

97

DEMOGRAPHIC SURVEILLANCE SYSTEM — MATLAB

VOLUME FIFTEEN

**REGISTRATION OF
DEMOGRAPHIC EVENTS -
1984**

SCIENTIFIC REPORT NO. 67
December 1991



**INTERNATIONAL
CENTRE FOR
DIARRHOEAL DISEASE
RESEARCH,
BANGLADESH**

DEMOGRAPHIC SURVEILLANCE SYSTEM – MATLAB

Volume Fifteen

Registration of Demographic Events – 1984



International Centre for
Diarrhoeal Disease Research, Bangladesh
GPO Box 128, Dhaka – 1000
Bangladesh

DSS reports are not copyrighted and may be freely quoted as long as the source is properly indicated. The following citation is suggested for this report; this form of citation is also appropriate for previous DSS annual reports.

Demographic Surveillance System – Matlab: Registration of Demographic Events – 1984. Dhaka: International Centre for Diarrhoeal Disease Research, Bangladesh, 1990

This report was prepared by the staff of the Demographic Surveillance System.

PREFACE

The International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) is an autonomous, international, philanthropic, non-profit centre for research, education, training, and clinical service. The Centre is derived from the Cholera Research Laboratory (CRL). Its aims and objectives are to undertake and promote study, research, and dissemination of knowledge in diarrhoeal diseases and the directly related subjects of nutrition and fertility, with a view to developing improved health care methods and to prevent and control diarrhoeal diseases and improve public health programmes, especially in developing countries. The ICDDR,B issues an annual report, working papers, scientific reports, special publications, monographs, theses, dissertations, and a bi-monthly newsletter which demonstrates the type of research activities currently in progress. The views expressed in these publications are those of the authors, and do not necessarily represent the views of the ICDDR,B.

ACKNOWLEDGEMENTS

From 1984 through 1989 the Demographic Surveillance System of the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) was supported by the Canadian International Development Agency (CIDA). In 1990 it was supported by the Netherlands and by CIDA. The ICDDR,B is supported by countries and agencies which share its concern about the impact of diarrhoeal diseases on the developing world. Current major donors include: The aid agencies of the Governments of Australia, Bangladesh, Belgium, Canada, Denmark, France, Japan, the Netherlands, Norway, Saudi Arabia, Sweden, Switzerland, the United Kingdom and the United States; international organisations including the United Nations Capital Development Fund, the United Nations Development Programme, the United Nations Children's Fund and the World Health Organization; and private foundations including the Ford Foundation and the Sasakawa Foundation.

CONTENTS

	<u>Page</u>
Preface	i
Acknowledgements	ii
Summary	1
Chapter 1: Introduction	3
Chapter 2: Population Changes	6
Chapter 3: Mortality	14
Chapter 4: Fertility	32
Chapter 5: Marriage and Divorce	44
Chapter 6: Migration	53

LIST OF TABLES

Table 2.1 : Vital Statistics of the Matlab MCH – FP and Comparison Areas, 1978 – 1984	7
Table 2.2 : Mid – year Population, Events Registered, and Population Change in 1984	8
Table 2.3 : Mid – year Population by Age and Sex, 1984	9
Table 2.4 : Mid – year Population by Area, Age, and Sex, 1984	10
Table 2.5 : Mid – year Population in MCH – FP Area by Age, Sex, and Block, 1984	11
Table 3.1 : Deaths by Age and Sex, 1984	15
Table 3.2 : Deaths by Area, Age, and Sex, 1984	16
Table 3.3 : Deaths in MCH – FP Area by Age, Sex, and Block, 1984	17
Table 3.4 : Death Rates by Age and Sex, 1984	19
Table 3.5 : Death Rates by Area, Age, and Sex, 1984	20
Table 3.6 : Abridged Life Table, 1984	21
Table 3.7 : Abridged Life Tables by Sex, 1984	22
Table 3.8 : Abridged Life Tables by Area, 1984	24

Table 3.9 :	Abridged Life Tables for MCH – FP Area by Sex, 1984	25
Table 3.10 :	Abridged Life Tables for Comparison Area by Sex, 1984	26
Table 3.11 :	Deaths by Age and Month of Death, 1984	27
Table 3.12 :	Male Deaths by Cause and Age, 1984	28
Table 3.13 :	Female Deaths by Cause and Age, 1984	29
Table 3.14 :	Male Deaths by Cause, Age, and Area, 1984	30
Table 3.15 :	Female Deaths by Cause, Age, and Area, 1984	31
Table 4.1 :	Number and Rates of Pregnancy Outcomes by Type and Area, 1984	33
Table 4.2 :	Pregnancy Outcomes by Month, 1984	34
Table 4.3 :	Number of Women who had Live Births by Age and Number of Previous Pregnancies, 1984	35
Table 4.4 :	Number of Women who had Stillbirths by Age and Number of Previous Pregnancies, 1984	35
Table 4.5 :	Number of Women who had Induced Miscarriages by Age and Number of Previous Pregnancies, 1984	36
Table 4.6 :	Number of Women who had Spontaneous Miscarriages by Age and Number of Previous Pregnancies, 1984	37
Table 4.7 :	Number of Women who had Live Births by Age and Number of Surviving Children, 1984	38
Table 4.8 :	Age – specific Fertility Rates and Indices, 1984	39
Table 4.9 :	Age – specific Fertility Rates and Indices by Area, 1984	40
Table 4.10 :	Age – specific Fertility Rates and Indices for MCH – FP Area by Block, 1984	41
Table 5.1 :	Groom’s Age at Marriage by Previous Marital Status, 1984	45
Table 5.2 :	Bride’s Age at Marriage by Previous Marital Status, 1984	46
Table 5.3 :	Marriage Rates by Age and Sex, 1984	47
Table 5.4 :	Number of Marriages by Groom’s and Bride’s Age at Marriage, 1984	48
Table 5.5 :	Number of Divorces by Partners’ Age at Divorce, 1984	49
Table 5.6 :	Marriages and Divorces by Month, 1984	50

Table 5.7 :	Number of Divorces by Sex, Age, and Duration of Marriage, 1984	...	...	52
Table 6.1 :	In- and Out-migration by Age and Sex, 1984			54
Table 6.2 :	In-migration by Age, Sex, and Area, 1984	...		55
Table 6.3 :	Out-migration by Age, Sex, and Area, 1984	...		56
Table 6.4 :	Age and Sex-specific Migration Rates by Direction, 1984			57
Table 6.5 :	Male Out-migration by Cause of Movement and Age, 1984	...	...	59
Table 6.6 :	Female Out-migration by Cause of Movement and Age, 1984	...	...	60
Table 6.7 :	Male In-migration by Cause of Movement and Age, 1984	...	...	61
Table 6.8 :	Female In-migration by Cause of Movement and Age, 1984	...	...	62
Table 6.9 :	In- and Out-migration by Sex and Month, 1984			63
Table 6.10 :	In- and Out-migration by Sex and Major Categories of Reason for Migration, 1984	...		65

LIST OF FIGURES:

Figure 1.1 :	Map of Bangladesh showing the Study Area	...		4
Figure 1.2 :	Matlab Area showing Villages of Demographic Surveillance System, 1984	...	...	5
Figure 2.1 :	Age Pyramid of the 1984 Mid-year Population			13
Figure 3.1 :	Probability of Survival from Birth to Age (x) by Sex, 1984	...	...	23
Figure 4.1 :	Number of Births and Deaths by Month, 1984			32
Figure 4.2 :	Age-specific Fertility Rates by Area, 1984			43
Figure 5.1 :	Marriages and Divorces by Month, 1984	...		51
Figure 6.1 :	Rate of In- and Out-migration by Sex and Age, 1984			58
Figure 6.2 :	Number of In- and Out-migrants by Sex and Month, 1984	...	...	64

LIST OF APPENDICES:

Appendix A :	Names and Codes of Villages in the DSS Area, 1984			66
--------------	---	--	--	----

Appendix B	: Mid-year Population, Births, and Deaths by Village, 1984	...	...	67
Appendix C	: Life Table Equations	...	...	71
Appendix D	: Analysis of the Decline in Births in 1984	...	...	72
Appendix E	: Staff of the DSS - 1984	...	...	74

SUMMARY

This report presents the vital registration data for events taking place in 1984 in Matlab, Bangladesh. These data were collected by the Demographic Surveillance System of the International Centre for Diarrhoeal Disease Research, Bangladesh. The registration area is divided into a Maternal and Child Health and Family Planning (MCH-FP) intervention area and a Comparison area receiving government services. In both areas the death rate went up in 1984; in the MCH-FP area the crude death rate was 13.4 while in the Comparison area it was 17.3. The increase in mortality was primarily due to an increase in post-neonatal deaths.

The birth rate fell dramatically in both areas; between 1983 and 1984 the crude birth rate fell from 42.6 to 37.3 in the Comparison area and from 34.2 to 30.7 in the MCH-FP area. (This decline was reversed in 1985; an appendix to this report evaluates and rejects the possibility of the under-reporting of births in 1984.) Nuptiality patterns remained fairly constant during 1984 with the median age at first marriage staying at 26.0 years for men and 18.0 years for women. Out-migration by both males and females increased by about 20 percent in 1984 while in-migration remained fairly constant. Due to the decrease in fertility and the increase in mortality and out-migration there was virtually no net increase in the population under surveillance in Matlab in 1984.

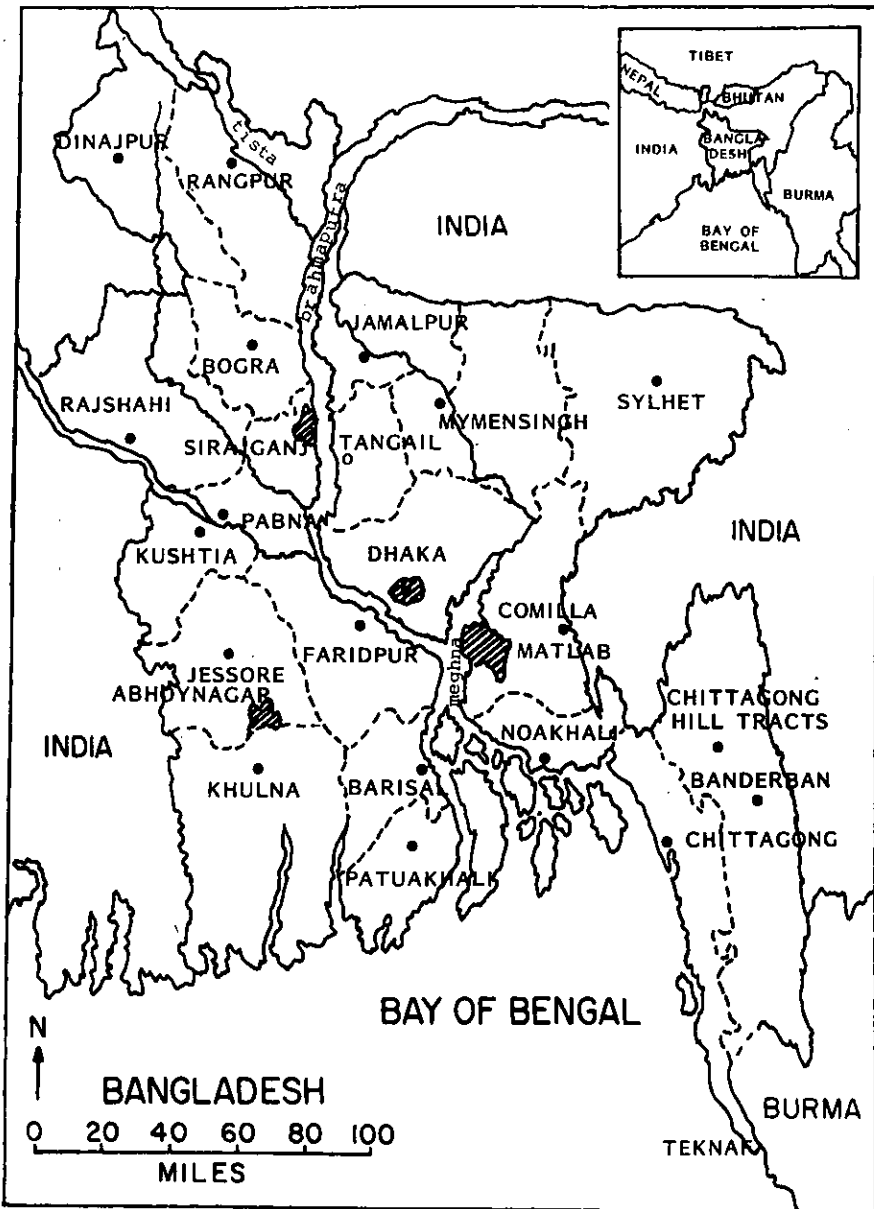
CHAPTER 1

INTRODUCTION

Since 1963 the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B), formerly the Cholera Research Laboratory, has been conducting a health related research programme near the town of Matlab, in rural Bangladesh. Matlab is located about 55 kilometers southeast of the country's capital, Dhaka (Figure 1.1). The Demographic Surveillance System (DSS) is one of the components of this field programme. Since 1966 the DSS has maintained the registration of births, deaths, and migrations, in addition to carrying out occasional censuses. In 1975 the system was augmented to include marriages and divorces. Information is gathered by Health Assistants who visit each household in their assigned areas regularly and fill out the event registration forms. A detailed description of the DSS and its operation appears in CRL Scientific Report No. 9 (March 1978). In October 1977 the surveillance area was reduced from 233 to 149 villages and a Maternal Child Health and Family Planning (MCH-FP) Programme was begun in 70 villages. The remaining 79 villages were treated as a Comparison area (Figure 1.2). These changes are described in detail in the ICDDR,B Scientific Report No. 47 (May 1981).

This is the fifteenth volume of a series of scientific reports of the Demographic Surveillance System produced by the ICDDR,B. Presented here are results obtained from the Matlab DSS in 1984, along with brief notes and explanations of the tables.

Figure 1.1: Map of Bangladesh showing the Study Area




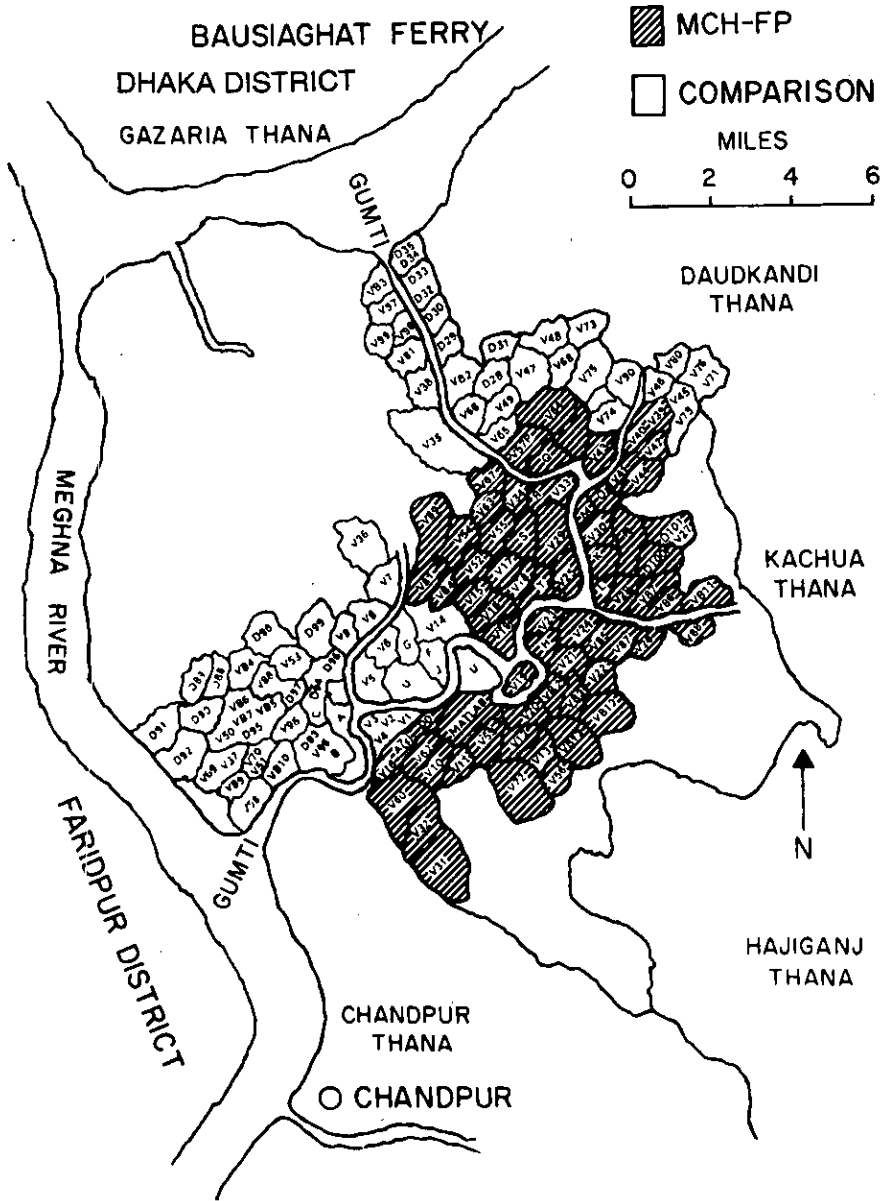
Key:  Study areas

Figure 1.2: Matlab Area showing Villages of Demographic Surveillance System, 1984



CHAPTER 2

POPULATION CHANGES

The mid-year population, as well as the demographic events registered in 1984 in the Maternal Child Health and Family Planning (MCH-FP) and the Comparison areas, are shown in Tables 2.1 through 2.5.

The crude birth rate in 1984 declined to 30.7 in the MCH-FP and 37.3 in the Comparison areas from the 1983 level of 34.2 in the MCH-FP and 42.6 in the Comparison areas. (In 1982 the crude birth rate had been 36.9 and 44.7 in the MCH-FP and the Comparison areas respectively.) The crude death rates increased to 13.4 and 17.3 in 1984 compared to 11.9 and 16.7 in 1983 in the MCH-FP and the Comparison areas respectively. (In 1982 the crude death rates had been 12.5 and 15.9 in the MCH-FP and the Comparison areas respectively.) These rates show that Matlab experienced a noticeable increase in mortality in 1984, while the birth rate fell dramatically.

The numbers of in- and out-migrants registered in 1984 were 4,664 and 8,223 respectively, giving an in-migration rate of 24.2, an out-migration rate of 42.7, and a net migration rate of 18.5 per thousand population leaving the area. The net migration rate in 1984 was substantially higher than in 1982 (2.0) or in 1983 (11.2).

The net population increase was 12.9 per thousand in 1983. It declined to 0.2 per thousand in 1984. This sharp decline in population growth in 1984 was due to a 19 percent increase in the rate of out-migration, a 7 percent increase in the death rate, and a decrease in the birth rate of 11 percent.

There were 2,874 marriages registered in 1984, yielding a marriage rate of 14.9 per 1,000 population, which was higher than that of 1983. In 1984 there were 469 divorces, giving a ratio of 163 divorces per 1,000 marriages, which was higher than the 1983 rate of 153.

The population pyramid, presented in Figure 2.1, indicates that the age distribution was almost identical to those seen during the previous four years. Age is recorded in total completed years as of the last birthday. For people born within the DSS area after 1966, age figures are exact. In cases where ages are unknown — which may apply to in-migrants or to persons born before 1966 — age ascertainment is made as accurately as possible by reference to any past event that may be remembered.

Table 2.1: Vital Statistics of the Matlab MCH-FP and Comparison Areas, 1978-1984

Vital rates (per 1000)	1978	1979	1980	1981	1982	1983	1984
All deaths							
MCH-FP area	12.5	12.1	11.3	11.9	12.5	11.9	13.4
Comparison area	13.8	15.6	14.9	14.4	15.9	16.7	17.3
Both areas	13.2	13.8	13.1	13.1	14.2	14.3	15.3
Neonatal deaths*							
MCH-FP area	69.0	70.9	59.3	66.4	58.1	56.4	57.9
Comparison area	78.7	74.6	72.7	69.5	68.1	70.3	71.4
Both areas	74.1	73.0	66.6	68.1	63.5	64.0	65.3
Post-neonatal deaths*							
MCH-FP area	45.5	43.5	32.6	36.1	47.5	41.8	56.9
Comparison area	47.1	43.3	41.3	45.0	50.2	42.2	55.7
Both areas	46.3	43.4	37.3	41.0	49.0	42.0	56.2
Child deaths (1-4 yrs)							
MCH-FP area	22.5	17.1	18.6	19.1	18.8	21.9	23.1
Comparison area	22.1	26.2	25.4	24.8	27.4	35.3	139.2
Both areas	22.3	21.6	22.1	22.0	23.3	29.1	31.6
Births							
MCH-FP area	32.1	34.9	37.1	35.3	36.9	34.2	30.7
Comparison area	37.7	47.0	45.5	43.8	44.7	42.6	37.3
Both areas	34.8	40.9	41.2	39.5	40.7	38.3	34.0
Total fertility**							
MCH-FP area	4.5	4.9	5.1	4.8	5.0	4.5	4.0
Comparison area	5.5	6.9	6.7	6.3	6.3	6.1	5.1
Both areas	5.0	5.9	5.9	5.5	5.6	5.3	4.5
In-migration	28.7	33.1	29.7	27.3	24.5	24.6	24.2
Out-migration	40.2	40.8	36.6	35.0	26.5	35.8	42.7
Growth (%)	1.0	1.9	2.1	1.9	2.5	1.3	0.0
Natural increase							
MCH-FP area	19.6	22.9	25.8	23.4	24.3	22.3	17.3
Comparison area	23.9	31.4	30.6	29.4	28.8	25.8	20.0
Both areas	21.7	27.1	28.2	26.4	26.5	24.1	18.6

*Per 1000 live births.

**Per woman.

Table 2.2: Mid-year Population, Events Registered, and Population Change in 1984

	Number			Rate per 1000 population		
	Total	Males	Females	Total	Males	Females
Total population as of 30th June 1984	192691	97621	95070	-	-	-
MCH-FP area	97329	49300	48029	-	-	-
Comparison area	95362	48321	47041	-	-	-
<u>Events registered</u> (January - December 1984)						
Births						
MCH-FP area	2988	1496	1492	30.7	-	-
Comparison area	3556	1806	1750	37.3	-	-
Both areas	6544	3302	3242	34.0	-	-
Deaths						
- Infant*						
MCH-FP area	343	180	163	114.8	120.3	109.2
Comparison area	452	240	212	127.1	132.9	121.1
Both areas	795	420	375	121.5	127.2	115.7
- All deaths						
MCH-FP area	1303	655	648	13.4	13.3	13.5
Comparison area	1652	806	846	17.3	16.7	18.0
Both areas	2955	1461	1494	15.3	15.0	15.7
In-migration	4664	1914	2750	24.2	19.6	28.9
Out-migration	8223	3803	4420	42.7	39.0	46.5
Marriage	2874	-	-	14.9	-	-
Divorce**	469	-	-	163.2	-	-
<u>Population change</u> (January - December 1984)						
Net-migration	-3559	-1889	-1670	-18.5	-19.4	-17.6
Natural increase						
MCH-FP area	1685	841	844	17.3	17.1	17.6
Comparison area	1904	1000	904	20.0	20.7	19.2
Both areas	3589	1841	1748	18.6	18.9	18.4
Net increase	30	-48	78	0.2	-0.5	0.8

* Rate per 1000 live births.

** Ratio per 1000 marriages.

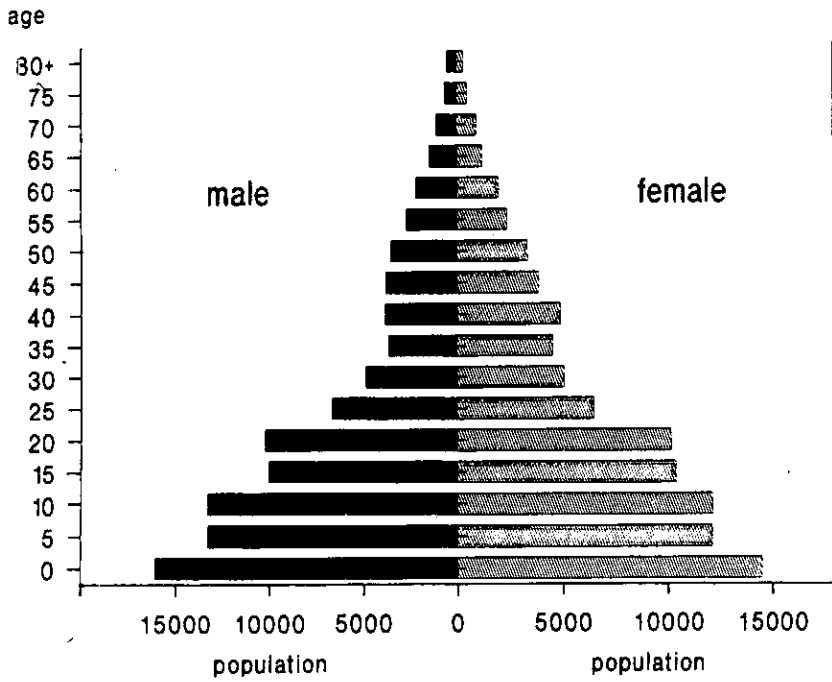
Table 2.3: Mid-year Population by Age and Sex, 1984

Age (years)	Both areas			Percent		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	192691	97621	95070	100.0	100.0	100.0
Under 1	6649	3416	3233	3.5	3.5	3.4
1-4	23890	12623	11267	12.4	12.9	11.9
1	6337	3315	3022	3.3	3.4	3.2
2	5947	3062	2885	3.1	3.1	3.0
3	5765	3091	2674	3.0	3.2	2.8
4	5841	3155	2686	3.0	3.2	12.8
5-9	25391	13268	12123	13.2	13.6	12.8
10-14	25406	13256	12150	13.2	13.6	12.8
15-19	20443	10031	10412	10.6	10.3	11.0
20-24	20410	10216	10194	10.6	10.5	10.7
25-29	13149	6625	6524	6.8	6.8	6.9
30-34	9930	4857	5073	5.2	5.0	5.3
35-39	8202	3648	4554	4.3	3.7	4.8
40-44	8718	3811	4907	4.5	3.9	5.2
45-49	7662	3766	3896	4.0	3.9	4.1
50-54	6888	3535	3353	3.6	3.6	3.5
55-59	5109	2704	2405	2.7	2.8	2.5
60-64	4198	2200	1998	2.2	2.3	2.1
65-69	2646	1442	1204	1.4	1.5	1.3
70-74	2021	1074	947	1.0	1.1	1.0
75-79	1126	629	497	0.6	0.6	0.5
80-84	556	322	234	0.3	0.3	10.2
85+	297	198	99	0.2	0.2	0.1

Table 2.5 (cont.): Mid-year Population in MCH-FP Area
by Age, Sex, and Block, 1984

Age (years)	Block C			Block D		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	25790	13148	12642	21394	10827	10567
Under 1	812	413	399	627	310	317
1-4	2917	1525	1392	2357	1248	1109
1	742	391	351	647	339	308
2	701	364	337	571	291	280
3	731	396	335	571	281	290
4	743	374	369	568	337	231
5-9	3450	1794	11656	2734	1452	1282
10-14	3523	1829	1694	2835	1460	1375
15-19	2707	1341	1366	2299	1116	1183
20-24	2746	1384	1362	2357	1173	1184
25-29	1773	920	853	1472	772	700
30-34	1480	726	754	1169	600	569
35-39	1080	509	571	881	377	504
40-44	1279	560	719	1024	445	579
45-49	1037	515	522	908	410	498
50-54	934	523	411	837	407	430
55-59	621	343	278	640	339	301
60-64	586	301	285	499	278	221
65-69	349	192	157	280	163	117
70-74	236	126	110	289	166	123
75-79	155	91	64	107	60	47
80-84	62	31	31	48	32	16
85+	43	25	18	31	19	12

Figure 2.1: Age Pyramid of the 1984 Mid-year Population



CHAPTER 3

MORTALITY

The age and sex specific deaths for 1984 are shown in Table 3.1. Of the 2,955 registered deaths, 52.5 percent occurred to children under age 5. This was slightly less than in 1982 and 1983, when deaths under 5 comprised 52.7 percent and 53.5 percent of all deaths respectively. The 1984 infant mortality rate of 121.5 was higher than the 1981, 1982, and 1983 rates of 109.1, 112.5, and 106.1 respectively. In 1984 the male infant mortality rate was 127.2 and the female infant mortality rate was 115.7 (Table 3.4). A similar infant mortality pattern for males and females was found in 1982, although the rates were lower in that year. In 1983, the infant mortality rate for females was higher than that of males. In 1984, the overall death rates for males and females were 15.0 and 15.7 respectively. In most age groups death rates were higher in the Comparison area than in the MCH-FP area (Table 3.5).

Tables 3.6 and 3.7 show the basic life table parameters; the l_x values are plotted in Figure 3.1. The expectation of life at birth was 51.9 years for males and 49.3 years for females (Table 3.7). It was higher in the MCH-FP area (53.2) than in the Comparison area (48.5) (Table 3.8). The difference in the expectation of life between the two areas was more pronounced for females (5.4 years) than for males (3.9 years) (Tables 3.9 and 3.10). The expectation of life at birth declined in 1984 compared to 1983 for both sexes in both areas, but this change was greater in the MCH-FP area.

Table 3.11 shows the seasonal variation of deaths by age. The number of deaths peaked in January for the total population; this seasonal pattern was different from that recorded for the previous year when December was the peak month of deaths. Deaths by cause (based on lay reporting) are presented in Tables 3.12 through 3.15. Diarrhoea or dysentery were associated with 24 percent of all male deaths and 31 percent of all female deaths. In children of age 1-4 years, 46 percent of deaths among boys and 53 percent of deaths among girls were associated with diarrhoea or dysentery. These rates were higher than those observed during the preceding year.

Table 3.1: Deaths by Age and Sex, 1984

Age	Both sexes	Males	Females
All ages	2955	1461	1494
Under 1 year	795	420	375
Under 1 month	427	235	192
1-5 months	232	122	110
6-11 months	136	63	73
1-4 years	756	307	449
1	292	128	164
2	234	91	143
3	139	46	93
4	91	42	49
5-9	110	44	66
10-14	29	16	13
15-19	32	11	21
20-24	44	14	30
25-29	37	12	25
30-34	30	14	16
35-39	19	9	10
40-44	36	23	13
45-49	56	30	26
50-54	82	51	31
55-59	127	74	53
60-64	153	84	69
65-69	181	101	80
70-74	171	82	89
75-79	147	86	61
80-84	85	45	40
85+	65	38	27

Table 3.2: Deaths by Area, Age, and Sex, 1984

Age	MCH-FP area			Comparison area		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	1303	655	648	1652	806	846
Under 1 year	343	180	163	452	240	212
Under 1 month	173	92	81	254	143	111
1-5 months	112	58	54	120	64	56
6-11 months	58	30	28	78	33	45
1-4 years	260	99	161	496	208	288
1	111	47	64	181	81	100
2	72	24	48	162	67	95
3	40	12	28	99	34	65
4	37	16	21	54	26	28
5-9	50	21	29	60	23	37
10-14	9	4	5	20	12	8
15-19	18	5	13	14	6	8
20-24	27	9	18	17	5	12
25-29	18	9	9	19	3	16
30-34	14	5	9	16	9	7
35-39	11	6	5	8	3	5
40-44	17	12	5	19	11	8
45-49	25	16	9	31	14	17
50-54	36	22	14	46	29	17
55-59	68	46	22	59	28	31
60-64	82	48	34	71	36	35
65-69	78	39	39	103	62	41
70-74	84	40	44	87	42	45
75-79	70	43	27	77	43	34
80-84	45	21	24	40	24	16
85+	48	30	18	17	8	9

Table 3.3: Deaths in MCH-HP Area by Age, Sex, and Block, 1984

Age	Block A			Block B		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	288	143	145	314	154	160
Under 1 year	84	42	42	89	53	36
Under 1 month	38	19	19	51	30	21
1-5 months	27	13	14	28	18	10
6-11 months	19	10	9	10	5	5
1-4 years	51	21	30	71	23	48
1	26	11	15	28	10	18
2	17	5	12	22	7	15
3	5	3	2	12	1	11
4	3	2	1	9	5	4
5-9	7	4	3	13	4	9
10-14	3	2	1	1	-	1
15-19	5	2	3	5	2	3
20-24	12	3	9	5	3	2
25-29	4	2	2	4	2	2
30-34	1	-	1	3	2	
35-39	1	1	-	4	1	3
40-44	1	1	-	5	3	2
45-49	7	5	2	6	3	3
50-54	6	4	2	5	4	1
55-59	10	6	4	15	10	5
60-64	18	10	8	19	4	5
65-69	19	11	8	19	6	13
70-74	19	5	14	21	10	11
75-79	14	7	7	16	11	5
80-84	15	10	5	12	5	7
85+	11	7	4	111	8	3

Table 3.3 (cont.): Deaths in MCH-FP Area by Age, Sex, and Block, 1984

Age	Block C			Block D		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	363	200	163	338	158	180
Under 1 year	98	51	47	72	34	38
Under 1 month	51	27	24	33	16	17
1-5 months	29	15	14	28	12	16
6-11 months	18	9	9	11	6	5
1-4 years	53	22	31	85	33	52
1	22	11	11	35	15	20
2	11	3	8	22	9	13
3	11	5	6	12	3	9
4	9	3	6	16	6	10
5-9	12	8	4	18	5	13
10-14	2	2	-	3	-	3
15-19	15	1	4	3	-	3
20-24	6	2	4	4	1	3
25-29	7	5	2	3	-	3
35-39	5	3	2	1	1	-
40-44	8	6	2	3	2	1
45-49	7	6	1	5	2	3
50-54	12	9	3	13	5	8
55-59	24	19	5	19	11	8
60-64	30	20	10	25	14	11
65-69	26	14	12	14	8	6
70-74	16	7	9	28	18	10
75-79	18	10	8	22	15	7
80-84	11	3	8	7	3	4
85+	17	10	7	9	5	4

Table 3.4: Death Rates by Age and Sex, 1984
(per 1000 population)

Age	Both sexes	Males	Females
All ages	15.3	15.0	15.7
Under 1 year*	121.5	127.2	115.7
Under 1 month*	65.3	71.2	59.2
1-5 months*	35.5	36.9	33.9
6-11 months*	20.8	19.1	22.5
1-4 years	31.6	24.3	39.9
1	46.1	38.6	54.3
2	39.3	29.7	49.6
3	24.1	14.9	34.8
4	15.6	13.3	18.2
5-9	4.3	3.3	5.4
10-14	1.1	1.2	1.1
15-19	1.6	1.1	2.0
20-24	2.2	1.4	2.9
25-29	2.8	1.8	3.8
30-34	3.0	2.9	3.2
35-39	2.3	2.5	2.2
40-44	4.1	6.0	2.6
45-49	7.3	8.0	6.7
50-54	11.9	14.4	9.2
55-59	24.9	27.4	22.0
60-64	36.4	38.2	34.5
65-69	68.4	70.0	66.4
70-74	84.6	76.4	94.0
75-79	130.6	136.7	122.7
80-84	152.9	139.8	170.9
85+	218.9	191.9	272.7

*Rate per 1000 live births.

Table 3.5: Death Rates by Area, Age, and Sex, 1984
(per 1000 population)

Age	MCH-FP area			Comparison area		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	13.4	13.3	13.5	17.3	16.7	18.0
Under 1 year*	114.8	120.3	109.2	127.1	132.9	121.1
Under 1 month*	57.9	61.5	54.3	71.4	79.2	63.4
1-5 months*	37.5	38.8	36.2	33.7	35.4	32.0
6-11 months*	19.4	20.1	18.8	21.9	18.3	25.7
1-4 years	23.1	16.7	30.3	39.2	31.1	48.4
1	37.4	30.1	45.4	53.8	46.2	62.0
2	26.0	16.8	35.6	51.0	41.0	61.8
3	14.5	8.2	21.4	33.0	20.8	47.5
4	13.5	10.7	16.8	17.4	15.6	19.5
5-9	3.9	3.1	4.7	4.8	3.5	6.2
10-14	0.7	0.6	0.8	1.6	1.9	1.4
15-19	1.7	1.0	2.4	1.4	1.2	1.6
20-24	2.6	1.7	3.4	1.7	1.0	2.4
25-29	2.7	2.7	2.8	2.9	0.9	4.9
30-34	2.7	2.0	3.4	3.4	3.9	2.9
35-39	2.6	3.2	2.1	2.0	1.7	2.3
40-44	3.8	6.1	2.0	4.5	6.0	3.4
45-49	6.4	8.4	4.5	8.2	7.5	8.9
50-54	10.3	12.0	8.5	13.5	17.0	10.0
55-59	25.8	32.7	17.9	23.9	21.6	26.4
60-64	39.2	42.2	35.6	33.7	33.9	33.6
65-69	59.2	53.8	65.8	77.6	86.5	67.1
70-74	80.2	70.3	91.9	89.4	83.2	96.2
75-79	120.7	128.4	110.2	141.0	146.3	134.9
80-84	150.5	121.4	190.5	155.6	161.1	148.1
85+	250.0	238.1	272.7	161.9	111.1	272.7

*Rate per 1000 live births.

Table 3.6: Abridged Life Table, 1984

Age (years)	$1000 \cdot nq_x$	l_x	$n \cdot L_x$	e^o_x
0	121.5	100000	91204	50.7
1	45.0	87851	85516	56.6
2	38.6	83894	82275	58.3
3	23.8	80656	79695	59.6
4	15.5	78734	78125	60.1
5	21.4	77517	383742	60.0
10	5.7	75854	378277	56.2
15	7.8	75423	375757	51.6
20	10.7	74834	372321	46.9
25	14.0	74032	367770	42.4
30	15.0	72997	362457	38.0
35	11.5	71902	357598	33.5
40	20.5	71073	352009	28.9
45	35.9	69620	342302	24.4
50	57.9	67118	326545	20.2
55	117.4	63231	298677	16.3
60	167.7	55806	256776	13.1
65	293.0	46448	198967	10.3
70	349.7	32837	135725	8.4
75	488.6	21353	79913	6.6
80	545.7	10921	38985	5.6
85+	1000.0	4961	22667	4.6

Table 3.7: Abridged Life Tables by Sex, 1984

Age	Males				Females			
	$1000 n q_x$	l_x	$n L_x$	e_x^O	$1000 n q_x$	l_x	$n L_x$	e_x^O
0	127.2	100000	90791	51.9	115.7	100000	91626	49.3
1	37.9	87280	85329	58.4	52.8	88433	85676	54.7
2	29.3	83974	82744	59.7	48.4	83760	81734	56.8
3	14.8	81514	80912	60.5	34.2	79708	78345	58.6
4	13.2	80310	79779	60.4	18.1	76983	76287	59.7
5	16.5	79248	393228	60.2	26.9	75591	373253	59.8
10	6.0	77944	388637	56.1	5.3	73559	366889	56.4
15	5.5	77475	386397	51.4	10.0	73166	364137	51.6
20	6.8	77051	384041	46.7	14.6	72432	359715	47.1
25	9.0	76525	381032	42.0	19.0	71373	353734	42.8
30	14.3	75834	376666	37.4	15.7	70018	347557	38.6
35	12.3	74749	371628	32.9	10.9	68921	342870	34.1
40	29.8	73832	364073	28.2	13.2	68168	338771	29.5
45	39.1	71635	351677	24.0	32.9	67271	331235	24.8
50	69.8	68833	332963	19.9	45.3	65060	318467	20.6
55	128.5	64029	300732	16.2	104.8	62116	295301	16.4
60	175.0	55799	255741	13.2	159.6	55608	256974	13.1
65	298.9	46035	196484	10.4	285.9	46734	201065	10.0
70	321.4	32273	135838	8.8	380.6	33374	135145	8.0
75	505.0	21901	80895	6.8	467.1	20673	78669	6.4
80	512.9	10841	39786	6.2	587.7	11018	37877	4.9
85 +	1000.0	5281	27516	5.2	1000.0	4543	16657	3.7

Figure 3.1: Probability of Survival from Birth to Age (x) by Sex, 1984

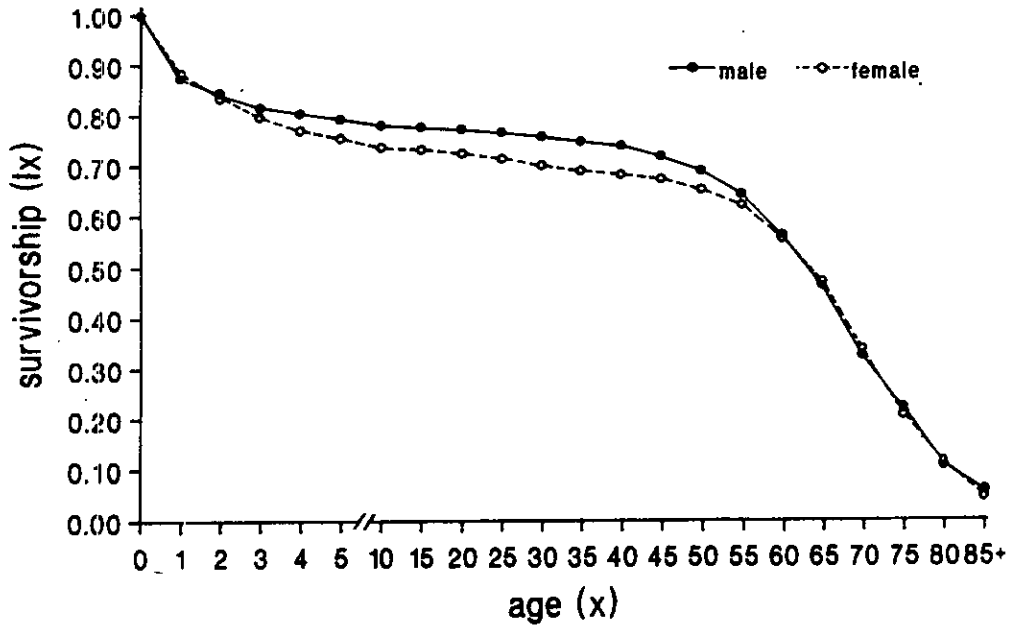


Table 3.8: Abridged Life Tables by Area, 1984

Age (years)	MCH-FP area				Comparison area			
	1000_nq_x	l_x	nL_x	e^o_x	1000_nq_x	l_x	nL_x	e^o_x
0	114.8	100000	91689	53.2	127.1	100000	90797	48.5
1	36.7	88521	86605	59.1	52.4	87289	84592	54.6
2	25.6	85274	84181	60.3	49.8	82717	80659	56.6
3	14.4	83088	82491	60.9	32.5	78600	77324	58.5
4	13.4	81894	81345	60.7	17.3	76048	75391	59.5
5	19.3	80796	400371	60.6	23.6	74734	369594	59.5
10	3.4	79233	395545	56.7	8.2	72971	363485	55.9
15	8.5	78963	393265	51.9	7.0	72377	360711	51.3
20	12.8	78290	389132	47.3	8.5	71868	357931	46.6
25	13.6	77285	384009	42.9	14.4	71257	353914	42.0
30	13.5	76238	378817	38.4	16.6	70230	348452	37.6
35	12.8	75210	373819	33.9	10.1	69062	343701	33.2
40	18.7	74243	368009	29.3	22.3	68365	338299	28.5
45	31.6	72854	358938	24.8	40.4	66840	327939	24.1
50	50.5	70551	344480	20.6	65.5	64141	310916	20.0
55	121.6	66990	315768	16.5	113.0	59941	283774	16.2
60	179.2	58847	269105	13.4	156.2	53168	246142	12.9
65	258.8	48304	211206	10.8	325.6	44865	188339	9.8
70	334.6	35805	149449	8.7	365.7	30258	123754	8.3
75	461.3	23826	91066	6.7	516.2	19192	70246	6.7
80	540.0	12836	46050	5.4	552.4	9286	32958	6.3
85+	1000.0	5905	23620	4.0	1000.0	4156	25672	6.2

Table 3.9: Abridged Life Tables for MCH-FP Area by Sex, 1984

Age (years)	Males				Females			
	1000_nq_x	l_x	nL_x	e^o_x	1000_nq_x	l_x	nL_x	e^o_x
0	120.3	100000	91289	54.0	109.2	100000	92090	52.2
1	29.6	87968	86429	60.4	44.4	89075	86741	57.6
2	16.7	85360	84647	61.2	35.0	85118	83628	59.2
3	8.2	83935	83591	61.3	21.2	82138	81267	60.3
4	10.7	83247	82803	60.8	16.6	80396	79727	60.6
5	15.6	82358	408833	60.4	23.5	79058	390998	60.7
10	2.9	81077	404838	56.3	3.9	77202	385312	57.1
15	4.8	80839	403303	51.5	12.2	76899	382340	52.3
20	8.7	80451	400650	46.7	16.9	75965	376855	47.9
25	13.3	79755	396321	42.1	13.8	74679	371022	43.7
30	9.8	78692	391671	37.6	17.0	73650	365365	39.2
35	16.0	77917	386707	33.0	10.4	72401	360267	34.9
40	30.0	76671	378028	28.5	9.8	71648	356616	30.2
45	41.1	74370	364760	24.3	22.4	70944	351042	25.5
50	58.5	71313	346861	20.2	41.5	69353	340083	21.0
55	151.6	67143	311588	16.3	85.9	66473	319004	16.8
60	191.5	56963	258635	13.7	164.1	60762	280114	13.1
65	238.1	46050	203786	11.4	283.4	50790	218843	10.2
70	299.9	35088	149676	9.1	373.7	36397	148070	8.2
75	482.6	24566	92366	6.9	430.8	22795	89114	6.6
80	463.3	12710	48506	6.1	629.0	12975	42847	4.7
85+	1000.0	6822	28652	4.2	1000.0	4813	17649	3.7

Table 3.10: Abridged Life Tables for Comparison Area by Sex, 1984

Age (years)	Males				Females			
	1000_nq_x	l_x	nL_x	e^o_x	1000_nq_x	l_x	nL_x	e^o_x
0	132.9	100000	90379	50.1	121.1	100000	91229	46.8
1	45.2	86711	84400	56.8	60.1	87886	84767	52.2
2	40.1	82794	81132	58.4	59.9	82600	80125	54.6
3	20.6	79471	78652	59.9	46.5	77650	75846	57.0
4	15.5	77833	77230	60.1	19.3	74043	73327	58.8
5	17.4	76626	380057	60.0	30.3	72612	357962	58.9
10	9.3	75295	374865	56.1	6.9	70410	350930	55.7
15	6.2	74596	371919	51.6	7.8	69924	348360	51.0
20	5.0	74135	369830	46.9	12.1	69377	344943	46.4
25	4.6	73768	368063	42.1	24.1	68535	338854	42.0
30	19.1	73430	363905	37.3	14.2	66882	332212	37.9
35	8.4	72025	358735	32.9	11.5	65930	327897	33.4
40	29.5	71422	352235	28.2	16.7	65171	323339	28.8
45	37.0	69315	340625	24.0	43.6	64082	313924	24.2
50	81.8	66747	320975	19.8	48.9	61288	299481	20.2
55	102.8	61288	291650	16.3	124.1	58293	274414	16.1
60	156.9	54987	254467	12.9	155.4	51059	236473	13.0
65	356.0	46361	190842	9.8	288.3	43124	185262	9.9
70	344.8	29858	123805	8.8	387.5	30692	123697	7.9
75	529.4	19562	70811	7.1	500.3	18798	69699	6.4
80	565.2	9205	32302	7.4	534.1	9394	33871	5.3
85+	1000.0	4002	36019	9.0	1000.0	4376	16047	3.7

Table 3.11: Deaths by Age and Month of Death, 1984

Month	Age at death				
	All ages	Under 1 month	1 - 11 months	1 - 4 years	5 years and over
January	326	38	47	94	147
February	215	28	35	40	112
March	227	20	30	57	120
April	265	39	47	65	114
May	259	29	35	98	97
June	226	22	27	79	98
July	252	20	28	70	134
August	193	36	22	43	92
September	231	46	21	57	107
October	227	54	18	59	96
November	284	55	29	52	148
December	250	40	29	42	139
Total	2955	427	368	756	1404

Table 3.12: Male Deaths by Cause and Age, 1984

Cause	All ages	Age at death (years)																		
		<1 yr.	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
All causes	1461	420	307	44	16	11	14	12	14	9	23	30	51	74	84	101	82	86	45	38
Measles	49	12	36	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetanus	112	97	11	-	1	-	-	-	-	-	-	1	1	-	1	-	-	-	-	-
Drowning	41	3	22	7	3	-	2	-	1	-	-	-	-	-	2	1	-	-	-	-
Murder	3	1	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-
Suicide	3	-	-	-	-	-	1	-	-	1	-	-	-	1	-	-	-	-	-	-
Diarrhoea acute	68	18	20	4	1	1	1	-	1	-	2	2	1	3	3	2	2	2	5	-
Diarr. chronic*	27	6	11	-	-	1	-	-	-	1	-	-	2	-	1	1	1	1	2	-
Dysentery acute	84	15	42	5	2	-	1	-	1	-	-	-	1	-	3	2	6	4	1	1
Dys. chronic*	178	4	68	2	2	1	2	-	-	1	1	4	6	9	17	19	14	17	8	3
Childbirth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jaundice	23	1	6	-	2	2	1	1	-	1	1	1	1	2	2	1	1	-	-	-
Other	275	164	21	5	2	-	1	3	1	-	5	7	7	12	5	15	9	8	5	5
G.I. tract	46	1	-	1	-	-	1	-	3	2	4	1	7	5	5	10	3	1	2	-
Respiratory	186	54	23	3	2	1	1	4	1	3	3	8	6	14	18	14	9	12	3	7
Heart disease	19	-	-	-	-	-	-	1	3	-	1	-	2	2	2	4	1	3	-	-
Liver disease	7	-	1	-	-	-	-	1	-	-	-	-	3	-	1	-	-	-	1	-
Veneral disease	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Skin disease	8	3	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E.N.T. disease	5	2	1	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-
Cholera proven	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oedema (dropsy)	76	2	9	-	-	-	-	1	1	-	1	-	3	7	4	13	8	12	9	6
Rheumatism	51	2	3	-	-	-	-	-	-	-	-	2	2	4	5	9	9	5	5	5
Accident	10	1	1	-	1	2	-	-	1	-	2	-	-	-	1	1	-	-	-	-
Old age	40	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2	11	11	4	9
Fever(all forms)	100	20	26	14	-	3	3	-	-	-	1	-	6	10	3	5	5	3	-	1
Unknown	25	13	2	-	-	-	-	-	-	-	-	-	1	1	1	1	-	5	-	1
Diabetes	3	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	-	-
Cancer	21	1	-	1	-	-	-	-	1	1	1	3	2	3	5	1	1	1	-	-

*Prolonged or recurrent illness during last two/three months.

(See Zimicki, S. et al., Cause of death reporting in Matlab, ICDDR,B Scientific Report No. 63, 1985.)

Table 3.13: Female Deaths by Cause and Age, 1984

Cause	All ages	Age at death (years)																		
		<1 yr.	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85+
All causes	1494	375	449	66	13	21	30	25	16	10	13	26	31	53	69	80	89	61	40	27
Measles	70	12	48	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetanus	79	73	3	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Drowning	42	1	35	4	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
Murder	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Suicide	2	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
Diarrhoea acute	68	17	28	6	-	-	-	1	2	-	-	-	1	2	1	1	4	3	2	-
Diarr. chronic*	22	12	-	1	-	-	-	1	-	-	-	-	-	2	-	2	1	1	1	1
Dysentery acute	114	10	71	6	1	2	2	1	-	-	-	1	-	-	4	4	4	1	6	1
Dys. chronic*	255	15	138	13	-	-	-	-	2	1	1	2	4	13	10	13	22	15	4	2
Childbirth	16	-	-	-	-	3	2	4	4	1	2	-	-	-	-	-	-	-	-	-
Jaundice	9	-	2	1	-	-	3	2	-	-	-	-	-	-	-	1	-	-	-	-
Other	265	129	40	3	4	5	4	7	2	3	5	11	8	7	12	11	3	3	3	
G.I. tract	33	1	1	2	-	1	2	-	-	-	1	3	1	5	3	6	4	2	-	1
Respiratory	143	50	28	4	1	1	5	2	1	2	-	7	4	7	10	9	4	6	1	1
Heart disease	15	-	-	1	-	1	-	-	-	1	1	1	1	3	3	-	1	-	-	-
Liver disease	7	-	1	2	-	-	1	1	-	-	-	-	1	-	-	-	-	-	-	-
Venereal disease	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-
Skin disease	10	4	2	-	-	1	-	-	-	-	-	-	-	1	1	-	-	-	-	-
E.N.T. disease	5	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cholera proven	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oedema (dropsy)	100	-	16	5	1	2	6	1	1	2	2	4	3	2	10	14	14	6	5	6
Rheumatism	37	-	-	-	-	1	-	1	1	1	1	2	-	5	3	5	6	7	2	2
Accident	10	1	1	-	-	2	-	-	-	-	-	1	-	-	-	5	3	4	8	6
Old age	34	-	-	-	-	-	-	-	-	-	-	-	-	-	5	3	4	8	8	6
Fever(all forms)	110	22	27	6	4	1	2	2	2	-	-	-	3	4	9	6	7	7	4	4
Unknown	45	27	6	1	1	1	-	2	-	-	-	-	1	1	1	-	2	-	2	-
Diabetes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cancer	2	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-

*Prolonged or recurrent illness during last two/three months.

(See Zimicki, S. et al., Cause of death reporting in Matlab, ICDDR,B Scientific Report No. 63, 1985.)

Table 3.14: Male Deaths by Cause, Age, and Area, 1984

Cause	Age at death (years)															
	All ages		Under 1		1-4		5-14		15-44		45-64		65-84		85+	
	M	C	M	C	M	C	M	C	M	C	M	C	M	C	M	C
All causes	655	806	180	240	99	208	25	35	46	37	132	107	143	171	30	8
Measles	13	36	7	5	5	131	1	-	-	-	-	-	-	-	-	-
Tetanus	30	82	27	70	3	8	-	1	-	-	-	3	-	-	-	-
Drowning	20	21	2	1	10	12	6	4	1	2	1	1	-	1	-	-
Murder	2	1	1	-	-	-	-	-	1	-	-	1	-	-	-	-
Suicide	1	2	-	-	-	-	-	-	1	1	-	1	-	-	-	-
Diarrhoea acute	31	37	11	7	8	12	2	3	-	5	6	3	4	7	-	-
Diarr. chronic*	8	19	1	5	5	6	-	-	-	2	1	2	1	4	-	-
Dysentery acute	27	57	6	9	13	29	2	5	1	1	1	3	4	9	-	1
Dys. chronic*	71	107	1	3	24	44	12	2	4	1	18	18	20	38	2	1
Childbirth	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Jaundice	10	13	1	-	1	5	-	2	4	2	3	3	1	1	-	-
Other	137	138	74	90	9	12	4	3	6	4	18	13	22	15	4	1
G.I. tract	30	16	1	-	-	-	1	-	6	4	13	5	9	7	-	-
Respiratory	84	102	24	30	6	17	1	4	7	6	26	20	14	24	6	1
Heart disease	10	9	-	-	-	-	-	-	3	2	4	2	3	5	-	-
Liver disease	5	2	-	-	-	1	-	-	1	-	3	1	1	-	-	-
Venereal disease	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Skin disease	4	4	3	-	1	3	-	1	-	-	-	-	-	-	-	-
E.N.T. disease	2	3	-	2	1	-	-	-	-	-	-	1	1	-	-	-
Cholera (proven)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Oedema (dropsy)	33	43	1	1	3	6	-	-	-	3	5	9	20	22	4	2
Rheumatism	30	21	1	1	1	2	-	-	-	-	9	4	14	14	5	-
Accident	7	3	-	-	1	-	1	-	3	2	1	-	1	-	-	-
Old age	29	11	-	-	-	-	-	-	-	-	2	1	20	8	7	2
Fever(all forms)	43	57	12	8	7	19	5	9	6	1	9	10	3	10	1	-
Unknown	15	10	7	6	1	1	-	-	-	-	3	-	3	3	1	-
Diabetes	2	1	-	-	-	-	-	-	-	-	2	-	-	1	-	-
Cancer	10	11	-	1	-	-	-	1	2	1	7	6	1	2	-	-

*Prolonged or recurrent illness during last two/three months.

(See Zimicki, S. et al., Cause of death reporting in Matlab, ICDDR,B Scientific Report No. 63, 1985.)

M = MCH - FP area.

C = Comparison area.

Table 3.15: Female Deaths by Cause, Age, and Area, 1984

Cause	Age at death (years)															
	All ages		Under 1		1-4		5-14		15-44		45-64		65-84		85+	
	M	C	M	C	M	C	M	C	M	C	M	C	M	C	M	C
All causes	648	846	163	212	161	288	34	45	59	56	79	100	134	136	18	9
Measles	16	54	2	10	9	39	5	5	-	-	-	-	-	-	-	-
Tetanus	21	58	20	53	-	3	1	1	-	1	-	-	-	-	-	-
Drowning	13	29	-	1	11	24	1	3	-	1	-	-	1	-	-	-
Murder	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Suicide	2	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
Diarrhoea acute	37	31	9	8	14	14	3	3	3	-	3	1	5	5	-	-
Diarr. chronic*	6	16	3	9	-	-	-	1	-	1	-	2	2	3	1	-
Dysentery acute	34	80	3	7	16	55	2	5	4	1	2	3	7	8	-	-
Dys. chronic*	108	147	9	6	56	82	6	7	2	2	9	20	24	30	2	-
Childbirth	5	11	-	-	-	-	-	-	5	11	-	-	-	-	-	-
Jaundice	4	5	-	-	1	1	-	1	3	2	-	1	-	-	-	-
Other	133	132	61	68	18	22	4	3	10	16	20	11	19	10	1	2
G.I. tract	13	20	1	-	-	1	1	1	3	1	3	9	5	7	-	1
Respiratory	63	80	26	24	9	19	1	4	4	7	13	15	10	10	-	1
Heart disease	5	10	-	-	-	-	-	-	1	1	2	5	2	4	-	-
Liver disease	1	6	-	-	-	1	1	1	-	1	-	1	-	1	-	-
Venereal disease	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Skin disease	7	3	3	1	1	1	-	-	1	-	-	-	2	1	-	-
E.N.T. disease	4	1	-	1	2	-	-	-	-	-	2	-	-	-	-	-
Cholera (proven)	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
Oedema (dropsy)	61	39	-	-	10	6	2	4	10	4	9	10	25	14	5	1
Rheumatism	19	18	-	-	-	-	-	-	3	2	5	5	9	11	2	-
Accident	4	6	1	-	-	1	-	-	1	1	2	-	-	4	-	-
Old age	19	15	-	-	-	-	-	-	-	-	2	3	12	11	5	1
Fever(all forms)	43	67	10	12	9	18	5	5	5	2	3	13	9	15	2	2
Unknown	28	17	15	12	5	1	1	1	2	1	3	-	2	2	-	-
Diabetes	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cancer	1	1	-	-	-	-	-	-	-	-	1	1	-	-	-	-

*Prolonged or recurrent illness during last two/three months.

(See Zimicki, S. et al., Cause of death reporting in Matlab, ICDDR,B Scientific Report No. 63, 1985.)

M = MCH-FP area.

C = Comparison area.

CHAPTER 4

FERTILITY

There were 7,392 reported pregnancies in 1984 in the Matlab DSS area, of which 6,479 resulted in live births and 913 resulted in miscarriages or stillbirths, yielding a ratio of 141 foetal losses per 1,000 live births (Table 4.1). Stillbirths are defined as foetal losses of seven months gestation or more; if the gestation period is less than seven months, the loss is designated as a miscarriage, either induced or spontaneous. The number of pregnancies in 1984 was less than the number reported for 1982 and 1983 by 1,055 and 721 respectively. The reported foetal losses in 1984, however, exceeded those of 1982 and 1983 by 46 and 54.

Seasonality of births, shown in Table 4.2 and Figure 4.1, had the same pattern in 1984 as in previous years, with a larger number of births in October, November, and December. Table 4.8 presents the 1984 age-specific fertility rates. Fertility reached its peak at ages 20-24. The general fertility rate was 144 per thousand women aged 15-49. All fertility rates were lower in 1984 than in 1982 and 1983 in both areas; these fertility indices were lower in the MCH-FP area than in the Comparison area (Table 4.9).

Figure 4.1: Number of Births and Deaths by Month, 1984

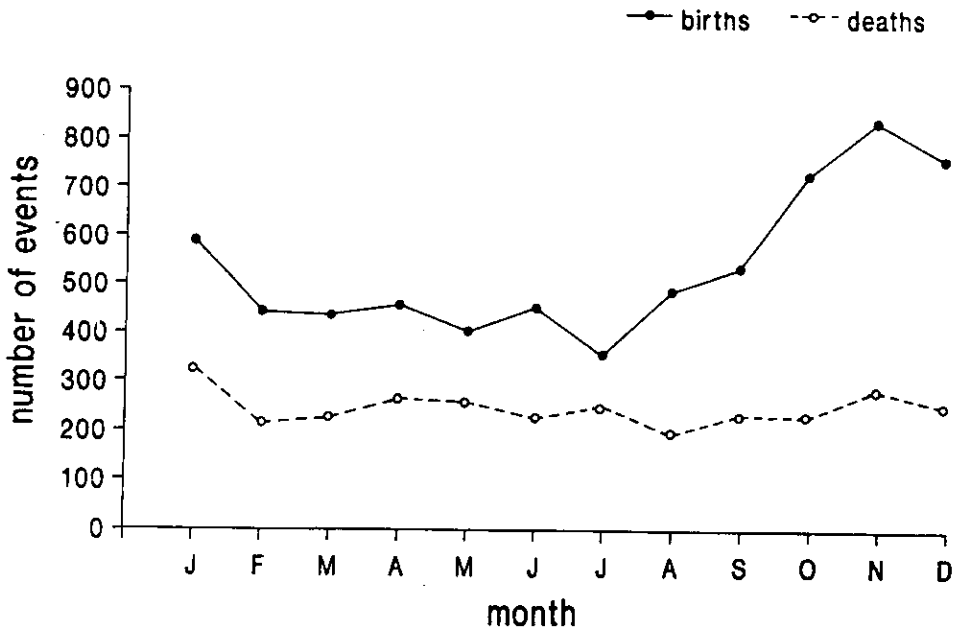


Table 4.1: Number and Rates of Pregnancy Outcomes by Type and Area, 1984

Type of pregnancy outcome	Both areas		MCH-FP area		Comparison area	
	Number	Rate	Number	Rate	Number	Rate
Total pregnancies*	7392	162.2	3296	141.0	4096	184.7
Live birth pregnancies**	6479	876.5	2953	895.9	3526	860.8
Fetal wastage pregnancies**	913	123.5	343	104.1	570	139.2
Early (miscarriages)	676	91.5	242	73.4	434	106.0
Late (still - births)	237	32.1	101	30.6	136	33.2
<hr/>						
Twin birth pregnancies	77		38		39	
Live birth pregnancies	72		38		34	
Two live births	65		35		30	
One live birth	7		3		4	
Still - birth pregnancies	4		-		4	
Miscarriage pregnancies	1		-		1	

* Rate per 1,000 women of age 15-49 years.

** Rate per 1,000 total pregnancies.

Table 4.2: Pregnancy Outcomes by Month, 1984

Month	Pregnancy outcome					No. of live born children		
	All	Miscarriage		Still - birth	Live - birth*	Both sexes	Males	Females
		Induced	Spontaneous					
All months	7392	222	454	237	6479	6544	3302	3242
January	663	20	32	20	591	596	309	287
February	489	13	18	15	443	444	245	199
March	503	19	28	19	437	442	212	230
April	539	19	41	21	458	464	244	220
May	496	24	61	7	404	405	209	196
June	541	19	53	17	452	458	244	214
July	435	20	49	11	355	360	188	172
August	562	24	41	12	485	495	248	247
September	597	11	30	22	534	538	258	280
October	812	19	39	28	726	732	352	380
November	923	17	39	31	836	849	424	425
December	832	17	23	34	758	761	369	392

*For any multiple pregnancy, the outcome is recorded as live birth if at least one of the issue is live born.

Table 4.3: Number of Women who had Live Births by Age and Number of Previous Pregnancies, 1984

Age (years)	Total	Number of previous pregnancies*											Mean No. of pregnancies
		0	1	2	3	4	5	6	7	8	9	10+	
All ages	6479	1295	1234	979	778	637	491	374	276	175	116	124	2.8
Under 15	5	3	2	-	-	-	-	-	-	-	-	-	0.4
15-19	924	664	212	40	5	1	2	-	-	-	-	-	0.3
20-24	2362	583	868	584	211	85	24	4	1	1	1	-	1.3
25-29	1486	45	131	307	422	322	171	59	20	7	1	1	3.2
30-34	934	-	15	42	123	177	213	184	111	45	15	9	5.0
35-39	517	-	3	3	14	44	68	99	95	85	58	48	6.8
40-44	227	-	2	2	3	6	11	26	47	35	36	59	7.8
45+	24	-	1	1	-	2	2	2	2	2	5	7	7.4

*Present birth excluded.

Table 4.4: Number of Women who had Stillbirths by Age and Number of Previous Pregnancies, 1984

Age (years)	Total	Number of previous pregnancies*										
		0	1	2	3	4	5	6	7	8	9	10+
All ages	237	64	35	23	24	24	21	13	15	7	2	9
Under 15	1	1	-	-	-	-	-	-	-	-	-	-
15-19	29	24	5	-	-	-	-	-	-	-	-	-
20-24	82	32	25	15	5	2	3	-	-	-	-	-
25-29	55	4	5	6	15	14	7	1	3	-	-	-
30-34	42	2	-	1	4	8	10	8	5	-	1	3
35-39	15	-	-	1	-	-	-	2	5	5	-	2
40-44	11	1	-	-	-	-	1	2	2	2	1	2
45+	2	-	-	-	-	-	-	-	-	-	-	2

*Present stillbirth excluded.

Table 4.5: Number of Women who had Induced Miscarriages by Age and Number of Previous Pregnancies, 1984

Age (years)	Total	Number of previous pregnancies*										
		0	1	2	3	4	5	6	7	8	9	10+
All ages	222	53	21	15	13	26	24	17	7	16	17	13
Under 15	-	-	-	-	-	-	-	-	-	-	-	-
15-19	40	34	6	-	-	-	-	-	-	-	-	-
20-24	46	17	9	11	5	2	1	1	-	-	-	-
25-29	45	2	6	4	4	16	8	3	1	1	-	-
30-34	32	-	-	-	2	5	9	7	2	4	2	1
35-39	32	-	-	-	1	2	3	3	2	6	9	6
40-44	23	-	-	-	1	1	2	2	2	5	5	5
45+	4	-	-	-	-	-	1	1	-	-	1	1

*Present miscarriage excluded.

Table 4.6: Number of Women who had Spontaneous Miscarriages by Age and Number of Previous Pregnancies, 1984

Age (years)	Total	Number of previous pregnancies*										
		0	1	2	3	4	5	6	7	8	9	10+
All ages	454	93	71	56	58	42	37	21	28	17	15	16
Under 15	-	-	-	-	-	-	-	-	-	-	-	-
15-19	85	58	23	-	1	2	-	-	1	-	-	-
20-24	130	30	40	30	23	2	4	1	-	-	-	-
25-29	97	4	8	22	28	26	4	1	3	-	1	-
30-34	71	-	-	4	6	10	17	9	12	6	1	6
35-39	42	-	-	-	-	2	8	8	8	5	7	4
40-44	25	1	-	-	-	-	4	2	3	4	6	5
45+	4	-	-	-	-	-	-	-	1	2	-	1

*Present miscarriage excluded.

Table 4.7: Number of Women who had Live Births by Age and Number of Surviving Children, 1984

Age (years)	Total	Number of surviving children*											Mean no. surviving children
		0	1	2	3	4	5	6	7	8	9	10+	
All ages	6479	1699	1497	1135	791	556	394	233	109	41	18	6	2.0
Under 15	5	5	-	-	-	-	-	-	-	-	-	-	0.0
15-19	924	758	149	12	4	1	-	-	-	-	-	-	0.2
20-24	2382	838	997	447	62	13	4	-	1	-	-	-	0.8
25-29	1486	83	291	508	397	167	37	2	-	-	-	-	2.3
30-34	934	14	49	133	249	236	169	71	13	-	-	-	3.6
35-39	518	-	8	27	63	103	139	98	56	18	5	1	4.9
40-44	227	-	3	7	15	33	43	56	33	21	11	5	5.7
45+	24	1	-	1	1	3	2	6	6	2	2	-	5.8

*Present birth excluded.

Table 4.8: Age-specific Fertility Rates and Indices, 1984

Age (years)	Number of live births	Number of women*	ASFR (per 1000)
All ages	6544	45560	143.6
15 - 19 **	933	10412	89.6
20 - 24	2379	10194	233.4
25 - 29	1501	6524	230.1
30 - 34	947	5073	186.7
35 - 39	527	4554	115.7
40 - 44	233	4907	47.5
45 - 49 ***	24	3896	6.2
Total Fertility Rate (TFR)		4545	
General Fertility Rate (GFR)		144	
Gross Reproduction Rate (GRR)		2252	
Net Reproduction Rate (NRR)		1589	

* Mid-year population.

** Births to mothers under age 15 were included in this group.

*** Births to mothers age 50 and over were included in this group.

Table 4.9: Age-specific Fertility Rates and Indices by Area, 1984

Age (years)	MCH - FP area		Comparison area	
	Number of live births	ASFR (per 1000)	Number of live births	ASFR (per 1000)
All ages	2988	127.8	3556	160.3
15 - 19*	425	79.9	508	99.7
20 - 24	1161	220.0	1218	247.8
25 - 29	645	198.8	856	261.0
30 - 34	423	160.7	524	214.7
35 - 39	226	94.4	301	139.3
40 - 44	99	39.1	134	56.4
45 - 49**	9	4.5	15	7.9
TFR = 3987		TFR = 5134		
GFR = 128		GFR = 160		
GRR = 1991		GRR = 2526		
NRR = 1475		NRR = 1704		

*Births to mothers under age 15 were included in this group.

**Births to mothers age 50 and over were included in this group.

Table 4.10: Age-specific Fertility Rates and Indices for MCH--FP Area by Block, 1984

Age (years)	Block A		Block B	
	Number of live births	ASFR (per 1000)	Number of live births	ASFR (per 1000)
All ages	726	118.7	838	141.9
15-19*	106	75.6	114	83.3
20-24	279	193.6	320	247.9
25-29	167	188.1	177	220.4
30-34	90	138.9	120	181.5
35-39	64	93.6	65	102.5
40-44	17	27.9	38	60.8
45-49**	3	6.8	4	7.6
	TFR = 3622		TFR = 4521	
	GFR = 119		GFR = 142	
	GRR = 1809		GRR = 2257	

*Births to mothers under age 15 were included in this group.

**Births to mothers age 50 and over were included in this group.

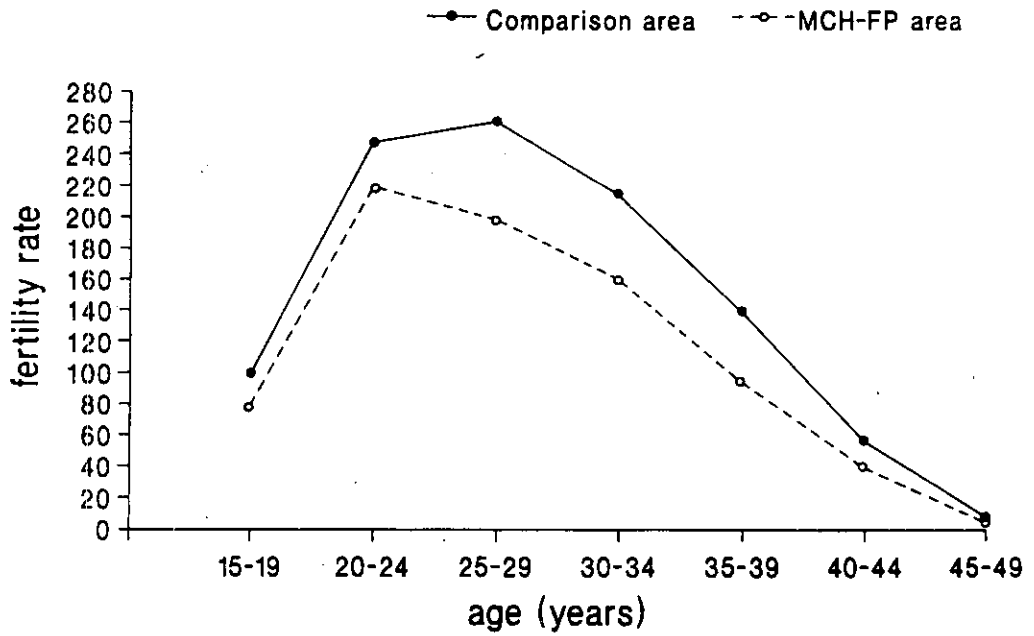
Table 4.10 (cont.): Age-specific Fertility Rates and Indices for MCH-FP Area by Block, 1984

Age (years)	Block C		Block D	
	Number of live births	ASFR (per 1000)	Number of live births	ASFR (per 1000)
All ages	816	132.7	608	116.5
15-19*	116	84.9	89	75.2
20-24	316	232.0	246	207.8
25-29	169	198.1	132	188.6
30-34	129	171.1	84	147.6
35-39	61	106.8	36	71.4
40-44	24	33.4	20	34.5
45-49**	1	1.9	1	2.0
	TFR =	4141	TFR =	3636
	GFR =	133	GFR =	117
	GRR =	2068	GRR =	1816

*Births to mothers under age 15 were included in this group.

**Births to mothers age 50 and over were included in this group.

Figure 4.2: Age-specific Fertility Rates by Area, 1984



CHAPTER 5

MARRIAGE AND DIVORCE

In 1984, 2,874 marriages were registered, in which 2,211 men and 2,424 women were married for the first time (Tables 5.1 and 5.2). Of all the registered marriages, 40 percent of the men were married at the age of 25-29 years and 63 percent of the women were married at the age of 15-19 years. The median age at first marriage for both men and women remained the same as that reported in 1983.

The distribution of marriages and divorces by month (Table 5.6 and Figure 5.1) shows a seasonal variation which was more marked than in that of the previous year; the number of marriages ranged from 128 in April to 391 in March, and number of divorces ranged from 23 in May to 54 in January and February.

Table 5.1: Groom's Age at Marriage by Previous Marital Status, 1984

Age (years)	Previous marital status									
	All grooms		Single		Married		Widowed		Divorced	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All ages	2874	100.0	2211	100.0	135	100.0	154	100.0	374	100.0
10-14	2	0.1	2	0.1	-	-	-	-	-	-
15-19	110	3.8	104	4.7	2	1.5	1	0.6	3	0.8
20-24	996	34.7	870	39.3	16	11.9	13	8.4	197	25.9
25-29	1145	39.8	964	43.6	29	21.5	28	18.2	124	33.2
30-34	425	14.8	253	11.4	30	22.2	37	24.0	105	28.1
35-39	91	3.2	17	0.8	24	17.8	24	15.6	26	7.0
40-44	52	1.8	-	-	21	15.6	22	14.3	9	2.4
45-49	23	0.8	-	-	8	5.9	9	5.8	6	1.6
50-54	15	0.5	-	-	3	2.2	10	6.5	2	0.5
55-59	8	0.3	1	0.0	1	0.7	5	3.2	1	0.3
60-64	3	0.1	-	-	-	-	3	1.9	-	-
65+	4	0.1	-	-	1	0.7	2	1.3	1	0.3
Median age*	25.0		25.0		34.0		34.0		27.5	
Mean age*	25.8		25.3		34.0		36.7		28.7	
Standard dev.*	5.9		3.6		8.6		10.6		6.3	

*Mean, median, and standard deviation were calculated from ungrouped data.

Table 5.2: Bride's Age at Marriage by Previous Marital Status, 1984

Age (years)	Previous marital status							
	All brides		Single		Widowed		Divorced	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All ages	2874	100.0	2424	100.0	35	100.0	415	100.0
10-14	140	4.9	138	5.7	-	-	2	0.5
15-19	1817	63.2	1684	69.5	4	11.4	129	31.1
20-24	763	26.5	560	23.1	11	31.4	192	46.3
25-29	113	3.9	38	1.6	12	34.3	63	15.2
30-34	27	0.9	3	0.1	4	11.4	20	4.8
35-39	9	0.3	1	0.0	2	5.7	6	1.4
40-44	2	0.1	-	-	-	-	2	0.5
45+	3	0.1	-	-	2	5.7	1	0.2
Median age*	18.0		18.0		25.0		21.0	
Mean age*	18.7		18.0		27.2		21.9	
Standard dev.*	3.5		2.6		9.5		4.7	

*Mean, median, and standard deviation were calculated from ungrouped data.

Table 5.3: Marriage Rates by Age and Sex, 1984

Age at marriage (years)	Marriage rates*	
	Males	Females
10-14	0.2	11.5
15-19	11.0	174.5
20-24	97.5	74.8
25-29	172.8	17.3
30-34	87.5	5.3
35-39	24.9	2.0
40-44	13.6	0.4
45-49	6.1	0.2**
50-54	4.2	-
55-59	3.0	-
60-64	1.4	-
65+	1.1	-

*Rates per 1,000 population irrespective of previous marital status.

**Women age 45 and over were included in this group.

Table 5.4: Number of Marriages by Groom's and Bride's Age at Marriage, 1984

Groom's age (years)	Bride's age (years)									
	All	Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50+
All	2874	140	1817	763	113	27	9	2	2	1
Under 15	2	2	-	-	-	-	-	-	-	-
15-19	110	19	83	8	-	-	-	-	-	-
20-24	996	66	775	150	4	1	-	-	-	-
25-29	1145	41	767	312	21	4	-	-	-	-
30-34	425	6	153	226	38	2	-	-	-	-
35-39	91	5	19	38	21	7	1	-	-	-
40-44	52	1	14	17	14	3	3	-	-	-
45-49	23	-	3	6	7	3	4	-	-	-
50-54	15	-	1	2	4	6	1	1	-	-
55-59	8	-	2	1	2	1	-	1	-	1
60-64	3	-	-	2	1	-	-	-	-	-
65+	4	-	-	1	1	-	-	-	2	-

Table 5.5: Number of Divorces by Partners' Age at Divorce, 1984

Male's age (years)	Female's age (years)									
	All	Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50+
All	469	11	193	211	36	8	6	-	1	3
Under 15	-	-	-	-	-	-	-	-	-	-
15-19	12	1	9	2	-	-	-	-	-	-
20-24	123	4	69	46	4	-	-	-	-	-
25-29	187	4	88	91	4	-	-	-	-	-
30-34	87	2	19	55	10	1	-	-	-	-
35-39	28	-	6	8	11	3	-	-	-	-
40-44	9	-	2	4	3	-	-	-	-	-
45-49	10	-	-	3	3	1	3	-	-	-
50-54	5	-	-	1	1	1	2	-	-	-
55-59	2	-	-	-	-	1	-	-	-	1
60-64	3	-	-	1	-	1	1	-	-	-
65+	3	-	-	-	-	-	-	-	1	2

Table 5.6: Marriages and Divorces by Month, 1984

Month	Marriages		Divorces	
	Number	Percent	Number	Percent
All months	2874	100.0	469	100.0
January	224	7.8	54	11.5
February	324	11.3	54	11.5
March	391	13.6	41	8.7
April	128	4.4	32	6.8
May	255	8.9	23	4.9
June	130	4.5	31	6.6
July	268	10.0	51	10.9
August	185	6.4	31	6.6
September	286	10.0	36	7.7
October	230	8.0	45	9.6
November	174	6.1	37	7.9
December	259	9.0	34	7.2

Figure 5.1: Marriages and Divorces by Month, 1984

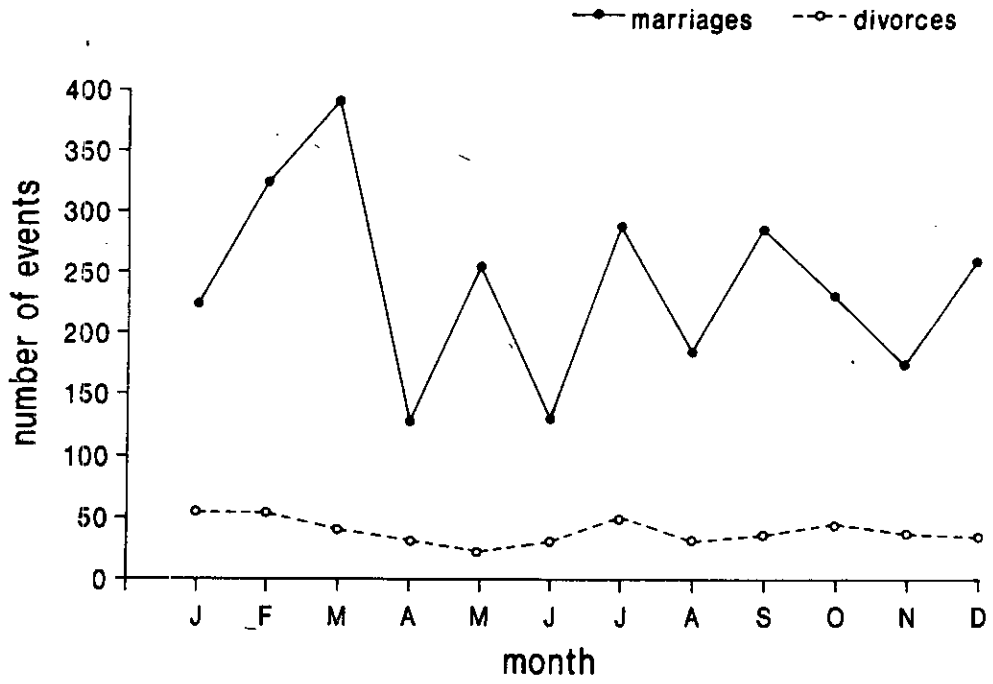


Table 5.7: Number of Divorces by Sex, Age, and Duration of Marriage, 1984

Age at divorce	Duration of marriage (months)															
	All durations		Less than 6		6-11		12-23		24-35		36-47		48-59		60+	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
All ages	469	469	76	76	69	69	122	122	71	71	42	42	31	31	58	58
Under 20	12	204	4	39	3	45	3	71	2	22	-	12	-	9	-	6
20-24	123	211	16	27	28	22	41	50	25	45	4	23	5	18	4	26
25-29	187	36	30	7	26	-	52	1	24	4	24	6	15	3	16	15
30-34	87	8	15	1	8	2	20	-	16	-	8	-	8	-	12	5
35-39	28	6	5	1	3	-	2	-	4	-	3	1	1	1	10	3
40-49	19	1	4	-	-	-	4	-	-	-	2	-	2	-	7	1
50+	13	3	2	1	1	-	-	-	-	-	1	-	-	-	9	2

CHAPTER 6

MIGRATION

An "out-migrant" is defined as a person originally listed on a DSS census as a resident, or a person who became a resident after the census by birth or in-migration, who subsequently moved out of the surveillance (DSS) area permanently. Likewise, an "in-migrant" is an individual not recorded in the census who has permanently moved into the surveillance area. Those who stay in the area continuously for at least 6 months in a year or come home at least once a month to stay overnight are treated as permanent residents.

There were 4,664 in-migrants and 8,223 out-migrants during 1984, yielding a net emigration rate of 18.5 per 1,000 population. The rate of out-migration in 1984 was markedly higher than the rates seen in previous years. The age-specific in- and out-migration rates are presented in Table 6.4 and Figure 6.1.

The highest male in- and out-migration rates, 39.8 and 69.1, respectively, were seen in the 25--29 age group. For females, the highest in- and out-migration rates were 86.3 and 104.7, respectively, in the 15-19 age group; these rates are similar to those of 1982 and 1983. The distribution of in- and out-migration by month shows a marked seasonal variation (Table 6.9 and Figure 6.2).

While the main cause of migration for males was economic ("for a better living"), moving to join a spouse was the major cause for female migration (Tables 6.5 through 6.8). A similar distribution of causes of migration for both males and females was also noted in 1982 and 1983.

Table 6.1: In- and Out-migration by Age and Sex, 1984

Age (years)	In-migration			Out-migration		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	4664	1914	2750	8223	3803	4420
Under 5	708	370	338	1199	615	584
0	113	55	58	274	140	134
1	169	86	83	296	146	150
2	164	85	79	227	127	100
3	131	72	59	207	106	101
4	131	72	59	195	96	99
5-9	425	217	208	754	388	366
10-14	370	173	197	785	392	393
15-19	1049	150	899	1526	436	1090
20-24	765	208	557	1691	658	1033
25-29	477	264	213	826	458	368
30-34	301	187	114	446	271	175
35-39	145	102	43	250	161	89
40-44	126	80	46	192	118	74
45-49	76	48	28	149	85	64
50-54	66	44	22	122	79	43
55-59	45	25	20	77	49	28
60-64	48	25	23	73	38	35
65+	63	21	42	133	55	78

Table 6.2: In-migration by Age, Sex, and Area, 1984

Age (years)	MCH-FP area			Comparison area		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	2019	791	1228	2645	1123	1522
Under 5	299	152	147	409	218	191
0	52	26	26	61	29	32
1	72	32	40	97	54	43
2	56	32	24	108	53	55
3	60	29	31	71	43	28
4	59	33	26	72	39	33
5-9	172	93	79	253	124	129
10-14	145	69	76	225	104	121
15-19	488	54	434	561	96	465
20-24	342	73	269	423	135	288
25-29	210	114	96	267	150	117
30-34	144	91	53	157	96	61
35-39	71	55	16	74	47	27
40-44	41	27	14	85	53	32
45-49	24	16	8	52	32	20
50-54	27	20	7	39	24	15
55-59	17	11	6	28	14	14
60-64	13	8	5	35	17	18
65+	26	8	18	37	13	24

Table 6.3: Out-migration by Age, Sex, and Area, 1984

Age (years)	MCH - FP area			Comparison area		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	3636	1644	1992	4587	2159	2428
Under 5	464	216	248	735	399	336
0	104	50	54	170	90	80
1	113	50	63	183	96	87
2	86	41	45	141	86	55
3	80	37	43	127	69	58
4	81	38	43	114	58	56
5 - 9	299	149	150	455	239	216
10 - 14	346	181	165	439	211	228
15 - 19	754	213	541	772	223	549
20 - 24	796	312	484	895	346	549
25 - 29	375	212	163	451	246	205
30 - 34	189	113	76	257	158	99
35 - 39	113	77	36	137	84	53
40 - 44	79	47	32	1113	71	42
45 - 49	57	30	27	92	55	37
50 - 54	46	32	14	76	47	29
55 - 59	35	21	14	42	28	14
60 - 64	33	17	16	40	21	19
65 +	50	24	26	83	31	52

Table 6.4: Age and Sex-specific Migration Rates by Direction, 1984

Age (years)	Both sexes		Males		Females	
	In	Out	In	Out	In	Out
All ages	24.2	42.7	19.6	39.0	28.9	46.5
Under 5	23.2	39.3	23.1	38.3	23.3	40.3
5-9	16.7	29.7	16.4	29.2	17.2	30.2
10-14	14.6	30.9	13.1	29.6	16.2	32.3
15-19	51.3	74.6	15.0	43.5	86.3	104.7
20-24	37.5	82.9	20.4	64.4	54.6	101.3
25-29	36.3	62.8	39.8	69.1	32.6	56.4
30-34	30.3	44.9	38.5	55.8	22.5	34.5
35-39	17.7	30.5	28.0	44.1	9.4	19.5
40-44	14.5	22.0	21.0	31.0	9.4	15.1
45-49	9.9	19.4	12.7	22.6	7.2	16.4
50-54	9.6	17.7	12.4	22.3	6.6	12.8
55-59	8.8	15.1	9.2	18.1	8.3	11.6
60-64	11.4	17.4	11.4	17.3	11.5	17.5
65+	9.5	20.0	5.7	15.0	14.1	26.2

Figure 6.1: Rate of In- and Out-migration by Sex and Age, 1984

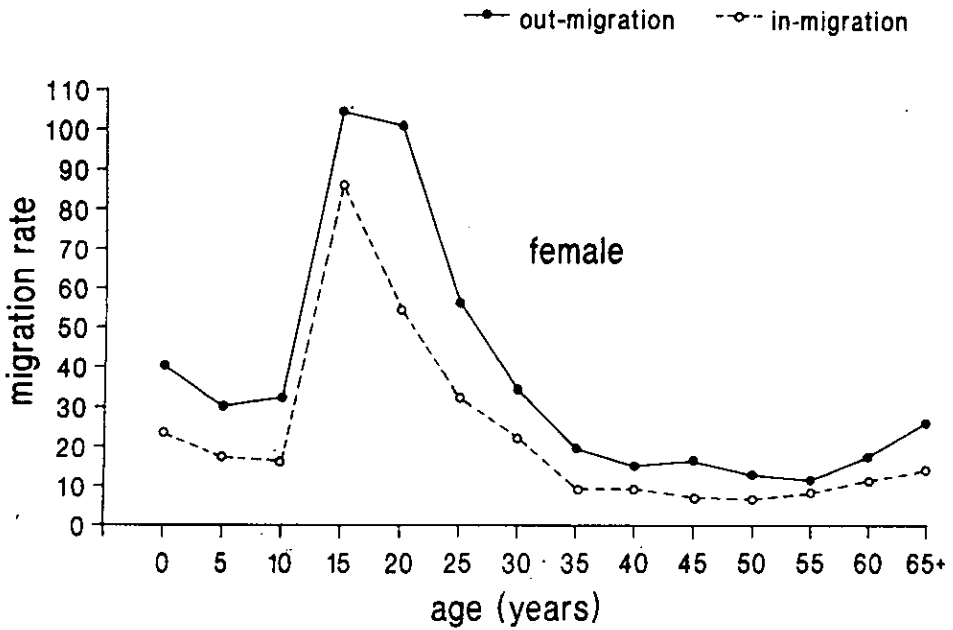
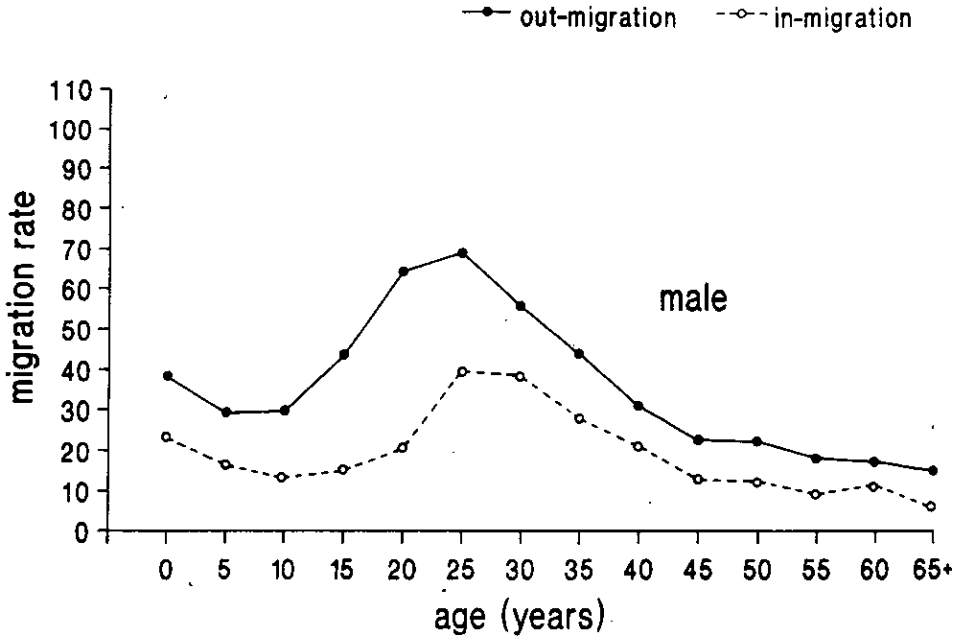


Table 6.5: Male Out-migration by Cause of Movement and Age, 1984

Cause of movement	Age (years)														
	All ages	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
All migrants	3803	615	388	392	436	657	459	271	161	118	85	79	49	38	55
1. Dependent movement															
- dependent	933	562	315	41	3	3	-	1	-	-	-	-	-	-	8
- to join with spouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- to join parents	14	5	5	3	1	-	-	-	-	-	-	-	-	-	-
- to join relatives	7	1	1	2	2	-	-	-	-	1	-	-	-	-	-
- adoption	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Independent movement															
2.1 Associated with work and living condition															
- service	1001	-	-	30	144	344	222	108	66	29	23	18	10	3	4
- work	84	-	2	21	24	16	11	5	1	2	1	-	1	-	-
- business	98	-	-	6	18	31	17	15	4	2	-	2	2	1	-
- better living	1154	17	31	209	150	135	166	119	78	70	54	43	25	24	33
- for livelihood	29	-	-	1	8	6	2	6	3	2	1	-	-	-	-
- study	196	-	20	48	50	62	14	1	1	-	-	-	-	-	-
2.2 Associated with marriage															
- marriage	7	-	-	1	2	4	-	-	-	-	-	-	-	-	-
- divorce	4	-	-	-	1	1	2	-	-	-	-	-	-	-	-
- widowhood	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- separation	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-
2.3 Return migration															
- after study	11	-	-	2	2	5	2	-	-	-	-	-	-	-	-
- after service	2	-	-	-	-	1	-	-	-	-	-	1	-	-	-
- after work	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- return home	6	1	-	1	-	2	-	-	2	-	-	-	-	-	-
- regular member of family	40	-	1	5	7	8	1	2	1	1	1	2	1	6	4
2.4 Others	20	-	-	-	3	8	5	3	-	-	-	-	1	-	-
3. Change in residence	11	-	-	2	1	1	1	-	-	2	1	2	1	-	-
4. For treatment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5. River erosion	171	23	13	16	19	29	16	9	5	8	4	11	8	4	6
6. Family affairs and to see the family	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7. Not stated	8	-	-	4	1	1	-	2	-	-	-	-	-	-	-

Table 6.6: Female Out-migration by Cause of Movement and Age, 1984

Cause of movement	Age (years)														
	All ages	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
All migrants	4420	584	367	393	1090	1032	368	175	89	74	84	43	28	35	78
1. Dependent movement															
- dependent	1362	520	300	42	76	143	94	56	39	23	23	11	8	6	21
- to join with spouse	171	-	-	2	34	85	30	9	3	4	1	1	1	-	1
- to join parents	34	8	1	7	11	4	1	2	-	-	-	-	-	-	-
- to join relatives	43	-	3	7	8	6	3	-	1	-	2	3	1	3	6
- adoption	10	9	-	-	-	-	-	-	-	-	-	-	-	-	1
2. Independent movement															
2.1 Associated with work and living condition															
- service	139	-	-	1	43	66	15	9	3	-	2	-	-	-	-
- work	67	-	2	28	17	11	4	4	-	1	-	-	-	-	-
- business	4	-	-	-	2	1	-	1	-	-	-	-	-	-	-
- better living	1174	20	24	209	243	284	139	68	30	28	29	20	16	21	43
- for livelihood	5	-	1	-	-	2	-	1	-	1	-	-	-	-	-
- study	83	-	13	26	31	13	-	-	-	-	-	-	-	-	-
2.2 Associated with marriage															
- marriage	952	1	-	36	513	337	56	7	2	-	-	-	-	-	-
- divorce	58	-	-	1	33	21	2	-	-	-	-	-	-	-	1
- widowhood	2	-	-	1	1	1	-	-	-	-	-	-	-	-	-
- separation	97	-	-	1	50	35	5	4	2	-	-	-	-	-	-
2.3 Return migration															
- after study	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- after service	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- after work	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- return home	7	1	1	1	1	2	1	-	-	-	-	-	-	-	-
- regular member of family	18	-	-	9	2	3	1	2	-	-	-	-	-	1	-
2.4 Others	6	-	-	-	3	-	1	1	1	-	-	-	-	-	-
3. Change in residence	8	1	2	-	1	1	-	1	-	1	1	-	-	-	-
4. For treatment	2	-	-	-	1	-	1	-	-	-	-	-	-	-	-
5. River erosion	170	23	18	22	20	16	13	10	8	15	6	8	2	4	5
6. Family affairs and to see the family	2	-	-	-	-	2	-	-	-	-	-	-	-	-	-
7. Not stated	6	1	2	-	-	-	2	-	-	1	-	-	-	-	-

Table 6.7: Male In-migration by Cause of Movement and Age, 1984

Cause of movement	Age (years)														
	All ages	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
All migrants	1914	370	217	173	150	208	264	187	102	90	48	44	25	25	21
1. Dependent movement															
- dependent	530	330	166	21	2	1	3	-	-	-	-	-	-	-	7
- to join with spouse	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- to join parents	15	2	4	4	1	1	1	2	-	-	-	-	-	-	-
- to join relatives	6	-	1	-	-	1	1	-	2	1	-	-	-	-	-
- adoption	5	4	-	1	-	-	-	-	-	-	-	-	-	-	-
2. Independent movement															
2.1 Associated with work and living condition															
- service	40	-	-	-	3	2	13	6	7	2	1	2	1	1	2
- work	5	-	-	-	2	2	-	1	-	-	-	-	-	-	-
- business	6	-	-	-	-	1	2	-	2	-	-	1	-	-	-
- better living	768	8	15	94	73	111	149	109	60	54	30	24	14	18	9
- for livelihood	4	-	-	1	-	1	1	-	-	-	-	-	-	1	-
- study	92	3	10	28	33	14	3	1	-	-	-	-	-	-	-
2.2 Associated with marriage															
- marriage	7	-	-	-	1	3	-	2	-	-	-	1	-	-	-
- divorce	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- widowhood	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- separation	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-
2.3 Return migration															
- after study	7	-	-	-	2	1	3	1	-	-	-	-	-	-	-
- after service	76	-	-	1	3	16	19	16	8	1	2	5	2	2	1
- after work	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- return home	13	1	-	1	3	2	4	1	1	-	-	-	-	-	-
- regular member of family	136	-	3	4	14	25	37	21	11	8	5	2	5	-	1
2.4 Others	10	-	-	1	1	2	3	1	-	1	-	1	-	-	-
3. Change in residence	10	3	1	1	-	-	-	2	-	2	1	-	-	-	-
4. For treatment	2	-	-	-	-	-	1	1	-	-	-	-	-	-	-
5. River erosion	119	19	17	16	11	14	8	7	4	7	6	5	1	3	1
6. Family affairs and to see the family	62	-	-	-	3	10	18	13	7	3	3	3	2	-	-
7. Not stated	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 6.9: In- and Out-migration by Sex and Month, 1984

Month	In-migration			Out-migration		
	Both sexes	Males	Females	Both sexes	Males	Females
January	941	436	505	1120	556	564
February	551	235	316	787	367	420
March	615	257	358	881	425	456
April	285	120	165	602	283	319
May	285	115	170	444	202	242
June	327	131	196	494	234	260
July	334	117	217	710	309	401
August	351	152	199	739	345	394
September	321	115	206	992	452	540
October	228	82	146	658	317	341
November	246	105	141	392	171	221
December	180	49	131	404	142	262
All months	4664	1914	2750	8223	3803	4420

Figure 6.2: Number of In- and Out-migrants by Sex and Month, 1984

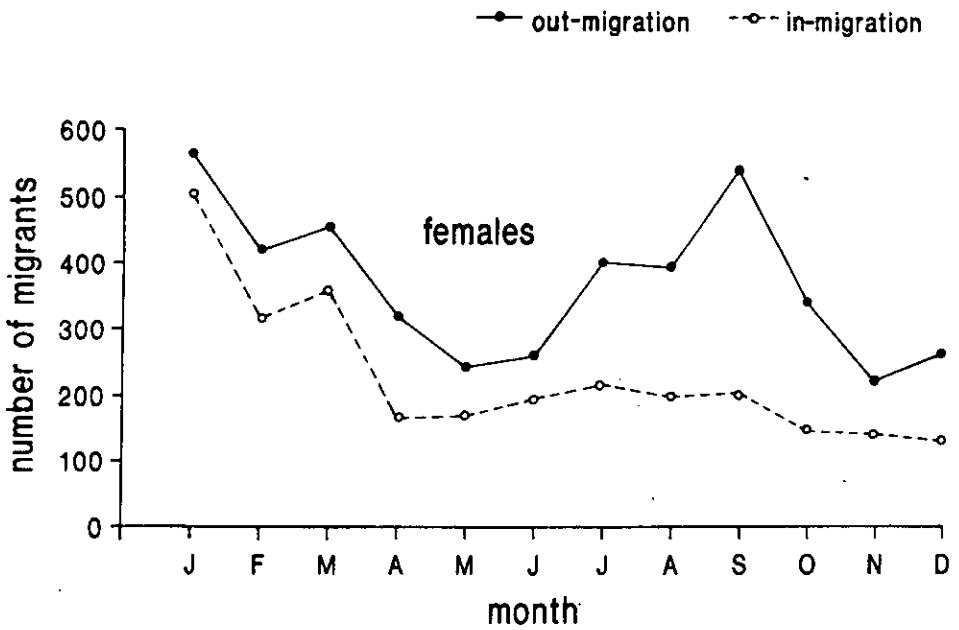
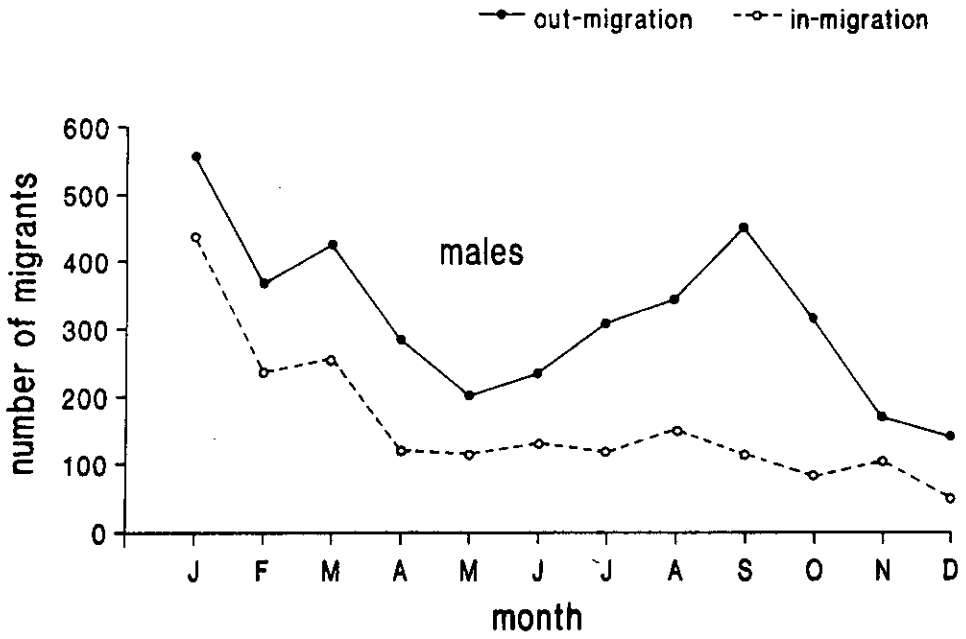


Table 6.10: In- and Out-migration by Sex and Major Categories of Reason for Migration, 1984

Reason for migration	In-migration				Out-migration			
	Males		Females		Males		Females	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
All reasons	1914	100.0	2750	100.0	3803	100.0	4420	100.0
Dependent movement	556	29.0	848	30.8	960	25.2	1620	36.7
Independent movement	1155	60.3	1772	64.4	2633	69.3	2606	59.0
- due to work and living condition	915	47.8	747	27.2	2562	67.4	1472	33.3
- due to marriage and marital disruption	8	0.4	932	33.9	12	0.3	1109	25.1
- return migration	232	12.1	93	3.4	59	1.6	25	0.6
Others*	203	10.6	130	4.7	210	5.5	194	4.4

*This category includes causes such as change in residence, treatment for diseases, river erosion, family affairs, to see the family, and some unstated causes related to independent movements.

Appendix A

Names and Codes of Villages in the DSS Area, 1984

Block*	MCH - FP area				Comparison area			
	Village code	Village name	Village code	Village name	Village code	Village name	Village code	Village name
A	D	Charmukundi	V59	Doshpara	A	Uddamdi	V78	Soladana
	W	Kaladi	V60	Suvankardi	B	Charmasua	V79	Pitambordi
	V10	Dhakirgaon	V61	Munsabdi	C	Sarderikandi	V80	Daribond
	V11	Nabakalash	V62	Shilmondi	F	Sepoykandi	V90	Narinda
	V31	Dighaldi	V72	Upadi	G	Thatalia	V95	Baluchar
	V32	Mobarakdi			J	Char Harigope	V96	Rampur
B	H	Lamchari	V26	Narayanpur	U	Baishpur	V97	Dhanagoda
	V12	Bhangerpar	V56	Pailpara	V01	Kadamtali	V98	Santoshpur
	V13	Baburpara	V82	Dhanarpar	V02	Nilokhi	V99	Baluakandi
	V19	Lakshampur	V83	Padmapal	V03	Char Nilokhi	VB1	Taitoli
	V20	Dagorpur	V85	Bhanurpara	V04	Char Pathalia	VB2	Sree Rayerchar
	V21	Khadergaon	V87	Hurmaisha	V05	Gazipur	VB3	Rayerkandi
	V22	Beloti	VB12	Nagda	V06	Fatepur	VB4	Ramdaspur
	V23	Baluchar	VB13	Naogaon	V07	Nayakandi	VB5	Thakurpara
	V24	Machuakhal			V08	Goalbhar	VB6	Sarkerpara
					V09	Naburkandi	VB7	Mirpur
C	K	Shahpur	V40	Masunda	V14	Enayetnagar	VB8	Farazikandi
	L	Tatkhana	V41	Paton	V35	Durgapur	VB9	Ramanathgonj
	M	Char Nayergaon	V42	Adhara (South)	V36	Ludhua	VB10	South Rampur
	N	Aswinpur	V43	Kanachak	V37	Charputia	D28	Bazarkhola
	O	Nayergaon	V44	Panchdona	V38	Galimkha	D29	Kirtankhola
	P	Titerkandi	V64	Kawadi	V45	Bakchar	D30	Banuakandi
	Q	Char Shibpur	V86	Adhara	V46	Silinda	D31	Harina Bazarkhola
	V27	Panchghoria	V88	Datikara	V47	Tulatali	D32	Khalisha
	V28	Khidirpur	VB11	Mehron	V48	Gangkandi	D33	Nayanagar
	V30	Harion	D100	Barogaon	V49	Harina	D34	Saidkharkandi
	V39	Gobindapur	D101	Naojan		Bhabanipara	D35	Molia Kandi
					V50	Bakharpur	D88	Sankibhanga
					V51	Induriakandi	D89	Sankibhanga
D	R	Nandalapur	V34	Satparia	V53	Chhoto Haldia		Namapara
	S	Tatua	V52	Nayakandi	V58	Mohishmari	D90	Zahirabaj
	T	Amuakanda	V54	Belaikandi	V65	Nayachar	D91	North Joypur
	V15	Bhati Rasulpur	V55	Induria	V66	Thatalia	D92	West Joypur
	V16	Binandapur	V57	Baluchar	V68	Sobahan	D93	Maizkandi
	V17	Hatighata	V63	Islamabad (East)	V69	Naobhanga	D94	Hazipur
	V18	Torkey	V67	Majlishpur	V70	South Joypur	D95	Tapaderpara
	V25	Char Pathalia	V81	Sonaterkandi	V71	Khamarpara	D96	Rampur
	V29	Shibpur (South)	V84	Shahbajkandi	V73	Sadardia	D97	Nayakandi
	V33	Shibpur (North)	V89	Islamabad (Middle)	V74	Ketundia	D98	Bara Haldia
					V75	Mukundia	D99	Mandertoli
				V76	Chosoi			

*Division by block applies only to the MCH - FP area.

Appendix B

Mid-year Population, Births, and Deaths by Village, 1984

Village code	Popula- tion	Live births	Deaths	Birth rate	Death rate
D	1477	46	16	31.1	10.8
W	2526	47	19	18.6	7.5
V10	1375	47	16	34.2	11.6
V11	1346	44	22	32.7	16.3
V31	8036	245	97	30.5	12.1
V32	2378	54	26	22.7	10.9
V59	839	23	8	27.4	9.5
V60	858	24	5	28.0	5.8
V61	638	17	6	26.6	9.4
V62	751	27	9	36.0	12.0
V72	5175	152	64	29.4	12.4
BLOCK A	25399	726	288	28.6	11.3
H	1222	38	23	31.1	18.8
V12	458	25	5	54.6	10.9
V13	715	24	17	33.6	23.8
V19	3123	98	36	31.4	11.5
V20	978	46	11	47.0	11.2
V21	459	11	6	24.0	13.1
V22	579	18	7	31.1	12.1
V23	581	16	6	27.5	10.3
V24	2400	84	34	35.0	14.2
V26	2411	81	33	33.6	13.7
V56	1315	46	18	35.0	13.7
V82	1297	37	17	28.5	13.1
V83	472	14	9	29.7	19.1
V85	382	14	8	36.6	20.9
V87	527	21	4	39.8	7.6
VB12	3639	124	39	34.1	10.7
VB13	4188	141	41	33.7	9.8
BLOCK B	24746	838	314	33.9	12.7

[continued]

Appendix B (cont.)

Mid-year Population, Births, and Deaths by Village, 1984

Village code	Population	Live births	Deaths	Birth rate	Death rate
K	862	29	10	33.6	11.6
L	436	14	8	32.1	18.3
M	142	9	4	63.4	28.2
N	1890	50	26	26.5	13.8
O	1204	38	18	31.6	15.0
P	1823	64	20	35.1	11.0
Q	332	10	6	30.1	18.1
V27	836	29	12	34.7	14.4
V28	1241	27	22	21.8	17.7
V30	496	26	6	52.4	12.1
V39	336	10	1	29.8	3.0
V40	699	22	5	31.5	7.2
V41	1317	43	22	32.6	16.7
V42	665	22	5	33.1	7.5
V43	850	23	16	27.1	18.8
V44	549	24	9	43.7	16.4
V64	4365	129	68	29.6	15.6
V86	710	28	9	39.4	12.7
V88	440	18	11	40.9	25.0
VB11	2325	70	39	30.1	16.8
D100	3045	83	32	27.3	10.5
D101	1227	48	14	39.1	11.4
BLOCK C	25790	816	363	31.6	14.1
R	1288	40	25	31.1	19.4
S	1086	30	9	27.6	8.3
T	1433	39	25	27.2	17.4
V15	554	15	7	27.1	12.6
V16	717	13	16	18.1	22.3
V17	1064	31	18	29.1	16.9
V18	3397	97	55	28.6	16.2
V25	1253	35	11	27.9	8.8
V29	583	7	9	12.0	15.4
V33	604	16	14	26.5	23.2
V34	760	23	12	30.3	15.8
V52	240	7	1	29.2	4.2
V54	545	21	10	38.5	18.3
V55	507	15	9	29.6	17.8
V57	1052	38	9	36.1	8.6
V63	1987	57	27	28.7	13.6
V67	569	19	12	33.4	21.1
V81	525	12	4	22.9	7.6
V84	1966	63	45	32.0	22.9
V89	1264	30	20	23.7	15.8
BLOCK D	21394	608	338	28.4	15.8
MCH - FP	97329	2988	1303	30.7	13.4

[continued]

Appendix B (cont.)

Mid - year Population, Births, and Deaths by Village, 1984

Village code	Popula- tion	Live births	Deaths	Birth rate	Death rate
A	2365	86	39	36.4	16.5
B	1770	87	34	49.2	19.2
C	3237	156	62	48.2	19.2
F	1194	38	11	31.8	9.2
G	2238	82	51	36.6	22.8
J	404	14	12	34.7	29.7
U	7461	249	116	33.4	15.5
V01	698	22	15	31.5	21.5
V02	464	14	7	30.2	15.1
V03	636	18	16	28.3	25.2
V04	238	8	2	33.6	8.4
V05	3015	114	69	37.8	22.9
V06	2189	71	35	32.4	16.0
V07	379	16	6	42.2	15.8
V08	1117	33	16	29.5	14.3
V09	1039	44	18	42.3	17.3
V14	876	21	20	24.0	22.8
V35	3277	125	68	38.1	20.8
V36	4614	172	84	37.3	18.2
V37	378	14	6	37.0	15.9
V38	1504	49	24	32.6	16.0
V45	929	41	14	44.1	15.1
V46	318	19	4	59.7	12.6
V 7	1734	58	32	33.4	18.5
V48	590	18	9	30.5	15.3
V49	1195	41	17	34.3	14.2
V50	779	30	11	38.5	14.1
V51	1449	45	10	31.1	6.9
V53	2951	101	47	34.2	15.9
V58	1293	46	29	35.6	22.4
V65	661	22	11	33.3	16.6
V66	866	33	14	38.1	16.2
V68	800	35	23	43.8	28.8
V69	1129	40	11	35.4	9.7
V70	666	28	8	42.0	12.0
V71	375	14	7	37.3	18.7
V73	736	30	8	40.8	10.9
V74	1191	47	27	39.5	22.7
V75	377	18	5	47.7	13.3
V76	1429	51	18	35.7	12.6
V78	241	7	2	29.0	8.3
V79	322	9	3	28.0	9.3

[continued]

Appendix B (cont.)

Mid-year Population, Births, and Deaths by Village, 1984

Village code	Population	Live births	Deaths	Birth rate	Death rate
V80	999	55	18	55.1	18.0
V90	1063	44	15	41.4	14.1
V95	930	35	18	37.6	19.4
V96	512	15	6	29.3	11.7
V97	394	10	4	25.4	10.2
V98	201	6	4	29.9	19.9
V99	644	18	17	28.0	26.4
VB1	1055	39	17	37.0	16.1
VB2	896	37	16	41.3	17.9
VB3	2651	108	45	40.7	17.0
VB4	2539	104	51	41.0	20.1
VB5	742	26	13	35.0	17.5
VB6	409	13	6	31.8	14.7
VB7	172	6	2	34.9	11.6
VB8	984	40	27	40.7	27.4
VB9	105	4	0	38.1	0.0
VB10	1524	51	29	33.5	19.0
D28	1127	46	18	40.8	16.0
D29	169	5	2	29.6	11.8
D30	691	24	12	34.7	17.4
D31	1073	41	19	38.2	17.7
D32	591	23	8	38.9	13.5
D33	972	48	13	49.4	13.4
D34	1282	51	22	39.8	17.2
D35	695	18	10	25.9	14.4
D88	1961	69	27	35.2	13.8
D89	675	34	14	50.4	20.7
D90	2732	102	49	37.3	17.9
D91	839	19	11	22.6	13.1
D92	158	4	1	25.3	6.3
D93	746	35	14	46.9	18.8
D94	984	48	20	48.8	20.3
D95	335	12	4	35.8	11.9
D96	222	10	3	45.0	13.5
D97	626	25	15	39.9	24.0
D98	2657	92	55	34.6	20.7
D99	1883	73	26	38.8	13.8
COMPARISON AREA	95362	3556	1652	37.3	17.3

Appendix C

Life Table Equations

$$1. \quad {}_nq_x = \frac{{}_nm_x}{\frac{1}{n} + {}_nm_x \left[\frac{1}{2} + \frac{n}{12} ({}_nm_x - \ln C) \right]}$$

$$2. \quad \ell_0 = 100,000$$

$$\ell_x = (1 - {}_nq_{x-1}) \ell_{x-n}$$

$$3. \quad L_0 = 0.276\ell_0 + 0.724\ell_1$$

$$L_1 = 0.410\ell_1 + 0.590\ell_2$$

$$L_i = \frac{1}{2}(\ell_i + \ell_{i+1}), \quad i = 2, 3, 4$$

$${}_nL_x = \frac{{}_nd_x}{{}_nm_x} \quad \text{for } 5 \leq x \leq 80$$

$${}_{\infty}L_{85} = \frac{\ell_{85}}{{}_{\infty}m_{85}} \quad \text{for the last age group 85+}$$

$$4. \quad \dot{e}_x = \frac{T_x}{\ell_x} \quad \text{where } T_x = \sum_{y=x}^{\infty} L_y$$

Note:

Greville's method, as suggested in Shryock, H.S., Seigel, J.S., and Associates, The Methods and Materials of Demography (revised), U.S. Dept. of Commerce, Bureau of the Census, 1975, Vol. II p.414 and pp. 444-5.

(In C assumed to be 0.095; separation factors in Equation 3 correspond to an infant mortality rate of 100.)

Appendix D

Analysis of the Decline in Births in 1984

As can be seen in Table D.1, there was a dramatic fall in the number of births taking place in the Matlab DSS area in 1984, followed by a return to the 1980-1983 level in 1985. Before publishing this report this dearth was investigated to ensure that it was not due to any problems with the DSS fieldwork.

The first test was to see if all recorded pregnancy outcomes were on the computer file. Since all registration forms for one village were given sequential serial numbers, from 1 to the number of births in that village, we could easily check that all forms recorded in the field (and in the Matlab field record books) were accounted for. Thus there was no "deck" of computer "cards" or batch of forms which was somehow lost.

Next the pace of the fieldwork in 1984 was examined; since both date of birth and date of registration by the fieldworker (Health Assistant) were on the file we could see if the recording began to lag behind births, an indication of problems in the field. Both the monthly pattern of births and birth reports and the percent of cumulative births registered by the start of each month were plotted. After a slow start in January, when the field staff was busy closing out 1983, recording gradually caught up with events. By July, registration was only 10 percent behind actual births, a level maintained until the end of the year; this is consistent with a 3 to 4 week delay between an event and the arrival of the Health Assistant to register it. Although there was a slight falling off in September, there was no indication of a large-scale diversion of the field staff to the Cholera Vaccine Trial which started up late in 1984.

Finally the births in 1983, 1984, and 1985 were compared in small areas. Villages were too small a unit for this analysis; random fluctuations would have masked any real changes. Instead, the 12 DSS administrative zones were scrutinised. Each of these zones is usually assigned one Health Assistant. The number of pregnancy outcomes recorded in each zone for 1983 to 1985 was examined. Overall, 1984 is 9% below the average of 1983 and 1985. Looking at individual zones there was a range of differences from 4.3% to 16.1% below the average; all zones are below "normal" and none seemed so far low as to make us suspect the fieldwork involved. In other words, it appeared unlikely that there were one or more Health Assistants who were to blame for this dearth.

In creating the mainframe DSS database all deaths to DSS residents are first checked against the actual presence of the person in the area at the time of death. If almost a thousand births were "missed" in 1984 then well over 100 infant and child deaths would occur in this group during 1984 and 1985. Unless all of these deaths were omitted -- either for the same structural reason or to cover up the birth under-registration -- they would have caused problems as we tried to identify the preceding birth record. In fact, we only found a couple of cases like this, another indication that the fieldwork was not at fault.

We next looked for seasonal or gender patterns which could show under-registration. The number of male births in 1984 was lower than 1983 or 1985 in July and from September through December; females were below average from July through the end of the year. There did not appear to be any sex bias to the dearth, however. The monthly pattern of stillbirths and miscarriages for 1983-1985 shows that there were actually more stillbirths and miscarriages in 1984 than in either 1983 or 1985. The number occurring in February, March, and April was somewhat below average, however.

This appendix was written by Dr. Michael A. Strona.

(The fact that there was no decline in stillbirths or miscarriages in 1984 was extremely important since all pregnancy outcomes are recorded on the same form.) Looking at all pregnancy outcomes together showed that 1984 is below the 1983/1985 average in every month, but especially from July through December.

We next looked for unexplained changes in the age specific fertility rates. In both the Treatment (MCH-FP) area and the Comparison area, fertility was about 10 percent below average in all age groups up to age 40. Thus whatever was affecting fertility was influencing each age group roughly the same. This was also true for parity; the number of births to women in parity groups 0 to 9 was lower in 1984 than in 1982, 1983, or 1984, and by roughly the same proportion in each group.

We finally looked at other events to see if there was any sign of undercount there as well. Mortality to infants 1 to 11 months old was higher in 1984 than in 1983 or 1985, and higher than in 1982 for ages above 1 year. The increase in 1984 followed a trend set in late 1983, and was also due to exaggerated seasonal peaks in April and October. While it is possible that deaths were under-reported in 1984, and that even more took place than were registered by the DSS, this seems unlikely. We also examined marriage registration, which failed to show evidence of under-registration in 1984 or of a dearth in 1983 large enough to produce a birth dearth (at all ages and parities) a year later.

Based on the above, as well as on discussions with the field staff and others, we think that it is safe to conclude that the 1984 data do not suffer from an under-registration of births due to faulty field or data processing work, and that analysis can be continued on these data.

Table D.1: Live Births in Matlab by Area and by Block within the MCH-FP Area, 1980-1985

Area	1980	1981	1982	1983	1984	1985
Block A	855	835	940	822	726	970
B	915	864	941	894	838	865
C	899	857	872	895	816	859
D	703	692	747	689	608	668
MCH-FP area	3372	3248	3500	3300	2988	3362
Comparison area	4016	3974	4131	4025	3556	4044
Total	7388	7222	7631	7325	6544	7406

Appendix E

Staff of the DSS – 1984

Matlab Field Station

Supervisory Staff:

Mr AM Sarder, Manager
Mr AKM Nurul Islam, SFRO
Mr Liaquat Ali Mondal, FRO
Mr Md Khalilur Rahman, FRO

Senior Health Assistants:

Mr A Latif Patwary
Mr AFM Aminul Islam Khan
Mr KJM Mannan Pathan
Mr A Rashid Miah
Mr Md Serajul Hoque

Recorders:

Ms Monowara Begum, HA
Ms Shahana Ahmed, HA

Health Assistants:

Mr SK A Jabbar
Mr Md Mozammel Hoque
Mr Md Golam Hossain
Mr Atekhharuzzaman
Mr Md Nazir Ahmed
Mr Md Abul Kashem
Mr Md Nurul Hoque
Mr Md Idrish Ali Miah II
Mr Md Shahidur Rahman
Mr Paresh Ch Chakraborty
Mr Md Idrish Ali Miah I
Mr Md Zahirul Haque

Clerk:

Mr AKM Mozibul Hoque

Dhaka Based Staff

Dr Bogdan Wojtyniak
Mr MA Kashem Shaikh
Ms Lutfun Nahar
Mr Rafiq – ud – Daula
Mr Abbas Bhuiya
Mr Abdur Razzaque
Mr Md Ibrahim Mollah
Mr Md Golam Mostafa
Mr Sentu B Gomes
Mr Md Kapil Ahmed
Mr SK Jaynal Abedin
Ms Habiba Rahman