DEMOGRAPHIC SURVEILLANCE SYSTEM — MATLAB

VOLUME TWENTY

REGISTRATION OF DEMOGRAPHIC EVENTS-1989

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December 1993

INTERNATIONAL CENTRE FOR DIARRHOEAL DISEASE RESEARCH, BANGLADESH

DEMOGRAPHIC SURVEILLANCE SYSTEM-MATLAB

Volume Twenty

Registration of Demographic Events - 1989

International Centre for
Diarrhoeal Disease Research, Bangladesh
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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.

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The ICDDR,B is grateful to the British Overseas Development Administration for the generous grant which funded the completion of this report, including the provision of the services of Dr. John Blacker, who improved the content and accuracy of this report and its rapid finalization.

CONTENTS

LIST OF TABLES

CONTENTS (continued)

CONTENTS (continued)

CONTENTS (continued)

SUMMARY

This report presents the vital registration data for events taking place in 1989 in Matlab, Bangladesh. These data were collected by the Demographic Surveillance System of the International Centre for Diarrhoeal Disease Research, Bangladesh. The surveillance area is divided into a Maternal and Child Health and Family Planning (MCH-FP) intervention area and a Comparison area receiving government services.

In 1989 fertility continued to fall in the MCH-FP area; the crude birth rate declined to 28.4 per thousand and the total fertility rate to 3.4 births per woman. Fertility also fell in the Comparison area, where the crude birth rate was 36.6 per thousand and the total fertility rate 4.9 births per woman.

Mortality also fell in both areas, the crude death rates dropping to 8.0 in the MCH-FP area and 9.5 in the Comparison area. These changes were almost entirely due to falls in both infant and child mortality. In the MCH-FP area infant mortality was 74.3 and under five mortality 97.5 per thousand live births, while the corresponding figures for the Comparison area were 90.7 and 131.1 per thousand.

Rates of both in- and out-migration for the surveillance area as a whole increased slightly on 1989, but were lower than the peak figures of 1987. The in-migration rate was 29.3 and that of out-migration 43.9 per thousand, leaving a net out-migration of 14.6 per thousand, thus offsetting the rate of natural increase of 23.6, and reducing the overall rate of population growth 0.9 per cent per annum.

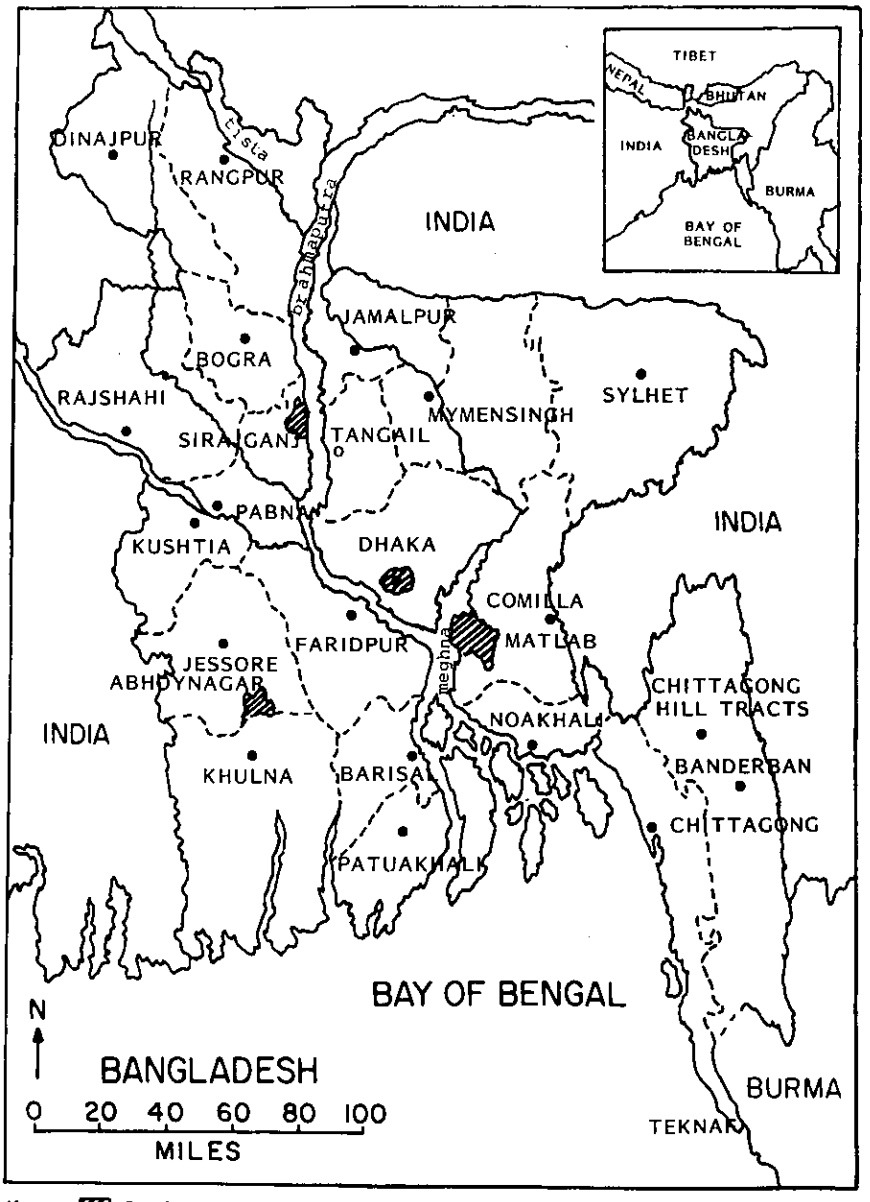
CHAPTER 1

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. Such 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).

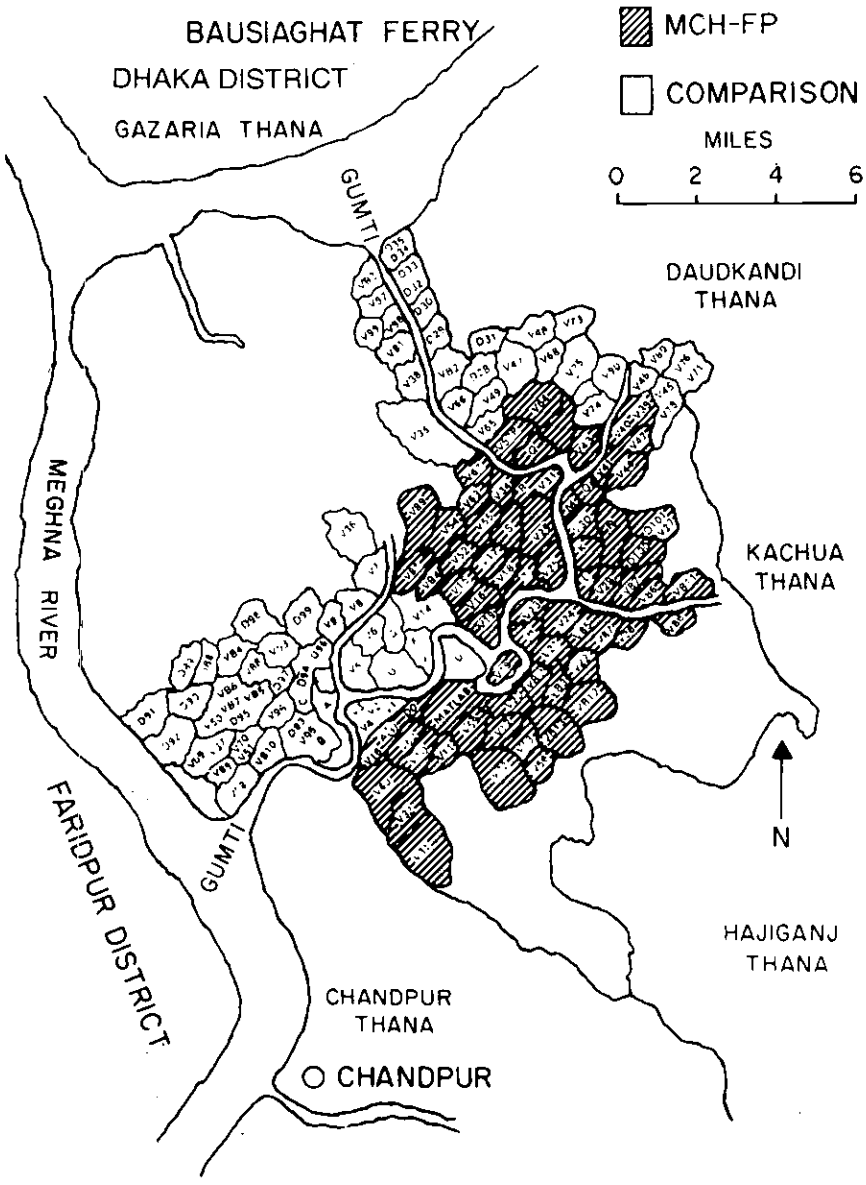
It is the twentieth volume of a series of scientific reports of the Demographic Surveillance System produced by the ICDDR,B. Presented here are results obtained from the Matlab DSS in 1989, along with brief notes and explanations of the tables.

Figure 1.1: Map of Bangladesh showing the Study Area



Key: Study areas

Figure 1.2: Matlab Area Showing Villages of Demographic Surveillance System, 1989



CHAPTER 2

POPULATION CHANGES

Table 2.1 summarizes the principal vital statistics of the MCH-FP and Comparison areas from 1978 up to 1989, and the basic 1989 figures, by sex, are shown in Table 2.2. The rates for 1989 show that fertility fell in both areas. In the MCH-FP area the total fertility rate had fluctuated from 1978 to 1985 and then began a steady decline; the 1989 figure of 3.4 was the lowest ever recorded. The crude birth rate also fell below 30 per thousand for the first time, reaching a figure of 28.4 per thousand. In the Comparison area the fertility indices also declined on the preceding year, and the TFR of 4.9 was also the lowest recorded since 1978. The trends in the total fertility rate in both areas are illustrated in Figure 2.1(a).

Infant and child mortality also fell in both areas. In the MCH-FP area under-5 mortality dropped below 100 for the first time, reaching a figure of 97.5 deaths in the first 5 years of life per 1000 live births. In the Comparison area under-5 mortality showed a fall of 15 points, reaching a record low of 131.1 per thousand. The components of this decline will be analyzed further in Chapter 3. The trends are illustrated in Figure 2.1(b).

Migration figures, both in and out, showed a small increase on 1989. Out-migrants continued to outnumber in-migrants, thus offsetting the rate of natural increase so that the overall rate of population growth was reduced to 0.9 per cent per annum.

Tables 2.3, 2.4, and 2.5 show the age and sex distributions for the whole study area, the MCH-FP and Comparison areas, and for the four blocks of the MCH-FP area. The age-sex distribution for the study area is illustrated by the population pyramid shown in Figure 2.2. The decline of fertility in the MCH-FP area has caused a small but significant change in the age structure of the population. Children under 15 years of age constituted 43% of the population at the beginning of the project in 1978; by 1989 this proportion had fallen to 39%. In the Comparison area, on the other hand, the proportion under 15 showed only minimal change, from 43% in 1978 to 42% in 1989.

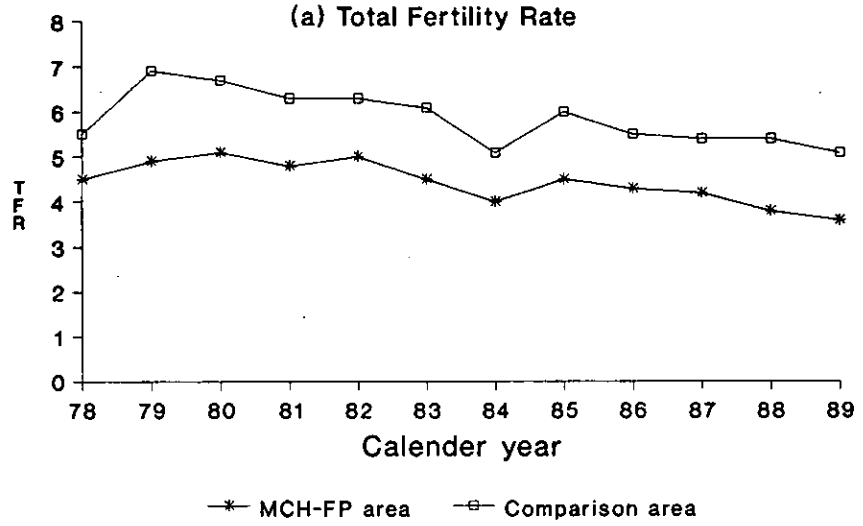
Table 2.1: Vital Statistics of the Matlab MCH-FP and Comparison Areas, 1978-1989

Vital rates (per 1000)	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
rude birth rate												
MCH-FP area	32.1	34.9	37.1	35.3	36.9	34.2	30.7	34.6	33.6	33.6	30.9	28.4
Comparison area	37.8	47.0	45.5	43.8	44.7	42.6	37.3	42.6	39.6	39.2	40.4	36.6
Both areas	34.8	40.9	41.2	39.5	40.7	38.3	34.0	38.5	36.5	36.4	35.5	32.4
otal fertility rate**												
MCH-FP area	4.5	4.9	5.1	4.8	5.0	4.5	4.0	4.5	4.3	4.2	3.8	3.4
Comparison area	5.5	6.9	6.7	6.3	6.3	6.1	5.1	6.0	5.5	5.4	5.4	4.9
Both areas	5.0	5.9	5.9	5.5	5.6	5.3	4.5	5.2	4.9	4.8	4.5	4.1
rude death rate												
MCH-FP area	12.6	12.1	11.3	11.9	12.5	11.9	13.4	10.2	9.9	9.3	8.7	8.0
Comparison area	13.8	15.6	14.9	14.4	15.9	16.7	17.3	14.2	12.2	11.2	11.0	9.5
Both areas	13.2	13.8	13.1	13.1	14.2	14.3	15.3	12.2	11.0	10.2	9.9	8.7
eonatal mortality*												
MCH-FP area	69.0	70.9	59.3	66.4	58.1	56.4	57.9	52.5	45.4	43.8	42.8	46.0
Comparison area	78.7	74.6	72.7	69.5	68.1	70.3	71.4	69.4	53.0	54.9	57.7	52.7
Both areas	74.1	73.0	66.6	68.1	63.5	64.0	65.3	61.7	49.4	49.7	51.1	49.7
ost-neonatal mortality*												
MCH-FP area	45.5	43.5	32.6	36.1	47.5	41.8	56.9	33.8	36.4	34.6	38.0	28.3
Comparison area	47.0	43.3	41.3	45.0	50.2	42.2	55.7	49.1	39.7	39.5	39.0	38.0
Both areas	46.3	43.4	37.3	41.0	49.0	42.0	56.2	42.1	38.2	37.2	38.6	33.6
fant mortality*												
MCH-FP area	114.5	114.4	91.9	102.5	105.6	98.2	114.8	86.3	81.8	78.4	80.8	74.3
Comparison area	125.8	118.0	114.0	114.5	118.3	112.5	127.1	118.5	92.7	94.4	96.6	90.7
Both areas	120.5	116.4	103.9	109.1	112.5	106.0	121.5	103.8	87.6	86.9	89.6	83.3
hild mortality (1-4 yrs)												
MCH-FP area	22.5	17.1	18.6	19.1	18.8	21.9	23.1	16.4	13.4	9.9	7.6	6.4
Comparison area	22.1	26.2	25.4	24.8	27.4	35.3	39.2	24.6	20.7	15.0	14.4	11.5
Both areas	22.3	21.6	22.1	22.0	23.3	29.1	31.6	20.7	17.2	12.6	11.1	9.0
nder five mortality*												
MCH-FP area	188.0	170.8	155.3	169.6	169.4	172.3	192.0	143.9	129.8	113.1	107.4	97.5
Comparison area	199.8	200.7	197.6	197.5	207.2	227.0	252.7	200.1	164.0	145.2	146.1	131.1
Both areas	194.0	186.0	177.7	184.8	189.7	202.1	224.8	174.4	148.0	130.2	128.3	115.7
te of natural increase												
MCH-FP area	19.5	22.8	25.8	23.4	24.3	22.3	17.3	24.4	23.7	24.3	22.1	20.4
Comparison area	24.0	31.4	30.6	29.4	28.8	25.8	20.0	28.4	27.4	28.0	29.4	27.1
Both areas	21.6	27.1	28.2	26.4	26.5	24.1	18.6	26.3	25.5	26.1	25.7	23.6
n- migration	28.7	33.1	29.7	27.3	24.5	24.6	24.2	23.9	28.3	33.6	26.5	29.3
ut-migration	40.2	40.8	36.6	35.0	26.5	35.8	42.7	42.1	41.7	44.3	41.5	43.9
rowth (%)	1.0	1.9	2.1	1.9	2.5	1.3	0.0	0.8	1.2	1.5	1.1	0.9

er 1000 live births.

er woman.

Figure 2.1 Trends in Fertility and Under Five Mortality by Area in 1978-1989



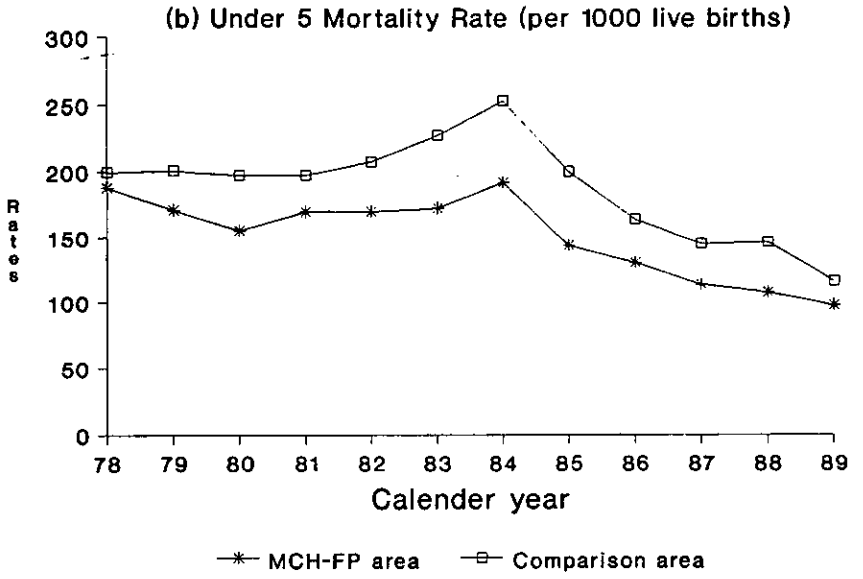


Table 2.2: Mid-year Population, Events Registered, and Population Changes in 1989

	Number			Rate per 1000		
	Total	Males	Females	Total	Males	Females
Total population as of 30 June 1989:						
MCH-FP area	103473	51928	51545			
Comparison area	98513	49577	48936			
Both areas	201986	101505	100481			
Events registered (Jan - Dec 1989)						
Births						
MCH-FP area	2936	1478	1458	28.4		
Comparison area	3607	1786	1821	36.6		
Both areas	6543	3264	3279	32.4		
Deaths						
-Infant *						
MCH-FP area	218	115	103	74.3	77.8	70.6
Comparison area	327	175	152	90.7	98.0	83.5
Both areas	545	290	255	83.3	88.8	77.8
-All deaths						
MCH-FP area	828	448	380	8.0	8.6	7.4
Comparison area	939	488	451	9.5	9.8	9.2
Both areas	1767	936	831	8.7	9.2	8.3
In-Migration	5912	2565	3347	29.3	25.3	33.3
Out-Migration	8869	4230	4639	43.9	41.7	46.2
Marriage	3070			15.2		
Divorce **	476			155.0		
Population change (Jan - Dec 1989)						
Net Migration	-2957	-1665	-1292	-14.6	-16.4	-12.9
Natural increase						
MCH-FP area	2108	1030	1078	20.4	19.8	20.9
Comparison area	2668	1298	1370	27.1	26.2	28.0
Both areas	4776	2328	2448	23.6	22.9	24.4
Net increase	1819	663	1156	9.0	6.5	11.5

* Rate per 1000 live births.
** Ratio per 1000 marriages.

Table 2.3: Mid-year Population by Age and Sex, 1989

Age (years)	Number			Percent		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	201986	101505	100481	100.0	100.0	100.0
Under 1	6475	3191	3284	3.2	3.1	3.3
1 - 4	24266	12310	11956	12.0	12.1	11.9
1	6168	3137	3031	3.1	3.1	3.0
2	6243	3138	3105	3.1	3.1	3.1
3	6368	3272	3096	3.2	3.2	3.1
4	5487	2763	2724	2.7	2.7	2.7
5 - 9	27384	14459	12925	13.6	14.2	12.9
10-14	23742	12432	11310	11.8	12.2	11.3
15-19	22832	11879	10953	11.3	11.7	10.9
20-24	19128	8885	10243	9.5	8.8	10.2
25-29	16420	8020	8400	8.1	7.9	8.4
30-34	12143	6165	5978	6.0	6.1	5.9
35-39	8749	4317	4432	4.3	4.3	4.4
40-44	7989	3517	4472	4.0	3.5	4.5
45-49	7846	3424	4422	3.9	3.4	4.4
50-54	7393	3643	3750	3.7	3.6	3.7
55-59	5888	3000	2888	2.9	3.0	2.9
60-64	4482	2362	2120	2.2	2.3	2.1
65-69	3252	1692	1560	1.6	1.7	1.6
70-74	1955	1066	889	1.0	1.1	0.9
75-79	1194	648	546	0.6	0.6	0.5
80-84	562	314	248	0.3	0.3	0.2
85+	286	181	105	0.1	0.2	0.1

Table 2.4: Mid-year Population by Area, Age, and Sex, 1989

Age (years)	MCH-FP area			Comparison area		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	103473	51928	51545	98513	49577	48936
Under 1	2918	1473	1445	3557	1718	1839
1 - 4	11643	5880	5763	12623	6430	6193
1	2901	1473	1428	3267	1664	1603
2	3012	1520	1492	3231	1618	1613
3	3117	1588	1529	3251	1684	1567
4	2613	1299	1314	2874	1464	1410
5 - 9	13437	7037	6400	13947	7422	6525
10-14	12341	6493	5848	11401	5939	5462
15-19	12084	6278	5806	10748	5601	5147
20-24	10186	4718	5468	8942	4167	4775
25-29	8516	4090	4426	7904	3930	3974
30-34	6370	3244	3126	5773	2921	2852
35-39	4649	2274	2375	4100	2043	2057
40-44	4261	1893	2368	3728	1624	2104
45-49	4142	1810	2332	3704	1614	2090
50-54	3800	1864	1936	3593	1779	1814
55-59	3025	1580	1445	2863	1420	1443
60-64	2329	1229	1100	2153	1133	1020
65-69	1649	881	768	1603	811	792
70-74	1013	563	450	942	503	439
75-79	643	348	295	551	300	251
80-84	293	161	132	269	153	116
85+	174	112	62	112	69	43

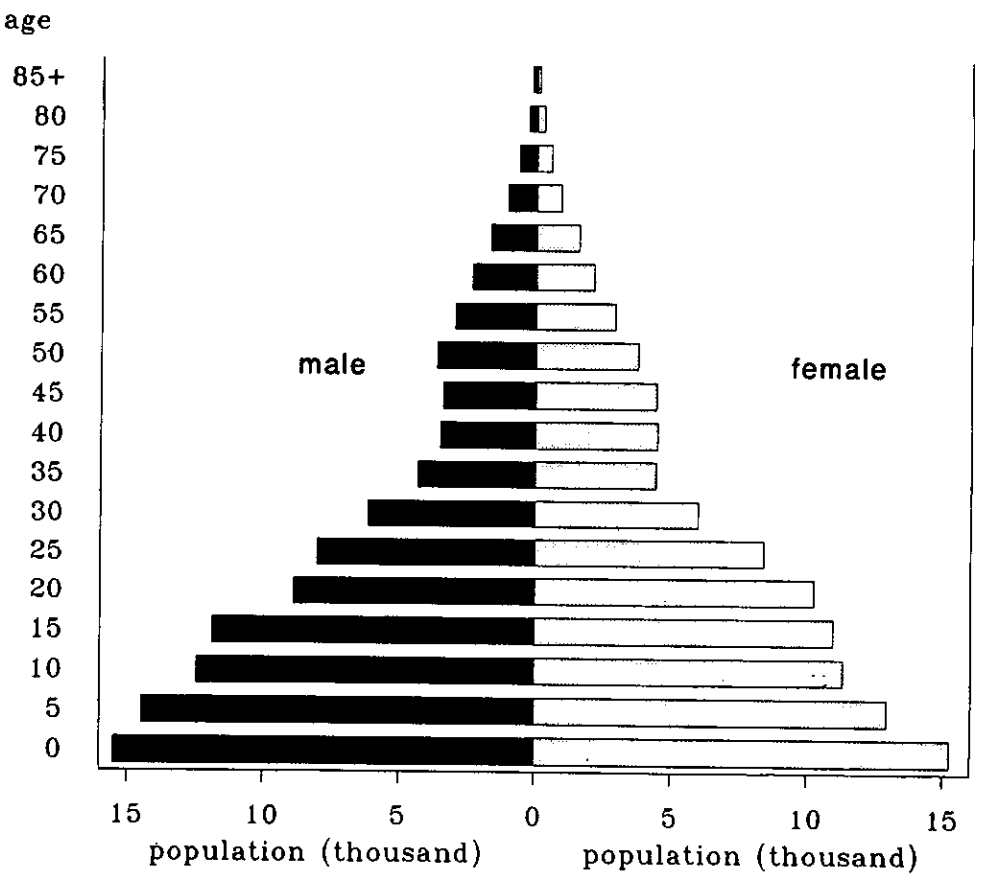
Table 2.5: Mid-year Population in MCH-FP Area by Age, Sex, and Block, 1989

Age (years)	Block A			Block B		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	28056	14114	13942	26325	13048	13277
Under 1	821	408	413	769	400	369
1 - 4	3203	1611	1592	3110	1597	1513
1	790	415	375	782	404	378
2	821	406	415	828	417	411
3	873	430	443	823	434	389
4	719	360	359	677	342	335
5 - 9	3670	1942	1728	3564	1868	1696
10-14	3342	1765	1577	3154	1639	1515
15-19	3258	1710	1548	3021	1525	1496
20-24	2918	1330	1588	2497	1119	1378
25-29	2350	1102	1248	2046	958	1088
30-34	1737	880	857	1533	760	773
35-39	1240	614	626	1170	538	632
40-44	1221	552	669	1049	439	610
45-49	1053	471	582	1032	429	603
50-54	946	506	440	945	443	502
55-59	732	384	348	793	421	372
60-64	595	318	277	645	331	314
65-69	391	212	179	426	247	179
70-74	261	134	127	268	166	102
75-79	181	93	88	160	86	74
80-84	80	43	37	86	46	40
85+	57	39	18	57	36	21

Table 2.5 (cont.): Mid-year Population in MCH-FP Area by Age, Sex, and Block, 1989

Age (years)	Block C			Block D		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	27451	13926	13525	21641	10840	10801
Under 1	703	343	360	625	322	303
1 - 4	3008	1540	1468	2322	1132	1190
1	743	371	372	586	283	303
2	784	406	378	579	291	288
3	780	394	386	641	330	311
4	701	369	332	516	228	288
5 - 9	3498	1816	1682	2705	1411	1294
10-14	3332	1741	1591	2513	1348	1165
15-19	3299	1734	1565	2506	1309	1197
20-24	2688	1295	1393	2083	974	1109
25-29	2275	1139	1136	1845	891	954
30-34	1751	895	856	1349	709	640
35-39	1292	639	653	947	483	464
40-44	1105	513	592	886	389	497
45-49	1158	523	635	899	387	512
50-54	1038	521	517	871	394	477
55-59	788	430	358	712	345	367
60-64	529	283	246	560	297	263
65-69	463	222	241	369	200	169
70-74	265	149	116	219	114	105
75-79	148	79	69	154	90	64
80-84	75	42	33	52	30	22
85+	36	22	14	24	15	9

Figure 2.2: Age Pyramid of the 1989 Mid-year Population



CHAPTER 3

MORTALITY

Table 3.1 to 3.3 show the distribution of deaths by sex and age for the whole study area, for the MCH-FP and Comparison areas, and for the four blocks of the MCH-FP area. Tables 3.4 and 3.5 show the corresponding age-sex-specific mortality rates for the study area and for the MCH-FP and Comparison areas. Tables 3.6 to 3.10 show the abridged life tables derived from these rates.

As noted in Chapter 2, the under-five mortality rate fell by about 13 points in both areas together, reaching the lowest levels recorded since the beginning of the MCH-FP Project in 1978. The decline in both areas was attributable to reductions not only in the child (1-4 years) mortality rate, which had been declining steadily since 1984, but also in the infant mortality, which had been stuck on a plateau from 1986 to 1988. In the MCH-FP area the fall in infant mortality was confined to the post-neonatal (1-11 months) period; neonatal mortality (deaths in the first month of life) showed a small rise on the 1988 figure. On the other hand in the Comparison area, most of the fall in infant mortality was in the neonatal rate, which fell by five points, as against a decline of only one point in the post-neonatal rate. In both areas male mortality was higher than female in the first month of life, while female mortality was higher in childhood between 1 and 5 five years of age.

The levels of adult mortality showed little change on 1989, and there was again little difference between the two areas. The probability of dying between the ages of 15 and 60 (45Q15) rose from 195 to 200 per thousand for the study area as a whole, but there were compensating movements between the two areas and between sexes, and it is doubtful whether the changes were statistically significant. However, male adult mortality remained consistently higher than female in both areas.

Table 3.11 shows the distribution of deaths by age and month of occurrence. Adult deaths tend to peak in the winter months, with modal values in December and January. Neonatal deaths were also most frequent in these months, doubtless reflecting the seasonal variation in births, described in Chapter 4. Post-neonatal and child deaths, on the other hand, were highest in April and May.

Table 3.12 to 3.15 show the distribution of deaths by age, sex, area and cause, and Table 3.16 gives the age-standardised mortality rates by cause of death, using the World Health Organization "World Standard" age distribution (WHO 1992). When compared with the corresponding figures for 1988 the most conspicuous change was the fall in the mortality rates attributed to "Senility", and may in fact reflect improved standards of diagnosis. This feature may also account for the apparent rise in the rates attributed to malignant neoplasms and cardio-vascular disease. Mortality from diarrhoea apparently increased while that dysentery decreased, so that for the two combined there was little consistent change.

Reference

World Health Statistics Annual 1991. Geneva: WHO, 1992.

Table 3.1: Deaths by Age and Sex, 1889

Age	Both sexes	Males	Females
All ages	1767	936	831
Under 1 year	545	290	255
Under 1 month	325	175	150
1-5 months	147	81	66
6-11 months	73	34	39
1 - 4 years	219	80	139
1	111	42	69
2	52	18	34
3	23	5	18
4	33	15	18
5 - 9	37	22	15
10-14	10	8	2
15-19	25	8	17
20-24	30	6	24
25-29	33	18	15
30-34	28	15	13
35-39	23	11	12
40-44	33	13	20
45-49	39	24	15
50-54	73	41	32
55-59	94	61	33
60-64	121	83	38
65-69	125	77	48
70-74	121	61	60
75-79	95	46	49
80-84	68	39	29
85+	48	33	15

Table 3.2: Deaths by Area, Age, and Sex, 1989

Age	MCH-FP area			Comparison area		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	828	448	380	939	488	451
Under 1 year	218	115	103	327	175	152
Under 1 month	135	73	62	190	102	88
1-5 months	58	35	23	89	46	43
6-11 months	25	7	18	48	27	21
1 - 4 years	74	28	46	145	52	93
1	35	12	23	76	30	46
2	20	9	11	32	9	23
3	9	2	7	14	3	11
4	10	5	5	23	10	13
5 - 9	24	15	9	13	7	6
10-14	6	4	2	4	4	0
15-19	12	6	6	13	2	11
20-24	20	4	16	10	2	8
25-29	21	12	9	12	6	6
30-34	19	11	8	9	4	5
35-39	12	8	4	11	3	8
40-44	19	5	14	14	8	6
45-49	18	10	8	21	14	7
50-54	40	25	15	33	16	17
55-59	47	26	21	47	35	12
60-64	60	41	19	61	42	19
65-69	62	41	21	63	36	27
70-74	55	29	26	66	32	34
75-79	62	34	28	33	12	21
80-84	31	17	14	37	22	15
85+	28	17	11	20	16	4

Table 3.3: Deaths in MCH-FP Area by Age, Sex, and Block, 1989

Age	Block A			Block B		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	208	119	89	218	105	113
Under 1 year	54	33	21	75	34	41
Under 1 month	37	20	17	43	19	24
1-5 months	14	11	3	20	12	8
6-11 months	3	2	1	12	3	9
1 - 4 years	22	7	15	22	11	11
1	8	2	6	14	6	8
2	7	3	4	4	3	1
3	3	1	2	1	0	1
4	4	1	3	3	2	1
5 - 9	5	2	3	5	3	2
10-14	0	0	0	1	0	1
15-19	2	1	1	5	3	2
20-24	2	1	1	5	1	4
25-29	5	2	3	9	6	3
30-34	3	2	1	6	2	4
35-39	2	2	0	2	1	1
40-44	8	4	4	3	0	3
45-49	9	5	4	3	1	2
50-54	15	12	3	10	3	7
55-59	18	11	7	5	2	3
60-64	11	6	5	16	12	4
65-69	11	10	1	8	3	5
70-74	15	9	6	11	5	6
75-79	10	2	8	12	6	6
80-84	8	4	4	11	5	6
85+		6	2	9	7	2

Table 3.3 (cont.): Deaths in MCH-FP Area by Age, Sex, and Block, 1989

Age	Block C			Block D		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	221	113	108	181	111	70
Under 1 year	55	29	26	34	19	15
Under 1 month	34	20	14	21	14	7
1-5 months	15	8	7	9	4	5
6-11 months	6	1	5	4	1	3
1 - 4 years	17	6	11	13	4	9
1	9	4	5	4	0	4
2	4	1	3	5	2	3
3	3	1	2	2	0	2
4	1	0	1	2	2	0
5 - 9	7	4	3	7	6	1
10-14	3	3	0	2	1	1
15-19	2	1	1	3	1	2
20-24	7	1	6	6	1	5
25-29	4	2	2	3	2	1
30-34	6	3	3	4	4	0
35-39	6	3	3	2	2	0
40-44	7	1	6	1	0	1
45-49	4	2	2	2	2	0
50-54	9	6	3	6	4	2
55-59	10	4	6	14	9	5
60-64	15	11	4	18	12	6
65-69	24	14	10	19	14	5
70-74	18	9	9	11	6	5
75-79	11	5	6	29	21	8
80-84	8	6	2	4	2	2
85+	8	3	5	3	1	2

Table 3.4: Death Rates by Age and Sex, 1989
(per 1000 population)

Age	Both sexes	Males	Females
All ages	8.7	9.2	8.3
Under 1 year	83.3	88.8	77.8
Under 1 month*	49.7	53.6	45.7
1 - 5 months*	22.5	24.8	20.1
6 - 11 months*	11.2	10.4	11.9
1 - 4 years	9.0	6.5	11.6
1	18.0	13.4	22.8
2	8.3	5.7	11.0
3	3.6	1.5	5.8
4	6.0	5.4	6.6
5 - 9	1.4	1.5	1.2
10-14	0.4	0.6	0.2
15-19	1.1	0.7	1.6
20-24	1.6	0.7	2.3
25-29	2.0	2.2	1.8
30-34	2.3	2.4	2.2
35-39	2.6	2.5	2.7
40-44	4.1	3.7	4.4
45-49	5.0	7.0	3.4
50-54	9.9	11.3	8.5
55-59	16.0	20.3	11.4
60-64	27.0	35.1	17.9
65-69	38.4	45.5	30.8
70-74	61.9	57.2	67.5
75-79	79.6	71.0	89.7
80-84	121.0	124.2	116.9
85+	167.8	182.3	142.9

*Rate per 1000 live births.

Table 3.5: Death Rates by Area, Age, and Sex, 1989

Age	MCH-FP area			Comparison area		
	Both sexes	Male	Female	Both sexes	Male	Female
All ages	8.0	8.6	7.4	9.5	9.8	9.2
Under 1 year*	74.3	77.8	70.6	90.7	98.0	83.5
Under 1 month*	46.0	49.4	42.5	52.7	57.1	48.3
1- 5 months*	19.8	23.7	15.8	24.7	25.8	23.6
6-11 months*	8.5	4.7	12.3	13.3	15.1	11.5
1 - 4	6.4	4.8	8.0	11.5	8.1	15.0
1	12.1	8.1	16.1	23.3	18.0	28.7
2	6.6	5.9	7.4	9.9	5.6	14.3
3	2.9	1.3	4.6	4.3	1.8	7.0
4	3.8	3.8	3.8	8.0	6.8	9.2
5-9	1.8	2.1	1.4	0.9	0.9	0.9
10-14	0.5	0.6	0.3	0.4	0.7	0.0
15-19	1.0	1.0	1.0	1.2	0.4	2.1
20-24	2.0	0.8	2.9	1.1	0.5	1.7
25-29	2.5	2.9	2.0	1.5	1.5	1.5
30-34	3.0	3.4	2.6	1.6	1.4	1.8
35-39	2.6	3.5	1.7	2.7	1.5	3.9
40-44	4.4	2.6	5.7	3.8	4.9	2.9
45-49	4.3	5.5	3.4	5.7	8.7	3.3
50-54	10.5	13.4	7.7	9.2	9.0	9.4
55-59	15.5	16.5	14.5	16.4	24.6	8.3
60-64	25.8	33.4	17.3	28.3	37.1	18.6
65-69	37.6	46.5	27.3	39.3	44.4	34.1
70-74	54.3	51.5	57.8	70.1	63.6	77.4
75-79	96.4	97.7	94.9	59.9	40.0	83.7
80-84	105.8	105.6	106.1	137.5	143.8	129.3
85+	160.9	151.8	177.4	178.6	231.9	93.0

*Rate per 1000 live births.

Figure 3.1: Probability of Survival from Birth to Age (x) by Sex, 1989

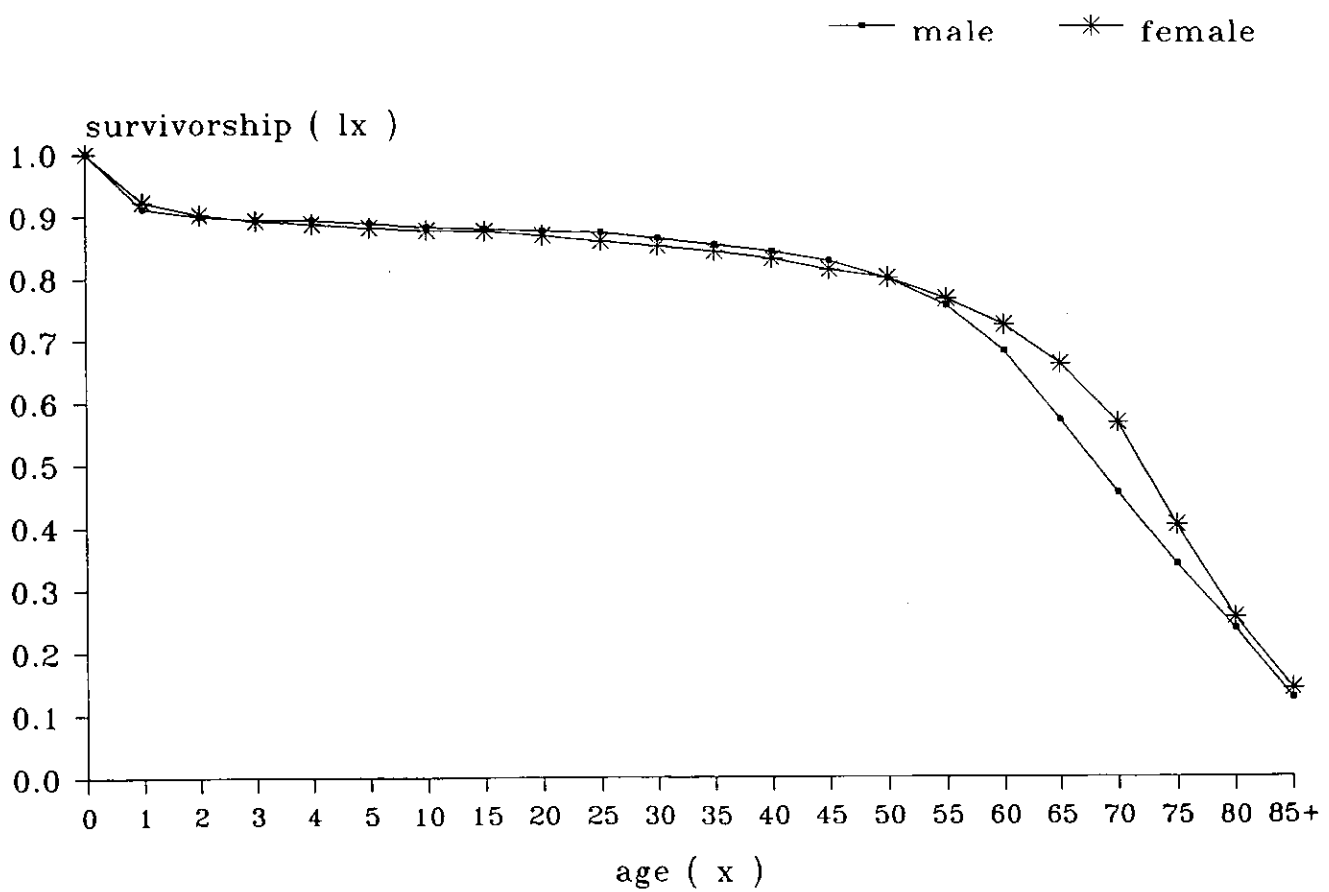


Table 3.6: Abridged Life Table, 1989

Age	$_nm_x$	$_nq_x$	l_x	L_x	T_x	e^0
0	83.3	83.3	100000	93969	6211717	62.1
1	18.0	17.8	91670	90706	6117748	66.7
2	8.3	8.3	90035	89662	6027042	66.9
3	3.6	3.6	89288	89127	5937380	66.5
4	6.0	6.0	88967	88700	5848253	65.7
5	1.4	6.7	88433	440792	5759553	65.1
10	0.4	2.1	87837	438762	5318761	60.6
15	1.1	5.5	87653	437160	4879999	55.7
20	1.6	7.8	87174	434300	4442839	51.0
25	2.0	10.0	86493	430469	4008539	46.3
30	2.3	11.5	85628	425873	3578070	41.8
35	2.6	13.1	84646	420677	3152197	37.2
40	4.1	20.2	83540	413798	2731521	32.7
45	5.0	24.6	81852	404608	2317722	28.3
50	9.9	48.3	79840	390252	1913115	24.0
55	16.0	77.0	75987	366279	1522863	20.0
60	27.0	126.9	70140	329706	1156583	16.5
65	38.4	176.1	61238	280508	826877	13.5
70	61.9	269.0	50456	219287	546370	10.8
75	79.6	332.5	36884	154152	327082	8.9
80	121.0	462.2	24619	94034	172930	7.0
85+	167.8	1000.0	13241	78896	78896	6.0

Table 3.7: Abridged Life Tables by Sex, 1989

Age (years)	Males						Females					
	$_nm_x$	$_nq_x$	l_x	L_x	T_x	e0	$_nm_x$	$_nq_x$	l_x	L_x	T_x	e^o
0	88.8	88.8	100000	93567	6140275	61.4	77.8	77.8	100000	94370	6298702	63.0
1	13.4	13.3	91115	90400	6046708	66.4	22.8	22.5	92223	90998	6204332	67.3
2	5.7	5.7	89903	89646	5956307	66.3	11.0	10.9	90147	89656	6113334	67.8
3	1.5	1.5	89389	89321	5866661	65.6	5.8	5.8	89165	88907	6023678	67.6
4	5.4	5.4	89253	89011	5777340	64.7	6.6	6.6	88648	88356	5934771	66.9
5	1.5	7.6	88769	442295	5688330	64.1	1.2	5.8	88065	439148	5846415	66.4
10	0.6	3.2	88096	439830	5246034	59.5	0.2	0.9	87555	437596	5407266	61.8
15	0.7	3.4	87813	438386	4806205	54.7	1.6	7.7	87477	435828	4969670	56.8
20	0.7	3.4	87518	436911	4367818	49.9	2.3	11.7	86801	431672	4533842	52.2
25	2.2	11.2	87223	433869	3930907	45.1	1.8	8.9	85790	427189	4102170	47.8
30	2.4	12.1	86249	428839	3497039	40.5	2.2	10.8	85027	423012	3674981	43.2
35	2.5	12.7	85206	423539	3068200	36.0	2.7	13.5	84107	417923	3251969	38.7
40	3.7	18.3	84127	417072	2644661	31.4	4.4	21.7	82975	410724	2834046	34.2
45	7.0	34.5	82585	406327	2227588	27.0	3.4	16.8	81179	402738	2423322	29.9
50	11.3	54.8	79737	388516	1821261	22.8	8.5	41.8	79812	391316	2020584	25.3
55	20.3	97.0	75364	359676	1432745	19.0	11.4	55.7	76473	372467	1629268	21.3
60	35.1	162.2	68051	314043	1073069	15.8	17.9	86.0	72217	346554	1256801	17.4
65	45.5	205.2	57016	257040	759026	13.3	30.8	143.4	66005	307630	910246	13.8
70	57.2	251.3	45318	199016	501986	11.1	67.5	289.7	56540	242689	602617	10.7
75	71.0	302.4	33930	144515	302970	8.9	89.7	366.8	40160	164138	359927	9.0
80	124.2	471.2	23671	89794	158455	6.7	116.9	450.6	25430	97983	195790	7.7
85+	182.3	1000.0	12518	68660	68660	5.5	142.9	1000.0	13972	97807	97807	7.0

Table 3.8: Abridged Life Tables by Area, 1989

Age (years)	MCH-FP area						Comparison area					
	$_nm_x$	$_nq_x$	l_x	L_x	Tx	e^o	$_nm_x$	$_nq_x$	l_x	L_x	Tx	e^o
0	74.3	74.3	100000	94624	6315537	63.2	90.7	90.7	100000	93436	6128482	61.3
1	12.1	12.0	92575	91920	6220912	67.2	23.3	23.0	90934	89700	6035045	66.4
2	6.6	6.6	91465	91162	6128992	67.0	9.9	9.9	88843	88405	5945345	66.9
3	2.9	2.9	90859	90728	6037831	66.5	4.3	4.3	87967	87778	5856940	66.6
4	3.8	3.8	90597	90424	5947102	65.6	8.0	8.0	87589	87240	5769161	65.9
5	1.8	8.9	90251	449405	5856678	64.9	0.9	4.7	86891	433524	5681921	65.4
10	0.5	2.4	89449	446743	5407273	60.5	0.4	1.8	86487	432086	5248397	60.7
15	1.0	5.0	89231	445138	4960530	55.6	1.2	6.0	86335	430477	4816311	55.8
20	2.0	9.8	88789	441945	4515392	50.9	1.1	5.6	85815	427971	4385834	51.1
25	2.5	12.3	87922	437121	4073446	46.3	1.5	7.6	85336	425192	3957863	46.4
30	3.0	14.8	86844	431249	3636326	41.9	1.6	7.8	84691	421936	3532671	41.7
35	2.6	12.8	85557	425254	3205077	37.5	2.7	13.3	84033	417579	3110734	37.0
40	4.4	21.6	84460	418089	2779823	32.9	3.8	18.6	82912	410997	2693156	32.5
45	4.3	21.5	82638	409082	2361734	28.6	5.7	28.0	81369	401577	2282159	28.0
50	10.5	51.4	80860	394648	1952652	24.1	9.2	45.0	79092	387206	1880582	23.8
55	15.5	75.0	76706	370107	1558004	20.3	16.4	79.0	75536	363730	1493376	19.8
60	25.8	121.4	70956	334480	1187897	16.7	28.3	132.8	69565	326015	1129646	16.2
65	37.6	172.5	62339	286089	853418	13.7	39.3	179.7	60328	275800	803631	13.3
70	54.3	240.0	51582	228012	567328	11.0	70.1	299.0	49489	211216	527831	10.7
75	96.4	388.4	39203	157904	339316	8.7	59.9	261.5	34690	151439	316616	9.1
80	105.8	417.6	23977	94630	181412	7.6	137.5	507.2	25620	94466	165176	6.4
85+	160.9	1000.0	13965	86783	86783	6.2	178.6	1000.0	12627	70710	70710	5.6

Table 3.9: Abridged Life Tables for MCH-FP area by Sex, 1989

Age (years)	Males						Females					
	$_nm_x$	$_nq_x$	l_x	L_x	T_x	e^o	$_nm_x$	$_nq_x$	l_x	L_x	T_x	e^o
0	77.8	77.8	100000	94367	6232214	62.3	70.6	70.6	100000	94885	6409746	64.1
1	8.1	8.1	92219	91778	6137847	66.6	16.1	16.0	92936	92059	6314860	67.9
2	5.9	5.9	91471	91201	6046069	66.1	7.4	7.3	91450	91115	6222801	68.0
3	1.3	1.3	90931	90874	5954868	65.5	4.6	4.6	90779	90571	6131686	67.5
4	3.8	3.8	90816	90642	5863995	64.6	3.8	3.8	90364	90192	6041115	66.9
5	2.1	10.6	90468	450125	5773353	63.8	1.4	7.0	90021	448650	5950923	66.1
10	0.6	3.1	89508	446906	5323228	59.5	0.3	1.7	89390	446598	5502273	61.6
15	1.0	4.8	89233	445183	4876322	54.6	1.0	5.2	89237	445126	5055675	56.7
20	0.8	4.2	88807	443171	4431138	49.9	2.9	14.5	88777	440908	4610549	51.9
25	2.9	14.6	88432	439184	3987967	45.1	2.0	10.1	87487	435393	4169641	47.7
30	3.4	16.8	87143	432330	3548784	40.7	2.6	12.7	86602	430466	3734248	43.1
35	3.5	17.4	85677	424933	3116454	36.4	1.7	8.4	85500	420485	3303782	38.6
40	2.6	13.1	84182	418361	2691521	32.0	5.7	28.0	84783	418422	2883297	34.0
45	5.5	27.3	83077	410143	2273161	27.4	3.4	17.0	82409	408808	2464875	29.9
50	13.4	65.0	80811	391811	1863018	23.1	7.7	38.1	81007	397888	2056067	25.4
55	16.5	79.2	75556	363794	1471207	19.5	14.5	70.3	77924	376847	1658180	21.3
60	33.4	154.6	69570	322345	1107413	15.9	17.3	83.0	72447	348176	1281333	17.7
65	46.5	209.3	58816	264545	785067	13.3	27.3	128.4	66433	312039	933157	14.0
70	51.5	229.1	46505	206852	520523	11.2	57.8	253.4	57901	253960	621118	10.7
75	97.7	392.4	35850	143998	313671	8.7	94.9	383.6	43228	174690	367158	8.5
80	105.6	416.9	21781	86002	169673	7.8	106.1	418.4	26647	105109	192468	7.2
85+	151.8	1000.0	12700	83671	83671	6.6	177.4	1000.0	15499	87359	87359	5.6

Table 3.10: Abridged Life Tables for Comparison Area by Sex, 1989

Age (years)	Males						Females					
	$_nm_x$	$_nq_x$	l_x	L_x	T_x	e^o	$_nm_x$	$_nq_x$	l_x	L_x	T_x	e^o
0	98.0	98.0	100000	92906	6066652	60.7	83.5	83.5	100000	93957	6230515	62.3
1	18.0	17.9	90202	89251	5973746	66.2	28.7	28.3	91653	90123	6136558	67.0
2	5.6	5.5	88590	88344	5884495	66.4	14.3	14.2	89060	88429	6046436	67.9
3	1.8	1.8	88098	88020	5796151	65.8	7.0	7.0	87799	87491	5958006	67.9
4	6.8	6.8	87941	87642	5708131	64.9	9.2	9.2	87184	86784	5870515	67.3
5	0.9	4.7	87343	435767	5620489	64.3	0.9	4.6	86384	431008	5783731	67.0
10	0.7	3.4	86932	433986	5184722	59.6	0.0	0.0	85988	429939	5352723	62.2
15	0.4	1.8	86639	432841	4750737	54.8	2.1	10.6	85988	427830	4922783	57.2
20	0.5	2.4	86485	431947	4317895	49.9	1.7	8.3	85074	423731	4494953	52.8
25	1.5	7.6	86278	429875	3885948	45.0	1.5	7.5	84364	420355	4071222	48.3
30	1.4	6.8	85621	426760	3456073	40.4	1.8	8.7	83729	416959	3650867	43.6
35	1.5	7.3	85037	423750	3029313	35.6	3.9	19.3	82998	411294	3233908	39.0
40	4.9	24.4	84415	417320	2605563	30.9	2.9	14.2	81398	404331	2822613	34.7
45	8.7	42.5	82359	403671	2188244	26.6	3.3	16.6	80245	398148	2418283	30.1
50	9.0	44.0	78857	386225	1784573	22.6	9.4	45.9	78912	386158	2020135	25.6
55	24.6	116.5	75384	356254	1398348	18.5	8.3	40.8	75293	369341	1633978	21.7
60	37.1	170.3	66603	306023	1042094	15.6	18.6	89.2	72221	346019	1264637	17.5
65	44.4	200.6	55259	249747	736071	13.3	34.1	157.7	65776	304265	918617	14.0
70	63.6	275.4	44173	191242	486324	11.0	77.4	325.2	55403	232633	614353	11.1
75	40.0	182.6	32006	146091	295082	9.2	83.7	346.5	37386	154849	381720	10.2
80	143.8	523.2	26162	95199	148992	5.7	129.3	485.2	24431	91671	226871	9.3
85+	231.9	1000.0	12474	53793	53793	4.3	93.0	1000.0	12577	135200	135200	10.8

Table 3.11: Deaths by Age and Month, 1989

Month	All ages	Age at death			
		Under 1 month	1-11 months	1-4 years	5 years and over
January	185	41	25	13	106
February	122	21	19	9	73
March	144	20	18	22	84
April	151	16	36	28	71
May	160	17	33	31	79
June	118	16	17	21	64
July	136	21	18	18	79
August	150	33	9	23	85
September	135	35	8	15	77
October	163	31	16	20	96
November	140	36	6	10	88
December	163	38	15	9	101
All months	1767	325	220	219	1003

Table 3.12: Male Deaths by Cause and Age, 1989

Cause	All ages	Age at death (years)																		
		<1	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+
DIARROEAL																				
Diarrhoea	85	44	9	3	0	0	0	1	0	0	0	0	5	2	4	5	5	2	2	3
Dysentery	18	5	6	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	3	1
INFECTIOUS																				
Tuberculosis	31	0	0	1	0	0	0	2	0	2	2	2	1	4	3	6	5	1	2	0
Tetanus (non-neonatal)	2	0	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Other infectious	27	7	7	0	3	0	0	3	1	0	0	3	1	0	0	1	0	1	0	0
MALIGNANT NEOPLASMS	27	0	1	0	0	1	0	0	1	1	1	2	3	4	8	3	2	0	0	0
NUTRITIONAL	15	11	3	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
CARDIO-VASCULAR	52	0	0	0	0	0	0	0	2	1	0	1	7	9	6	5	2	11	5	3
RESPIRATORY																				
ARI, pneum, influenza	69	56	11	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
COPD*	67	0	4	0	0	0	0	0	3	0	1	4	2	9	14	14	8	2	3	3
GASTRO-INTESTINAL	61	2	2	0	0	3	0	5	2	4	1	4	6	10	11	5	2	3	1	0
DIRECT OBSTETRIC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NEONATAL																				
Tetanus (neonatal)	15	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other neonatal	142	142	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ACCIDENTS, INJURIES																				
Suicide	4	0	0	0	0	0	1	1	0	0	0	0	2	0	0	0	0	0	0	0
Homicide	6	0	0	1	1	0	1	0	0	0	1	0	1	0	0	0	1	0	0	0
Drowning	42	2	29	7	0	0	1	1	0	0	0	0	0	0	0	1	1	0	0	0
Other accidents etc.	17	0	2	2	2	1	1	1	0	0	0	1	2	2	1	0	1	0	1	0
OTHER AND UNSPECIFIED																				
Senility	87	0	0	0	0	0	0	0	0	0	0	0	0	0	4	14	18	17	16	18
Other n.e.c.**	89	2	4	3	0	0	1	1	3	1	3	3	5	11	13	13	8	8	5	5
Unknown	80	4	2	3	1	3	1	3	3	2	4	3	5	8	18	10	8	1	1	0
TOTAL	936	290	80	22	8	8	6	18	15	11	13	24	41	61	83	77	61	46	39	33

* Chronic obstructive pulmonary disease.
** Not elsewhere classified.

Table 3.13: Female Deaths by Cause and Age, 1989

Cause	All Ages	Age at death (years)																		
		<1	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+
DIARRHOEAL																				
Diarrhoea	124	39	46	5	0	1	1	0	1	0	0	1	1	4	3	4	7	5	3	3
Dysentery	37	7	22	1	0	0	0	0	0	0	1	0	0	0	0	0	4	1	1	0
INFECTIOUS																				
Tuberculosis	6	0	0	0	0	0	0	0	0	2	0	1	3	0	0	0	0	0	0	0
Tetanus (non-neonatal)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other infectious	24	5	6	3	0	2	4	2	0	0	0	0	1	0	0	1	0	0	0	0
MALIGNANT NEOPLASMS	6	0	0	0	0	0	0	0	0	0	2	0	3	0	1	0	0	0	0	0
NUTRITIONAL	26	13	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
CARDIO-VASCULAR	40	0	0	0	0	0	0	0	0	0	1	2	4	4	10	4	1	8	5	1
ARI, Pneum, influenza	60	38	20	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
COPD*	37	0	2	1	1	0	0	0	0	2	0	2	3	6	2	9	6	2	1	0
GASTRO-INTESTINAL	24	0	0	0	0	2	5	1	1	2	1	1	3	3	1	2	1	1	0	0
DIRECT OBSTETRIC	12	0	0	0	0	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0
NEONATAL																				
Tetanus (neonatal)	7	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other neonatal	131	131	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ACCIDENTS, INJURIES																				
Suicide	3	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	0	0	0	0
Homicide	4	0	0	0	0	1	1	0	0	0	1	0	0	0	1	0	0	0	0	0
Drowning	27	5	20	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other accidents etc.	19	2	1	0	0	0	3	1	2	1	2	1	1	0	2	0	2	1	0	0
OTHER AND UNSPECIFIED																				
Senility	78	0	0	0	0	0	0	0	0	0	0	0	0	1	7	9	25	18	12	6
Other n.e.c.**	101	3	0	0	0	6	2	2	3	3	7	3	6	6	9	18	12	10	6	5
Unknown	65	5	9	2	1	2	5	5	3	1	5	4	6	9	2	0	2	3	1	0
TOTAL	831	255	139	15	2	17	24	15	13	12	20	15	32	33	38	48	60	49	29	15

* Chronic obstructive pulmonary disease.
** Not elsewhere classified.

Table 3.14: Male Deaths by Cause, Age, and Area, 1989

Cause	All ages		Age at death (years)													
			<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
DIARRHOEAL																
Diarrhoea	33	52	14	30	5	4	2	1	1	0	5	6	5	9	1	2
Dysentery	9	9	2	3	2	4	1	0	0	0	2	0	1	2	1	0
INFECTIOUS																
Tuberculosis	17	14	0	0	0	0	1	0	4	2	6	4	6	8	0	0
Tetanus (non-neonatal)	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0
Other infectious	12	15	2	5	1	6	2	1	3	1	3	1	1	1	0	0
MALIGNANT NEOPLASMS	14	13	0	0	1	0	0	0	3	1	8	9	2	3	0	0
NUTRITIONAL	6	9	6	5	0	3	0	0	0	0	0	1	0	0	0	0
CARDIO-VASCULAR	29	23	0	0	0	0	0	0	2	1	12	11	14	9	1	2
RESPIRATORY																
ARI, Pneum, influenza	24	45	23	33	1	10	0	1	0	0	0	1	0	0	0	0
COPD *	35	32	0	0	2	2	0	0	2	2	13	16	16	11	2	1
GASTRO-INTESTINAL	37	24	1	1	1	1	0	0	11	4	17	14	7	4	0	0
DIRECT OBSTETRIC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NEONATAL																
Tetanus (neonatal)	1	14	1	14	0	0	0	0	0	0	0	0	0	0	0	0
Other neonatal	61	81	61	81	0	0	0	0	0	0	0	0	0	0	0	0
ACCIDENTS, INJURIES																
Suicide	2	2	0	0	0	0	0	0	1	1	1	1	0	0	0	0
Homicide	2	4	0	0	0	0	0	2	1	1	1	0	0	1	0	0
Drowning	22	20	1	1	13	16	7	0	0	2	0	0	1	1	0	0
Other accidents etc.	7	10	0	0	1	1	2	2	2	1	2	4	0	2	0	0
OTHER AND UNSPECIFIED																
Senility	52	35	0	0	0	0	0	0	0	0	4	0	38	27	10	8
Other n.e.c. **	40	49	0	2	1	3	0	3	6	3	13	19	18	16	2	3
Unknown	43	37	4	0	0	2	3	1	10	6	14	20	12	8	0	0
Total	448	488	115	175	28	52	19	11	46	25	102	107	121	102	17	16

* Chronic obstructive pulmonary disease.
** Not elsewhere classified.

Table 3.15: Female Deaths by Cause, Age, and Area, 1989

Cause	All ages		Age at death (years)													
			<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
DIARRHOEAL																
Diarrhoea	58	66	19	20	20	26	4	1	3	0	3	6	6	13	3	0
Dysentery	9	28	2	5	2	20	1	0	1	0	0	0	3	3	0	0
INFECTIOUS																
Tuberculosis	3	3	0	0	0	0	0	0	1	1	2	2	0	0	0	0
Tetanus (non-neonatal)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other infectious	9	15	1	4	1	5	1	2	6	2	0	1	0	1	0	0
MALIGNANT NEOPLASMS	4	2	0	0	0	0	0	0	1	1	3	1	0	0	0	0
NUTRITIONAL	11	15	4	9	7	6	0	0	0	0	0	0	0	0	0	0
CARDIO-VASCULAR	26	14	0	0	0	0	0	0	1	0	13	7	11	7	1	0
RESPIRATORY																
ARI, pneum, influenza	17	43	13	25	3	17	0	1	1	0	0	0	0	0	0	0
COPD *	18	19	0	0	0	2	2	0	0	2	9	4	7	11	0	0
GASTRO-INTESTINAL	12	12	0	0	0	0	0	0	6	6	3	5	3	1	0	0
DIRECT OBSTETRIC	5	7	0	0	0	0	0	0	5	7	0	0	0	0	0	0
NEONATAL																
Tetanus (neonatal)	0	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0
Other neonatal	59	72	59	72	0	0	0	0	0	0	0	0	0	0	0	0
ACCIDENTS, INJURIES																
Suicide	1	2	0	0	0	0	0	0	0	1	1	0	0	1	0	0
Homicide	2	2	0	0	0	0	0	0	1	2	1	0	0	0	0	0
Drowning	13	14	2	3	10	10	1	1	0	0	0	0	0	0	0	0
Other accidents etc.	13	6	1	1	0	1	0	0	8	1	1	3	3	0	0	0
OTHER AND UNSPECIFIED																
Senility	39	39	0	0	0	0	0	0	0	0	5	3	30	34	4	2
Other n.e.c. **	46	55	0	3	0	0	0	0	10	13	12	12	21	25	3	2
Unknown	35	30	2	3	3	6	2	1	13	8	10	11	5	1	0	0
Total	380	451	103	152	46	93	11	6	57	44	63	55	89	97	11	4

* Chronic obstructive pulmonary disease.
** Not elsewhere classified.

Table 3.16: Age-standardised Mortality Rates by Cause of Death, 1989

Cause of death	Males		Females	
	MCH-FP area	Comparison area	MCH-FP area	Comparison area
Diarrhoea	64.04	98.46	137.27	143.73
Dysentery	17.49	15.99	24.81	50.50
Tuberculosis	40.40	38.82	6.68	7.63
Tetanus (non-neonatal)	3.74	00.00	0.00	0.00
Other infectious	24.25	25.51	15.33	25.33
Malignant neoplasms	31.59	34.03	8.51	5.61
Nutritional	10.42	14.45	18.05	21.04
Cardio-vascular	70.99	63.80	98.50	54.98
ARI, pneumonia, flu	41.56	68.08	28.89	60.54
C.O.P.D. *	82.68	83.12	52.54	63.09
Gastro-intestinal	85.66	58.36	31.94	27.60
Direct obstetric	0.00	0.00	8.51	15.46
Neonatal tetanus	1.74	20.85	0.00	9.41
Other neonatal	105.93	120.60	100.89	96.74
Suicide	4.21	4.52	2.10	6.42
Homicide	4.15	9.24	5.11	3.78
Drowning	36.00	32.42	21.07	20.54
Other accidents	12.64	22.36	33.27	13.37
Senility	130.97	106.27	178.07	210.72
Other n.e.c. **	97.46	123.04	167.56	197.07
Unknown	95.97	93.71	84.71	63.38
All causes	961.88	1033.62	1023.82	1096.95

* Chronic obstructive pulmonary disease.
** Not elsewhere classified.

CHAPTER 4

FERTILITY

Table 4.1 shows the number of pregnancies and their outcomes in 1989. Compared with 1988, the number of live births fell by 6% in the MCH-FP area and by 8% in the Comparison area. In the study area as a whole, 89% of pregnancies resulted in a live birth, which was almost identical to the proportion recorded the previous year.

Table 4.2 shows the distribution of pregnancies by outcome, and the live births by sex, and by month of occurrence. The data show the usual marked seasonal variation, peaking in October-November. The sex ratio of the live births of 0.9954, or 99.54 males per 100 females, appears abnormally low, but it must be remembered that this ratio is subject to large random variations: given the annual number of births recorded in Matlab, the sex ratio at birth could vary randomly by as much as +/- 5 percentage points (95% confidence interval).

Table 4.3 shows the age-specific fertility rates for the study area, together with the total fertility rate, crude birth rate, general fertility rate, and gross and net reproduction rates; Table 4.4 shows the corresponding rates for the MCH-FP and Comparison areas, which are also illustrated in Figure 4.2; and Table 4.5 shows the rates for the four blocks of the MCH-FP area. Comparisons with the age-specific rates for 1988 show declines in all age groups in the MCH-FP area, and in all except 35-39 and 45-49 in the Comparison area. The relative difference between the rates for the two areas tend to increase with the ages of the mothers, as might be expected.

Table 4.1: Number and Rates of Pregnancy Outcome by Type and Area, 1989

Type of pregnancy outcome	Both Areas		MCH-FP Area		Comparison Area	
	No.	Rate	No.	Rate	No.	Rate
Total pregnancies *	7287	149.0	3208	123.9	4079	177.4
Live birth pregnancies **	6494	891.2	2911	907.4	3583	878.4
Foetal wastage pregnancies	793	108.8	297	92.6	496	121.6
Early (miscarriages)	604	82.9	219	68.3	385	94.4
Late (still-births)	189	25.9	78	24.3	111	27.2
Multiple birth pregnancies	57		28		29	
Live births Pregnancies	57		28		29	
Three live births	1		1		0	
Two live births	48		24		24	
One live birth	9		4		5	

* Rates per 1000 women of age 15-49 years.
** Ratio per 1000 total pregnancies.

Table 4.2: Pregnancy Outcome by Month, 1989

Months	Pregnancy Outcome					No.of Live Born Children			
		Miscarriage							
	All	Induced	Spon.	Still birth	Live* birth	Both sexes	Males	Females	Ratio
All Months	7287	222	382	189	6494	6543	3264	3279	0.9954
Januanry	602	14	21	14	553	555	282	273	1.0330
February	587	23	18	11	535	538	262	276	0.9493
March	553	16	44	11	482	486	210	276	0.7609
April	576	20	31	10	515	521	250	271	0.9225
May	436	14	35	15	372	373	173	200	0.8650
June	414	31	40	6	337	339	174	165	1.0545
July	460	23	36	15	386	386	200	186	1.0753
August	576	15	36	23	502	508	275	233	1.1803
September	670	20	31	19	600	607	309	298	1.0369
October	830	16	40	23	751	757	377	380	0.9921
November	819	12	24	23	760	765	402	363	1.1074
December	764	18	26	19	701	708	350	358	0.9777

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

Figure 4.1: Number of Births and Deaths by Month, 1989

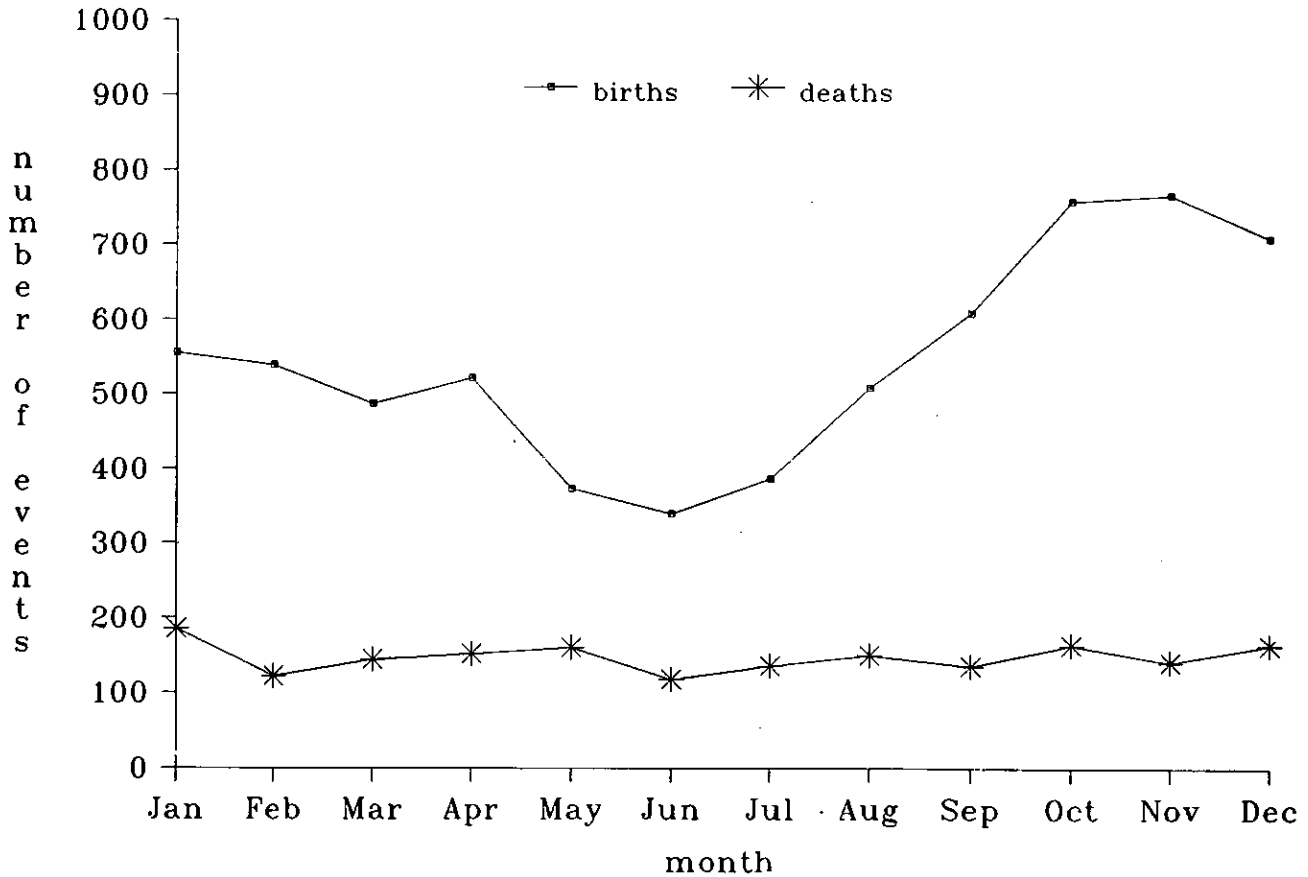


Table 4.3: Age-specific Fertility Rates and Indices, 1989

Age (years)	Number of live birth	Number of women	ASFR (per 1000)
All ages	6543	48900	133.8
15-19 *	730	10953	66.6
20-24	2295	10243	224.1
25-29	1940	8400	231.0
30-34	947	5978	158.4
35-39	441	4432	99.5
40-44	162	4472	36.2
45-49 **	28	4422	6.3

Total Fertility Rate (TFR)	= 4111
Crude Birth Rate (CBR)	= 32.4
General Fertility Rate (GFR)	= 134
Gross Reproduction Rate (GRR)	= 2060
Net Reproduction Rate (NRR)	= 1725

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

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

Table 4.4: Age-specific Fertility Rates and Indices by Area, 1989

Age (years)	MCH-FP Area			Comparison Area		
	Births	Women	Rate	Births	Women	Rate
All ages	2936	25901	113.4	3607	22999	156.8
15-19 *	330	5806	56.8	400	5147	77.7
20-24	1087	5468	198.8	1208	4775	253.0
25-29	880	4426	198.8	1060	3974	266.7
30-34	396	3126	126.7	551	2852	193.2
35-39	169	2375	71.2	272	2057	132.2
40-44	62	2368	26.2	100	2104	47.5
45-49 **	12	2332	5.1	16	2090	7.7
TFR	=	3418	TFR	=	4890	
CBR	=	28.4	CBR	=	36.6	
GFR	=	113	GFR	=	157	
GRR	=	1697	GRR	=	2469	
NRR	=	1443	NRR	=	1979	

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

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

Table 4.5: Age-specific Fertility Rates and Indices for MCH-FP Area by Block, 1989

Age (years)	Block A			Block B		
	Births	Women	Rate	Births	Women	Rate
All ages	888	7118	124.8	768	6580	116.7
15-19 *	86	1548	55.6	100	1496	66.8
20-24	343	1588	216.0	265	1378	192.3
25-29	269	1248	215.5	211	1088	193.9
30-34	122	857	142.4	112	773	144.9
35-39	45	626	71.9	52	632	82.3
40-44	19	669	28.4	24	610	39.3
45-49 **	4	582	6.9	4	603	6.6

TFR	=	3683	TFR	=	3631
GFR	=	125	GFR	=	117
GRR	=	1916	GRR	=	1801

* Birth to mothers under age 15 were included in this group

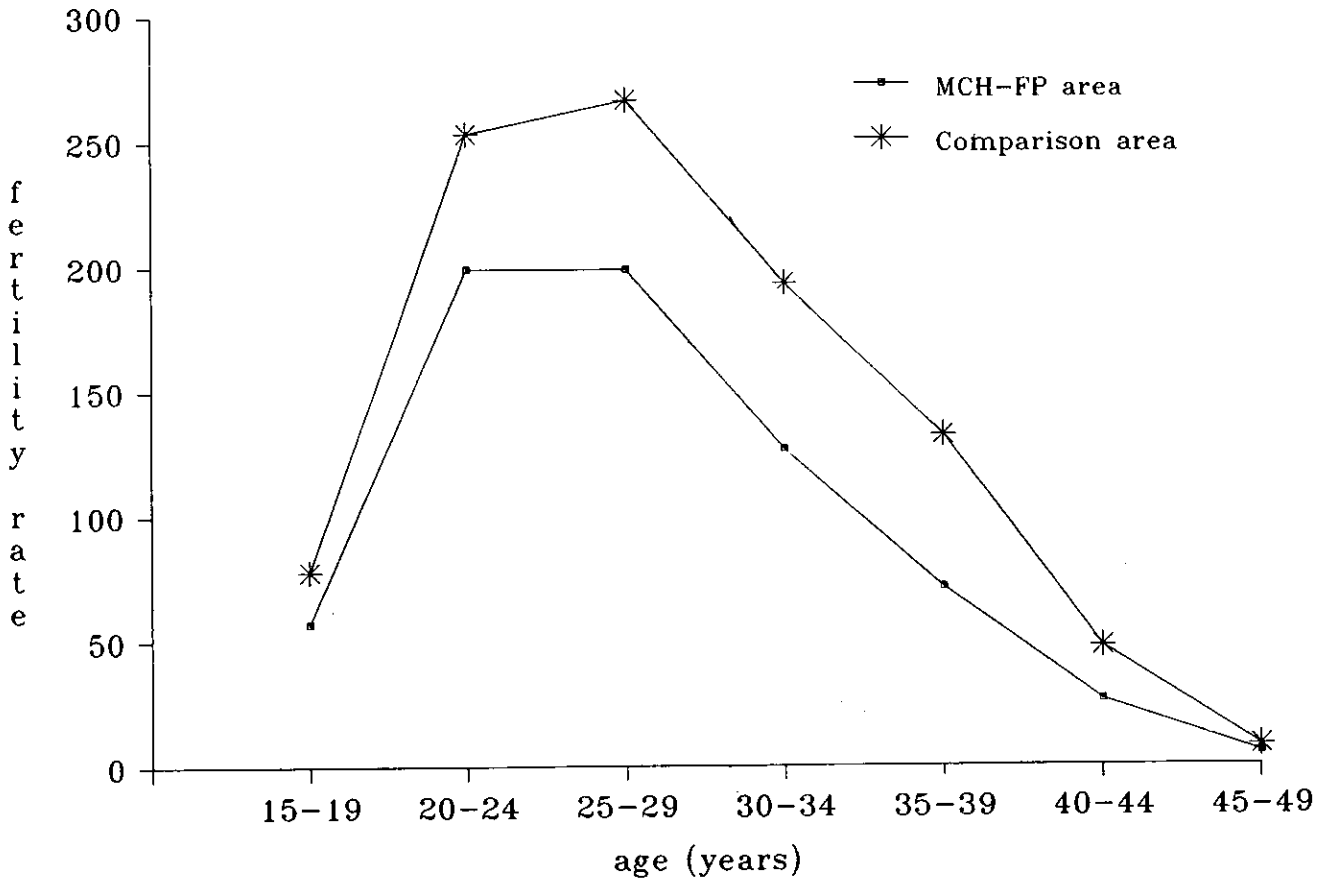
** Birth to mothers age 50 and above were included in this group

Table 4.5 (cont.): Age-specific Fertility Rates and Indices for MCH-FP Area by Block, 1989

Age (years)	Block C			Block D		
	Births	Women	Rate	Births	Women	Rate
All ages	709	6830	103.8	571	5373	106.3
15-19 *	86	1565	55.0	58	1197	48.5
20-24	272	1393	195.3	207	1109	186.7
25-29	205	1136	180.5	195	954	204.4
30-34	87	856	101.6	75	640	117.2
35-39	42	653	64.3	30	464	64.7
40-44	14	592	23.6	5	497	10.1
45-49 **	3	635	4.7	1	512	2.0
TFR	=	3125	TFR	=	3167	
GFR	=	104	GFR	=	106	
GRR	=	1565	GRR	=	1442	

* Birth to mothers under age 15 were included in this group.
** Birth to mothers age 50 and above were included in this group.

Figure 4.2: Age-specific Fertility Rates by Area, 1989



CHAPTER 5

MARRIAGE AND DIVORCE

The number of marriages registered in 1989 was 3,070, giving a crude marriage rate of 15.2 per thousand. These figures represent a resurgence in the number of marriages compared with the previous year, when the numbers had sunk to a record low of 2,540 giving a rate of 12.7 per thousand. However, the upsurge in the number of marriages was not reflected in any conspicuous change in age at marriage. Tables 5.1 and 5.2 show the distributions of grooms and brides by age at marriage and previous marital status. The mean ages in 1989 - 26.9 for males and 19.1 for females - show only a minimal fall on the 1988 figures of 27.1 and 19.2 respectively. In general there would appear to have been a long-term rise in age at marriage of females in Matlab: the mean age has been over 19 for every year since 1985, while prior to that date it was consistently below that age.

Divorces numbered 476 in 1989, which also constituted an increase on the 1988 figure of 420. In general, however, the incidence of divorce in Matlab appears to have fallen during the past decade.

Table 5.6 shows the distributions of marriages and divorces by month. When compared with previous years no regular seasonal pattern is again discernible.

Table 5.1: Groom's Age at Marriage by Previous Marital Status, 1989

Age (years)	All grooms		Previous marital status							
			Single		Married		Widowed		Divorced	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
All ages	3070	100.0	2463	100.0	124	100.0	112	100.0	371	100.0
10-14	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0
15-19	140	4.6	135	5.5	0	0.0	1	0.9	4	1.1
20-24	903	29.4	820	33.3	13	10.5	2	1.8	68	18.3
25-29	1349	43.9	1138	46.2	29	23.4	23	20.5	159	42.9
30-34	493	16.1	345	14.0	36	29.0	31	27.7	81	21.8
35-39	88	2.9	21	0.9	27	21.8	17	15.2	23	6.2
40-44	33	1.1	2	0.1	7	5.6	9	8.0	15	4.0
45-49	33	1.1	0	0.0	11	8.9	13	11.6	9	2.4
50-54	12	0.4	0	0.0	1	0.8	4	3.6	7	1.9
55-59	7	0.2	0	0.0	0	0.0	4	3.6	3	0.8
60-64	5	0.2	0	0.0	0	0.0	4	3.6	1	0.3
65+	6	0.2	1	0.0	0	0.0	4	3.6	1	0.3
Median age*	26.0		26.0		32.5		34.4		29.0	
Mean age*	26.9		25.7		33.3		38.1		29.8	
Standard dev.*	5.9		4.0		7.3		11.2		7.4	

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

Table 5.2: Bride's Age at Marriage by previous Marital Status, 1989

Age (years)	Previous marital status							
	All brides		Single		Widowed		Divorced	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
All ages	3070	100.0	2623	100.0	11	100.0	436	100.0
10-14	107	3.5	106	4.0	0	0.0	1	0.2
15-19	1883	61.3	1777	67.7	3	27.3	103	23.6
20-24	870	28.3	665	25.4	1	9.1	204	46.8
24-29	165	5.4	70	2.7	5	45.5	90	20.6
30-34	26	0.8	2	0.1	2	18.2	22	5.0
35-39	13	0.4	1	0.0	0	0.0	12	2.8
40-44	3	0.1	0	0.0	0	0.0	3	0.7
45-49	1	0.0	0	0.0	0	0.0	1	0.2
50-54	0	0.0	0	0.0	0	0.0	0	0.0
55-59	0	0.0	0	0.0	0	0.0	0	0.0
60-64	0	0.0	0	0.0	0	0.0	0	0.0
65+	0	0.0	0	0.0	0	0.0	0	0.0
Unknown	2	0.1	2	0.1	0	0.0	0	0.0
Median age*	18.5		18.0		26.0		22.0	
Mean age*	19.1		18.4		24.9		22.9	
Standard dev.*	3.5		2.7		4.8		4.9	

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

Table 5.3: Marriage Rates by Age and Sex, 1989

Age (years)	Males			Females		
	Marriages	Population	Rate	Marriages	Population	Rate
10-14	1	12432	0.1	107	11310	9.5
15-19	140	11879	11.8	1883	10953	171.9
20-24	903	8885	101.6	870	10243	84.9
25-29	1349	8020	168.2	165	8400	19.6
30-34	493	6165	80.0	26	5978	4.3
35-39	88	4317	20.4	13	4432	2.9
40-40	33	3517	9.4	3	4472	0.7
45-49	33	3424	9.6	3	16528	0.2*
50-54	12	3643	3.3	-	-	-
55-59	7	3000	2.3	-	-	-
60-64	5	2362	2.1	-	-	-
65+	6	3901	1.5	-	-	-

* Marriages of females age 50 and above were included in this group.

Table 5.4: Number of Marriages by Groom's and Bride's Age at Marriage, 1989

Groom s age (years)	All	Bride's age (years)									
		10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50+	Unknown
All ages	3070	107	1883	870	165	26	13	3	1	0	2
10-14	1	1	0	0	0	0	0	0	0	0	0
15-19	140	12	108	19	1	0	0	0	0	0	0
20-24	903	43	670	175	13	1	0	0	0	0	1
25-29	1349	42	859	411	36	1	0	0	0	0	0
30-34	493	9	203	213	62	4	1	0	0	0	1
35-39	88	0	28	29	25	6	0	0	0	0	0
40-44	33	0	10	6	9	6	2	0	0	0	0
45-49	33	0	4	12	10	3	4	0	0	0	0
50-54	12	0	1	2	3	3	2	1	0	0	0
55-59	7	0	0	2	3	0	1	1	0	0	0
60-64	5	0	0	0	2	0	2	1	0	0	0
65+	6	0	0	1	1	2	1	0	1	0	0

Table 5.5: Number of Divorces by Partners' Age at Divorce, 1989

Male's age (years)	All	Female's age (years)								
		10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50+
All ages	476	10	159	205	75	15	8	2	0	2
10-14	0	0	0	0	0	0	0	0	0	0
15-19	10	2	7	1	0	0	0	0	0	0
20-24	93	4	43	43	2	0	0	0	0	1
25-29	183	4	73	88	17	1	0	0	0	0
30-34	114	0	26	55	29	4	0	0	0	0
35-39	35	0	6	10	16	3	0	0	0	0
40-44	9	0	0	5	1	3	0	0	0	0
45-49	12	0	1	1	7	0	3	0	0	0
50-54	11	0	2	1	3	1	2	2	0	0
55-59	0	0	0	0	0	0	0	0	0	0
60-64	2	0	0	0	0	2	0	0	0	0
65+	5	0	1	0	0	0	3	0	0	1
Unknown	2	0	0	1	0	1	0	0	0	0

Table 5.6: Marriages and Divorces by Months, 1989

Month	Marriage		Divorce	
	Number	Percent	Number	Percent
January	206	6.7	48	10.1
February	234	7.6	53	11.1
March	265	8.6	41	8.6
April	117	3.8	35	7.4
May	260	8.5	41	8.6
June	215	7.0	37	7.8
July	398	13.0	59	12.4
August	256	8.3	35	7.4
September	288	9.4	34	7.1
October	327	10.7	36	7.6
November	207	6.7	29	6.1
December	297	9.7	28	5.9
All months	3070	100.0	476	100.0

Figure 5.1: Marriages and Divorces by Month, 1989

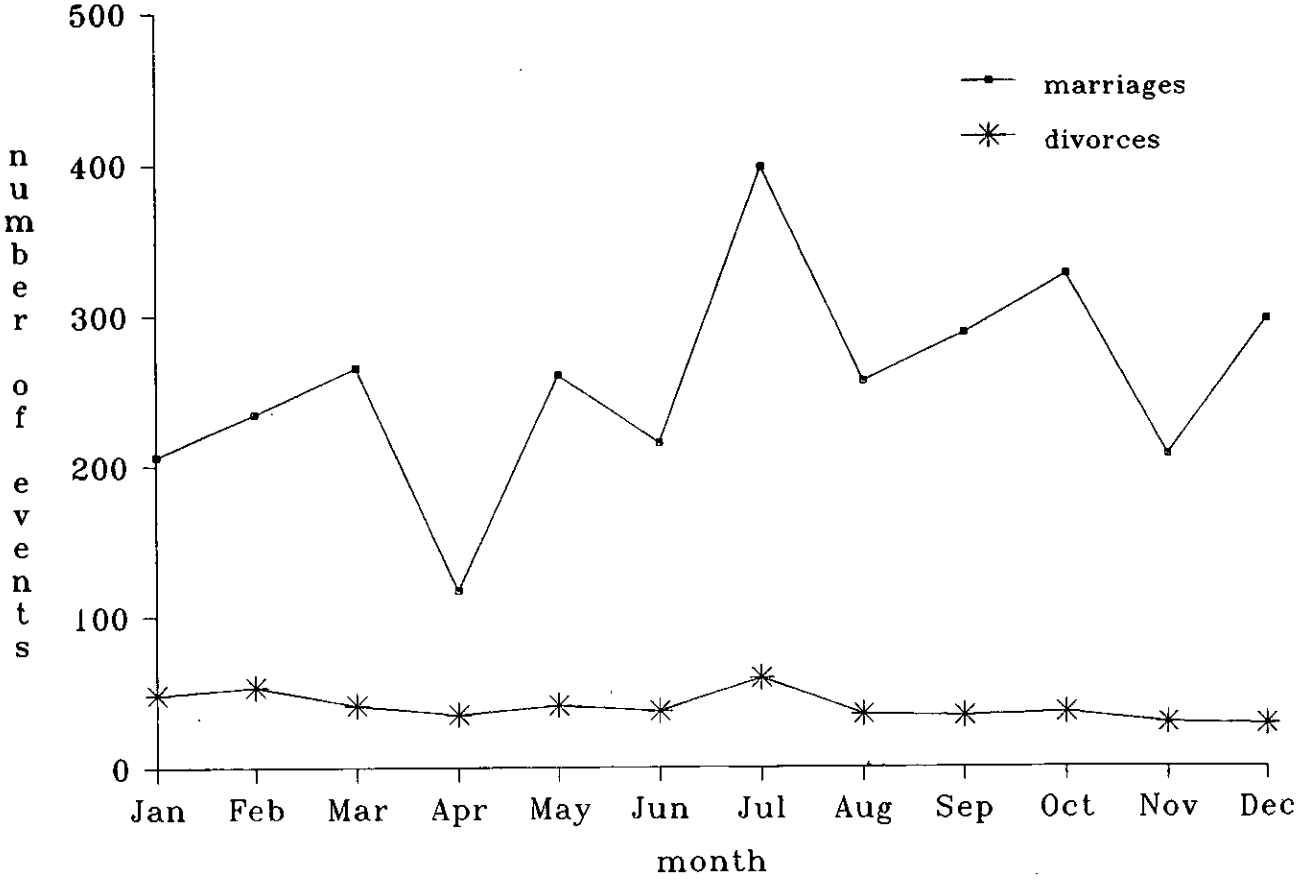


Table 5.7: Number of Divorces by Sex, Age, and Duration of Marriage, 1989

Age at divorce	All durations		Duration of marriage (months)													
			Under 6		6-11		12-23		24-35		36-47		48-59		60+	
	male	female	male	female	male	female	male	female	male	female	male	female	male	female	male	female
All ages	476	476	180	180	69	69	83	83	55	55	35	35	16	16	38	38
Under 20	9	169	7	76	2	24	0	40	0	17	0	8	0	1	0	3
20-24	94	205	32	77	10	30	27	23	15	28	3	21	3	13	4	13
25-29	183	75	77	19	26	12	28	11	22	7	17	5	7	2	6	19
30-34	114	15	42	5	18	1	11	5	9	1	11	1	4	0	19	2
35-39	35	8	9	3	7	1	8	3	4	1	3	0	2	0	2	0
40-44	21	2	5	0	5	0	4	0	3	1	0	0	0	0	4	1
50+	18	2	6	0	1	1	5	1	2	0	1	0	0	0	3	0
Unknown	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0

CHAPTER 6

MIGRATION

An "out-migrant" is defined as a person originally listed in a DSS census as a resident, or a person who became a resident after the census by birth or immigration, 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 six months in a year or come home at least once a month to stay overnight are treated as permanent residents. It may be noted that these definitions refer to the surveillance area as a whole. People who move from the Comparison area into the MCH-FP area, or vice versa, do not feature in the tables which show the numbers in the two areas.

The number of in-migrants in 1989 was 5,912, giving a crude in-migration rate of 29.3 per thousand. Out-migrants numbered 8,869 and the out-migration rate 43.9 per thousand. The figures constituted increases on the 1988 numbers, but were still lower that those of 1987 which had been a peak year for both in- and out-migration The numbers for the MCH-FP and Comparison areas, shown in Tables 6.1 and 6.2 by age and sex, show fairly even numbers of in-migrants for the two areas, but rather larger numbers of out-migrants leaving the Comparison area.

Table 6.3 and 6.4 show the age-specific migration rates, which are illustrated in Figure 6.1. They show the bi-modal age distributions commonly found for migrant populations, with a primary peak of young adults and a secondary peak of young children moving with their parents. For males the ages of the out-migrants tended to be rather younger than those of the in-migrants, while for females the shapes of the distributions were similar.

Tables 6.5 to 6.8 show the distributions of in- and out-migrants by age, sex and the cause of the movement. The classification by cause has been revised from that adopted in previous DSS annual reports, and it is hoped that users will find it more meaningful.

Table 6.9 and Figure 6.2 show the numbers moving in and out by month. As in previous years, January appears to be the preferred month for making such moves.

Table 6.1: In- and Out-migration by Age and Sex, 1989

Age (years)	In-migration			Out-migration		
	Both sexes	Males	Females	Both sexes	Males	Female
0 - 4	1041	550	491	1336	671	665
0	292	158	134	337	166	171
1	224	116	108	306	158	148
2	198	106	92	275	130	145
3	179	93	86	229	125	104
4	148	77	71	189	92	97
5 - 9	591	320	271	821	438	383
10-14	424	221	203	766	392	374
15-19	1045	209	836	1671	586	1085
20-24	973	221	752	1644	637	1007
25-29	657	308	349	1071	588	483
30-34	426	272	154	576	335	241
35-39	231	171	60	288	192	96
40-44	119	74	45	190	112	78
45-49	108	63	45	136	88	48
50-54	83	49	34	116	75	41
55-59	60	35	25	83	40	43
60-64	56	32	24	61	27	34
65+	98	40	58	110	49	61
Total	5912	2565	3347	8869	4230	4639

Table 6.2: In-migration by Age, Sex, and Area, 1989

Age (years)	MCH-FP area			Comparison area		
	Both sexes	Males	Females	Both sexes	Males	Females
0 - 4	509	264	245	532	286	246
0	148	81	67	144	77	67
1	108	56	52	116	60	56
2	98	52	46	100	54	46
3	88	43	45	91	50	41
4	67	32	35	81	45	36
5 - 9	285	148	137	306	172	134
10-14	200	107	93	224	114	110
15-19	519	105	414	526	104	422
20-24	495	96	399	478	125	353
25-29	313	134	179	344	174	170
30-34	226	142	84	200	130	70
35-39	115	93	22	116	78	38
40-44	59	40	19	60	34	26
45-49	42	25	17	66	38	28
50-54	40	28	12	43	21	22
55-59	19	11	8	41	24	17
60-64	24	14	10	32	18	14
65+	36	14	22	62	26	36
Total	2882	1221	1661	3030	1344	1686

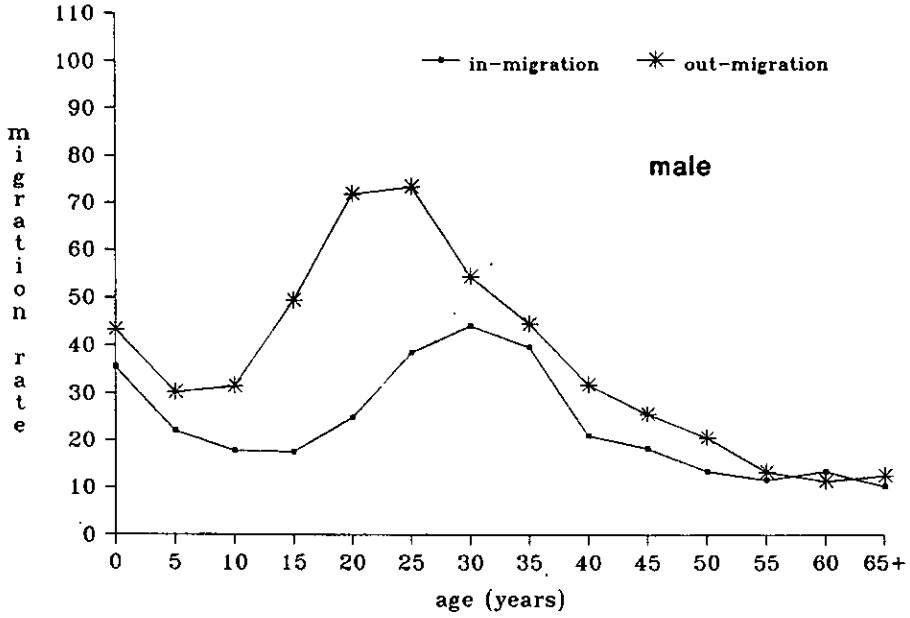
Table 6.3: Out-migration by Age, Sex, and Area, 1989

Age (years)	MCH-FP area			Comparison area		
	Both sexes	Males	Females	Both sexes	Males	Females
0 - 4	622	310	312	714	361	353
0	151	79	72	186	87	99
1	143	72	71	163	86	77
2	144	67	77	131	63	68
3	102	51	51	127	74	53
4	82	41	41	107	51	56
5 - 9	327	174	153	494	264	230
10-14	324	152	172	442	240	202
15-19	812	272	540	859	314	545
20-24	839	292	547	805	345	460
25-29	495	261	234	576	327	249
30-34	279	164	115	297	171	126
35-39	125	88	37	163	104	59
40-44	84	51	33	106	61	45
45-49	55	37	18	81	51	30
50-54	47	32	15	69	43	26
55-59	27	14	13	56	26	30
60-64	27	11	16	34	16	18
65+	48	24	24	62	25	37
Total	4111	1882	2229	4758	2348	2410

Table 6.4: Age and Sex-specific Migration Rates by Direction, 1989
(per 1000 population)

Age (years)	Both sexes		Males		Females	
	In	Out	In	Out	In	Out
0 - 4	33.9	43.5	35.5	43.3	32.2	43.6
0	45.1	52.0	49.5	52.0	40.8	52.1
1	36.3	49.6	37.0	50.4	35.6	48.8
2	31.7	44.0	33.8	41.4	29.6	46.7
3	28.1	36.0	28.4	38.2	27.8	33.6
4	27.0	34.4	27.9	33.3	26.1	35.6
5 - 9	21.6	30.0	22.1	30.3	21.0	29.6
10-14	17.9	32.3	17.8	31.5	17.9	33.1
15-19	45.8	73.2	17.6	49.3	76.3	99.1
20-24	50.9	85.9	24.9	71.7	73.4	98.3
25-29	40.0	65.2	38.4	73.3	41.5	57.5
30-34	35.1	47.4	44.1	54.3	25.8	40.3
35-39	26.4	32.9	39.6	44.5	13.5	21.7
40-44	14.9	23.8	21.0	31.8	10.1	17.4
45-49	13.8	17.3	18.4	25.7	10.2	10.9
50-54	11.2	15.7	13.5	20.6	9.1	10.9
55-59	10.2	14.1	11.7	13.3	8.7	14.9
60-64	12.5	13.6	13.5	11.4	11.3	16.0
65+	13.5	15.2	10.3	12.6	17.3	18.2
Total	29.3	43.9	25.3	41.7	33.3	46.2

Figure 6.1: Rate of In- and Out-migration by Sex and Age, 1989



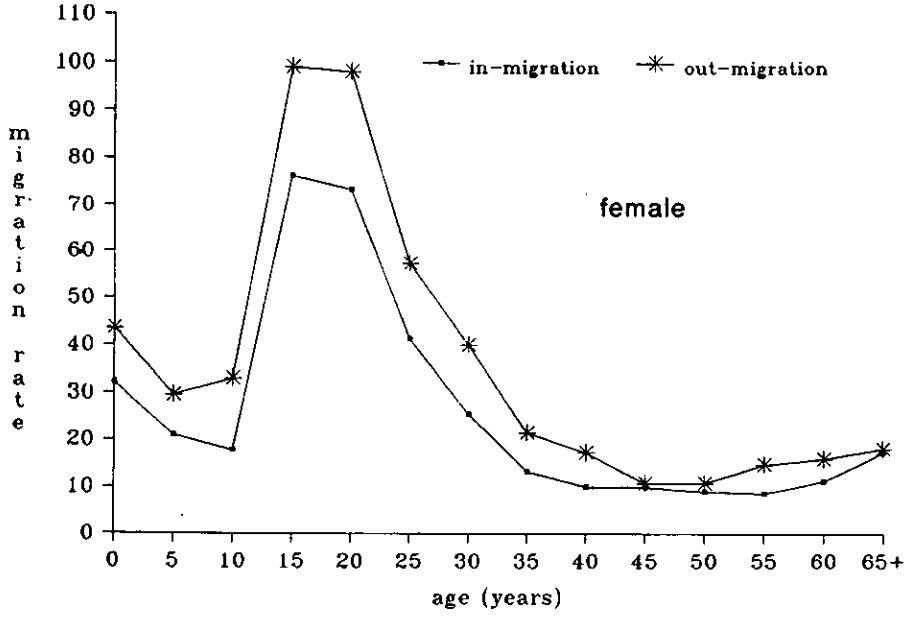


Table 6.5: Male Out-migration by Cause of Movement and Age, 1989

Cause of movement	Age (years)														
	Total	<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	4230	671	438	392	586	637	588	335	192	112	88	75	40	27	49
1. Work/Economic/Educational															
Acquired/seeking job	2015	1	10	101	359	471	457	251	148	75	59	41	19	10	13
Job completion/retirement	20	0	0	0	2	2	2	3	2	4	0	4	1	0	0
To acquire education	265	1	22	59	101	59	23	0	0	0	0	0	0	0	0
Education completed/interupt	4	0	0	0	1	3	0	0	0	0	0	0	0	0	0
Student lodging	36	0	1	7	7	13	7	1	0	0	0	0	0	0	0
2. Housing/Environmental															
Acquired/Seeking new land/house	141	0	4	4	5	4	23	29	16	13	12	10	5	5	11
River erosion	83	17	9	5	6	4	7	3	6	2	7	5	3	2	7
3. Marriage/Familial															
Marriage	4	0	0	1	0	3	0	0	0	0	0	0	0	0	0
Separation/ divorce/widow	7	0	0	0	0	5	0	2	0	0	0	0	0	0	0
Move with/join spouse/parents	1519	650	389	209	94	55	45	29	12	12	2	7	4	4	7
Adoption	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0
Family friction/breakdown	48	0	0	2	6	14	17	6	1	1	0	1	0	0	0
Health or old age care	9	0	0	0	0	0	0	0	0	1	1	0	1	1	5
4. Legal problems	23	0	0	0	2	4	4	3	3	1	4	1	0	1	0
5. Other and not stated															
Other n.e.c	25	0	2	2	2	0	2	3	1	1	2	3	3	2	2
Unknown or not stated	28	0	0	2	1	0	1	5	3	2	1	3	4	2	4

Table 6.6: Female Out-migration by Cause of Movement and Age, 1989

Cause of movement	Age (years)														
	Total	<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	4639	665	383	374	1085	1007	483	241	96	78	48	41	43	34	61
1. Work/Economic/Educational															
Acquired/seeking job	383	1	9	71	112	78	44	33	12	8	5	1	3	3	3
Job completion/retirement	4	0	0	1	0	2	1	0	0	0	0	0	0	0	0
To acquire education	105	0	18	38	29	17	3	0	0	0	0	0	0	0	0
Education completed/interupt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Student lodging	10	0	2	0	7	1	0	0	0	0	0	0	0	0	0
2. Housing/Environmental															
Acquired/Seeking new land/house	52	2	3	1	4	7	10	6	5	4	1	3	4	1	1
River erosion	86	17	14	10	5	7	8	4	5	4	2	2	3	1	4
3. Marriage/Familial															
Marriage	1036	0	0	38	542	330	91	24	6	1	2	2	0	0	0
Separation/ divorce/widow	142	0	1	1	41	68	16	7	5	1	1	0	1	0	0
Move with/join spouse/parents	2728	631	334	213	335	484	303	163	62	55	31	26	26	25	40
Adoption	14	14	0	0	0	0	0	0	0	0	0	0	0	0	0
Family friction/breakdown	25	0	0	0	7	10	4	2	0	1	0	0	1	0	0
Health or old age care	29	0	0	0	0	0	0	1	0	1	2	5	4	4	12
4. Legal problems	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5. Other and not stated															
Other n.e.c	18	0	0	1	3	3	3	0	1	2	3	0	1	0	1
Unknown or not stated	7	0	2	0	0	0	0	1	0	1	1	2	0	0	0

Table 6.7: Male In-migration by Cause of Movement and Age, 1989

Cause of movement	Age (years)														
	Total	<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	2565	550	320	221	209	221	308	272	171	74	63	49	35	32	40
1. Work/Economic/Educational															
Acquired/seeking job	371	0	0	4	29	57	81	77	49	21	19	12	7	5	10
Job completion/retirement	166	0	0	1	5	18	38	29	29	5	10	16	2	11	2
To acquire education	164	0	28	54	53	20	7	0	2	0	0	0	0	0	0
Education completed/interupt	4	0	0	0	2	1	1	0	0	0	0	0	0	0	0
Student lodging	29	0	1	4	9	10	4	0	0	1	0	0	0	0	0
2. Housing/Environmental															
Acquired/Seeking new land/house	476	3	3	10	42	64	94	102	55	26	22	17	15	11	12
River erosion	67	7	4	2	3	6	9	12	5	3	5	0	3	3	5
3. Marriage/Familial															
Marriage	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Separation/ divorce/widow	2	0	0	0	1	0	0	0	0	0	0	1	0	0	0
Move with/join spouse/parents	1228	536	281	143	64	40	66	43	24	16	5	3	3	0	4
Adoption	4	2	2	0	0	0	0	0	0	0	0	0	0	0	0
Family friction/breakdown	16	1	1	1	0	1	4	3	4	0	1	0	0	0	0
Health or old age care	12	0	0	0	0	1	0	2	0	1	0	0	2	1	5
4. Legal problems	9	0	0	0	1	1	2	2	1	1	0	0	1	0	0
5. Other and not stated															
Other n.e.c	16	1	0	2	0	2	2	2	1	0	1	0	2	1	2
Unknown or not stated	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

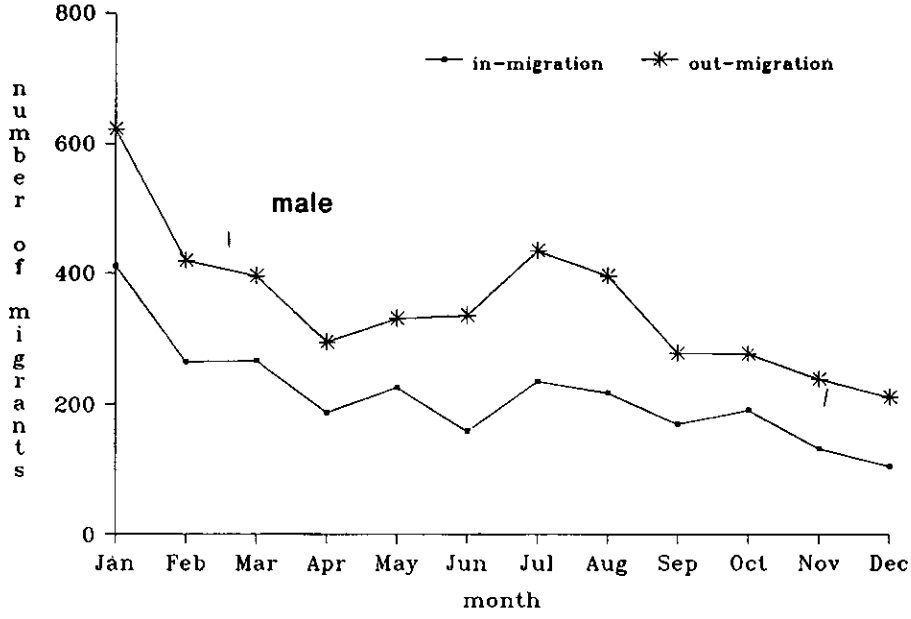
Table 6.8: Female In-migration by Cause of Movement and Age, 1989

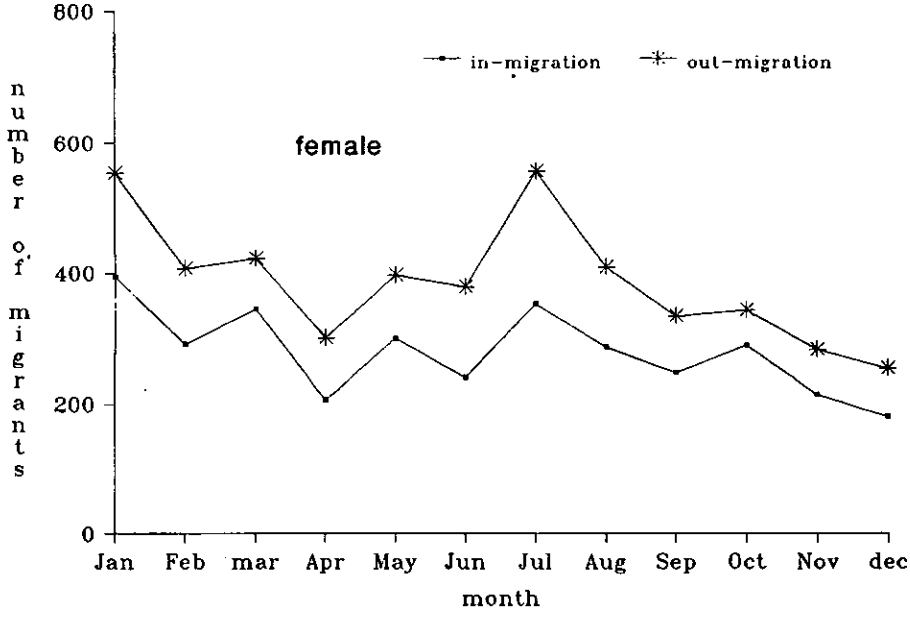
Cause of movemnt	Age (years)														
	Total	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
All migrants	3347	491	271	203	836	752	348	154	60	45	45	35	25	24	58
1. Work/Economic/Educational															
Acquired/seeking job	161	0	2	9	18	57	36	19	6	5	3	5	1	0	0
Job completion/retirement	37	0	0	7	15	5	1	6	0	0	0	0	0	1	2
To acquire education	75	0	17	27	20	8	0	1	2	0	0	0	0	0	0
Education completed/interupt	4	0	0	0	2	2	0	0	0	0	0	0	0	0	0
Student lodging	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0
2. Housing/Environmental															
Acquired/Seeking new land/house	105	2	1	1	4	13	26	17	5	6	11	7	6	1	5
River erosion	70	8	6	4	6	15	11	5	2	2	4	4	1	0	2
3. Marriage/Familial															
Marriage	855	1	0	11	504	311	17	6	3	1	1	0	0	0	0
Separation/ divorce/widow	182	0	0	3	55	77	26	14	2	4	0	1	0	0	0
Move with/join spouse/parents	1709	464	241	134	203	238	209	81	38	26	21	13	12	12	17
Adoption	17	14	2	1	0	0	0	0	0	0	0	0	0	0	0
Family friction/breakdown	36	0	0	0	4	19	11	1	0	0	0	1	0	0	0
Health or old age care	36	0	0	1	0	0	1	0	0	0	4	1	4	4	21
4. Legal problems	5	0	0	0	2	1	2	0	0	0	0	0	0	0	0
5. Other and not stated															
Other n.e.c	53	2	2	3	3	6	8	4	2	1	1	3	1	6	11
Unknown or not stated	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Table 6.9: In- and Out-migration by Age and Sex, 1989

Months	In-migration			Out-migration		
	Both	Male	Female	Both	Male	Female
January	805	411	394	1176	622	554
February	556	265	291	826	419	407
March	612	267	345	818	395	423
April	393	187	206	596	295	301
May	526	226	300	727	330	397
June	399	159	240	713	335	378
July	588	235	353	991	434	557
August	503	217	286	804	395	409
September	417	170	247	612	278	334
October	480	191	289	620	277	343
November	347	132	215	521	239	282
December	286	105	181	465	211	254
All months	5912	2565	3347	8869	4230	4639

Figure 6.2: Number of In- and Out-migrants by Sex and Month, 1989





Appendix A

Names and Codes of Villages in the DSS Area, 1989

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

*Division by block applies only to the MCH-FP area.
*Lost due to river erosion.

Appendix B

Mid-year Population, Births, and Deaths by Village, 1989

Village code	Population	Live births	Deaths	Birth rate	Death rate
D	1706	47	16	27.5	9.4
W	3046	63	10	20.7	3.3
V10	1522	56	14	36.8	9.2
V11	1564	39	12	24.9	7.7
V31	8615	300	69	34.8	8.0
V32	2562	79	31	30.8	12.1
V59	957	22	8	23.0	8.4
V60	872	25	3	28.7	3.4
V61	698	29	1	41.5	1.4
V62	847	32	9	37.8	10.6
V72	5667	196	35	34.6	6.2
BLOCK A	28056	888	208	31.7	7.4
H	1238	33	8	26.7	6.5
V12	541	12	7	22.2	12.9
V13	754	23	7	30.5	9.3
V19	3041	69	12	22.7	3.9
V20	1124	29	7	25.8	6.2
V21	476	17	6	35.7	12.6
V22	578	12	3	20.8	5.2
V23	541	11	3	20.3	5.5
V24	2655	102	28	38.4	10.5
V26	2613	84	17	32.1	6.5
V56	1430	33	11	23.1	7.7
V82	1415	34	15	24.0	10.6
V83	500	22	9	44.0	18.0
V85	460	15	5	32.6	10.9
V87	576	12	3	20.8	5.2
VB12	3924	121	37	30.8	9.4
VB13	4459	139	40	31.2	9.0
Block B	26325	768	218	29.2	8.3

Appendix B (cont.)

Village* code	Population	Live births	Deaths	Birth rate	Death rate
K	906	15	6	16.6	6.6
L	455	14	2	30.8	4.4
M	155	5	1	32.3	6.5
N	2047	50	13	24.4	6.4
O	1328	42	9	31.6	6.8
P	1892	59	15	31.2	7.9
Q	356	14	1	39.3	2.8
V27	894	18	8	20.1	8.9
V28	1353	31	6	22.9	4.4
V30	568	10	3	17.6	5.3
V39	350	11	2	31.4	5.7
V40	713	21	7	29.5	9.8
V41	1461	39	7	26.7	4.8
V42	710	19	5	26.8	7.0
V43	870	26	5	29.9	5.7
V44	599	11	3	18.4	5.0
V64	4587	117	41	25.5	8.9
V86	786	26	9	33.1	11.5
V88	484	14	9	28.9	18.6
VB11	2476	43	24	17.4	9.7
D100	3211	86	34	26.8	10.6
D101	1250	38	11	30.4	8.8
Block C	27451	709	221	25.8	8.1
R	1348	34	9	25.2	6.7
S	952	30	6	31.5	6.3
T	1513	41	8	27.1	5.3
V15	539	9	4	16.7	7.4
V16	746	18	4	24.1	5.4
V17	1027	38	9	37.0	8.8
V18	3542	83	26	23.4	7.3
V25	1188	26	11	21.9	9.3
V29	502	14	1	27.9	2.0
V33	585	11	5	18.8	8.5
V34	764	22	6	28.8	7.9
V52	239	8	4	33.5	16.7
V54	581	15	7	25.8	12.0
V55	491	12	9	24.4	18.3
V57	1093	24	13	22.0	11.9
V63	2043	50	23	24.5	11.3
V67	560	10	3	17.9	5.4
V81	589	18	4	30.6	6.8
V84	2057	66	16	32.1	7.8
V89	1282	42	13	32.8	10.1
Block D	21641	571	181	26.4	8.4
MCH-FP area	103473	2936	828	28.4	8.0

Appendix B (cont.)

Village* code	Popula-tion	Live births	Deaths	Birth rate	Death rate
A	2679	109	16	40.7	6.0
B	1955	63	15	32.2	7.7
C	3516	132	36	37.5	10.2
F	1222	38	10	31.1	8.2
G	2381	100	30	42.0	12.6
J	453	15	8	33.1	17.7
U	8005	290	71	36.2	8.9
V01	668	13	1	19.5	1.5
V02	526	17	4	32.3	7.6
V03	696	20	5	28.7	7.2
V04	254	4	3	15.7	11.8
V05	3319	130	38	39.2	11.4
V06	2225	67	21	30.1	9.4
V07	380	7	1	18.4	2.6
V08	1192	45	14	37.8	11.7
V09	1124	36	6	32.0	5.3
V14	868	36	11	41.5	12.7
V35	3446	128	28	37.1	8.1
V36	4773	171	48	35.8	10.1
V37	0	0	0	-/	-
V38	1631	48	18	29.4	11.0
V45	1075	40	21	37.2	19.5
V46	366	22	4	60.1	10.9
V47	1793	48	20	26.8	11.2
V48	592	12	6	20.3	10.1
V49	1302	45	12	34.6	9.2
V50	195	6	3	30.8	15.4
V51	1023	41	14	40.1	13.7
V53	3151	116	33	36.8	10.5
V58	0	0	0	-	-
V65	714	26	13	36.4	18.2
V66	794	34	11	42.8	13.9
V68	845	36	5	42.6	5.9
V69	0	0	0	-	-
V70	0	0	0	-	-
V71	441	20	2	45.4	4.5
V73	801	25	4	31.2	5.0
V74	1331	56	10	42.1	7.5
V75	408	16	4	39.2	9.8
V76	1573	60	25	38.1	15.9
V78	262	10	3	38.2	11.5
V79	325	10	3	30.8	9.2
V80	1072	46	12	42.9	11.2
V90	1148	33	8	28.7	7.0
V95	1464	70	11	47.8	7.5
V96	656	24	8	36.6	12.2
V97	439	20	4	45.6	9.1
V98	192	4	2	20.8	10.4
V99	678	28	11	41.3	16.2

Appendix B (cont.)

Village* code	Population	Live births	Deaths	Birth rate	Death rate
VB1	1078	39	9	36.2	8.3
VB2	940	35	14	37.2	14.9
VB3	2845	101	25	35.5	8.8
VB4	3580	139	22	38.8	6.1
VB5	1043	29	9	27.8	8.6
VB6	721	23	4	31.9	5.5
VB7	258	14	3	54.3	11.6
VB8	1392	45	10	32.3	7.2
VB9	0	0	0	-	-
VB10	2781	128	20	46.0	7.2
D28	1174	44	14	37.5	11.9
D29	154	1	1	6.5	6.5
D30	716	28	7	39.1	9.8
D31	1116	40	11	35.8	9.9
D32	641	25	5	39.0	7.8
D33	978	46	13	47.0	13.3
D34	1358	42	11	30.9	8.1
D35	696	18	6	25.9	8.6
D88	1514	49	19	32.4	12.5
D89	1239	44	11	35.5	8.9
D90	1252	43	16	34.3	12.8
D91	0	0	0	-	-
D92	0	0	0	-	-
D93	1009	37	5	36.7	5.0
D94	1147	59	12	51.4	10.5
D95	477	18	2	37.7	4.2
D96	616	22	5	35.7	8.1
D97	811	32	7	39.5	8.6
D98	3003	107	23	35.6	7.7
D99	2021	82	22	40.6	10.9
Comparison Area	98513	3607	939	36.6	9.5

* See village name in Appendix A.

Appendix C

Life Table Equations

1. $$ {}_nq_x = \frac{{}_nm_x}{{}^1/_n + {}_nm_x \left[{}^1/_2 + {}^n/_{12} \left({}_nm_x - \ln C \right) \right]} $$

2. $$ \ell_0 = 100{,}000 $$

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

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

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

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

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

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

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

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.

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

Appendix D

Staff of the DSS, 1989

Matlab Field Station

Supervisory Staff:

Mr. A.M. Sarder, Manager
Mr. A.K.M. Nurul Islam, SFRO
Mr. Liaquat Ali Mondal, FRO
Mr. Md. Ismail, FRO
Mr. Md. Khalilur Rahman I, Asst. Supvr.

Senior Health Assistants:

Mr. Md. A. Mannan Bakaul
Mr. Aftekharuzzaman
Mr. M. A. Satter Miah
Mr. Md. Serajul Hoque
Mr. K. J. M. Mannan Pathan
Mr. A. Rashid Miah
Mr. A. Latif Patwary
Mr. AFM Aminul Islam Khan
Mr. Monoranjan Das

Paramedic:

Mr. Md. Monirul Alam Bhuiya

Admin. Assistant:

Mr. A.K.M. Mozibul Hoque

Health Assistants:

Mr. Md. Nasir Ahmed
Mr. Md. Shahidur Rahman
Mr. Alfazuddin Ahmed Chowdhury
Mr. Sadiquzzaman
Mr. Shah Mostafa Kamal
Mr. Md. Mozammel Hoque
Mr. Sk. A. Jabber
Mr. A. Malek Patwary
Mr. Md. Idrish Ali Miah I
Mr. Md. Abul Kashem
Mr. Md. Idrish Ali Miah II
Mr. Md. Zahirul Hoque
Mr. Md. Nurul Hoque
Mr. Md. Golam Hossain
Mr. Paresh Ch. Chakraborty
Mr. Md. Monirul Hoque
Mr. Jabed Ali

Recorders:

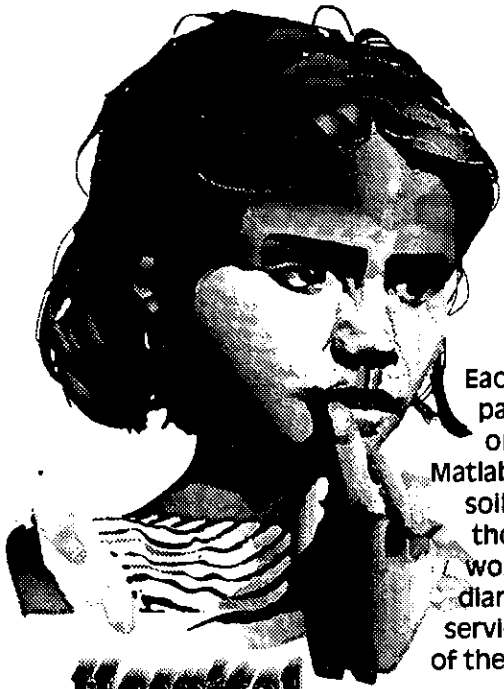
Ms. Shahana Ahmed, HA
Ms. Monowara Begum, HA

Dhaka-based Staff

Dr. Michael A. Strong*
Ms. Lutfun Nahar
Dr. Mridul K. Chowdhury
Mr. Abbas Bhuiya
Mr. Abdur Razzque
Mr. Md. Ibrahim Mollah
Mr. Md. Golam Mostafa
Mr. Sentu B. Gomes
Mr. Md. Kapil Ahmed
Mr. Mahmudul Haque

Dr. Lokky Wai
Mr. Sk. Jaynal Abedin
Mr. Birendra N. Adhikary
Ms. Rahima Mazhar
Ms. Habiba Rahman
Ms. Nasrin Aktar
Mr. Nizam Uddin Khan
Mr. M.A. Jalil Sarker
Mr. ABM Delwar Hossain
Mr. Arifur Rahim

*Dr. Strong is the DSS Project Director since September, 1988.



An Appeal

Each year, ICDDR,B treats over 70,000 patients attending its two hospitals, one in urban Dhaka, the other in rural Matlab. Though they are planted in Bangladeshi soil, they grow because of the dedication of thousands of concerned people throughout the world. The patients are mostly children with diarrhoea and associated illnesses and the services are offered free to the poorer section of the community

Hospital Endowment Fund

Since these services are entirely dependent on financial support from a number of donors, now we at the ICDDR,B are establishing an entirely new endeavour: an ENDOWMENT FUND. We feel that, given securely implanted roots, the future of the hospitals can confidently depend upon the harvest of fruit from perpetually bearing vines.

To generate enough income to cover most of the patient costs of the hospitals, the fund will need about five million dollars. That's a lot of money, but look at it this way:

JUST $150 IN THE FUND WILL COVER THE COST OF TREATMENT FOR ONE CHILD EVERY YEAR FOREVER!

We hope you will come forward with your contribution so that we can keep this effort growing forever or until the world is free of life-threatening diarrhoea. IT IS NOT AN IMPOSSIBLE GOAL.

Cheques may be made out to: ICDDR,B Hospital Endowment Fund.

For more information please call or write to:
Chairman, Hospital Endowment Fund Committee
GPO Box 128 - Dhaka, 1000, Bangladesh

Telephone: 600-171 through 600-178
Fax: (880-2)-883116

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