the 10th week of pregnancy for medical or social reasons. When the results of the 1988 Survey are compared with those of previous nationwide surveys, an upward trend in the prevalence of abortions can be seen . It should also be taken into consideration that, with the liberalization of the law, women feel more comfortable about reporting their abortions. In other words, one important factor of underreporting induced abortions has been eliminated.

According to the results of a previous survey (1983), 36.7 percent of ever-married women of reproductive age had had an abortion. As to the findings of this survey, the percentage of women with at least one abortion has reached 42.2 percent. With regard to induced abortion, the proportion of women who had induced abortions was found to increase from 16.8 in 1978 to 19.0 in 1983 and finally to 23.6 percent in 1988.

The 1988 Survey showed that almost a quarter of the pregnancies (23.6 percent) in 1987* were terminated by induced, 8.2 percent by spontaneous abortion and 1.0 by stillbirths. In terms of live births, 35.1 induced abortions per 100 live births were estimated which means that 4 induced abortions occur per 10 live births (Table II.8.1).

Examining in a time series, although a marked increase is observed in induced abortions, spontaneous abortions do not show any considerable variation. Induced abortions are more easily affected by exogeneous factors such as personal, social and economic conditions, whereas spontaneous abortion is in part a biological phenomenon.

(*) Since the Survey was conducted in August and early September, 1988 covers only 8 months, therefore in the analysis of abortions the incidences are estimated for 1987 in order to take a complete year.

TABLE II.8.1 **Summary Table for Abortion Incidence (1987)**

Abortions per 100 ever-married women (15-49)	6.1
Induced abortions per 100 ever-married women (15-49)	4.5
Spontaneous abortions per 100 ever-married womnen (15-49)	1.6
Total abortions per 100 pregnancies	31.8
Induced abortions per 100 pregnancies	23.6
Spontaneous abortions per 100 pregnancies	8.2
Total abortions per 100 live births	47.3
Induced abortions per 100 live births	35.1
Spontaneous abortions per 100 live births	12.2

II.8.2. OBSERVATIONS BY SELECTED BACKGROUND VARIABLES

As seen in Tables II.8.3 and II.8.4 , induced abortion rates increased both in urban and rural settlements in comparison to five years before. However, the increase in induced abortions is relatively higher in rural areas. In general, urban women are more likely to experience induced abortion compared to their rural counterparts. It is also noteworthy that, the urban induced abortion rates are higher than the rates for the country overall. Most probably due to the easy access to services in urban areas induced abortion is widely seen. Urban women feel the burden of social and economic conditions more heavily and resort to induced abortion as fertility regulation trying to close the gap of contraception. On the other hand, the increase in the rural induced abortion rates implies that rural areas are in some part achieving urban characteristics. Another point which draws attention is the decline in the spontaneous abortion rate of urban areas compared to that of 1983. In contrast, in rural settlements, there is a marked increase in the spontaneous abortion rate. In 1983, 7.1 spontaneous abortions were seen per 100 pregnancies whereas in 1987, this ratio became 9.4 abortions per 100 pregnancies . Spontaneous abortions are partly related to the biological structure of the woman and partly to the prevailing living conditions of the woman. Also, the share of adolescent marriages which is the most risky group for spontaneous abortions, is important in the variations of spontaneous abortion.

Tables II.8.3 and II.8.4 show a marked regional variation in both the induced and spontaneous abortion rates. Among all regions the pronounced increase in induced abortions is in the Central followed by the Eastern region. Contrary to the regional differentiation in 1983, the current situation shows that induced abortions per pregnancies are highest in the Central and lowest in the Southern Region. In the Central, 3 out of 10 pregnancies are terminated by induced abortion, whereas in the South this ratio is only slightly above 1 in 10 pregnancies. The results imply that, in the Central and West, where the induced abortion rates are above the country average, there still exists a gap in fertility regulation despite the relatively wide use of contraception in the Western Region.

Regarding spontaneous abortions, it should be noted that the abortion rates for West and Central decreased considerably, most probably, due to better environmental conditions and more pronounced pre-natal care. However, in the remainder of the regions, unfortunately an increase is observed in spontaneous abortions. One further point, is the pattern of abortion types in the East. According to the results of 1983 Survey, in the Eastern region, the numbers of spontaneous and induced abortions were almost identical which was explained by the prevailing rural characteristics of urban settlements of the East, as they are at the very beginning of the urbanization process. However, now the same pattern as other regions is observed in the East as well. In other words, more induced abortions than spontaneous abortions. Besides, the increase in in-

TABLE II.8.2: Distribution of Abortions by Year (Per 100 Pregnancies)

	1987	1986	1985	1984
Induced abortions	23.6	20.2	16.8	15.1
Spontaneous abortions	8.2	8.1	8.7	7.6
Still births	1.0	0.7	2.3	1.0
TOTAL	**32.8**	**29.0**	**27.8**	**23.8**

TABLE II.8.3: Abortions Per 100 Pregnancies

	Induced Abortions		Spontaneous Abortions		Stillbirths		TOTAL	
	1987	1982-83	1987	1982-83	1987	1982-83	1987	1982-83
TURKEY	23.6	12.1	8.2	8.0	1.0	1.1	32.8	21.2
URBAN/RURAL RESIDENCE								
Urban	28.6	18.1	7.2	9.1	0.5	0.8	36.3	28.0
Rural	17.4	7.0	9.4	7.1	1.6	1.2	28.4	15.3
REGION								
West	28.5	19.2	8.1	12.2	0.6	1.5	37.2	32.9
South	13.8	9.6	9.4	6.9	1.3	0.5	24.5	17.0
Central	31.4	12.1	4.5	7.6	0.9	0.9	36.8	20.6
North	18.0	13.2	11.2	6.5	-	2.6	29.2	22.3
East	18.2	5.3	10.0	5.2	1.8	0.2	30.0	10.7

TABLE II.8.4: Abortions per 100 Women of Reproductive Age (15-49)

	Induced Abortions		Spontaneous Abortions		Stillbirths		TOTAL	
	1987	1982-83	1987	1982-83	1987	1982-83	1987	1982-83
TURKEY	4.5	2.8	1.6	1.8	0.2	0.2	6.3	4.8
URBAN/RURAL RESIDENCE								
Urban	5.3	3.7	1.3	1.8	0.1	0.2	6.7	5.7
Rural	3.4	1.8	1.8	1.8	0.3	0.3	5.5	3.9
REGION								
West	4.7	3.4	1.3	2.2	0.1	0.3	6.1	5.9
South	3.1	2.4	2.1	1.7	0.3	0.1	5.5	4.2
Central	5.6	2.8	0.8	1.8	0.2	0.2	6.6	4.8
North	2.8	3.0	1.7	1.5	-	0.6	4.5	5.1
East	4.6	1.6	2.5	1.6	0.5	0.1	7.6	3.3

duced abortions is higher than that of spontaneous abortions.

Age variations especially in induced abortions are also significant. The induced abortion rate maintained an upward trend till the 35-39 age group when it reaches the peak point (Table II.8.5). In age group 20-24 1 out of 10 pregnancies terminated with an induced abortion, but in the age group 35-39 this ratio reaches 4 abortions in 10 pregnancies. This may imply that, as at these ages the desired family size is achieved women are more motivated towards controlling their fertility. On the other hand, the distinctly lower rate of the 45-49 age group may be partly due to underreporting and partly to a declining number of pregnancies at these ages.

Examining spontaneous abortions, the most striking is the very high rate of the youngest age cohort where adolescent marriages take place (Table II.8.5). In this age group stillbirths are also very high, mostly for the same reason.

Table II.8.6 shows that there are significant variations in regard to level of educational attainment. The results indicate a positive relation between level of education and induced abortions showing a steady and upward trend with the increase in the level of education. Women with higher educational level, experience approximately 3 abortions in 10 pregnancies, whereas women with no education have about 2 abortions in 10 pregnancies.

TABLE II.8.5: Abortions per 100 Pregnancies by Age (1987)

	Induced Abortions	Spontaneous Abortions	Stillbirths	TOTAL
< 20		20.0	5.0	25.0
20-24	12.5	9.3	0.7	22.4
25-29	22.6	8.4	0.4	31.4
30-34	32.2	4.4	1.1	37.8
35-39	42.4	9.8	1.5	53.8
40-44	31.7	5.0	1.7	38.3
45-49	16.1	3.2	-	19.4

TABLE II.8.6: Abortions per 100 Pregnancies by Level of Education (1987)

	Induced Abortions	Spontaneous Abortions	Stillbirths	TOTAL
Illiterate	18.2	6.4	0.7	25.4
Literate	23.5	4.9	2.9	31.4
Primary	25.8	9.0	0.8	35.7
Secondary +	26.9	11.5	1.4	39.2

CHAPTER III

FINDINGS FROM THE HUSBAND'S QUESTIONNAIRE

In the 1988 Turkish Fertility and Health Survey, husbands of the eligible women who were currently married were also interviewed. In other words, men who were currently married and had a wife in the reproductive age bracket (i.e. 15-49) were selected for interview.No age limitations were introduced for the husbands to be interviewed. As a strategy, not all husbands were interviewed; the husband's questionnaire was applied in nearly half of the clusters: in 213 clusters out of 405. In these clusters, 2707 husbands were considered eligible; however, the questionnaire was only completed successfully for 2264 husbands due to the inability to catch them at home or to refusals. The overall response rate was 77.47 percent for the questionnaire.

This chapter gives a summary of findings on the background characteristics of husbands, contraceptive knowledge and use, ideal number of children and additional number of children wanted and finally, results of some attitude questions on family planning and gender equality.

It is of utmost importance to point out that, this chapter in no way attempts a comparison of results obtained from the wives with those of the husbands. The wives and husbands were not matched at this stage; the results given here should be treated as the preliminary findings of the questionnaire and should be evaluated within the context of their own internal consistency. Further analyses that will be carried out will compare the results from the wives and the husbands.

III.1. BACKGROUND CHARACTERISTICS OF THE HUSBANDS INTERVIEWED

This section presents some background characteristics of the husbands interviewed. Table III.1.1. shows the number and percentage distribution of the husbands interviewed by region and stratum. Of these husbands, 34.8 percent were in the West, 22.5 percent in the Central, 16.4 percent in the East, 14 percent in the South and finally 12.3 percent were in the North region. In terms of strata, 55.8 percent of the husbands were interviewed in urban areas (localities with a population over 10,000) and 44.2 percent in rural areas (localities with a population less than 10,000).

Table III.1.2 presents the number and percentage distribution of husbands by age and type of place of residence. Of the husbands :

- 7.6 percent were less than 25 years of age,
- 38.4 percent were between the ages 25-34,
- 31.4 percent were between the ages 35-44
- 18.1 percent were between the ages 45-54 and finally,
- 4.5 percent were over 55 years of age.

This shows that 69.8 percent of the husbands interviewed were between the ages of 25-44. It is interesting to note that the percentage of husbands who are less than 25 years of age is considerably higher in rural areas compared to the overall distribution in Turkey, while it is lower in urban areas.

TABLE III.1.1: Number and Percentage Distribution of Husbands Interviewed by Region and Stratum

STRATUM	URBAN				RURAL				
REGION	50,000+	25,000-49,999	10,000-24,999	2,000-9,999	1,000-1,999	500-999	< 500	TOTAL	Percent Distribution by Region
I	454	30	58	73	56	65	53	789	
WEST	57.5	3.8	7.4	9.3	7.1	8.2	6.7	100.0	34.8
II	138	11	32	40	37	28	30	316	
SOUTH	43.7	3.5	10.1	12.7	11.7	8.9	9.5	100.0	14.0
III	215	33	48	70	39	57	47	509	
CENTRAL	42.2	6.5	9.4	13.8	7.7	11.2	9.2	100.0	22.5
IV	44	12	31	38	59	54	40	278	
NORTH	15.8	4.3	11.2	13.7	21.2	19.4	14.4	100.0	12.3
V	100	23	34	52	49	73	41	372	
EAST	26.9	6.2	9.1	14.0	13.2	19.6	11.0	100.0	16.4
TOTAL	951	109	203	273	240	277	211		
	42.0	4.8	9.0	12.1	10.6	12.2	9.3		
		1263				1001		2264	
		55.8				44.2		100.0	100.0

TABLE III.1.2 : Number and Percentage Distribution of Husbands by Age and Place of Residence

AGE	URBAN	RURAL	TOTAL	PERCENT DISTRIBUTION BY AGE
< 25	64	109	173	
	37.0	63.0	100.0	7.6
25-34	498	372	870	
	57.2	42.8	100.0	38.4
35-44	419	292	711	
	58.9	41.1	100.0	31.4
45-54	225	184	409	
	55.0	45.0	100.0	18.1
55 +	57	44	101	
	56.4	43.6	100.0	4.5
TOTAL	1263	1001	2264	100.0
	55.8	44.2	100.0	

Compared to the 56 percent of the sample in urban areas, the percentage of husbands less than 25 years of age declines to 37 percent and compared to 44 percent of the sample in rural areas, it increases to 63 percent in rural areas. In other age groups, the distribution is similar to the distribution for overall Turkey. The difference in the youngest age group may be considered an indication of the fact that men in rural areas marry earlier than their counterparts in urban areas. In fact, this is supported by the findings of the husband's questionnaire on age at first marriage. It is found that mean age at first marriage for the husband is 22.9 for overall Turkey.In urban areas, it increases by almost one year and reaches 23.6, while in rural areas age at first marriage declines to 22.1. Thus, this shows one and a half year difference in mean age at first marriage between men in rural and urban areas.

Table III.1.3 shows the number and percentage distribution of husbands by age and region. Of the husbands interviewed, 35 percent were in the West, 23 percent in the Central, 16 percent in the East, 14 percent in the South and finally 12 percent were in the North. It is observed that the percentage of husbands less than 25 years of age is considerably lower in the West (26.6 percent) compared to the overall sample in the West (34.8 percent), which also may indicate a higher age at first marriage than the average for overall Turkey. In fact, in the West, mean age at first marriage is found to be one year higher (24.0) compared to the average (22.9). In the other regions, this relationship is somewhat similar. It is observed that age at first marriage is lowest in the North (21.5) being one and a half year lower than the national average. Mean age at first marriage by region and place of residence are given in Table III.1.4.

Mean age at first marriage for the husbands is calculated based on those who are currently over 34 years old and have married before or at 34. The reasoning behind this is as follows: Since the sample includes only the currently married men (i.e. husbands of currently married women eligible for the woman's questionnaire), it selectively excludes late marrying men in any age group. This selection bias is more definite for younger age groups, since a larger proportion of them were not married during the time of survey but would marry later. To control this effect, a pivotal age (here 34) is selected and men currently under that age as well as those who were not married by that age are excluded. According to the results of the Household Questionnaire, with regard to men, fluctuations begin at age 34 in percentages married (it is observed that by age 34, 97 percent of men are ever-married). Since after

TABLE III.1.3: Number and Percentage Distribution of Husbands by Age and Region

AGE	WEST	SOUTH	CENTRAL	NORTH	EAST	TOTAL
< 25	46	36	36	26	29	173
	26.6	20.8	20.8	15.0	16.8	100.0
25-34	288	121	194	130	137	870
	33.1	13.9	22.3	14.9	15.7	100.0
35-44	258	87	166	76	124	711
	36.3	12.2	23.3	10.7	17.4	100.0
45-54	156	63	89	39	62	409
	38.1	15.4	21.8	9.5	15.2	100.0
55 +	41	9	24	7	20	101
	40.6	8.9	23.8	6.9	19.8	100.0
TOTAL	**789**	**316**	**509**	**278**	**372**	**2264**
	34.8	**14.0**	**22.5**	**12.3**	**16.4**	**100.0**

this pivotal age a relative stagnation is observed in percent-married among men, it can be said that event of marriage significantly subsists up to age 34. Therefore age 34 was chosen as the pivotal age.

TABLE III.1.4: Mean Age at First Marriage for the Husbands by Region and Place of Residence

TURKEY	22.9
West	24.0
South	22.0
Central	22.5
North	21.5
East	22.9
Urban	23.6
Rural	22.1

Table III.1.5 presents the number and percentage distribution of husbands by age and education. It is observed that, in general, 58 percent of the husbands interviewed are primary school graduates, while 4 percent are illiterate and 8 percent are literate. 29 percent have higher educational levels than primary. It is observed that younger husbands are better educated. For example, while the proportion of husbands illiterate is only 0.6 percent among those under 25 years of age, it gradually increases as the age increases and reaches 15.8 percent among those over 55 years of age. While 69 percent of the husbands below 25 are primary school graduates, the proportion declines considerably and less than 50 percent (43 percent) of the husbands over 55 are primary school graduates. Similarly, the proportion of husbands who have higher education than primary school level is higher among those below 45 years of age compared to those over 45.

III.2. IDEAL AND ADDITIONAL NUMBER OF CHILDREN WANTED

III.2.1. IDEAL NUMBER OF CHILDREN

As one of the indicators of family size desires, husbands were asked their ideal number of children: "If you were able to start your marital life again, and if it were possible for you to have exactly the number of children you wanted, how many would you like to have?" This question on ideal number of children was identical to that in the Woman's Questionnaire.

Table III.2.1 presents mean ideal number of children for husbands by some background variables. The mean ideal number of children is found to be 2.41 for total Turkey (1) The number is 2.14 for ever-married women (it should be taken into account that the former figure is for the subsample of husbands of currently married women while the latter is for the whole sample of ever-married women).

When regional differentials are examined, it is observed that the mean ideal number of children for husbands in the South and East are higher than the national average (2.95 and 2.70 respectively). In the other three regions, namely West, Central, and North, ideal numbers are below the national average with no regional differentials. Although the difference in the mean ideal number of children in urban and rural areas is not very dramatic, the mean in urban areas is lower compared to rural areas, as well as being lower than the national average.

Table III.2.1 also indicates the fact that there is a clear relationship between ideal number of children and education; the better educated husbands prefer a smaller families than the less educhildren and education; the better educated husbands prefer a smaller families than the less educated. The difference in the mean ideal number of children between illiterate husbands and university graduates is almost one child (3.02 and 2.11 respectively). Moreover, it is also observed that illiterate and literate husbands have higher means of ideal number of children than the national average.

When the mean ideal number of children is examined according to the number of living children, it is observed that for childless respondents the mean is very close to the overall mean.

(1) The means are calculated based on husbands who gave numerical answers. Out of 2264 husbands, 1.3 percent gave non-numerical answers such as "it depends on what God gives", "as many as possible", "no idea", etc.

TABLE III.1.5 : Number and Percentage Distribution of Husbands by Age and Educational Level

Age	Illiterate	Literate	Primary School	Secondary School	High School	University	Total
< 25	1	8	119	20	24	1	173
	0.6	4.6	68.8	11.6	13.9	0.6	100.0
25-34	9	26	503	86	198	48	870
	1.0	3.0	57.8	9.9	22.8	5.5	100.0
35-44	30	57	433	64	78	47	709
	4.2	8.0	61.1	9.0	11.0	6.6	100.0
45-54	34	73	220	27	41	14	409
	8.3	17.8	53.8	6.6	10.0	3.4	100.0
55 +	16	25	43	7	4	6	101
	15.8	24.8	42.6	6.9	4.0	5.9	100.0
TOTAL	**90**	**189**	**1318**	**204**	**345**	**116**	**2262***
	4.0	**8.4**	**58.3**	**9.0**	**15.3**	**5.1**	**100.0**

** Level of education is not stated for 2 cases*

For those with one living child,the mean declines and thereafter increases with increasing parity. There could be several likely reasons which contribute to this trend. The first, to the extent that respondents implement their prefences, those who find larger family size ideal, may tend to achieve larger families. The second, these responses may be subject to a rationalization effect,i.e., respondents may adjust their ideal number of children upwards as the actual number increases.

III.2.2. ADDITIONAL NUMBER OF CHILDREN WANTED

When the husbands were asked about whether they wanted another child in addition to the existing children (and if any, in addition to the current pregnancy), 2.18 percent of the respondents stated that they desire future birth(s) while 73.7 percent stated that they do not want to have children in the future. 1.9 percent of the husbands stated that they are not sure whether they desire future births, 1.8 percent gave the response "God knows", and 0.7 percent stated that it was impossible for him to have a child in the future. For those who would like to have another child in the future, the number of additional children desired was asked. Table III.2.2 shows the mean number of additional children wanted for those who indicated a desire for future birth(s). The mean number of additional children wanted by husbands is 1.65 for all Turkey (1). The figure is 1.44 for ever-married women.

In relation to regional differentials, it is observed that similar to the case of ideal number of children, in the South and the East, husbands' desire for future births is higher than the national average (1.98 and 1.79 respectively) while the other three regions have lower means than the average. It is seen that the highest mean number of additional children wanted was by husbands in the South, and the lowest by those in the Central. When urban/rural differentials are examined, parallel to the mean of ideal number of children, husbands living in urban areas desire to have fewer number of children in the future than those in rural areas. Similarly, the mean number of additional children wanted by husbands in urban areas is lower than the national average, while it is higher than the average in rural areas.

Table III.2.2 also very clearly indicates that as the level of education of husbands increases, the mean number of additional children wanted decreases. This trend is similar to that observed between the ideal number of children and level of education. It is observed that the mean additional number of children wanted by illiterate husbands is greater than the national average by one child (2.67 vs. 1.65) as well as the means for literate husbands and primary school graduates being higher than the national average. The mean number of additional children wanted for higher levels of education declines below the average. When

(1) The means calculated are based on numerical values. Of those who indicated desire for future births, 1.8 percent gave no figures.

TABLE III.2.1 : Mean Ideal Number of Children By Some Background Variables

TURKEY	2.41
REGION	
West	2.25
South	2.95
Central	2.22
North	2.22
East	2.70
TYPE OF PLACE OF RESIDENCE	
Urban	2.35
Rural	2.49
EDUCATIONAL LEVEL	
Illiterate	3.02
Literate	2.73
Primary	2.42
Secondary	2.25
High School	2.22
University	2.11
NUMBER OF LIVING CHILDREN	
0	2.35
1	2.11
2	2.22
3	2.52
4	2.55
5+	2.85

the lowest and highest educational levels are compared, it is observed that the mean number of additional children wanted by illiterate husbands is greater than university graduates by more than one child (2.67 vs. 1.36).

TABLE III.2.2: Mean Number of Additional Children Wanted by Some Background Variables

TURKEY	1.65
REGİON	
West	1.55
South	1.98
Central	1.40
North	1.63
East	1.79
PLACE OF RESIDENCE	
Urban	1.48
Rural	1.91
EDUCATIONAL LEVEL	
Illiterate	2.67*
Literate	2.00
Primary	1.80
Secondary	1.49
High School	1.41
Universty	1.36

** Less than 10 cases*

III.3. CONTRACEPTIVE KNOWLEDGE AND USE

The Husband's Questionnaire in the 1988 "Turkish Fertility and Health Survey" included a series of questions on the knowledge, ever-use and current use of contraceptive methods. The questionnaire contained the identical list of contraceptive methods as the Woman's Questionnaire. The procedure for completing the table, i.e. asking questions on knowledge, ever-use and current use of contraceptives was also identical to the Woman's Questionnaire (see Sections II.6.1, II.6.2 and II.6.3 for detailed information). However, it should be noted here once again that, data presented here on the knowledge and use of contraception should be evaluated within their own internal consistency. No comparisons are attempted here between the husband's and the wife's reporting of level of current use as they are not matched. Such comparisons will be attempted in further analyses.

III.3.1. KNOWLEDGE OF CONTRACEPTIVE METHODS

The results obtained from the Husband's Questionnaire show the fact that knowledge of contraceptive methods is almost universal among the husbands interviewed. It is observed from Table III.3.1 that 96.5 percent of the husbands know about at least one contraceptive method. This level of knowledge is very close to that one reported by ever-married women (i.e. 98 percent), as well as the very high level of knowledge of at least one modern method.

TABLE III.3.1: Percentage Distribution of Husbands Reporting Knowledge of Contraceptive Methods

Knows no method	3.5
Knows only traditional methods	0.9
Knows some modern method	95.6
TOTAL	**100.0**

Table III.3.2 shows the percentage of husbands who have heard of various contraceptive methods by whether the reporting was spontaneous or probed. The highest level of contraceptive knowledge is reported for a female method, namely the pill as among ever-married women. The highest level of spontaneous reporting among husbands is also for this method. 67 percent of the husbands spontaneously reported that they know the pill. The second widely known method is another female-method, the IUD for which the next highest level of spontaneous knowledge is reported. These methods are followed by the two male- methods, withdrawal and condom (77 percent and 75 percent of husbands reporting knowledge respectively). The level of spontaneous reporting for the condom followed

those of the pill and IUD while the situation is reversed for withdrawal. It is interesting that while for the most widely known four methods (i.e. the pill, IUD, condom and withdrawal), spontaneous reporting was also the highest except for withdrawal, in case of which spontaneous knowledge is found to be considerably lower than the probed knowledge. Both this low level of spontaneous reporting and the overall lower level of reporting for this widely used method in Turkey, might be explained by the fact that husbands feel shy to report this method, as the women do. The lowest levels of contraceptive knowledge are about diaphragm, injection, abstinence and "other" methods.

Table III.3.3 shows the percentage of husbands who have heard of various contraceptive methods by age. It is observed that the pattern of knowledge is similar to that for ever-married women, i.e. level of knowledge is higher in intermediate age groups (25-44) and lower in the youngest and older age groups. It can also be said that for all modern methods, the level of knowledge in young ages is higher than the oldest age groups which indicates that the young generation is more aware of contraceptive methods than the oldest.

Rural and urban differentials by spontaneous or probed knowledge of modern contraceptive methods are presented in Table III.3.4. It is observed that the level of overall knowledge for specific contraceptive methods among husbands is higher in urban compared to rural areas (the only exception is injection for which knowledge in rural areas is slightly higher). The highest difference in the knowledge of modern methods is for male sterilization, the level of knowledge in urban areas being 29 percent greater than the rural. The second highest difference is for female sterilization (24.3 percent difference) followed by the condom (22.6 percent difference). It is also interesting to note that though overall level of knowledge for both female and male sterilization is higher in urban areas, spontaneous reporting in both urban and rural areas is almost negligible compared to probed reporting.

Table III.3.5 and III.3.6 show the regional differentials in the level of knowledge for contraceptive methods.

It is observed that the lowest level of knowledge of contraceptives among the husbands is in the North, while in the other four regions the level of knowledge is well over 95 percent. In the North, percentage of husbands who know a method of contraception is 89.5 percent which is below the national average. It is also observed from Tables III.3.5 and III.3.6 that knowledge of modern methods of contraception is also lowest in the North. Table III.3.6 presents knowledge of

TABLE III.3.2 : Percentage of Husbands by Spontaneous or Probed Knowledge of Contraceptive Methods

METHODS	SPONTANEOUS	PROBED	TOTAL
Pill	66.9	24.7	91.6
IUD	48.3	34.0	82.3
Condom	40.5	34.3	74.8
Diaphragm	1.4	10.3	11.6
Female Scientific	10.7	29.9	40.6
Female Sterilization	6.9	51.1	58.0
Male Sterilization	4.2	38.1	57.7
Injection	4.5	*	4.5
Withdrawal	25.7	51.2	76.9
Rhythm	8.4	37.3	45.7
Douche	3.5	39.0	42.5
Abstinence	0.9	16.1	17.0
Other	4.0	*	4.0

** Only spontaneous knowledge was reported.*

TABLE III.3.3 : Percentage of Husbands by Knowledge of Contraceptive Methods and Age

METHODS	AGE				
	< 25	25-34	35-44	45-54	55+
Pill	85.6	94.3	91.8	90.9	78.8
IUD	72.8	88.2	84.2	76.5	56.6
Condom	57.2	77.9	78.1	73.3	61.6
Diaphragm	8.1	13.7	11.7	9.8	7.1
Female Scientific	34.7	44.8	42.5	34.8	25.2
Female Sterilization	47.4	64.5	58.8	51.9	38.4
Male Sterilization	31.2	47.2	45.6	35.8	22.2
Injection	10.4	4.1	4.8	3.2	1.0
Withdrawal	63.0	82.0	77.9	72.3	67.6
Rhythm	33.5	44.7	42.7	41.8	39.8
Douche	34.7	52.3	45.7	40.9	27.3
Abstinence	12.8	18.1	18.0	15.7	13.1
Other	3.5	3.3	4.9	4.2	3.0

specific modern methods of contraception by region. It is seen that for the most widely known method among husbands, i.e.the pill, the level of knowledge is lower than the national average in the South and the East, while it is the lowest for the IUD and condom in the North and East. It is observed that for the less known modern methods like female scientific methods and sterilization, the lowest level of knowledge is in the East, and percentages are considerably lower than the national average.

Educational differences in the husband's level of knowledge of contraceptive methods are given in Table III.3.7. It is observed from the table that, as expected, level of knowledge of contraceptives gradually increases as the level of education increases. Fluctuations are observed for injection and "other" methods which might be due to the fact that no probing was done for these two methods. The level of knowledge of the pill, a female contraceptive, is considerably high even among the illiterate husbands (78 percent), a male contraceptive, the condom is only known by 43 percent of the same group as well as withdrawal being known by only 49 percent of the illiterate husbands. Knowledge of male sterilization is considerably lower than female sterilization among all educational groups.

III.3.2. EVER-USE OF CONTRACEPTION

Table III.3.8 shows the percentage distribution of husbands according to ever-use of contraceptive methods and the regional differentials. It is observed that 79.5 percent of the husbands reported that they have tried a method of contraception while 20.5 percent had never tried a method. Of the husbands, 62 percent reported that they have tried some modern method while 17.5 percent have used only traditional methods. (These figures give lower levels of ever-use in general and also for ever-use of only the traditional methods when compared to those reported by ever-married women). As shown in the table, the West and the Central have the highest level of ever-use, in addition to the highest proportion of husbands who have ever-used some modern method. However, while percentage of husbands who have ever-used a modern method is the highest in the West (68.8 percent), the Central has the highest percentage of husbands who have reported ever-use of only traditional methods (23 percent). In the other three regions, namely South, North, and the East, the level of ever- use of some modern contraceptive is less than the national average.

TABLE III.3.4 : Percentage of Husbands by Spontaneous and Probed Knowledge of Modern Contraceptive Methods and Place of Residence

	URBAN			RURAL		
Methods	Spontaneous	Probed	Total	Spontaneous	Probed	Total
Pill	71.9	23.1	95.0	60.6	26.7	87.3
IUD	57.5	33.0	90.5	36.5	35.2	71.2
Condom	50.6	34.2	84.8	27.7	34.5	62.2
Diaphragm	2.1	13.9	16.0	0.4	5.7	6.1
Female Scientific	13.5	34.5	48.0	7.2	24.1	31.3
Female Sterilization	8.6	60.1	68.7	4.8	39.6	44.4
Male Sterilization	6.3	48.8	55.1	1.6	24.5	26.1
Injection	2.6	-	2.6	6.9	-	6.9

TABLE III.3.5 : Percentage Distribution of Husbands According to Knowledge of Contraceptive Methods and Region

	West	South	Central	North	East	TURKEY
Knows No Method	2.2	4.4	1.2	10.4	3.5	3.5
Knows Only Traditional	1.0	—	1.4	0.7	0.8	0.9
Knows Some Modern	96.8	95.6	97.4	88.8	95.7	95.6

TABLE III.3.6 : Percentage of Husbands by Knowledge of Modern Contraceptive Methods and Region

	West	South	Central	North	East	TURKEY
Pill	94.3	87.6	94.1	83.8	91.6	91.6
IUD	85.7	82.0	87.4	73.0	75.1	82.3
Condom	80.3	73.4	81.4	65.8	62.1	74.8
Diaphragm	15.0	7.9	11.2	11.9	8.2	11.6
Female Scientific	46.3	43.0	41.9	37.1	27.6	40.6
Female Sterilization	62.7	66.1	54.4	56.5	47.1	58.0
Male Sterilization	48.0	35.2	44.6	46.0	30.5	57.7
Injection	1.0	10.8	2.9	—	12.1	4.5

TABLE III.3.7 : Percentage of Husbands by Knowledge of Contraceptive Methods and Educational Level

	Illiterate	Literate	Primary School	Secondary School	High School	University
Pill	77.8	80.9	90.9	95.6	98.6	100.0
IUD	51.2	61.9	80.0	93.1	98.0	99.1
Condom	43.4	50.8	71.3	85.3	95.0	99.1
Diaphragm	4.4	4.3	6.9	18.2	22.7	39.6
Female Scientific	22.2	23.8	35.9	51.0	56.2	70.7
Female Sterilization	28.9	41.8	51.3	69.6	81.4	91.4
Male Sterilization	11.1	21.7	33.0	58.3	72.7	86.2
Injection	8.9	9.0	4.9	2.0	2.3	
Withdrawal	48.9	61.4	74.5	82.2	92.7	93.1
Rhythm	15.5	24.9	36.2	59.8	77.4	92.2
Douche	23.3	25.1	38.9	50.2	55.6	71.5
Abstinence	5.6	17.1	13.9	24.5	21.1	35.4
Other	1.1	5.8	3.6	5.4	3.2	6.0

Table III.3.9 shows the percentage of husbands who have ever-used specified contraceptive methods for overall Turkey and by regional. urban-rural and educational differentials. It is observed that the percentage of husbands who have ever-used withdrawal is highest among all contraceptive methods in Turkey, followed by the pill, condom and IUD. When regional differentials are examined, it is seen that a female contraceptive, the pill, is reported to have been the most widely practised in the West, while the lowest level is in the South. The lowest level of ever-use for IUD is reported by the husbands in the North, while in the other regions, the level of ever-use is close to the national average. Two male contraceptives, the condom and withdrawal is reported to be most widely ever-used in the West and the Central. The level of ever-use for these two methods is higher than the national average in these regions. In addition, the level of ever- use of withdrawal, the traditional male method, is close to the national average in the North, while for the condom, except in the West and Central, are lower than average.

Table III.3.9 shows the well known fact that the level of ever-use is higher in urban areas compared to rural. Husbands also reported higher levels of ever-use for almost all methods in urban

TABLE III.3.8 : Percentage Distribution of Husbands According to Ever-use of Contraceptive Methods and Region

	West	South	Center	North	East	TURKEY
Never Used Any	14.1	32.3	13.2	30.6	27.0	20.5
Used Only Traditional	17.1	14.2	22.6	19.8	12.2	17.5
Used Some Modern	68.8	53.5	64.2	49.6	60.8	62.0
TOTAL	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

areas like the ever-married women. Among modern methods, the highest differentials in the level of ever-use is reported for IUD and condom. The level of ever-use for these two methods is almost double in urban areas. When traditional methods are taken into account, the highest difference is reported for rhythm (24 percent in the urban vs. 10 percent in the rural).

It is also observed from the same table that, in general, increasing level of education of husbands brings higher levels of practice of contraceptive methods. For the two male contraceptives, substantial differentials are observed between the lowest and highest educational groups. In case of condoms, while only 10 percent of husbands (which is considerably lower than the national average) report ever-use, the percentage increases to 40.5 (which is considerably higher than the national average) among those with secondary or higher education. In the case of withdrawal, the proportions are 22 percent among the illiterate group vs. 56 percent among those with secondary or higher education. This sharp increase for a traditional male method with increasing level of education is interesting. Comparison of percentages for these two methods among the educational groups also implies that the level of ever-use for a modern male contraceptive (i.e. condom) is considerably lower than that for a traditional male contraceptive (withdrawal) at all educational levels.

III.3.3. CURRENT USE OF CONTRACEPTION

Table III.3.10 shows current use of various contraceptive methods as reported by the husbands for overall Turkey and the differentials by some background variables. 75 percent of the husbands "whose wives are fecund and not pregnant" have reported that they were using a method of contraception during the time of the survey. Of these, 43.5 percent report current use of a modern method while 31.4 percent report current use of a traditional method. This gives higher reporting of modern contraceptives for current use than reported in the woman's questionnaire. Reasons for such differentials will be studied after matching the wives and husbands through further analyses.

Withdrawal is reported to be the most widely used method (by 22 percent of the husbands whose wives are exposed) followed by the IUD (16.7 percent), the condom (12 percent) and the pill (10.6 percent). Current level of use for other methods are reported to be very low.

When regional differentials are examined, it is seen that the highest level of current use of contraceptives is reported in the West (81 percent of husbands reporting current use of some method) and in the Central (82.5 percent), while in the other three regions the level of current use is lower than the national average.

TABLE III.3.9: Percentage of Husbands who have Ever-Used Contraceptive Methods by Some Background Variables

	Pill	IUD	Con.	Diaph.	Female Scient.	Female Steril.	Malea Steril	Injec.	Withd.	Rhythm	Douche	Abstin.	Other
TURKEY	38.3	24.7	27.0	0.3	9.2	1.4	--	1.4	47.9	17.9	21.3	3.7	0.9
REGION													
West	43.0	25.0	31.1	0.1	9.8	1.8	--	0.3	53.0	20.7	26.0	3.5	0.5
South	27.8	24.4	21.2	0.3	10.4	1.9	--	1.6	39.6	15.5	13.6	1.9	0.3
Central	40.7	26.5	32.8	0.4	11.8	1.0	--	1.0	55.4	19.8	29.5	4.5	1.8
North	30.2	19.8	20.5	0.7	8.3	0.7	--	--	46.9	14.0	11.5	2.9	1.8
East	39.8	25.3	20.4	--	4.3	1.3	--	5.4	34.4	14.5	14.2	4.8	0.5
PLACE OF RESIDENCE													
Urban	40.8	31.3	33.5	0.3	11.2	1.6	--	0.6	51.8	23.9	25.0	3.9	0.6
Rural	35.1	16.3	18.9	0.2	6.8	1.2	--	2.5	43.0	10.4	16.7	3.4	1.4
EDUCATIONAL LEVEL													
Illiterate	28.9	14.4	10.0	--	4.4	1.1	--	2.2	22.2	4.4	12.2	3.3	
Literate	29.6	12.7	13.2	--	6.3	3.7	--	2.1	38.6	7.9	12.7	4.8	1.6
Primary	39.9	21.4	23.3	0.2	8.8	1.1	--	1.9	46.7	11.1	21.6	3.1	1.1
Secondary or higher	38.8	35.8	40.5	0.5	11.4	1.4	--	0.3	56.2	36.1	24.2	4.4	0.5

TABLE III.3.10 Percentage Distribution of Husbands whose Wives are Exposed According to Current Use of Contraceptive Methods and Some Background Variables

	Not Using	Pill	IUD	Condom	Female Scient.	Female Steril.	Injection	Withd.	Rhythm	Douche	Abstin.	Other
TURKEY	25.1	10.6	16.7	12.2	2.1	1.6	0.3	22.2	6.5	2.2	0.3	0.2
REGION												
West	19.3	11.6	19.1	14.3	2.0	2.0	--	22.4	7.4	1.8	--	0.1
South	31.2	6.8	16.4	10.0	3.2	2.4	0.4	19.2	6.4	4.0	--	--
Central	17.5	9.5	16.3	15.4	2.7	1.1	0.2	25.4	8.2	3.2	0.5	--
North	39.4	9.2	10.0	9.6	2.0	0.8	--	23.1	4.8	0.4	--	0.8
East	32.7	14.0	17.0	6.7	1.0	1.5	1.3	19.4	3.8	1.6	1.0	--
PLACE OF RESIDENCE												
Urban	19.1	9.7	21.0	14.8	2.2	1.8	--	20.7	8.5	2.0	0.1	0.1
Rural	33.3	11.8	10.8	8.6	2.0	1.4	0.7	24.4	3.8	2.4	0.5	0.2
EDUCATIONAL LEVEL												
Illiterate	46.3	20.9	9.0	1.5	1.5	1.5	--	16.4	1.5	1.5	--	--
Literate	43.7	7.6	7.0	3.8	--	4.4	1.3	25.9	2.5	3.2	0.6	--
Primary	26.6	12.4	13.7	10.7	2.5	1.3	0.4	24.9	4.2	2.9	0.4	0.1
Secondary or higher	15.1	6.9	25.8	18.4	2.0	1.5	--	16.8	12.6	0.7	--	1.1

It is also seen from Table III.3.10 that as expected, the level of current use is higher among husbands living in urban areas compared with their counterparts in rural areas. Current use of the pill and withdrawal have been reported to be slightly higher in rural areas.

Table III.3.10 indicates the well known fact that increasing level of education brings higher levels of contraceptive use to avoid or delay pregnancy Among the illiterate group, only 54 percent of husbands reported current use of a contraceptive method while among those with secondary school or higher education, 85 percent reported that they are using a method of contraception. Practice of modern methods also increases as education increases. Among those who are illiterate, 34.4 percent report current use of a modern method while this proportion increases to 55 percent among husbands with secondary or higher education. However, it should be noted that husbands who are literate have reported lower levels of current use of a modern method compared to the illiterate. Use of withdrawal, the most widely practised method which is traditional, increases up to primary school level and declines after secondary school education. Thus, increasing practice of withdrawal with increasing level of education in case of "ever-use" is not observed for current use. It also draws attention to the fact that current use of the pill shows fluctuations among educational groups according to the reporting of husbands. In addition, according to the woman's questionnaire, i.e. as reported by the women, level of current use for the pill is 6.6 percent among those whose husbands are illiterate, while it sharply increases to 21 percent as reported by the illiterate husbands. Such differences in the level of reporting of current use from the woman's and man's questionnaire will be examined by further analyses.

III.4. ATTITUDES TO FAMILY PLANNING and GENDER EQUALITY

In the 1988 Turkish Fertility and Health Survey, in the husband's questionnaire, several attitude questions were included on family planning and gender equality, and decision-making behaviour, to relate these attitudes and behaviour of the husbands with family planning behaviour. In this section, some of the preliminary findings of the attitude questions are presented for overall Turkey. No analytical relationships are attempted here between the attitudes and family planning behaviour. Such relationships will be studied through further analyses.

In the husband's questionnaire, it is reported by 89 percent that, in general, they approve a married couple using family planning methods, while 7.7 reported that they do not. In addition, 2.2 percent of the husbands said that it depends on the couple, while a minority of 0.7 percent did not have an opinion on this issue. Similarly, an important portion of the husbands stated that they would like to learn more about family planning themselves and would like their wives to do so (82 percent). However, as much as 72 percent of the husbands stated that family planning services available are insufficient. Although these figures make one think that the majority of husbands favour family planning, it should also be remembered that husband's refusal to use contraceptive methods ranked second among reasons for not using contraceptives as stated by the women. (See Table II. 6, 22)

TABLE III.4.1: Percentage Distribution of Husbands According to Approval of a Woman Working Outside the Home by Woman's Marital Status

	Unmarried	Married
Approves	49.4	38.2
Disapproves	37.1	43.6
Approves if necessary	13.5	18.2
TOTAL	**100.0**	**100.0**

When attitude questions on gender equality are examined, it is observed that women's participation in the labour force has not yet gained wide ac-

ceptance by husbands in Turkey. Only 49 percent stated that they approve of an "unmarried" woman working outside the home, while the proportion of husbands approving a woman being employed in a job decreases further to 38 percent when a woman is "married".

Furthermore, in the 1988 Survey husband's questionnaire, some statements about gender equality were read to the respondents and the interviewer asked the respondent to answer whether he "agrees", "disagrees" or "is indifferent to/or has no idea about" these statements. The percentage of husbands who agree, disagree or are indifferent to the statements is given in the below table.

TABLE III.4.2: Percentage Distribution of Husbands by Attitudes to Gender Equality

	Agrees	Indifferent/ No Opinion	Disagrees
-- As a rule, men are more intelligent than women	53.7	4.5	41.7
- At home, the husband has definite authority and the wife should always obey him	62.1	2.0	35.9
-- When a wife does not obey her husband, he has the right to beat her	44.9	3.1	51.9
-- When a woman disagrees with her husband, she should keep silent instead of arguing with him	64.0	2.8	33.2
-- It is perfectly alright for a married man to go out alone when he wants, but a woman can not	65.8	2.1	32.1
-- At home, there is some work that is the woman's and some that is the man's, and they should not be doing each other's	61.5	1.5	36.9

CHAPTER IV

FINDINGS FROM HOUSEHOLD QUESTIONNIARE

IV.1. HOUSEHOLD MEMBERS

IV.1.1 AGE STRUCTURE

In 6552 households interviewed, information was collected for 31601 household members.

Questions about age, birth date, sex, relation to the head of the house were directed to every household member. Questions on marital status were asked for those who are above 12 years of age. Also educational and work status questions were directed to those 7 years old and over. Table IV.1.1 is the sex and age distribution of household members.

The sex ratio is high, as expected, in age group 0-4 and low after age 50. The low level of sex ratio at ages 15-24 may be explained by the absence of males at home at those ages for educational purposes or military service, since institutional populations were not included in the household members list in the survey.

Age reporting in 1988 appears to be better than 1978 values. Whipple's index was calculated for 1988 data and compared with 1978 values below.

Whipples' index is lower at all ages ending with 0 or 5 than in the 1978 figures, except at age 20. It is increasing at older ages, but stays at a reasonable level before age 40. Better results in age reporting in 1988 survey may be due to increased level of education in the country in five years.

There is a sharp decline in the proportion of population after age 40, in both sexes. As can be followed on the age pyramid the Turkish population is still young. 40-49 cohort is the population born in Second World War years, that may be the cause of the belt at these ages on the pyramid. Low proportion of population at age 0-4 is the general characteristic of the age pyramid obtained from survey data.

IV.1.2 EDUCATION

The 18% of the population over school age had no schooling. This figure is 9.2% for males and 26.1% for females. If "had no schooling" and "primary not completed" categories are combined 33.89% of the population is considered illiterate. This figure is 24.87% for males and 42.38% for females. The proportion of the population who had secondary and higher education is l9.46%. This is 24.78% for males and l4.44% for females.

These findings reveal that there is still a big gap in the attitude of the community towards the education of males and females.

In Southern, Central and Northern Anatolia the proportion of those with secondary and higher education is very close to the proportion of the same group in Turkey (about 19%). This proportion is as high as 25% in the West and as low as 12% in the East. The difference is much more in Urban and Rural (30% in urban and 7.5% in rural).

IV.1.3 ECONOMIC ACTIVITIES

12038 household members out of 31601 are ever-worked some time. Proportion of working population in Western and Central Anatolia in total the working population is higher than the proportion of total population of these regions. On the contrary, the reverse is true for Eastern Anatolia, that

Figure IV.1.1: The age pyramid

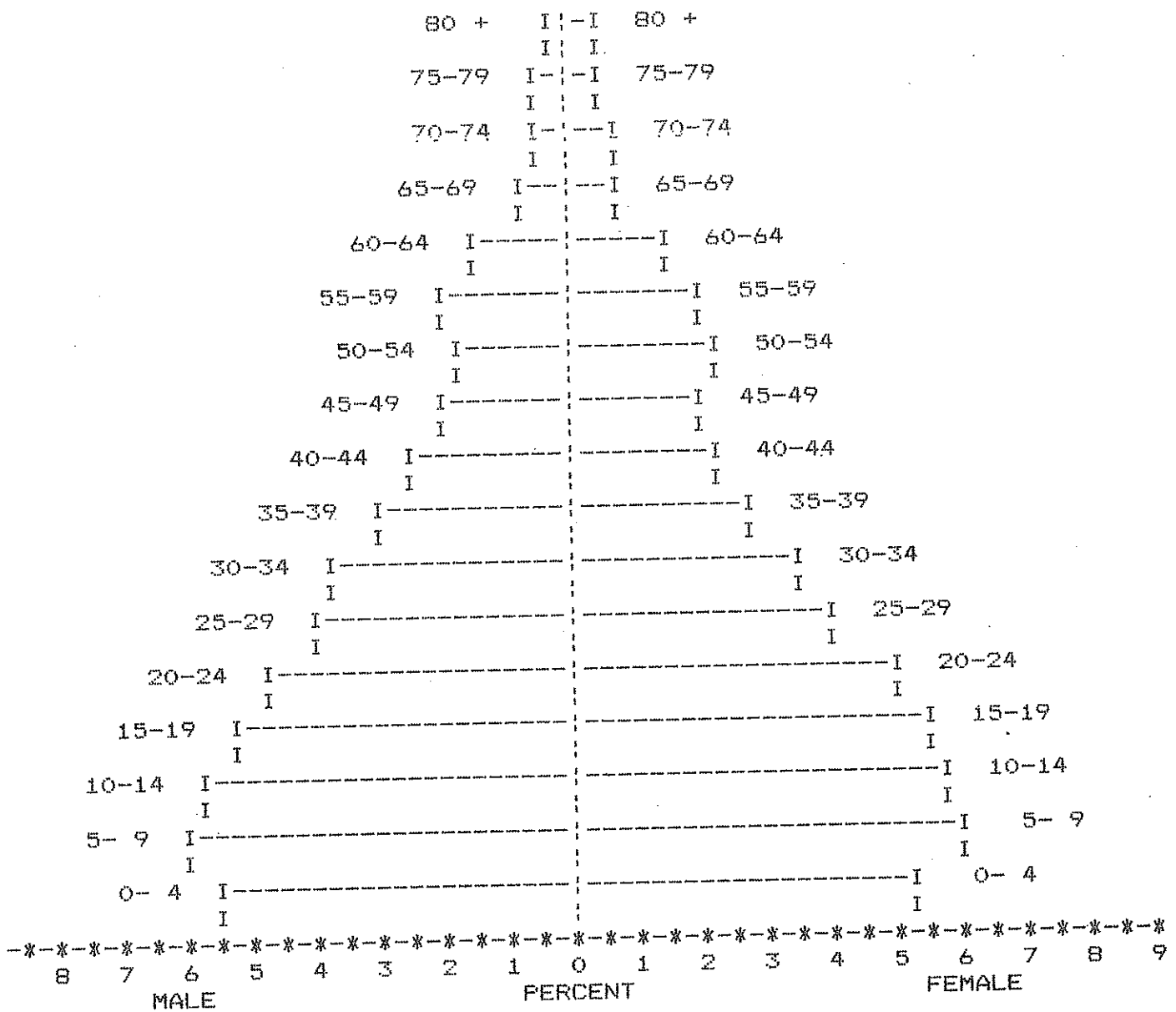


Table IV.1.1: Distribution of household members by 5 year age groups and sex.

	Males	Females	Sex Ratio
0 - 4	1736 11.0	1664 10.5	104
5 - 9	1901 12.0	1912 12.1	99
10-14	1840 11.7	1775 11.2	104
15-19	1642 10.4	1742 11.0	94
20-24	1475 9.3	1545 9.8	95
25-29	1298 8.2	1254 7.9	104
30-34	1149 7.3	1118 7.1	103
35-39	943 6.0	900 5.7	105
40-44	793 5.0	728 4.6	109
45-49	621 3.9	611 3.9	102
50-54	587 3.7	686 4.3	86
55-59	621 3.9	618 3.9	100
60-64	462 2.9	497 3.1	93
65 +	676 4.3	729 4.6	93
Unknown	43 0.3	35 0.2	123
TOTAL	**15787**	**15814**	**100**

is, the proportion of Eastern Anatolian working population is lower than the proportion of this region's population in Turkey.

In Turkey, 15.86% of the working household members work in state enterprises and 75.69% at private institutions. There is no differentiation among the regions.

The 4.32% of the working population is between age 7-14 and 7% is above 65 +. There is no differentiation among regions with respect to percentage of working population at different age groups.

Table IV.1.3: Distribution of household members according to educational status and sex

	Male	Female	Total
Primary or less	9262 73.98	11130 83.80	20392 79.04
Secondary higher	3102 24.78	1918 14.44	5020 19.46
Other + Ns	156 1.24	233 1.76	389 1.51
Total	**12520** **100.0**	**13281** **100.0**	**25801** **100.0**

Table IV.1.4: Distribution of household members according to educational status and sex

No Schooling or Primary not completed	3114 24.87	5629 42.38	8743 33.89
Other	9406 75.13	7652 57.62	17058 66.11
Total	12520 100.0	13281 100.0	25801 100.0

TABLE IV.1.2: Whipples' index for two surveys

AGES	5	10	15	20	25	30	35	40	45	50	55	60
1978	1.00	1.04	1.05	1.05	1.23	1.44	1.39	1.77	1.66	1.76	1.94	2.53
1988	0.99	1.02	0.94	1.09	1.05	1.07	1.07	1.23	1.18	1.50	1.71	1.85

Table IV.1.5: Distribution of household members according to educational status and region and type of settlement place.

	West	South	Central	North	East	Urban	Rural
Primary or less	6249	2863	4790	2157	4333	9510	10882
	73.2	80.7	79.2	81.6	86.1	68.9	90.7
Secondary higher	2161	636	1144	458	621	4116	904
	25.3	17.9	18.9	17.3	12.3	29.8	7.5
Other + Ns	122	49	113	28	77	171	218
	1.4	1.4	1.9	1.1	1.5	1.2	1.8
Total	8532	3548	6047	2643	5031	13797	12004
	33.1	13.8	23.4	10.2	19.5	53.5	46.5

Table IV.1.6: Working household population compared with total population

	Pop'n	Working Turkey
West	4393	10075
	36.49	31.88
South	1545	4484
	12.83	14.19
Central	3136	7351
	26.05	23.26
North	1283	3218
	10.66	10.18
East	1681	6473
	13.96	20.48
	12038	31601
	100.00	100.00

The 29.29% of the working population work on their own account, 41.23% work as employees and 19.41% as unpaid family workers. The proportion of self employed in West and Central Anatolia is around 25% and it increases to over 36% in Northern and Eastern Anatolia. The reverse is true when the employees are considered, that is, the proportion of employees is over 43% in Southern and Western Anatolia, while it is below 35% in Central, Northern and Eastern Anatolia. The distribution of self employed and employers in regions is parallel to the industrialization levels there.

Less than one fifth of the total population (18.19%) have social insurance of some type. The highest proportion with social insurance is in Western Anatolia (24.67%) and the lowest is in Eastern Anatolia (8.81%). The proportion in Central and North Anatolia is close to Turkey's average while it is 14.07% in South Anatolia.

Half of those who have social insurance are insured by SSK. Western Anatolia has the highest proportion insured by SSK while Eastern Anatolia has the lowest.

Those who are working but not insured, and all other household members who are not working were asked if they had any health insurance indirectly. The distribution of those household members in regions is given on Table IV.1.12.

The 48.26% of the total population have health insurance of some kind. The rate of being insured is very low in the East (33%). This rate is above 50% in the West, Central and North. Since indirect insurance is made through parents insurance, 1.18 persons were indirectly insured through one in the West, above 1.80 persons were insured through one in the South, Central, and North; and 2.74 persons were insured through one in the Eastern Anatolia.

Table IV.1.7: Distribution of working population in regions by sector.

	Not applicable	State	Private	Not Stated	Total
West	9	637	3260	487	4393
	0.20	14.50	74.21	11.09	
South	2	224	1207	112	1545
	0.13	14.50	78.12	7.25	
Central	5	538	2413	180	3136
	0.16	17.16	76.95	5.74	
North	3	215	945	120	1283
	0.23	16.76	73.66	9.35	
East	2	295	1287	97	1681
	0.12	17.55	76.56	5.77	
TOTAL	**21**	**1909**	**9112**	**996**	**12038**
	0.17	**15.86**	**75.69**	**8.27**	

Table IV.1.8: Distribution of working household members in regions by age groups.

	WEST	SOUTH	CENTRAL	NORTH	EAST	TOTAL
7-9	14	12	19	6	7	58
	0.32	0.78	0.61	0.47	0.42	0.48
10-14	139	78	136	29	80	462
	3.16	5.05	4.34	2.26	4.76	3.84
15-64	3972	1369	2747	1129	1459	10676
	90.42	88.61	87.60	88.00	86.79	88.69
65 +	268	86	234	119	135	842
	6.10	5.56	7.46	9.27	8.03	6.99
TOTAL	**4393**	**1545**	**3136**	**1283**	**1681**	**12038**

Table IV.1.9: Distribution of Working Household Members by Region and Status at Work.

	Self Employed	Paid	Unpaid Fam. Employer	Unpaid Fam. Work	Irregul.	N.S.	Total
West	1140	2225	251	497	220	60	4393
	25.95	50.65	5.71	11.31	5.01	1.37	
South	451	663	18	263	117	33	1545
	29.19	42.91	1.17	17.02	7.57	2.14	
Central	802	1099	42	961	182	50	3136
	25.57	35.04	1.34	30.64	5.80	1.59	
North	473	446	24	296	26	18	1283
	36.87	34.76	1.87	23.07	2.03	1.40	
East	660	530	13	319	134	25	1681
	39.26	31.53	0.77	18.98	7.97	1.49	
Urban	1516	3668	307	276	295	115	6177
	24.5	59.4	5.0	4.5	4.8	1.9	51.3
Rural	2010	1295	41	2060	384	71	5861
	34.3	22.1	7	35.1	6.6	1.2	48.7
TURKEY	**3526**	**4963**	**348**	**2336**	**679**	**186**	**12038**
	29.29	**41.23**	**2.89**	**19.41**	**5.64**	**1.55**	**100.0**

IV.1.4 FAMILY TYPE

The 67.1% of the total 6552 families interviewed are nuclear families. In the Western region the proportion of nuclear families is higher while in the North and East it is lower.

Average family size is calculated to be 4.82 from 1988 data. When the household members residing away are dropped the avearage household size becomes 4.69. The distribution of average size in regions is given in Table IV.1.13.

As expected the proportion of nuclear families in urban areas is higher than in rural areas. When compared with average for Turkey, rural areas have a high proportion of non-nuclear families.

A considerable increase has occurred in nuclear families in all regions since 1983 with a 5.5% increase for the whole of Turkey. but the greatest increase has occurred in West. The region with the highest proportion of nuclear families was the South in 1983, but in 1988 it is the West. The North is stil the region with the smallest proportion of nuclear families.

Table IV.1.10: Distribution of social insurance institutions in regions

	Emekli Sandığı	SSK	Bağ-kur	Other	N.S.	Total
West	427	1417	536	72	34	2486
	17.18	57.00	21.56	2.90	1.37	
South	190	282	129	8	22	631
	30.11	44.69	20.44	1.27	3.49	
Central	369	719	315	27	37	1467
	23.15	49.01	21.47	1.84	2.52	
North	122	301	160	2	10	595
	20.50	50.59	26.89	0.34	1.68	
East	166	239	143	-	22	570
	29.12	41.93	25.09	-	3.86	
Urban	1067	2139	856	85	58	4205
	25.4	50.9	20.4	2.0	1.4	
Rural	20.7	819	427	25	67	1545
	13.4	53.0	27.6	1.6	4.3	
TURKEY	**1274**	**2958**	**1283**	**109**	**125**	**5749**
	22.16	**51.45**	**22.32**	**1.90**	**2.17**	

Table IV.1.11: Distribution of health insurance in regions

	Emekli Sandigi	SSK	Bag-kur	Other	N.S.	Total
West	587	1982	221	63	84	2937
	19.99	67.48	7.52	2.15	2.86	
South	326	574	225	11	41	1177
	27.70	48.77	19.12	0.93	3.48	
Central	635	1430	419	34	159	2677
	23.72	53.42	15.65	1.27	5.94	
North	243	665	217	6	23	1154
	21.06	57.63	18.80	0.52	1.99	
East	452	780	289	10	28	1559
	28.99	50.03	18.54	0.64	1.80	
TURKEY	2243	5431	1371	124	335	9504
	23.60	57.14	14.43	1.30	3.52	

Table IV.1.12: Distribution of indirect health insurance in regions

	Directly Insured	Health Insur.	Total Pop'n with health insur.	TURKEY
West	2486 24.67	2937 29.15	5423 53.82	10075
South	631 14.07	1177 26.25	1808 40.32	4484
Central	1467 19.96	2677 36.42	4144 56.38	7351
North	595 18.49	1154 35.86	1749 54.35	3218
East	570 8.81	1559 24.08	2129 32.89	6473
TURKEY	5749 18.19	9504 30.07	15253 48.26	31601

Table IV.1.13: Distribution of household size in regions by surveys.

	West	South	Cent.	North	East	TURKEY
1983	4.31	5.45	5.26	4.96	7.02	5.32
1988	4.01	5.26	4.67	5.61	6.22	4.82

Table IV.1.14: Distribution of family types in regions

	WEST	SOUTH	CENTRAL	NORTH	EAST	TOTAL
NON-NUCLEAR	678 31.4 27.0	243 11.3 28.5	541 25.1 34.4	271 12.6 47.2	424 19.7 40.7	2157 32.9
NUCLEAR	1832 41.7 73.0	609 13.9 71.5	1033 23.5 65.6	303 6.9 52.8	618 14.1 59.3	4395 67.1
TOTAL	2510 38.3	852 13.0	1574 24.0	574 8.8	1042 15.9	6552 100.0

Table IV.1.15: Distribution of family types in type of residence.

	URBAN	RURAL	TOTAL
NON-NUCLEAR	1052 48.8 26.9	1105 51.2 41.9	2157 32.9
NUCLEAR	2861 65.1 73.1	1534 34.9 58.1	4395 67.1
	3913 59.7	2639 40.3	6552 100.0

Table IV.1.16: Percentage distribution of nuclear families by region, type of residence and surveys.

	West	South	Central	North	East	Urban	Rural	Total
1983	64.7	69.8	59.8	48.7	58.3	67.4	54.4	61.6
1988	73.0	71.5	65.6	52.8	59.3	73.1	58.1	67.1

Table IV.1.17: Regional percentage distribution of population in two surveys

	West	South	Central	North	East
1978	27	12	26	13	22
1988	32	14	23	10	20

IV.1.5 REGIONAL DISTRIBUTION

Table V.1.17 reveals that there was a population movement from Central, North and East Anatolia towards the West and South regions. The proportion of population in West and South increased by 7% in ten years while the total population of the remaining three regions decreased by the same amount in the same period.

Although not indicated by the available data, population movement from the East is generally towards the South, because many of the demographic indicators of the South display similarity with the East.

IV.2 HOUSEHOLD FACILITIES

In Turkey, 71.3 percent of the houses are used by their owners and 24.1 percent are rented. For the remaining 4.6 percent, people either live in guest houses or in their relatives' houses without paying money. As it can be seen from Table IV.2.1 renting a house is a way of living in urban areas. Only 5.3 percent of the houses in the rural areas are rented. Almost all the people living in rural areas reside in their own houses, whereas only 58 percent of the houses in the urban areas are inhabited by their owners. With respect to regions, the Western Region has the highest proportion of

rented houses and the Northern Region has the highest proportion of owned houses.

Table IV.2.2 shows the percentage distribution of the number of rooms in the houses by region and place of residence. Overall, approximately 40 percent of the houses have three rooms and 30 percent have four. Most of the houses in the North and Central Regions have four rooms, whereas in the other regions most of them have three. The mean number of rooms in Turkey is 3.4. In urban areas, about 3/4 of all houses have three or four rooms, while rural areas have houses with different numbers of rooms. The highest proportion of houses with five or more rooms is found in the Northern Region. The lowest proportion of houses with only one living room is also in this region.

Of all houses, more than 3/4 have a separate kitchen and there are significant differentiations for houses in having a separate kitchen (Table IV.2.3). In the East, 62.8 percent of the houses have a separate kitchen while in the West 88.2 percent have it. The Northern Region also have a high proportion of houses with a separate kitchen. Although in urban areas 90 percent of the houses have a separate kitchen, the same proportion is only 58.2 for the rural areas

68.3 percent of all houses in Turkey have a separate bathroom. Again, the West has the highest and the East has the lowest proportion of houses with separate bathrooms. The Northern Region also has a very high proportion. Approximately, twice as many houses in the urban areas have a separate bathrom compared to houses in the rural areas.

TABLE IV.2.1 : Percentage Distribution of Houses According to Ownership by Region and Place of Residence

	West	South	Central	North	East	Urban	Rural	Turkey
Rented	29.3	24.9	26.3	15.4	12.5	36.7	5.3	24.1
Owned	66.8	67.3	70.4	83.1	80.1	58.0	90.9	71.3
Other	3.9	7.9	3.3	1.6	7.4	5.2	3.8	4.6
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

TABLE IV.2.2 : Percentage Distribution of Houses According to Number of Rooms by Region and Place of Residence

	West	South	Central	North	East	Urban	Rural	Turkey
1	2.9	9.1	1.7	0.5	3.7	2.8	4.1	3.3
2	16.9	26.3	9.4	5.6	21.9	13.5	20.0	16.1
3	44.5	35.4	35.3	32.9	37.7	43.9	31.8	39.0
4	28.6	24.0	37.6	35.0	25.8	32.8	26.6	30.3
5+	7.1	5.2	15.9	26.0	11.0	7.0	17.5	11.2
Total	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

TABLE IV.2.3 : **Percentage of Houses With a Separate Kitchen and Separate Bathroom by Region and Place of Residence**

	West	South	Central	North	East	Urban	Rural	Turkey
Has separate kitchen	88.2	71.7	70.5	81.9	62.8	90.0	58.2	77.2
Has separate bathroom	78.0	62.0	64.9	77.7	49.8	83.7	45.4	68.3

Regarding the location of the toilet, there are significant residential differences. As Table IV.2.4 shows, 66.7 percent of the toilets in the East are outside the house. Even in the urban areas, 17.3 percent of the toilets are outside. The highest proportion of houses with a toilet inside it is in the Northern Region. There are also houses without any toilet (1.1 percent of all houses) and they constitute 5.2 percent of the houses in the Southern and 2.8 percent in the Eastern Region.

It is observed from Table IV.2.5 that among houses with a toilet inside or outside the house, approximately 80 percent have water and 68 percent have a place for hand washing. The toilet paper facility is very low in overall Turkey. About half of the houses in urban areas and in the West have toilet paper in toilets. People living in rural areas and in the Eastern Region seem not to be in the habit of using toilet paper. In terms of water facilities, only the Eastern Region and the rural areas seem to suffer, but, in general, the use of toilet paper is not very widespread.

In Turkey, 56 percent of the houses are connected to a sewerage system. In 37.9 percent, sewerage is collected in a closed pit, and 6.2 percent in an open pit (Table IV.2.6). In rural areas, people mostly use closed pits to collect sewage, whereas in urban areas, more than 80 percent of the houses are connected to the drainage system. The Northern Region has the highest proportion of houses with open pits,.the Eastern Region has the highest proportion of houses with closed pits and ,as expected, the Western Region has the highest proportion of houses with a sewerage system.

Table IV.2.7 shows that almost all the houses in Turkey are using electricity for lighting and there is no differentiation for regions and places of residence.

The most striking finding from the Table IV.2.8 is that there are significant differences between the West and the East and between the urban and the rural areas. Compared to other regions, the East, which is relatively the least developed region of Turkey, has the lowest percentages for almost all items, and the South is usually the next.

Overall, about 10 percent of the houses have a video and 34.4 percent of them have a telephone. If it is assumed that a household with a colour television has no black and white television and vice versa , regardless of the place of residence, more than 90 percent of all households have television. Refrigerator ownership is also very common except for the relatively low percentages for the Eastern and rural areas. Vacuum cleaner and oven are again mostly found in more developed areas. Use of a sewing machine, regardless of the residential characteristics, is around 60 percent. Ownership of living room furniture is common again in developed areas. With respect to dining room furniture and bedstead, the Northern Region has the highest percentage and the Southern Region the lowest. There is no differentiation among regions and places of residence in terms of having a stove for cooking; almost all residences, 90 percent or more, have one.

As seen in Table IV.2.9, approximately 90 percent of the houses in Turkey use stoves for heating.

TABLE IV.2.4 : Percentage Distribution of Houses According To Location of the Toilet by Region and Place of Residence

	West	South	Central	North	East	Urban	Rural	Turkey
Inside the house	75.3	49.5	70.2	81.4	30.5	82.5	36.9	64.1
Outside the house	24.6	45.4	29.8	18.6	66.7	17.3	60.5	34.7
None	0.1	5.2			2.8	0.2	2.6	1.1
TOTAL	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

TABLE IV.2.5 : Percentage of Houses with Toilets with Water, a Place for Hand Washing and Toilet Paper by Region and Place of Residence

	Water In the Toilet	Place for Hand Washing in The Toilet	Toilet Paper
West	86.7	79.2	50.3
South	75.4	64.3	29.8
Central	82.6	67.1	32.9
North	83.8	81.2	43.6
East	56.1	37.5	16.3
Urban	90.6	83.5	54.6
Rural	62.1	44.5	11.7
TURKEY	**79.3**	**68.0**	**37.6**

TABLE IV.2.6 : Percentage Distribution of Houses According to Where Sewage is Collected by Region and Place of Residence

	West	South	Central	North	East	Urban	Rural	Turkey
Open Pit	1.8	4.3	6.6	17.9	11.3	1.7	12.9	6.2
Closed Pit	22.8	44.4	42.2	47.4	57.8	15.7	71.6	37.9
Drainage System	75.4	51.3	51.2	34.7	30.9	82.5	15.5	56.0
TOTAL	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

TABLE IV.2.7 : Percentage Distribution of Houses According to the Source of Lighting by Region and Place of Residence

	West	South	Central	North	East	Urban	Rural	Turkey
Electricity	99.1	99.3	99.7	99.1	99.0	99.6	98.7	99.3
Other	0.9	0.7	0.2	0.9	1.0	0.3	1.3	0.7
TOTAL	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

TABLE IV.2.8 : Percentage of Household Effects by Region and Place of Residence

	West	South	Central	North	East	Urban	Rural	Turkey
Video	18.7	8.7	9.6	3.5	4.0	17.5	2.7	11.6
Telephone	40.7	25.3	35.6	37.6	23.5	46.6	16.5	34.4
Colour TV	55.5	37.0	38.6	35.9	27.2	57.7	20.7	42.8
B&W TV	45.2	52.5	55.1	50.7	50.5	45.0	57.0	49.8
Washing Machine	58.4	39.7	45.1	47.0	29.3	66.1	19.0	47.1
Refrigerator	88.5	81.1	81.5	84.5	69.7	91.9	68.7	82.5
Vacuum Cleaner	54.9	29.1	42.7	39.4	22.4	60.2	15.2	42.1
Oven	55.4	38.7	42.3	44.8	30.8	60.9	22.1	45.3
Sewing Machine	60.6	67.4	64.8	69.2	57.1	65.4	58.7	62.7
Living Room Furniture	63.8	34.7	47.7	54.7	28.0	66.4	24.9	49.6
Dining Room Furniture	64.6	42.9	51.1	72.8	46.6	68.4	38.6	56.4
Bedstead	86.9	58.4	83.3	92.5	69.7	87.6	69.0	80.1
Stove For Cooking	93.5	91.9	94.9	89.9	94.2	94.4	92.0	93.4

TABLE IV.2.9 : Percentage Distribution of Houses According to Source of Heating by Region and Place of Residence

	West	South	Central	North	East	Urban	Rural	Turkey
Central Heating	14.9	4.6	9.0	1.2	2.4	14.8	0.3	9.0
Stove	84.3	89.6	91.0	98.1	97.6	84.9	97.3	89.9
Other	0.8	5.9	0.1	0.7	-	0.3	2.4	1.2
TOTAL	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

Central heating system is common in urban areas and in the Western and Central regions but does not exceed 15 percent. Central heating is almost absent in rural areas.

Although 66.8 percent of the houses in Turkey use coal for heating, there are obvious residential differences (Table IV.2.10). In the Western and Central Regions and in urban areas, about 80 percent of the houses use coal and more than 10 percent use wood for heating. In the Eastern Region, in addition to coal and wood, dried dung has a wide use. The Northern Region has the highest percentage of houses using wood for heating; in the Southern Region, on the other hand, people use different kinds of fuel. Although coal and wood are used widely, gasoline and sawdust are also very commonly used in this region.

The percentage distribution of houses in terms of usual source of water shows that about 1/3 of the houses use running water, 1/4 of them use springs or fountains and the remaining 6 percent use sources such as well, tank, lake or river (Table IV.2.11). There are significant differences among different residences. Almost all houses in urban areas use running water whereas in rural areas, springs or fountains are mostly used. Houses in the West, South, and Central regions mostly have running water, but in the North and East, the majority of houses have springs or fountains as the usual source of water.

TABLE IV.2.10 Percentage Distribution of Houses According to Fuel Used for Heating by Region and Place of Residence

	West	South	Central	North	East	Urban	Rural	Turkey
Coal	79.4	36.5	80.2	36.4	57.5	79.5	47.9	66.8
Wood	12.4	40.3	16.1	60.6	20.8	10.1	40.9	22.5
Gasoline	4.5	10.2	0.3	1.4	0.3	5.3	0.4	3.3
Fuel-oil	2.9	2.6	1.0	0.9	0.1	2.9	0.1	1.8
Sawdust	0.2	5.3	0.3	0.5	0.7	1.0	0.9	1.0
Dried Dung	-	2.5	2.0	-	20.2	0.3	9.5	4.0
Other	0.6	2.7	0.2	0.2	0.4	1.0	0.2	0.7
TOTAL	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

TABLE IV.2.11 Percentage Distribution of Houses According to Water Source by Region and Place Of Residence

	West	South	Central	North	East	Urban	Rural	Turkey
Running Water	81.5	68.1	72.5	39.4	42.2	96.2	25.3	67.6
Spring-Fountain	13.7	17.7	25.0	56.7	50.0	2.7	61.8	26.5
Well-Tank	4.7	14.1	2.0	3.7	7.8	0.9	12.8	5.7
Lake-River	0.1	0.1	0.5	0.2		0.2	0.2	0.2
TOTAL	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**

CHAPTER V

PRELIMINARY EVALUATION OF DATA QUALITY OF THE 1988 FAMILY AND HEALTH SURVEY

V.1. Introduction

Turkey has a remarkable history of conducting regular population enquiries. Since 1935 censuses have been conducted every five years and nationally representative demographic sample surveys have been fielded quinquennially since 1963. The latest such survey is the 1988 Turkish Fertility and Health Survey conducted by the Institute of Population Studies of Hacettepe University, Ankara, Turkey, and assisted by the Contraceptive Prevalence Survey Program of the U.S. Centers for Disease Control.

The 1988 survey consists of three separate questionnaires: the household questionnaire, gathering information on dwelling and household characteristics, and a listing of resident members; a female questionnaire for ever-married women, containing a full birth and marriage histories and asking questions on knowledge and use of contraception, fertility preferences, access to family planning and on matters related to child health; and a male questionnaire, applied to a subsample of husbands of the women surveyed, questioning knowledge and use of contraception and fertility preferences. Basic demographic measures are made using the female questionnaire incorporating the proportion ever-married calculated from the household schedule.

The Problem

Preliminary tabulations of the female questionnaire revealed a total fertility rate of about 3.0 children per woman and an infant mortality rate of about 76 deaths per thousand births for the year preceding the survey. These rates represent a very rapid decline from those calculated from the 1983 Turkish Population and Health Survey, 4.2 and 110, respectively. It is the purpose of this investigation to assess whether the rates found from the 1988 survey are reasonable estimates of the current levels of fertility and infant and child mortality. First the representativity of the sample is checked, then nuptiality, fertility and infant and child mortality are scrutinized, using checks for internal consistency and reconstruction comparisons with the two preceding surveys.

V.2. Sampling and Representativity

Sampling Procedures

The details of the sampling and fieldwork are described in the methodology chapter. We will touch on here some highlights that may be important for determining the representativity of the sample.

A sample of approximately 5000 ever-married women was desired and multi-stage stratified cluster sampling techniques were used with an overall selection rate of 1 in 1500. The strata were determined by classification by region of the country (5) and size of settlement (9). Forty-three strata resulted. Size of settlement was determined by projecting the 1985 census results to 1988. Settlements were the primary sampling unit. The number of settlements to be

TABLE V.2.1. Probability of Selection and Distribution of the Sampling Frame

WESTERN

Settlement Size	No.	Number Selected	Prob.	Pop. (000s)	HH Size	Est No. HH (000s)	Second Stage Villages	Frame Pop.	Selected Households Number	Prob.	Ratio	Interviewed HH Number	Ratio	Interviewed Number	Wom. %	Pop. %	Wom. per HH
H.500	3463	7	0.00202	983	4.74	207	186	54	139	0.00670	1.01	139	1.01	102	5.5%	5.5%	0.73
500-999	1827	8	0.00438	1286	4.74	271	123	87	181	0.000667	1.00	180	1.01	149	8.0%	7.2%	0.83
1000-1999	771	7	0.00908	1043	4.74	220	81	106	146	0.000663	1.00	143	1.02	119	6.4%	5.9%	0.83
2000-9999	417	5	0.01199	1571	4.74	331	42	146	220	0.000663	1.00	211	1.04	172	9.3%	8.9%	0.82
10.000-24	65	4	0.06154	1034	4.31	240			160	0.000666	1.00	151	1.06	114	6.1%	5.8%	0.75
25.000-49	17	3	0.17647	629	4.31	146			98	0.000671	1.01	92	1.07	67	3.6%	3.5%	0.73
50.000-99	15	3	0.20000	1074	4.07	264			176	0.000666	1.00	155	1.14	121	6.5%	6.1%	0.78
100.000+	7	2	0.28571	1757	4.07	432			287	0.000664	1.00	263	1.09	204	11.0%	9.9%	0.78
Metropol.	2	2	1.00000	8363	4.07	2055			1369	0.000666	1.00	1177	1.16	810	43.6%	47.1%	0.69
														Rural	29.2%	27.5%	0.81

SOUTHERN

Settlement Size	No.	Number Selected	Prob.	Pop. (000s)	HH Size	Est. No. HH (000s)	Second Stage Villages	Frame Pop.	Selected Households Number	Prob.	Ratio	Inverviewed Number	HH Ratio	Interveewed Number	Wom. %	Pop. %	Wom. per HH
<500	1694	3	0.00177	494	6.27	79	200	58	52	0.00066	0.99	52	0.99	53	7.5%	6.6%	1.02
500-999	1111	4	0.00360	804	6.27	128	146	106	84	0.000655	0.98	84	0.98	74	10.5%	10.8%	0.88
1000-1999	615	4	0.00650	851	6.27	136	60	85	90	0.000663	1.00	90	1.00	75	10.7%	11.4%	0.83
2000-9999	310	3	0.00968	1109	6.27	177	19	54	118	0.000667	1.00	107	1.10	94	13.4%	14.9%	0.88
10.000-24	32	2	0.6250	492	4.31	114			76	0.000665	1.00	74	1.03	63	8.9%	6.6%	0.85
25.000-49	12	2	0.16667	407	4.31	94			63	0.000667	1.00	55	1.15	36	5.1%	5.5%	0.65
50.000-99	7	1	0.14286	426	4.97	86			57	0.000665	1.00	57	1.00	50	7.1%	5.7%	0.88
100.000+	8	2	0.25000	1946	4.97	392			261	0.000666	1.00	234	1.12	193	27.4%	26.2%	0.82
Metropol.	1	1	1.00000	909	4.97	183			122	0.000667	1.00	100	1.22	66	9.4%	12.2%	0.66
														Rural	42.0%	43.8%	0.89

CENTRAL

Settlement Size	Number No.	Selected	Prob.	Pop. (000s)	HH Size	Est. No. HH (000s)	Second Stage Villages	Frame Pop.	Selected Number	Households Prob.	Ratio	Interviewed Number	HH Ratio	Interviewed Number	Wom. %	Pop. %	Wom. per HH
<500	5442	6	0.00110	1416	6.06	234	324	83	157	0.000671	1.01	152	1.04	109	8.7%	10.8%	0.72
500-999	2298	6	0.00261	1593	6.06	263	139	98	174	0.000661	0.99	174	0.99	137	10.9%	12.1%	0.79
1000-1999	847	5	0.00590	1144	6.06	189	43	56	125	0.000662	0.99	122	1.02	111	8.8%	8.7%	0.91
2000-9999	569	4	0.00703	2041	6.06	337	24	79	224	0.000665	1.00	224	1.00	188	15.0%	15.5%	0.84
10.000-24	54	3	0.05556	830	4.59	181			121	0.000669	1.00	110	1.10	93	7.4%	6.3%	0.85
25.000-49	20	2	0.10000	703	4.59	181			102	0.000665	1.00	100	1.02	83	6.6%	5.4%	0.83
50.000-99	14	2	0.14286	953	4.58	153			139	0.000668	1.00	135	1.03	111	8.8%	7.3%	0.82
100.000+	7	2	0.28571	1947	4.58	208			284	0.000668	1.00	252	1.13	204	16.3%	14.8%	0.81
Metropol.	1	1	1.00000	2508	4.58	548			365	0.000666	100	304	1.20	219	17.5%	19.1%	0.72
														Rural	43.4%	47.2%	0.81

NORTHERN

Settlement Size	Number No.	Selected	Prob.	Pop. (000s)	HH Size	Est. No. HH (000s)	Second Stage Villages	Frame Pop.	Selected Number	Households Prob.	Ratio	Interviewed Number	HH Ratio	Interviewed Number	Wom. %	Pop. %	Wom.per HH
<500	2767	3	0.00108	775	7.15	108	140	41	72	0.000664	1.00	72	1.00	67	11.6%	13.4%	0.93
500-999	1577	3	0.00190	1123	7.15	157	69	49	105	0.000668	1.00	105	1.00	125	21.7%	19.4%	1.19
1000-1999	825	3	0.00364	1122	7.15	157	37	52	105	0.000669	1.00	105	1.00	112	19.4%	19.3%	1.07
2000-9999	242	3	0.01240	906	7.15	127	11	42	85	0.000670	1.01	85	1.01	90	15.6%	15.6%	1.06
10.000-24	39	2	0.05128	591	5.14	115			76	0.000660	0.99	64	1.18	59	10.2%	10.2%	0.92
25.000-49	7	1	0.14286	241	5.14	47			31	0.000661	0.99	28	1.10	26	4.5%	4.2%	0.93
50.000-99	6	1	0.16667	382	4.96	77			51	0.000662	0.99	41	1.24	35	6.1%	6.6%	0.85
100.000+	4	1	0.25000	660	4.96	133			89	0.000668	1.00	74	1.21	62	10.8%	11.4%	0.84
Metropol.	0	0	—	0	—	—			0	—	—	0	—	0	0.0%	0.0%	—
														Rural	68.4%	67.7%	1.07

EASTERN

Settlement Size	No.	Number Selected	Number Prob.	Pop. (000s)	HH Size	Est. No. HH (000s)	Second Stage Villages	Frame Pop.	Selected Households Number	Prob.	Ratio	Interviewed Number	HH Ratio	Wom. Number	Pop. %	Wom. per HH %	HH
<500	6841	6	0.00088	1796	7.64	235	175	47	158	0.000672	1.01	158	1.01	124	14.4%	16.1%	0.78
500-999	3049	6	0.00197	2169	7.64	284	102	73	189	0.000665	1.00	179	1.06	164	19.0%	19.5%	0.92
1000-1999	1156	6	0.00519	1542	7.64	202	49	65	135	0.000668	1.00	135	1.00	108	12.5%	13.8%	0.80
2000-9999	378	5	0.01323	1403	7.64	184	19	69	122	0.000664	1.00	121	1.01	103	11.9%	12.6%	0.85
10.000-24	53	3	0.05660	778	6.39	122			81	0.000665	0.99	79	1.02	65	7.5%	7.0%	0.82
25.000-49	21	2	0.09524	716	6.39	112			74	0.000660	1.00	74	0.99	53	6.1%	6.4%	0.72
50.000-99	11	2	0.18182	696	5.85	119			79	0.000664	1.00	75	1.05	66	7.6%	6.2%	0.88
100.000+	9	2	0.22222	2039	5.85	349			232	0.000665	1.00	220	1.05	181	20.9%	18.3%	0.82
Metropol.	0	0	—	0	—	—			0	—	—	0	—	0	0.0%	0.0%	—
														Rural	57.8%	62.0%	0.84

selected per strata was determined somewhat arbitrarily but following generally the number of settlements in the strata. The four metropolitan areas were self-selected.The urban areas (those with over 10,000 population) were selected first. For the rural areas, a new second frame was made of those rural settlements that fell within the administrative unit (district or province) of the selected urban areas. Then the previously determined number of settlements were selected randomly from this second frame. This was done to reduce costs of fieldwork.

For second-stage selection in the urban areas, clusters of dwellings (in reality compact segments) were selected from listings of dwellings from TEK, Turkey's electricity board by selecting the starting dwelling of the cluster. Over 99% of urban households have electricity and are included on these listings. In rural areas, the starting dwellings of the clusters of dwellings were randomly selected from lists of household heads available at the village level. In both the urban and rural areas, the size of the clusters and the number of clusters was controlled to produce a self-weighting sample.

Evaluation of the Sample

There are two concerns with the sample: Did the procedure used result in a self-weighting sample? and does the sample adequately represent the population? To answer the first concern, the sample probability was calculated for each of the 43 strata. Table V.2.1 shows that indeed the sample as selected is self-weighting. However, because of non-response of both households and eligible respondents, the proportion of women interviewed in each strata differs substantially, being especially low in the metropolitan and other large urban areas. Weights varying from .98 to 1.24 should be applied to the data set to correct for the non-response.

To investigate the representativity of the sample, three checks were made: a comparison of the regional distribution of the household population with the population projected from the census, a comparison for each region of the distribution of eligible respondents by size of place with the projection, and a comparison of educational attainment of women aged 15 to 49 with that of the census for five-year cohorts. The first comparison is shown in Table V.2.2. The differences are minimal. Checking the urban-rural distribution, we find that the household population of the sample is 52.8% urban versus 54.4% for the 1988 projected population, indicating that there may be a very small overall rural bias to the sample, but not enough to affect the overall results of the survey.

Table V.2.1 shows the comparisons of the distribution of the eligible respondents by size of place within each region. Again the differences are generally small. In the Central and Eastern regions there does appear to be a somewhat lower proportion rural in the sample than in the projected population, but the differences are

TABLE V.2.2. Comparison of the Regional Distribution of the Sample Household Population with the 1988 Projected Population

Region	Household Population	Projected Population
West	31.9%	32.1%
South	14.2%	13.5%
Central	23.3%	23.8%
North	10.2%	10.5%
East	20.5%	20.2%

TABLE V.2.3. Comparison of Educational Attainment of Women Between the 1985 Census and the Household Survey by Five-Year Cohorts of Women

1985	Illiterate		Literate & Primary		More than Primary	
Census	Surv.	Cen.	Surv.	Cen.	Surv.	Cen.
	Percent Distributions					
20-24	17.4	16.0	64.1	62.3	18.5	21.6
25-29	21.3	20.1	61.1	61.7	17.6	18.0
30-34	30.0	26.7	55.7	59.3	14.3	13.9
35-39	36.9	34.6	51.8	54.6	11.5	10.7
40-44	43.7	43.8	46.1	48.4	10.2	7.7
45-49	45.6	51.9	48.4	42.6	6.1	5.4
Differences in Distributions (Survey - Census)						
20-24		+1.4		+1.8		-3.1
25-29		+1.2		-0.6		-0.4
30-34		+3.3		-3.6		+0.6
35-39		+2.3		-2.8		+0.8
40-44		-0.1		-2.3		+2.5
45-49		-6.3		+5.8		-0.7

under five percent. Indeed inspection of the location of the primary sampling units of the Eastern region appears to indicate that they are somewhat concentrated in the Western and Northern areas of the region, perhaps under-representing to a degree the most rural and least developed areas.

The third check is to compare a characteristic that is associated with level of development between the survey and the census. We chose to use women's education because it is unlikely to change for a cohort of women who have reached age twenty or higher. This check is made more important in light of the frame of rural areas, since they may be biased towards those that are close to the larger urban areas. For this comparison we use the age at the time of the census for the women in the survey to obtain the same cohort. Table V.2.3 shows the results of this comparison. For cohorts 20-24 through 35-39, the sample has slightly more illiterate women than the census, discounting a bias towards more developed areas. Only for the oldest two cohorts does education appear to be higher in the sample than in the census, especially for women 45-49. This reversal is most likely due to relatively more less educated women being declared as fifty years of age in the sample than in the census.This is a typical age misreporting pattern for fertility surveys, and the effect here is not too great.

V.3. Nuptiality

Because only ever-married women were interviewed with the female questionnaire, it is necessary to use the proportion ever married calculated from the household questionnaire when estimating the total fertility rate. The 1988 survey

TABLE V.3.1. Comparison in Median Age at Marriage for Cohorts of Women from 1978, 1983 and 1988 Surveys

Cohort (Age in 1988)	Source		
	1978	1983	1988
20-24	--	--	20.0
25-29	--	19.9	18.6
30-34	18.8	18.8	18.3
35-39	18.3	18.5	17.6
40-44	17.8	17.8	17.5
45-49	17.2	18.0	17.2
50-54	17.6	17.9	--
55-59	17.9	--	--

indicates a recent large decline in the percentage ever married compared with previous surveys, from 74% of women 15 to 49 in 1978 and 71.6 in 1983 to 62% in 1988. Because the proportion ever married rapidly increases with age for the younger women, it is not possible to directly compare this information from the household survey with other sources. However, combining information from the marriage history section of the female questionnaire, we can estimate the proportions ever married for cohorts into the past. In Table V.3.1. we compare the age at which various cohorts reached fifty percent ever married (median age at marriage) indicated by the 1978, 1983 and 1988 surveys, also shown graphically in Figure V.3.1. It is interesting to note the 1988 survey indicates somewhat lower median ages at marriage (i.e. higher proportions ever married at given ages) for the cohorts aged 25-29 to 40-44 in 1988 even though overall there is a drop in the proportion ever married. This drop is due to the large changes in the proportions ever married for the cohorts aged 15-19 and 20-24. The comparison with the previous surveys therefore gives no evidence that these proportions and the overall proportion ever married have been understated.

Figure V.3.1

Median Age at Marriage for Cohorts as Reported in 1978, 1983 and 1988 Surveys

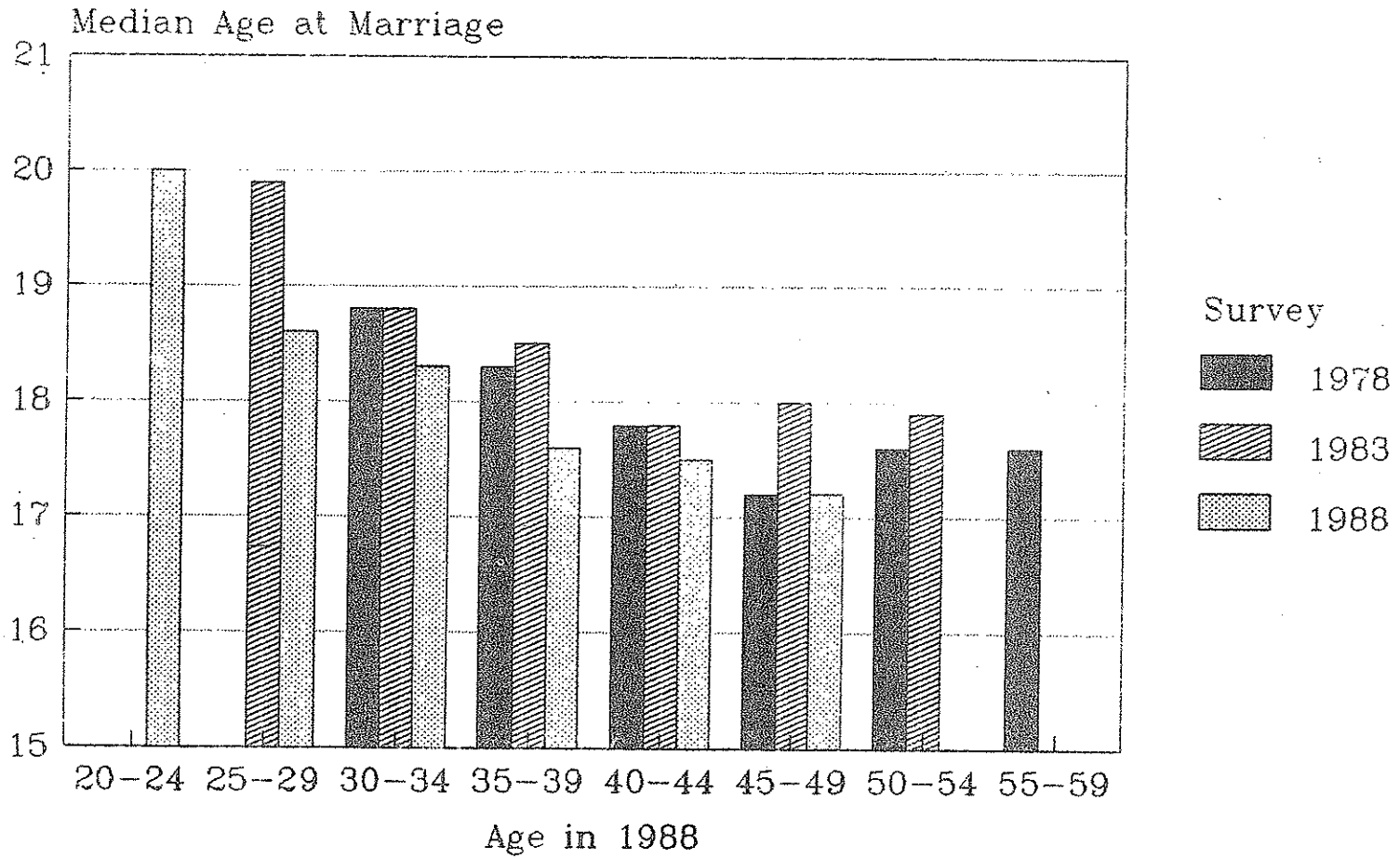


Figure V.4.1

Type of Birthdate Reporting By Time Since Birth

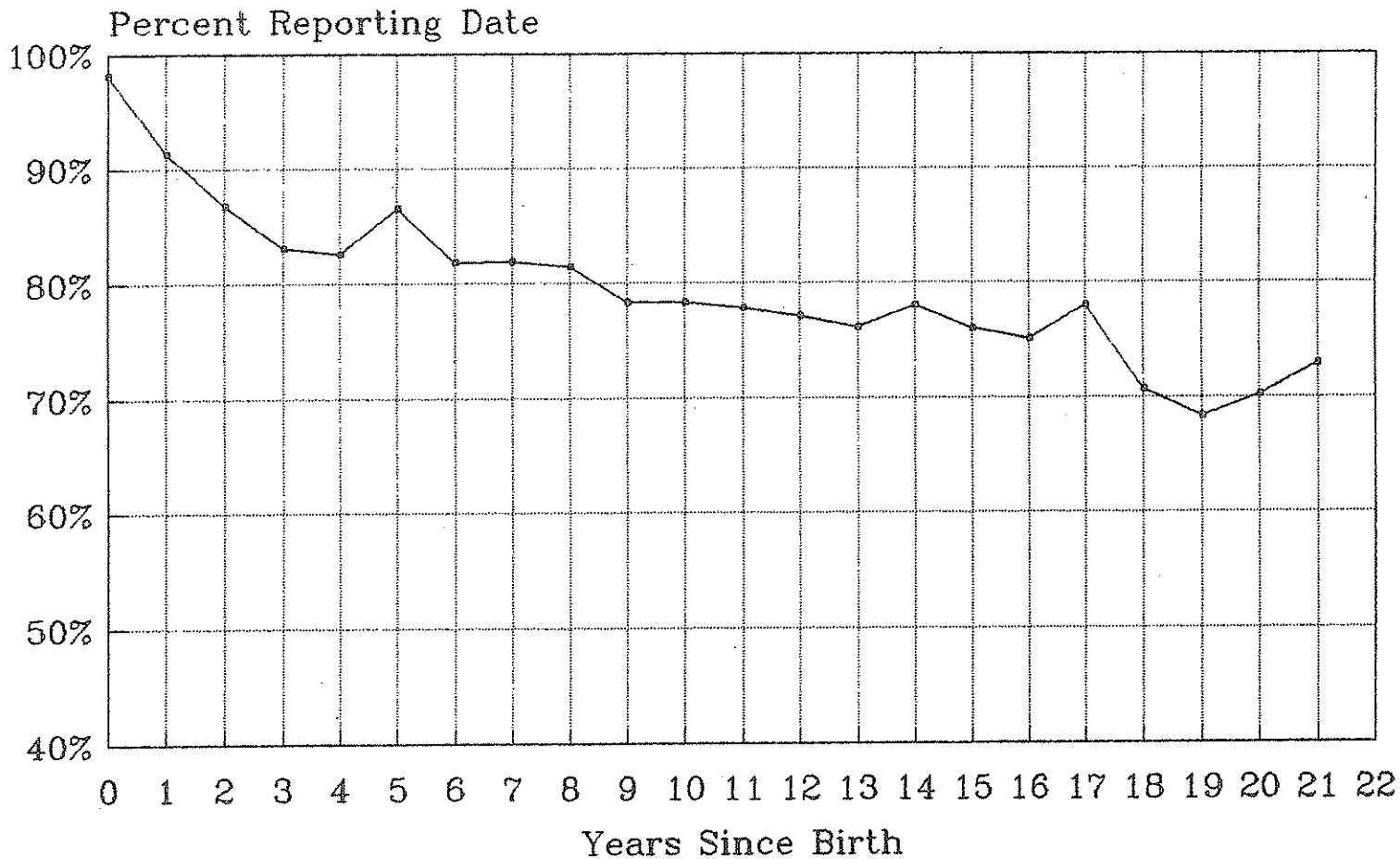


Figure V.4.2

Type of Birthdate Reporting By Place of Residence

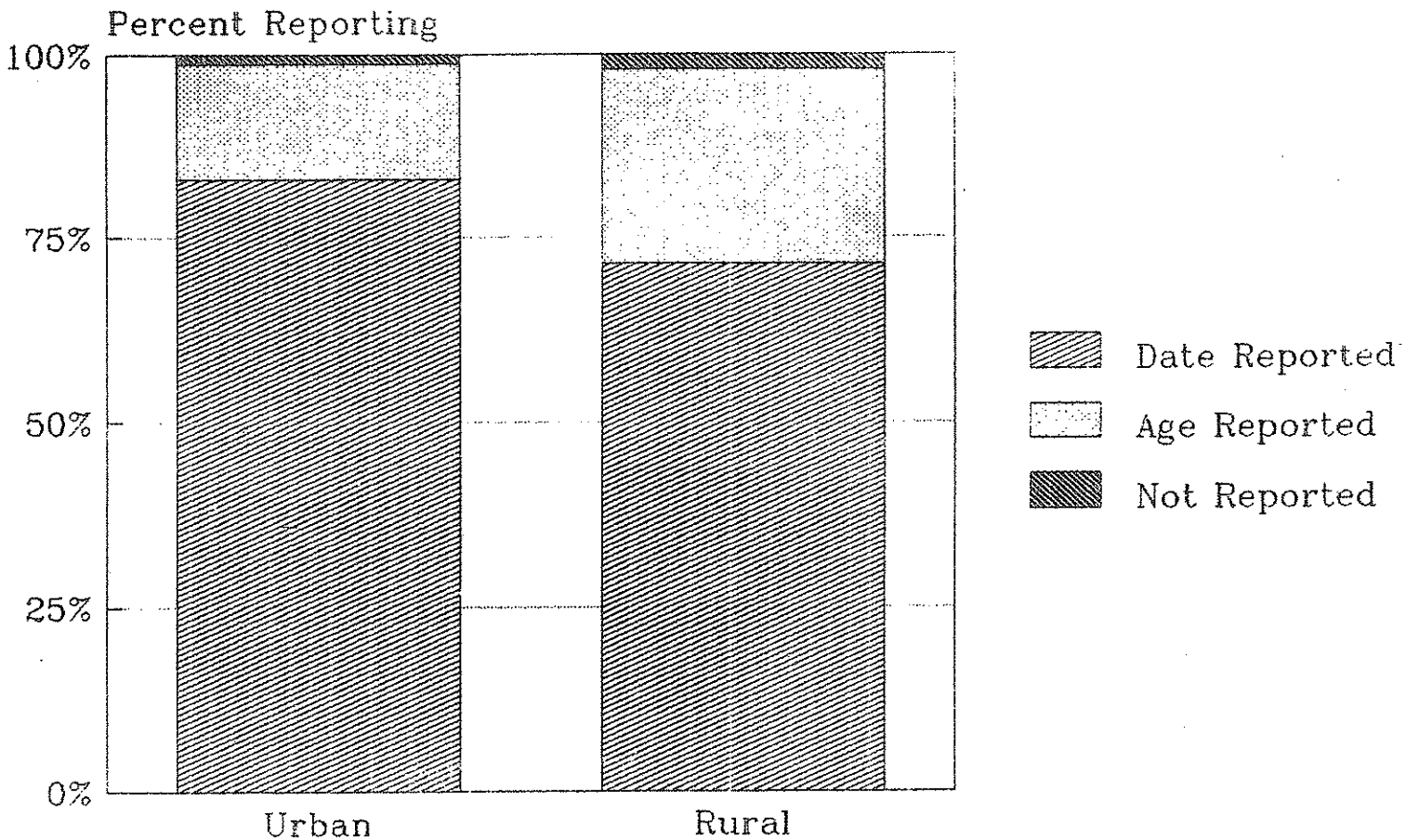


Figure V.4.3
Type of Birthdate Reporting by Region

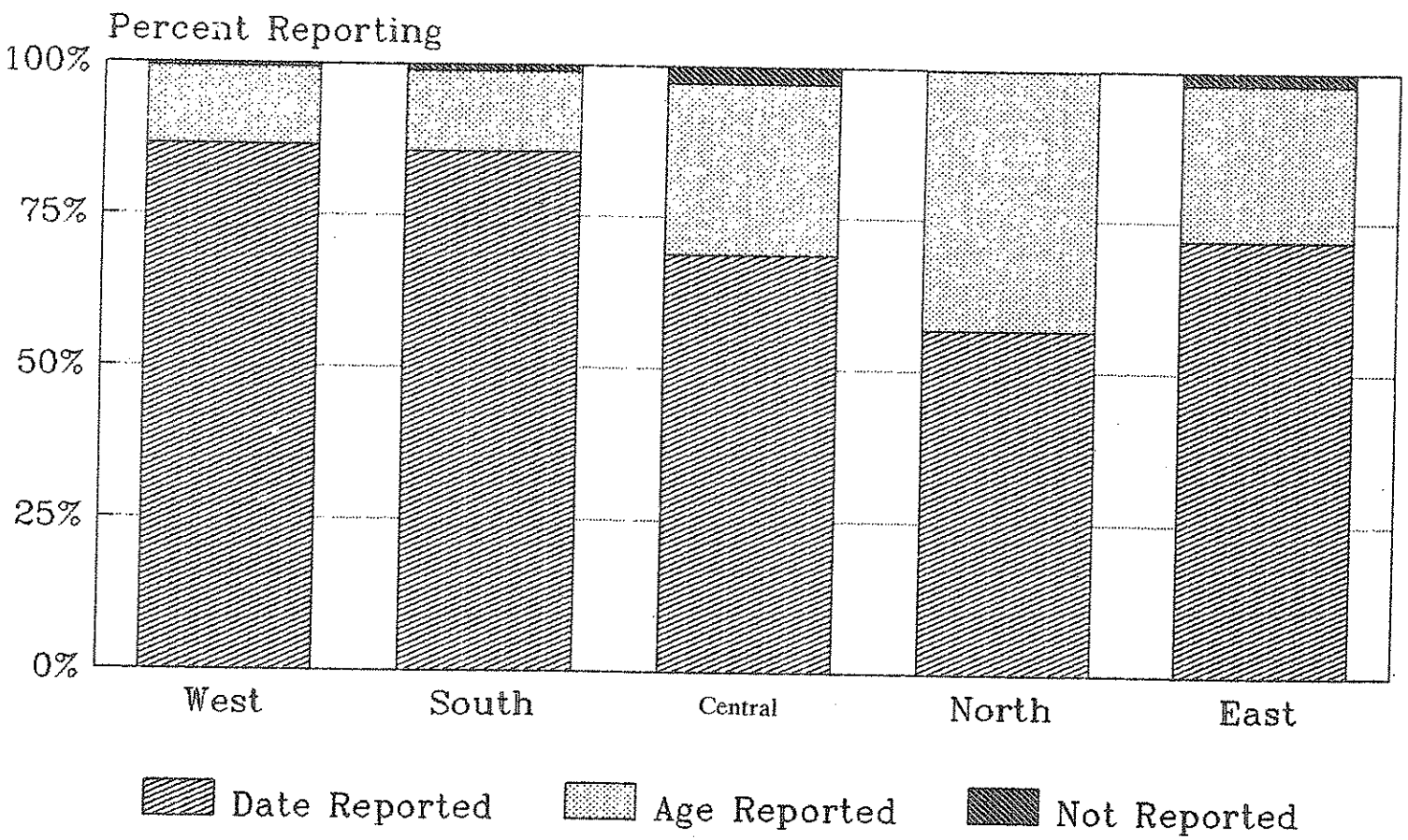
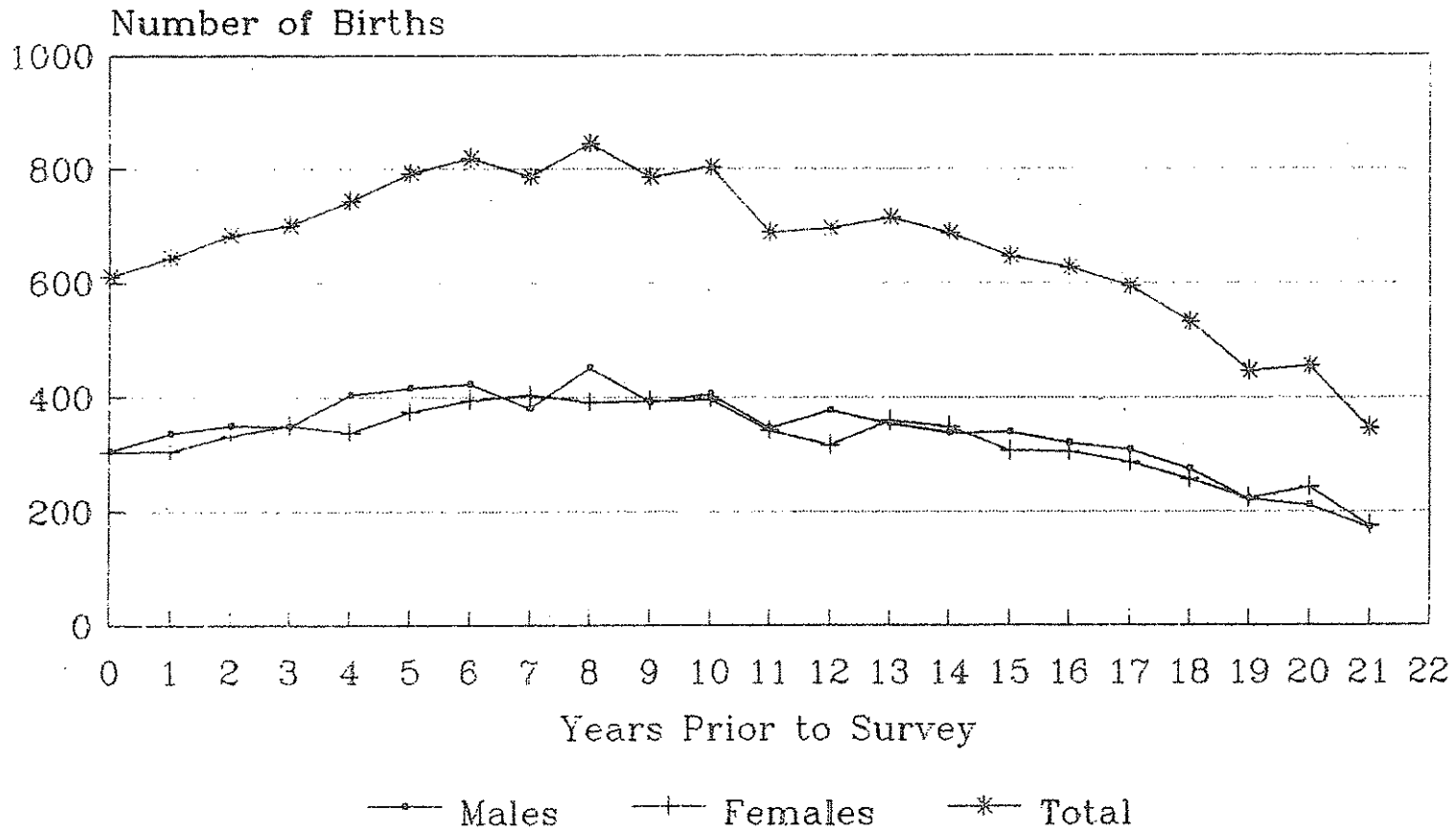


Figure V.4.4
Births According to Sex by Time Since Birth, Birth History, 1988



V.4. Fertility

Basic Data

To assess the fertility rates produced by the survey, we begin by first looking at the basic data of the rates, the information on births according to birthdate and on the denominators, the estimated number of women. Not all the information collected on the dates of birth were reported in the form of month and year birthdates, the preferred and more exact method of reporting. About a fifth (21.1%) were reported in the form of age (living children). For some children (1.6%) neither birthdate nor age was reported. There was no relationship between the reporting of birthdate by sex, but there was a rapid decline in date reporting with increasing time since the birth (Figure V.4.1). There are fairly large urban-rural and regional differences in form of reporting, the East and Central regions being the more likely to report age (Figures V.4.2. and V.4.3).

The number of births according to the number of years preceding the survey appear graphically in figures five, six and seven. Figure V.4.4. shows the total and by sex. We notice a sharp decline in the number of births as time gets closer to the survey starting with the births six years before. Small peaks appear at 8, 10 and 20 years, probably due to age heaping. Because the questionnaire includes additional questions for children born within five years of the survey, there is the possiblity that some births have been displaced from this period into that beginning six years before the survey. That the decline in the total number of births begins at six years is consistent with this hypothesis, but examining the numbers according to sex does not indicate a large effect of this kind.

The decline in births as time approaches the survey is evident in both urban and rural areas, as shown in Figure V.4.5. A rather sharp peak occurs at five years of age in the urban areas and six years in the rural areas. This difference may be due to differences in form of reporting birthdate in the two areas coupled with the transferrence of some children out of the eligible range for the under-five section of the questionnaire.

The number of births over time by region is shown in Figures V.4.6a and V.4.6b. Because of the smaller size of the sample in the regions, there is more random fluctuation than for the nation as a whole. However, the Central region shows very sharp peaks at four, six and eight years prior to the survey. Eight is understandable since the birth would have been heaped on 1980, but the peaks at four and six years are puzzling. All regions except the South indicate a falling number of births from six years to zero years prior to the survey.

The sex ratios of birth by date of birth are shown in Figure V.4.7. There are strong departures from the expected 104.0 to 105.0. These are probably due to randomness and age heaping. By five year age groups the sex ratios are 107.0, 105.5, 103.3, and 106.1 for periods 0-4, 5-9, 10-14 and 15-19 years prior to the survey, which indicates some omission of girls. However, correcting the sex ratio for the 0-4 group to 104.0 by adding about 46 girls would change the total number of births in this period by less than three percent.

Comparison of Fertility Rates

If a fertility survey contains a birth history, a revealing test of the quality of the fertility estimates is to compare them with the estimates from previous surveys for the same cohorts at the same time. We used cohort-period fertility rates to compare the surveys in order to view changes along the same cohort of women measured in the three surveys. Tables V.4.1a and V.4.1b shows the rates from the three surveys as well as the rates cumulated in the same period. From this table and Figure V.4.8, it appears that the rates for the 1988 survey fit those for the 1983 survey well for the rates centered on 1980. For 1975, the rates for the current survey lie between those of the 1978 and 1983 surveys. All three surveys seem to have a characteristic shape to the cumulated rates over time, and Figure V.4.9. confirms this: an exaggerated decline appears in the most recent period with perhaps too low estimates for the period 20-24 years prior to the date of the survey. Note how the curves cross each other in the most recent period.

TABLE V.4.1a Comparison of Cohort-Period Fertility Rates from the 1978, 1983 and 1988Surveys

Age at Period		Calendar Years						
		54-58	59-63	64-68	69-73	74-78	79-83	84-88
45-49	a	-	-	-	-	26	--	--
	b	-	-	-	-	-	23	-
	c	-	-	-	-	-	-	16
40-44	a	-	-	-	103	70	-	-
	b					74	52	-
	c	-	-	-	-	-	57	33
35-39	a			202	172	134	-	-
	b				177	135	119	-
	c					123	103	78
30-34	a	-	297	268	246	200	-	-
	b	-	-	248	246	215	197	--
	c	-	-	-	233	198	170	133
25-29	a	354	337	329	293	249	--	--
	b	--	326	304	292	286	247	--
	c	-- --	-	282	284	266	246	186
20-24	a	259	295	264	248	204	--	--
	b	232	261	251	244	226	176	--
	c	--	191	219	221	212	195	138
15-19	a	81	72	54	60	29	--	--
	b	55	68	52	51	42	23	--
	c	43	46	47	46	46	36	18

a 1978 Survey
b 1983 Survey
c 1988 Survey

We believe that the excessive decline in the most recent periods is due to mainly omission and some misreporting of age of children born 0 to 4 years ago. The omission probably occurs more the younger the child is, and the shifting to ages outside the period more among children 3 and 4 years old. Omission of very young children is characteristic of many demographic enquiries and has been documented in the censuses of Turkey. The shifting of age to ages five and over may occur because of digit preference for the number 5, and in the current survey because a special set of questions is asked for children under age five.The Demographic and Health Surveys have found similar evidence in other countries of age shifting with similarly directed questions.

Comparison by means of the TARGET model

According to the current survey, there have been large changes in each of the principle factors that affect fertility. The proportion ever married among women 15 to 49 declined by almost ten percent in five years. Contraceptive prevalence rose from 62% of exposed women to 77 percent, with modern contraception accounting for the majority of the increase. The number of induced abortions per thousand pregnancies just about doubled. The Population Council's TARGET model can be employed to test the consistency of changes in marriage, contraception and abortion data with changes in fertility. The application of the model with 1983 and 1988 data are shown in Table V.4.2. The results from

TABLE V.4.1b Comparison of Cumulated Cohort-Period Fertility Rates from the 1978, 1983 and 1988 Surveys

Age at Period		Calendar Years						
		54-58	59-63	64-68	69-73	74-78	79-83	84-88
45-49	a	-	-	-	-	4.6	-	-
	b	-	-	-	-	-	4.2	-
	c	-	-	-	-	-	-	3.0
40-44	a	-	-	-	5.6	4.4	--	-
	b	-	-	-	-	4.9	4.1	--
	c	-	-	-	-	-	4.0	2.9
35-39	a	-	-	5.6	5.1	4.1	--	--
	b	-	-	-	5.1	4.5	3.8	--
	c	-	-	-	-	4.2	3.8	2.8
30-34	a	--	5.0	4.6	4.2	3.4	--	-
	b	--	--	4.3	4.2	3.8	3.2	--
	c	-	-	-	3.9	3.6	3.2	2.4
25-29	a	3.5	3.5	3.2	3.0	2.4	--	--
	b	--	3.3	3.0	2.9	2.8	2.2	--
	c	-	-	2.8	2.8	2.6	2.4	1.7
20-24	a	1.7	1.8	1.6	1.6	1.2	--	--
	b	1.4	1.6	1.5	1.5	1.3	1.0	--
	c	--	1.2	1.3	1.3	1.3	1.2	0.8
15-19	a	0.4	0.4	0.3	0.3	0.2	--	--
	b	0.3	0.3	0.3	0.3	0.2	0.1	--
	c	0.2	0.2	0.2	0.2	0.2	0.2	0.1

a 1978 Survey
b 1983 Survey
c 1988 Survey

applying the model are consistent with the observed decline between 1983 and 1988.If the 1983 total fertility rate were too low then the 1988 rate would be also, although the rate of decline would be consistent with the changes in the principal factors affecting fertility. (Note that in this application, we have not taken into account changes in the length of breastfeeding, which is assumed not to have changed. The data on length of breastfeeding were not available to us at the time of making this evaluation.

Comparisons of infant and child mortality were made for the 1973, 1978 and 1988 surveys. The infant mortality rates over time from these surveys are shown in Figure V.5.1. and the under-five mortality rates from the 1978 and 1988 surveys are shown in Figure V.5.2. Because of a defect in the data set available to us at the time of this evaluation, only mortality above the neonatal period could be calculated. The available rates from the 1973 to 1988 surveys are shown in Table V.5.1. Except for the infant mortality rate for 1968-72 from the 1973 survey and the child mortality rate (4q1) for 1973-78 from the 1978 survey, the data are remarkably consistent. We feel that there is probably very little error in the estimation of the levels of mortality from the current survey and also the preceding surveys.

TABLE V.4.2. Use of Target Model to Check Fertility Decline

Basic Data	1983	1988
Total Fertilty Rate	4.2	3.0
Prop Married	0.688	0.599
Abortions per preg	0.121	0.236
Tot Abortion Rate	0.578	0.927

% using cc among exposed women			Effectiveness
Pill	0.090	0.076	0.90
IUD	0.089	0.171	0.95
Steril.	0.013	0.022	1.00
Other	0.423	0.501	0.70
Total	0.615	0.770	

% using among currently married		
	0.506	0.633

Model Parameters	1983	1988
Cm	0.688	0.599
e	0.772	0.784
Cc	0.579	0.464
Ca	0.979	0.972

Result	
Projected TFR	2.9
Actual TFR	3.0
Difference	-0.1

Figure V.4.5

Births for Urban and Rural Areas by Years Before Survey, Birth History, 1988

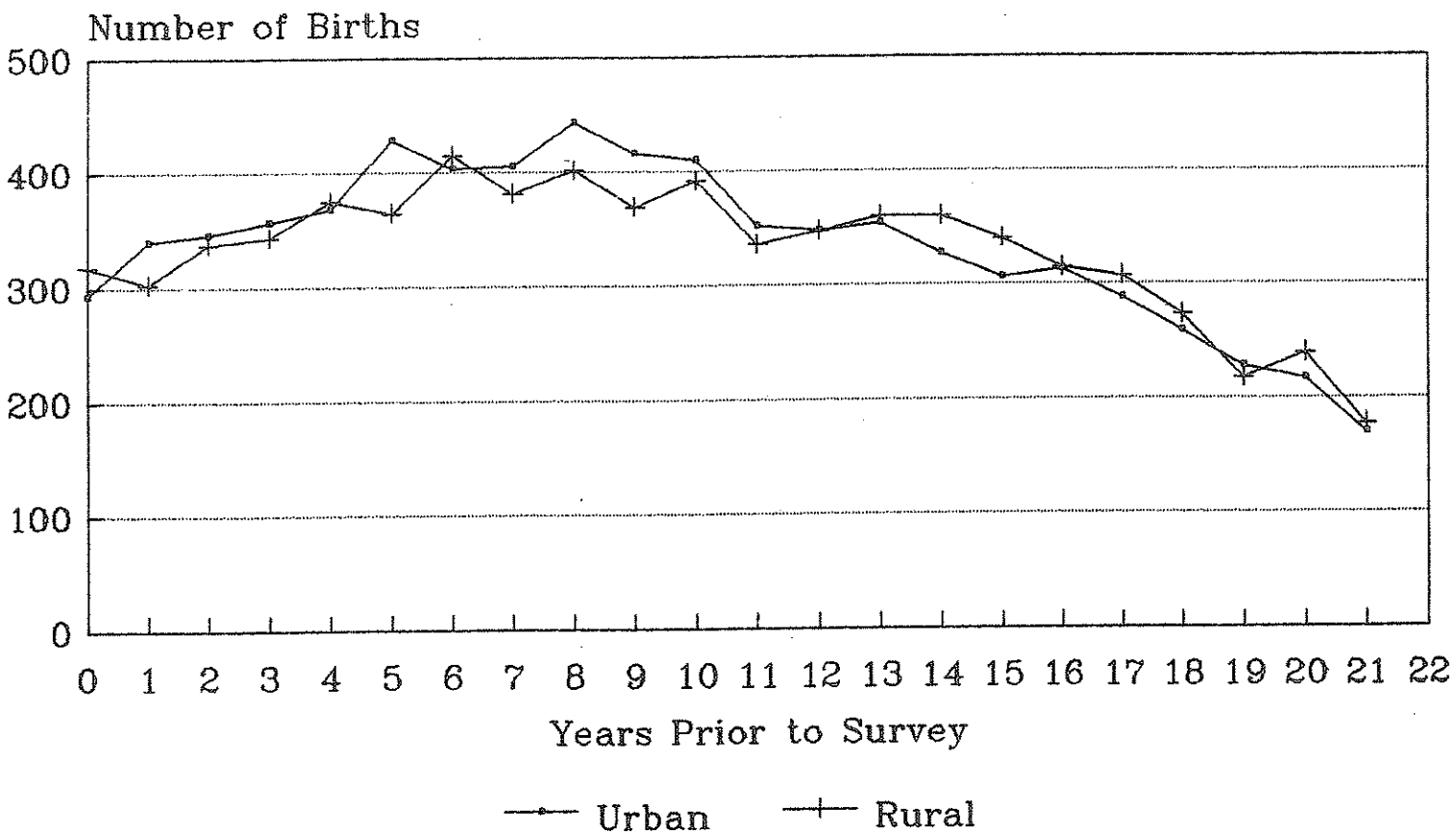


Figure V.4.6a

Births for Regions by Years Prior to Survey From Birth History, 1988

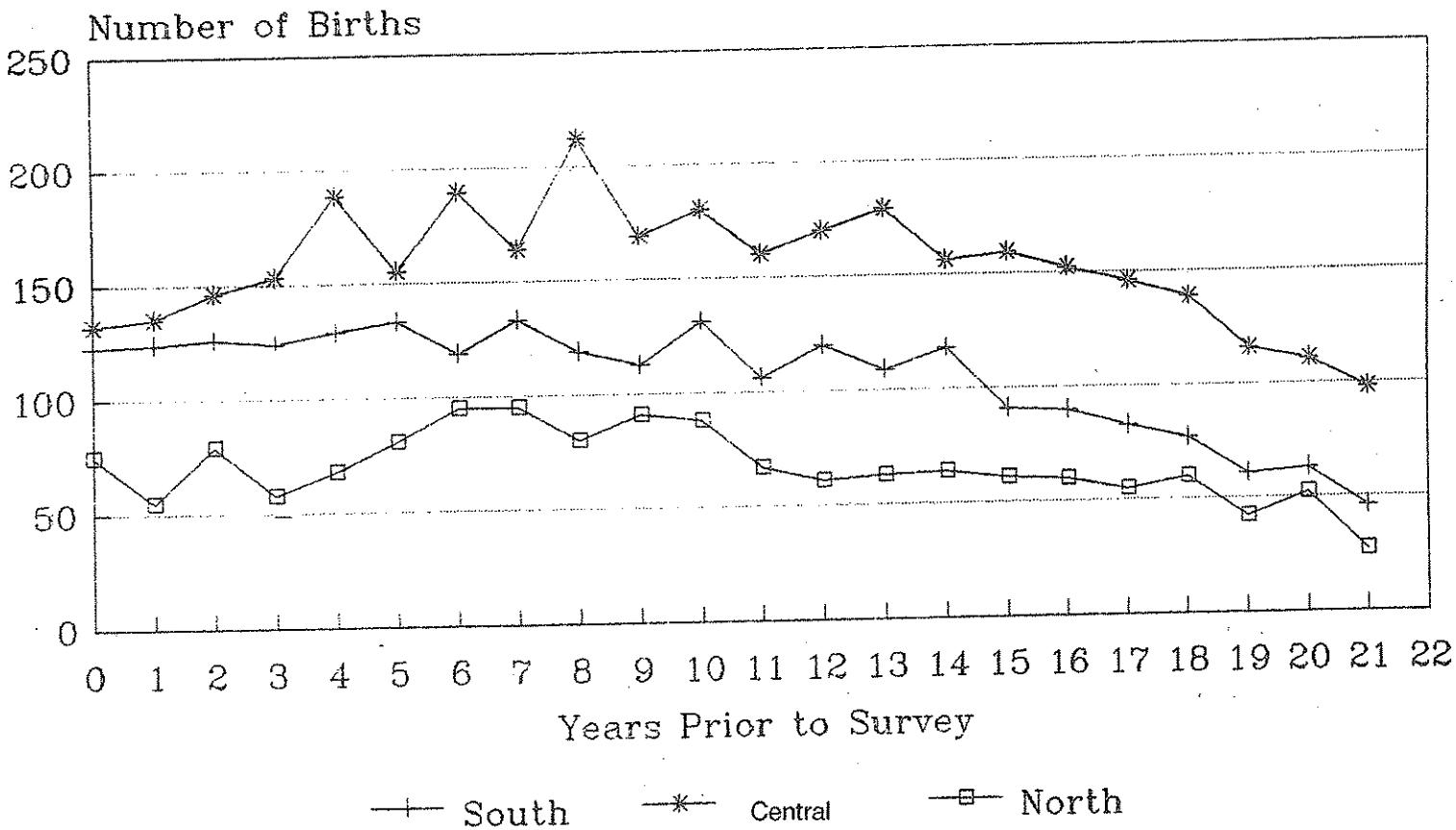


Figure V.4.6b

Births for Regions by Years Prior to Survey From Birth History, 1988

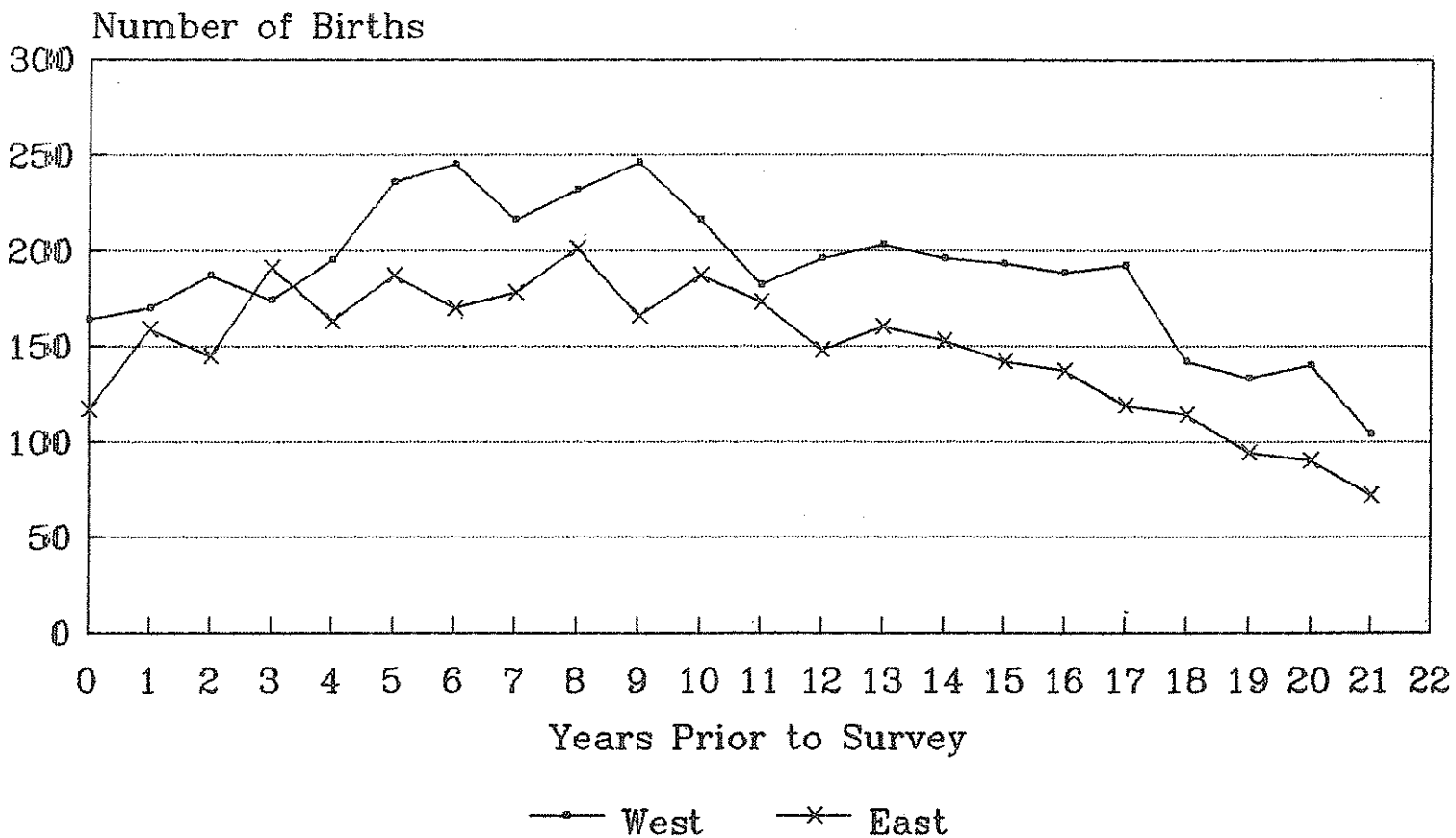


Figure V.4.7
Sex Ratios of Children by Time Since Birth, Birth History, 1988

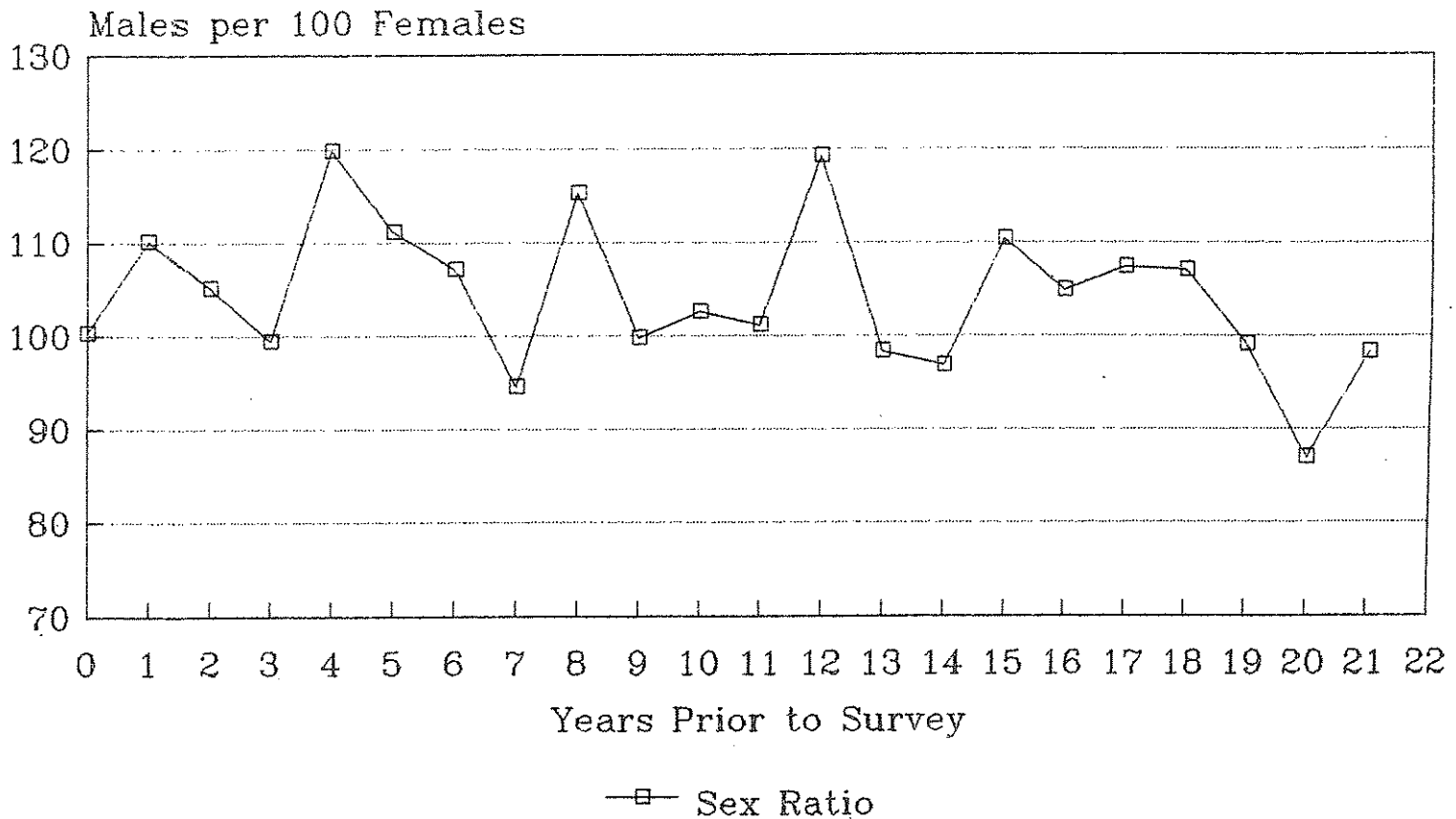


Figure V.4.8

Comparison of Fertility Rates Cumulated to Ages 30 and 35

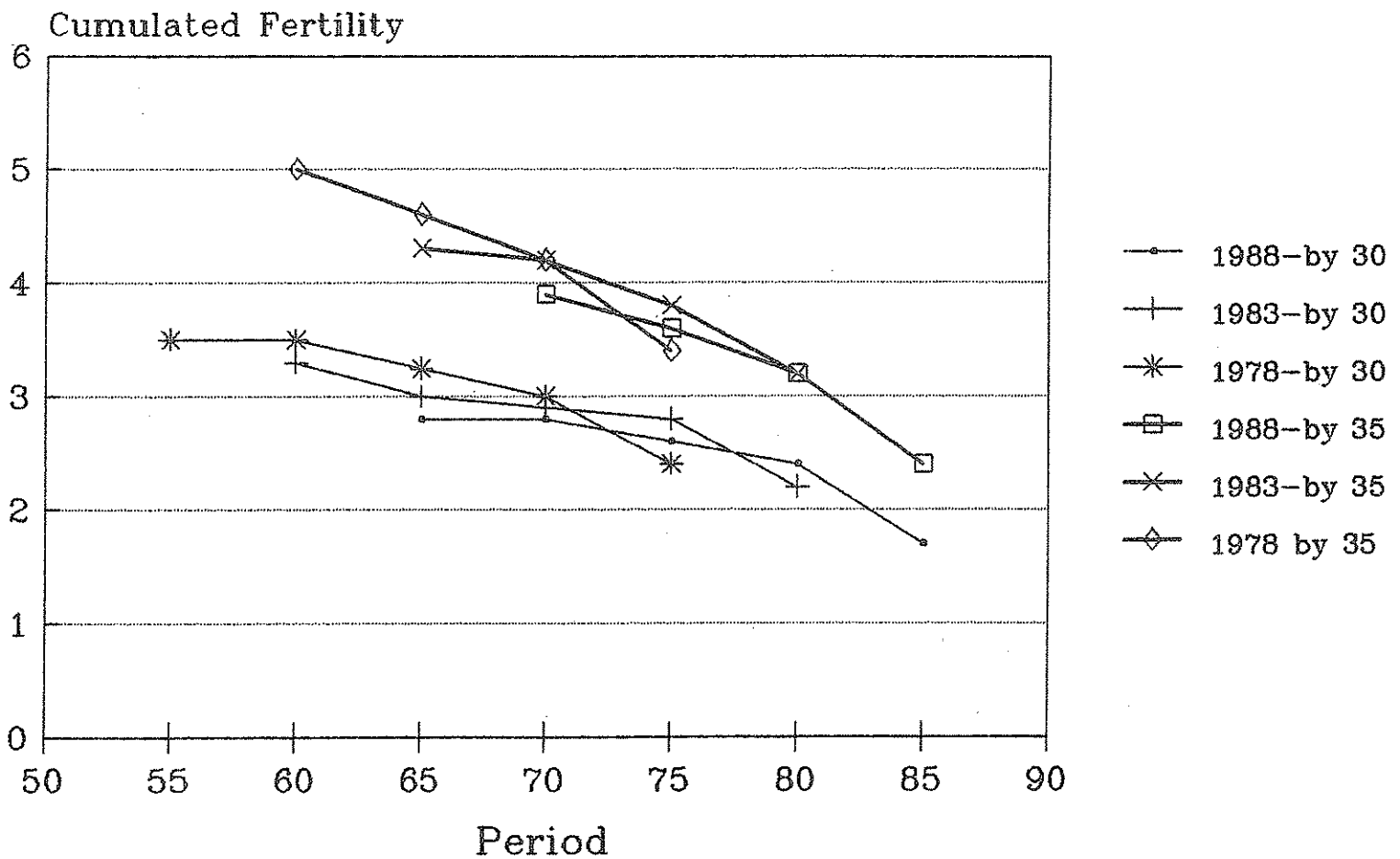


Figure V.4.9

Comparison of Pattern Cumulated Rates to Age 35

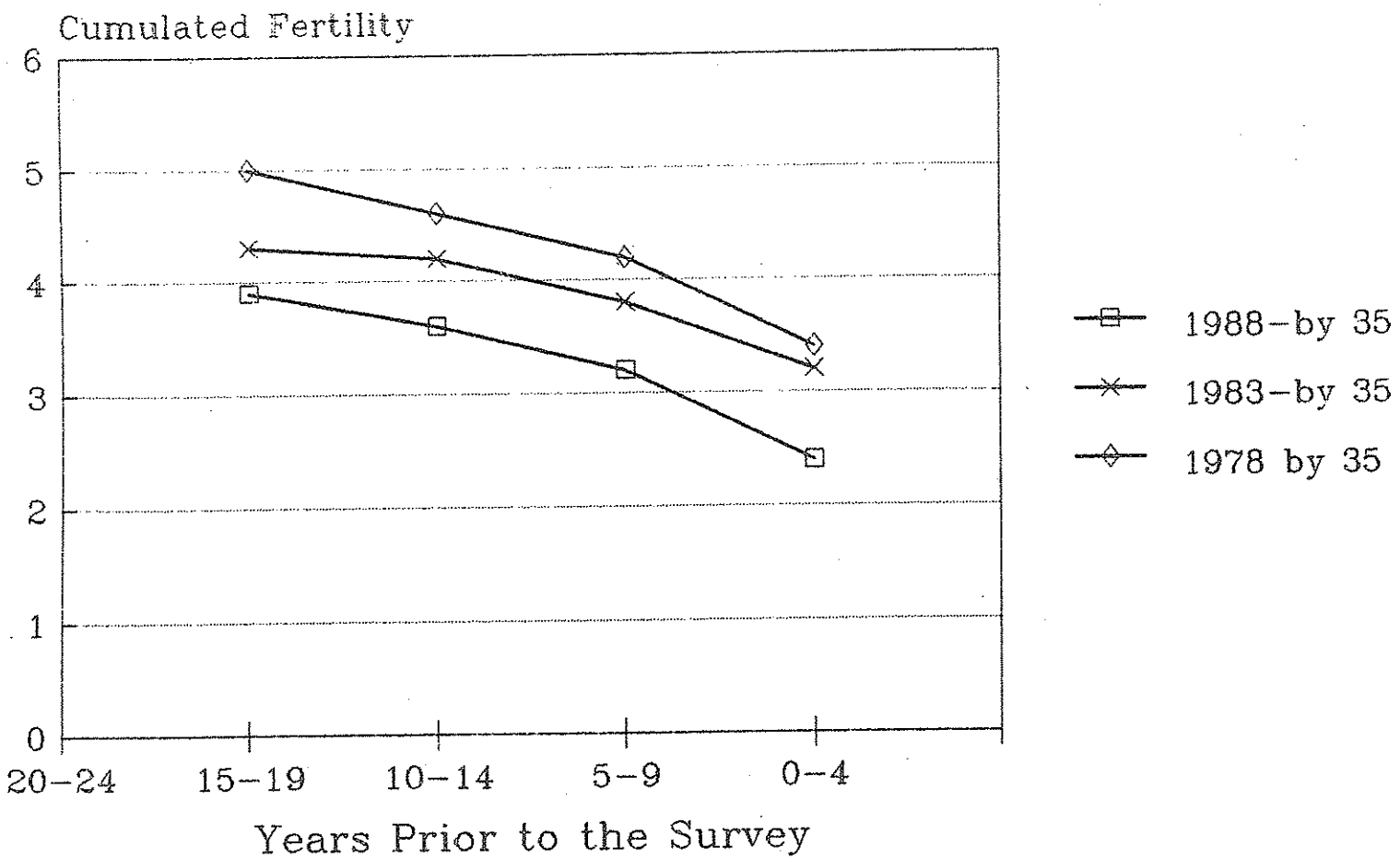


Figure V.5.1

Infant Mortality Over Time
Surveys of 1973, 1978 and 1988

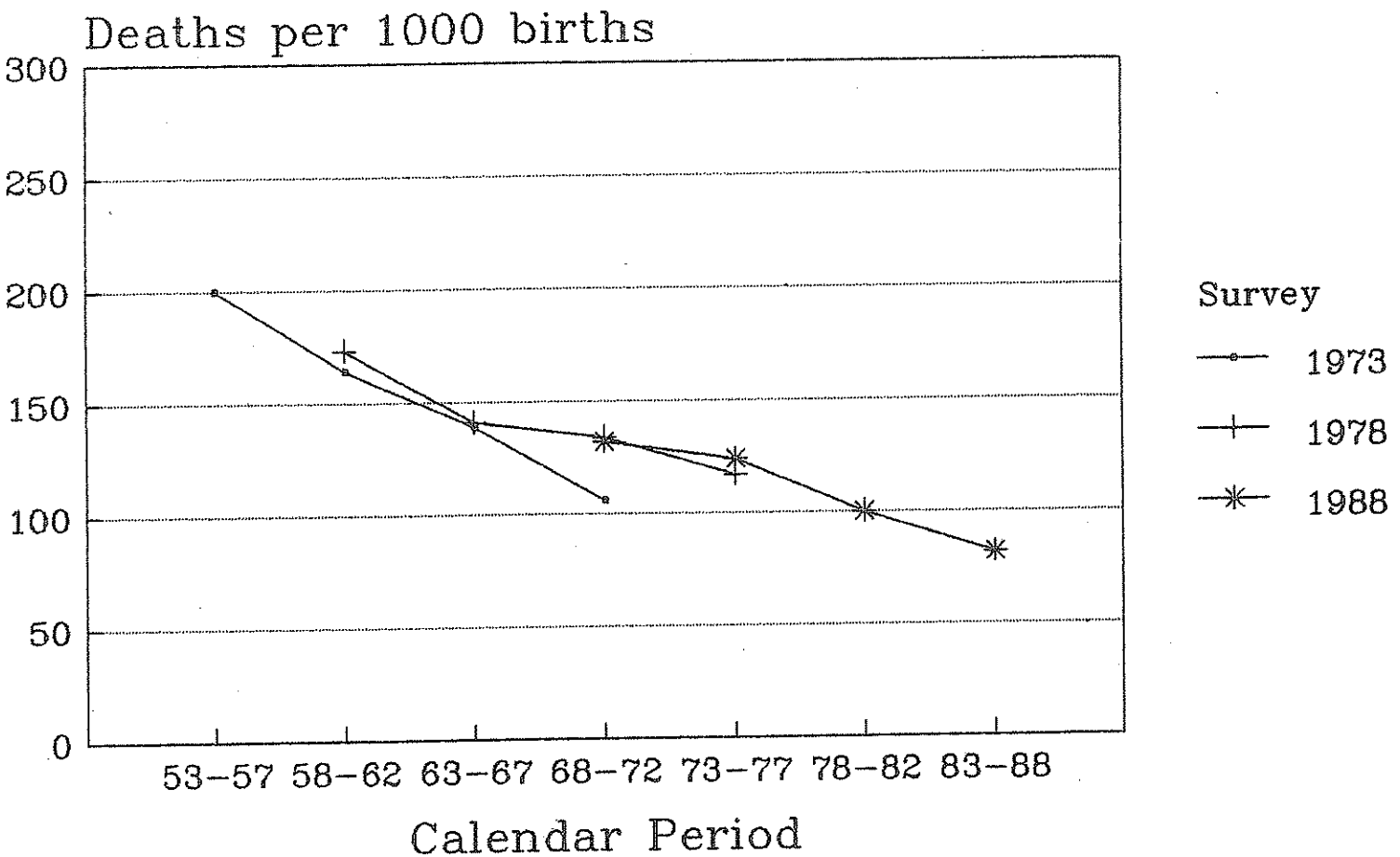


Figure V.5.2

Under-Five Mortality Over Time
Surveys of 1978 and 1988

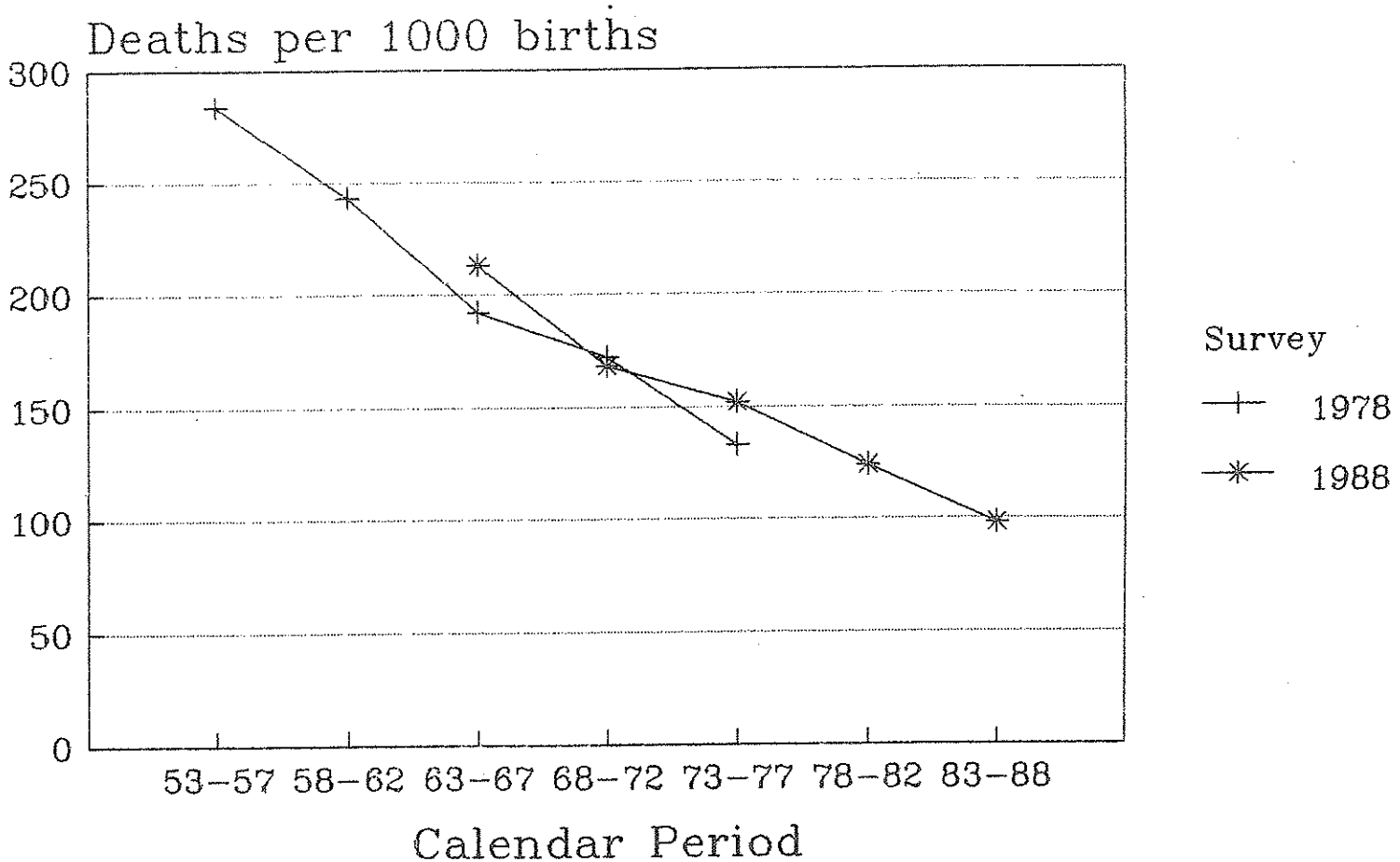


Figure V.5.3
"Best" Estimated Cohort-Period Fertility Rates

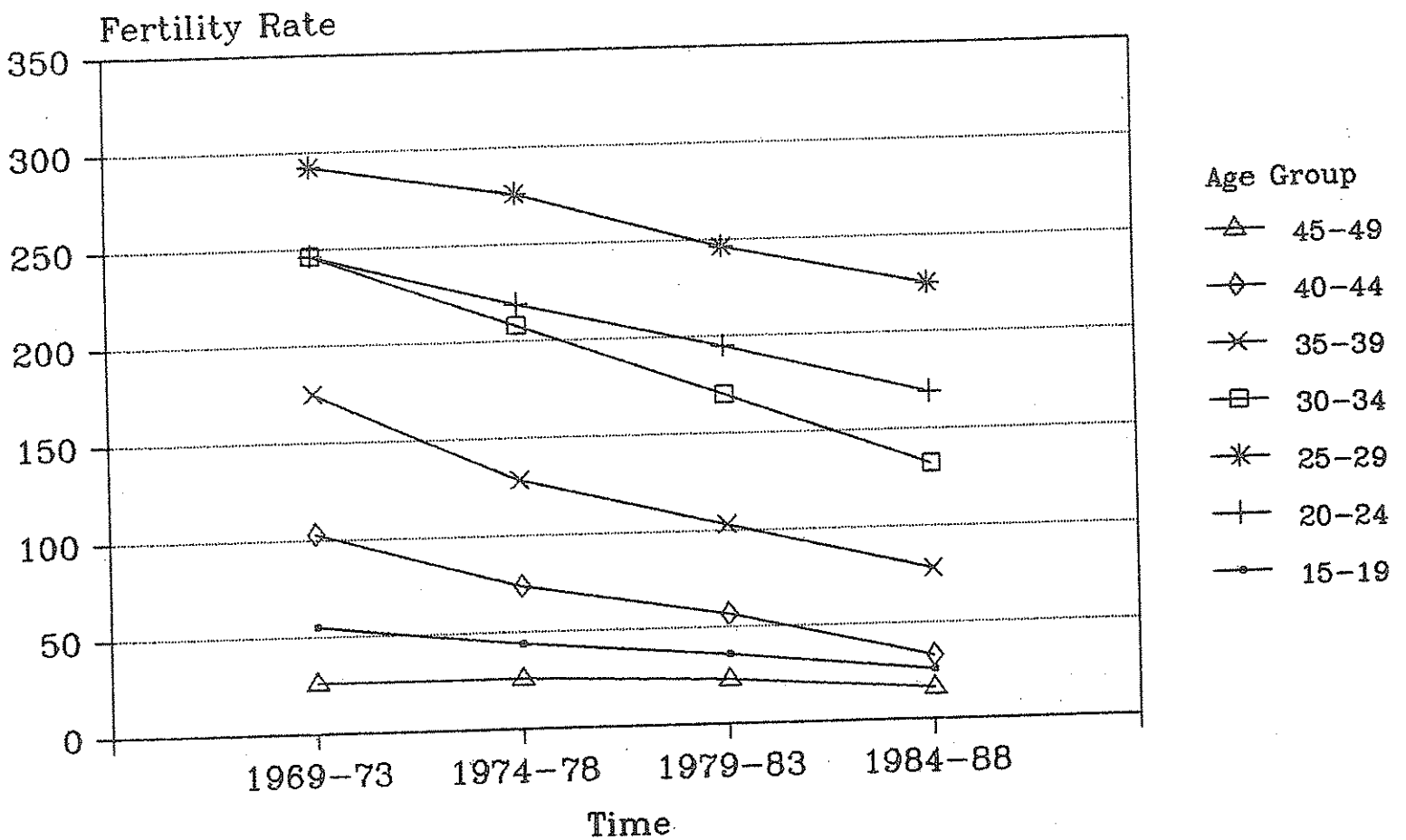


Figure V.5.4

"Best" Estimate of 1984–88 Fertility Rates According to Age

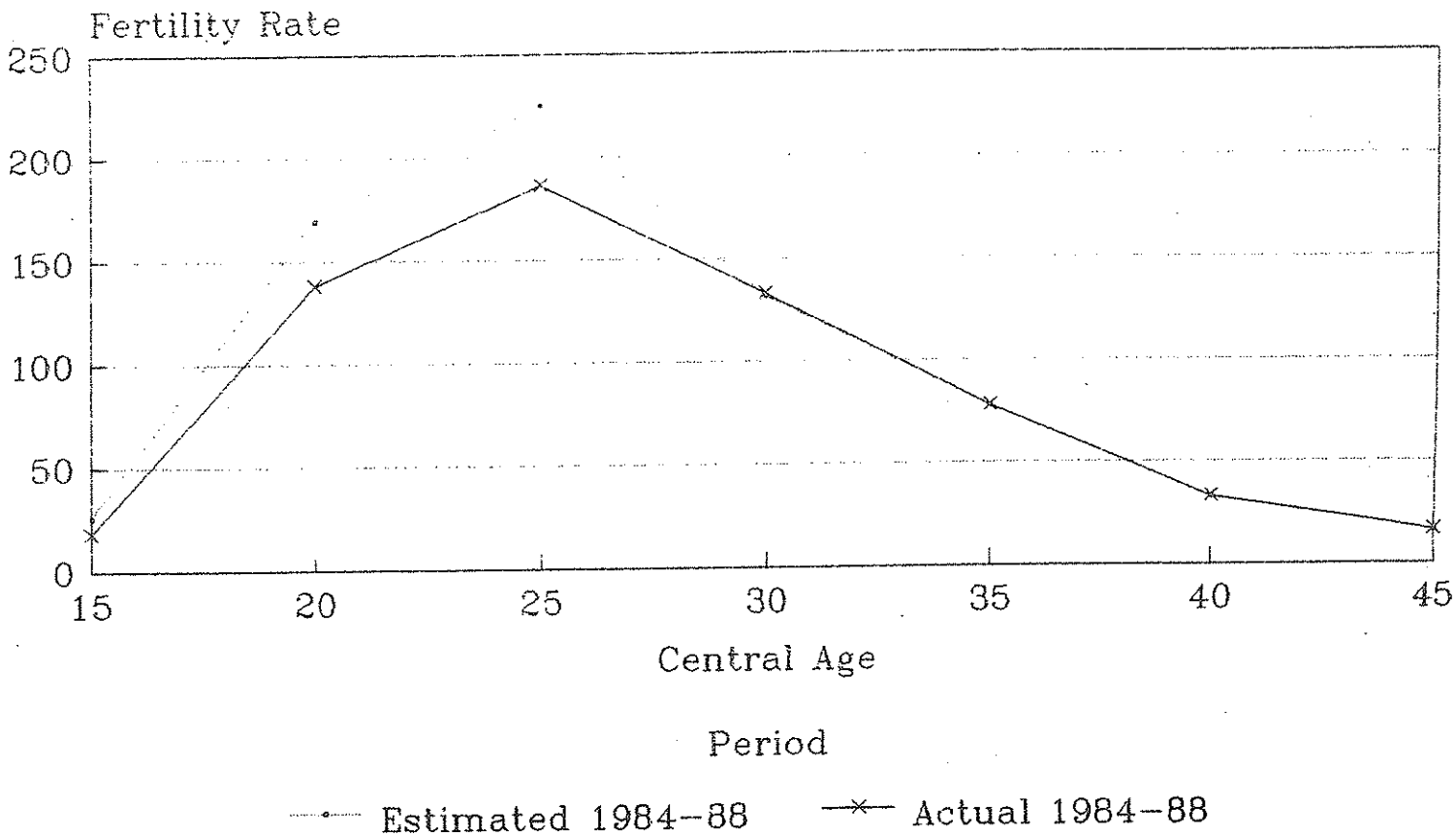


Figure V.5.5
"Best" Estimated Total Fertility Rates

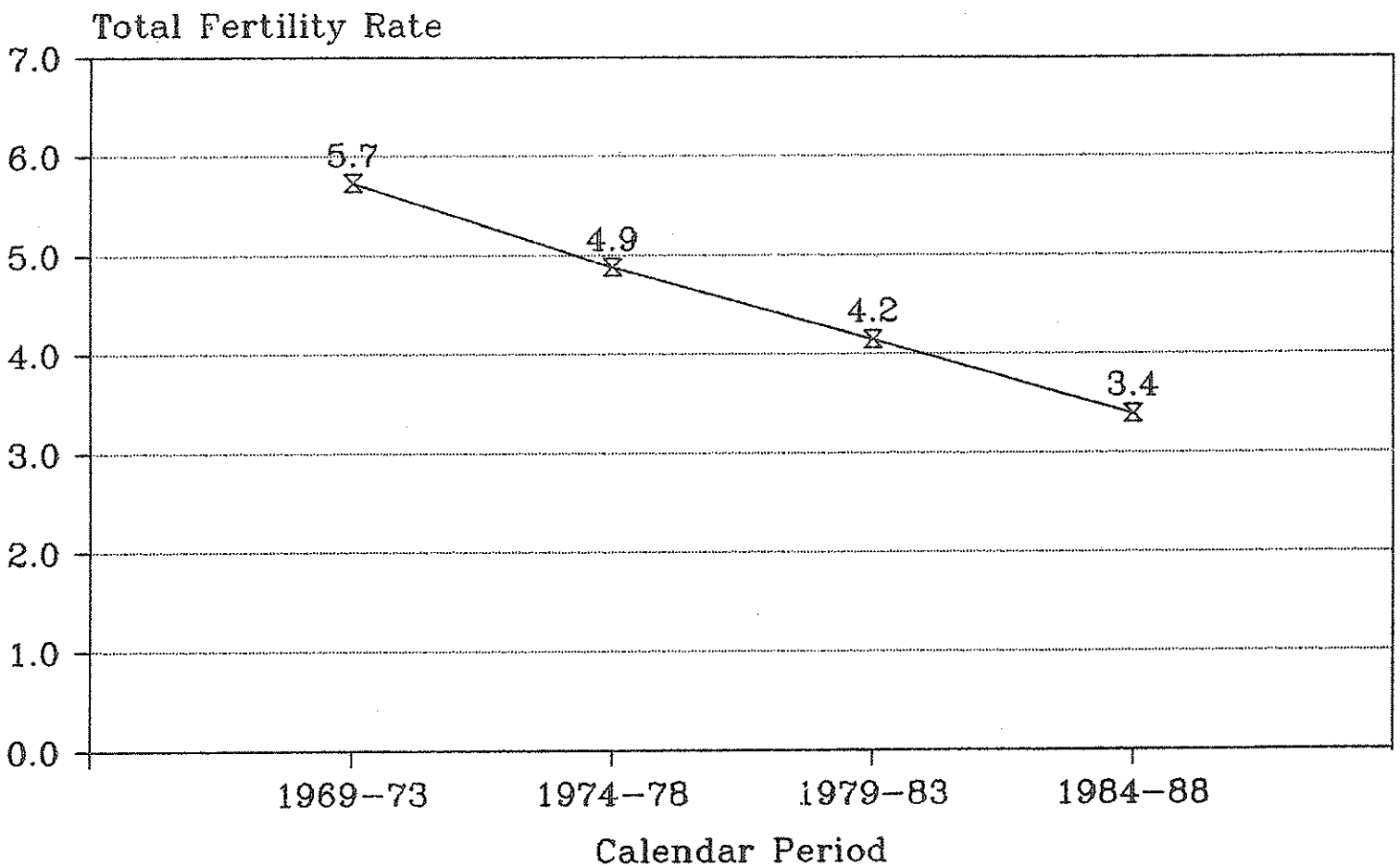


TABLE V.5.1. Comparison of Infant and Child Mortality Rates from 1973, 1978,1983 and 1988 Surveys

Rate and Source		Time Period 1983-88	1978-82	1973-77	1968-72	1963-67
1q0	a	82	100	124	132	161
	c	--	--	117	134	141
	d	--	--	--	106	139
5q0	a	98	124	152	168	--
	c	--	--	133	172	192
Post Neonatal						
	a	47	58	75	83	104
	b	--	55	72	83	95
4q1	a	17	26	33	42	--
	b	--	26	38	49	67
	c	-	--	18	44	59

-- indicates data not available or rate base on too few cases

Sources:

a 1988 survey
b 1983 survey
c 1978 survey
d 1973 survey

V.6. Summary and Conclusions

First, the sample of the 1988 Family and Health Survey was examined for equal selection probability and representativity. The sample is self-weighting as regards selection and does not appear to be particularly biased towards urban areas as was suspected. However, nonresponse is fairly high for the large urban areas and should be compensated for by weighting, but we expect the effects of nonresponse to be small. Inspection of the location of the sampling points indicated that the geographical distribution could be improved, especially in the Eastern region. Further sub-regional stratification would help.

There is a large recent decline in the proportion married among women under twenty-five. Comparisons with earlier surveys do not give evidence that this decline is exaggerated.

Infant and child mortality rates are remarkably in line with those found in preceding surveys, and foster belief in the levels found in the survey for 1984-88.

Fertility rates do seem to have declined excessively in the most recent five-year period. The reason appears to be the omission of children under age five and perhaps transferrence of some children to the next higher age group due to the extra questions in the interview directed at this group.However, the 1988 survey is not unique in this omission. The other surveys appear to also have excessive declines for the most recent periods, and the censuses also indicate the presence of this omission. Most of the children omitted are alive as indicated by the level and the consistency of the infant mortality rates.

A "best" estimate of fertility levels can be made by ignoring the rates for the most recent period from each of the surveys and then averaging the rates that are closest to each other. After this was done, we estimated the current rates by using a regression trend of the rates from the three preceding five-year time periods. Figures V.5.3. to V.5.5. show the results of this estimation. The estimated total fertility rate for the five-year period 1984-88 that results is 3.4 children per woman versus 3.0 as calculated directly from the survey data. We believe that this rate is approximately correct.