

105

DEMOGRAPHIC SURVEILLANCE SYSTEM— MATLAB

VOLUME NINETEEN

**REGISTRATION OF
DEMOGRAPHIC EVENTS-
1988**

SCIENTIFIC REPORT NO. 71
November 1993



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

DEMOGRAPHIC SURVEILLANCE SYSTEM-MATLAB

Volume Nineteen

Registration of Demographic Events - 1988



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

This report presents the vital registration data for events taking place in 1988 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 1988 fertility continued to fall in the MCH-FP area; the crude birth rate declined to 30.9 per thousand and the total fertility rate to 3.8 births per woman; but no such decline occurred in the Comparison area, where the crude birth rate rose slightly to 40.4 per thousand and the TFR remained unchanged at 5.4.

Mortality also continued to fall in the MCH-FP area, with the crude death rate dropping to 8.7 per thousand and the under-five mortality to 107.4 deaths in the first five years of life per 1000 live births. Most of this decline was due to changes in the mortality rate of children aged 1-4 years; infant mortality in fact increased slightly in the MCH-FP area from 78.4 to 80.8 per thousand live births. In the Comparison area there was little change in the level of mortality: the crude death rate remained at 11.0 per thousand, compared with 11.2 in 1987, and the under-five mortality rate also remained virtually constant at 146.1 per thousand, compared with 145.2 in 1987.

Rates of both in- and out-migration for the surveillance area as a whole declined on 1987, being 26.5 for in-migrants and 41.5 for out-migrants, leaving a net out-migration of 15.0 per thousand. This net loss therefore tends to offset the rate of natural increase of 25.6 per thousand, and reduces the overall rate of population growth to little more than 1% 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).

This is the nineteenth 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 1988, along with brief notes and explanations of the tables.

Figure 1.1: Map of Bangladesh Showing the Study Area

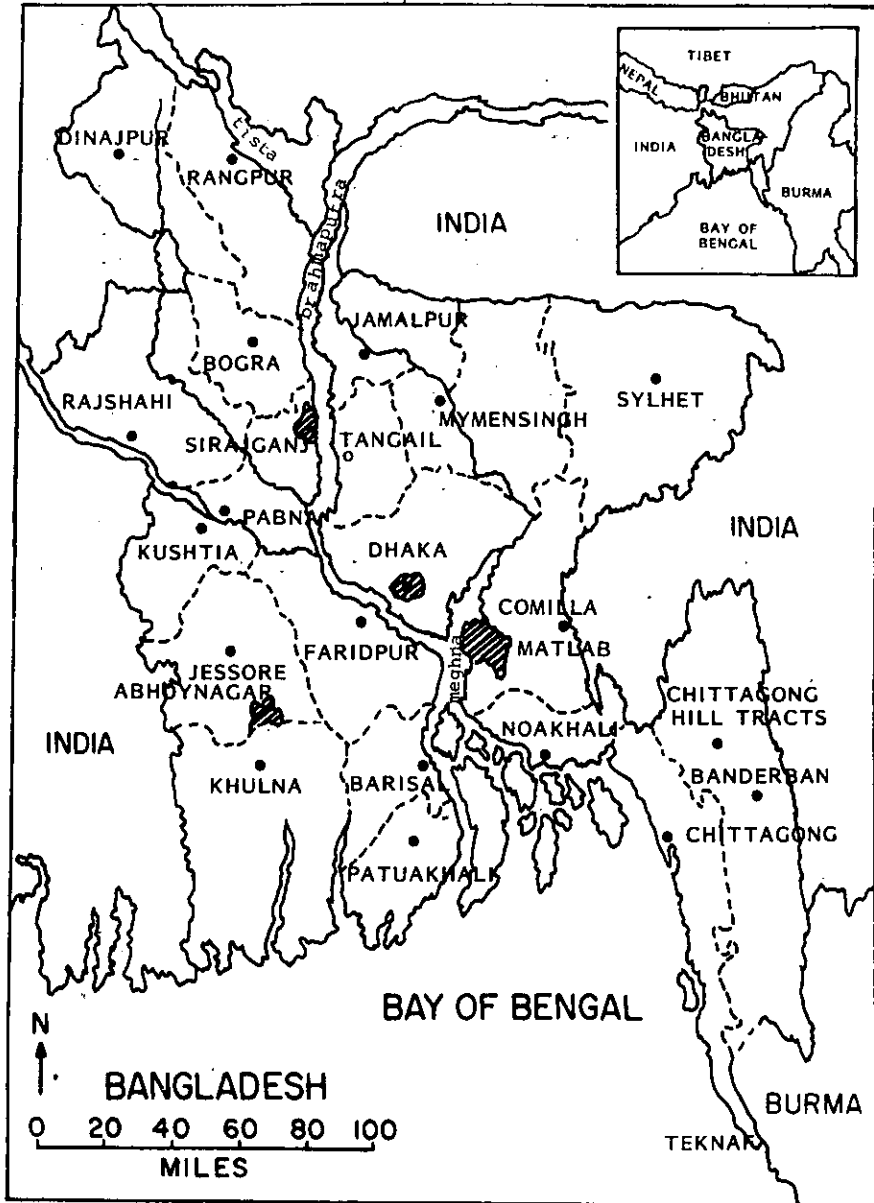
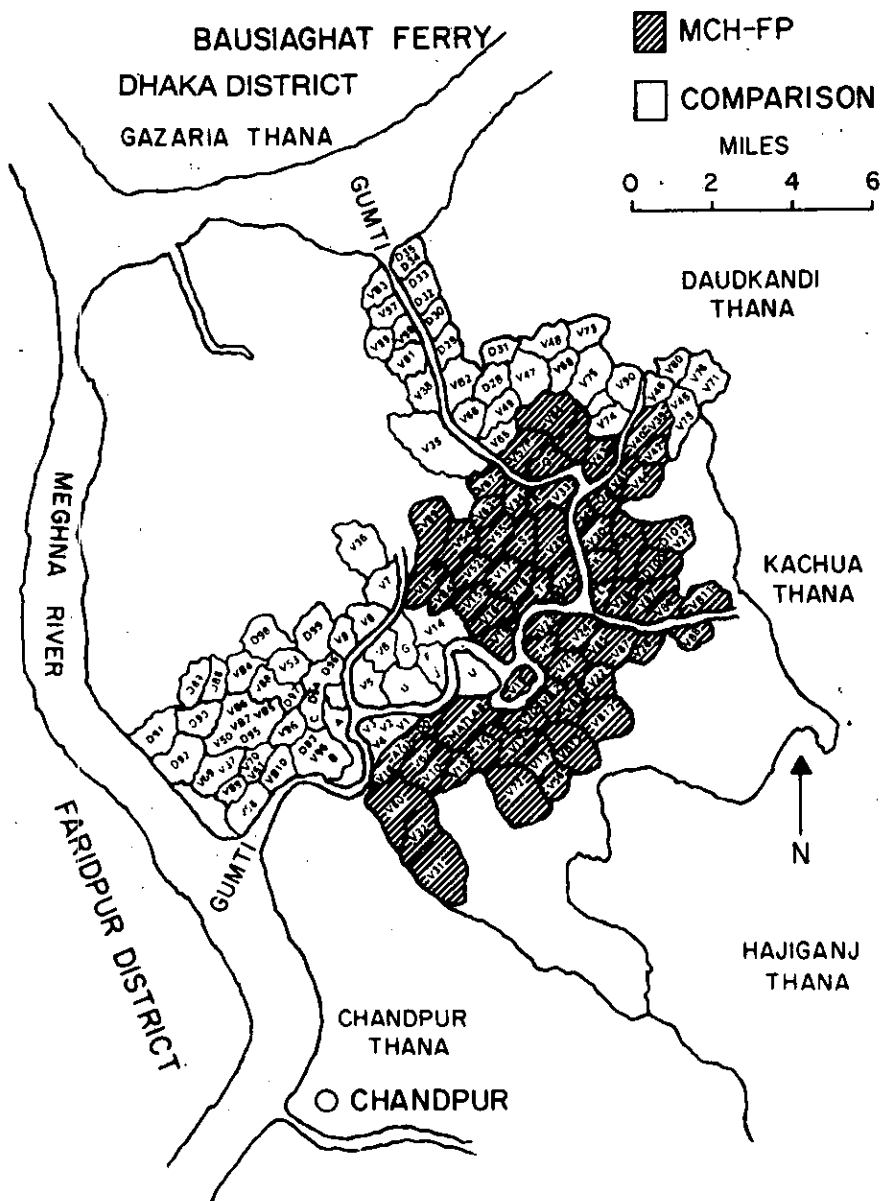


Figure 1.2: Matlab Area Showing Villages of Demographic Surveillance System, 1988



CHAPTER 2

POPULATION CHANGES

Table 2.1 summarizes the principal vital statistics of the MCH-FP and Comparison Areas from 1978 up to 1988. The figures for 1988 show that fertility in the MCH-FP area continued to decline, with the crude birth rate dropping to 30.9 per thousand and the total fertility rate to 3.8. In contrast, the Comparison area shows no consistent decline in fertility: the 1988 crude birth rate in fact shows a slight rise on that of 1987, and is indeed marginally higher than it had been ten years earlier at the beginning of the MCH-FP project.

Under-five mortality also showed a significant decline in the MCH-FP area in 1988, which was entirely attributable to the fall in the mortality of the 1-4 age group, since the infant mortality rate rose slightly on the 1987 figure. The Comparison area showed no decline in either infant or under-five mortality in 1988 compared with the previous year. Both areas had experienced increases in infant and child mortality in the early 1980's, which reached a peak in 1984; this was followed a sharp fall in 1985, which was continued in 1986 and 1987.

The trends in total fertility and under-five mortality, 1978-1988, are illustrated in Figure 2.1.

Migration rates, both in and out of the study area, continued at much the same level as in the preceding years, and resulted in a net loss of migrants which constituted about 1.5% of the population. This loss tends to offset the rate of natural increase, currently 25.7 per thousand, or 2.57 per cent, in 1988 for the two areas combined. Thus the overall rate of population growth was just over 1 per cent per annum.

Tables 2.3 to 2.5 show the age and sex distributions of the whole study population, of the MCH-FP and Comparison areas, and of the four blocks which constitute the MCH-FP area. The fall in fertility in the MCH-FP area is reflected in changes in the age distribution. Comparing the 1988 percentage age distribution with that of 1978 shows that the proportion under the age of 15 had fallen from 43.4% in 1978 to 39.8% in 1988. In contrast, the age distribution of the Comparison area shows relatively little change, the proportion under 15 being 43.3% in 1978 and 42.4% in 1988. Figure 2.2 shows the 1988 age-sex pyramid.

Table 2.1: "Vital Statistics of the Matlab MCH-FP and Comparison Areas, 1978-1988

Vital rates (per 1000)	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988
Crude 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
Comparison area	37.8	47.0	45.5	43.8	44.7	42.6	37.3	42.6	39.6	39.2	40.4
Both areas	34.8	40.9	41.2	39.5	40.7	38.3	34.0	38.5	36.5	36.4	35.5
Total 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
Comparison area	5.5	6.9	6.7	6.3	6.3	6.1	5.1	6.0	5.5	5.4	5.4
Both areas	5.0	5.9	5.9	5.5	5.6	5.3	4.5	5.2	4.9	4.8	4.5
Crude 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
Comparison area	13.8	15.6	14.9	14.4	15.9	16.7	17.3	14.2	12.2	11.2	11.0
Both areas	13.2	13.8	13.1	13.1	14.2	14.3	15.3	12.2	11.0	10.2	9.9
Neonatal 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
Comparison area	78.7	74.6	72.7	69.5	68.1	70.3	71.4	69.4	53.0	54.9	57.7
Both areas	74.1	73.0	66.6	68.1	63.5	64.0	65.3	61.7	49.4	49.7	51.1
Post-neonatal mortality*											
MCH-FP area	45.5	43.5	32.6	36.1	47.5	41.8	56.9	33.8	36.4	34.8	38.0
Comparison area	47.0	43.3	41.3	45.0	50.2	42.2	55.7	49.1	39.7	39.2	39.0
Both areas	46.3	43.4	37.3	41.0	49.0	42.0	56.2	42.1	38.2	37.2	38.6
Infant 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
Comparison area	125.8	118.0	114.0	114.5	118.3	112.5	127.1	118.5	92.7	94.4	96.6
Both areas	120.5	116.4	103.9	109.1	112.5	106.0	121.5	103.8	87.6	86.9	89.6
Child 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
Comparison area	22.1	26.2	25.4	24.8	27.4	35.3	39.2	24.6	20.7	15.0	14.4
Both areas	22.3	21.6	22.1	22.0	23.3	29.1	31.6	20.7	17.2	12.6	11.1
Under 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
Comparison area	199.8	200.7	197.6	197.5	207.2	227.0	252.7	200.1	164.0	145.2	146.1
Both areas	194.0	186.0	177.7	184.8	189.7	202.1	224.8	174.4	148.0	130.2	128.3
Rate 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
Comparison area	24.0	31.4	30.6	29.4	28.8	25.8	20.0	28.4	27.4	28.0	29.4
Both areas	21.6	27.1	28.2	26.4	26.5	24.1	18.6	26.3	25.5	26.1	25.7
In-migration	28.7	33.1	29.7	27.3	24.5	24.6	24.2	23.9	28.3	33.6	26.5
Out-migration	40.2	40.8	36.6	35.0	26.5	35.8	42.7	42.1	41.7	44.3	41.5
Growth (%)	1.0	1.9	2.1	1.9	2.5	1.3	0.0	0.8	1.2	1.5	1.1

*Per 1000 live births.

**Per woman.

Figure 2.1 Trends in Fertility and Under Five Mortality by Area in 1978-1988

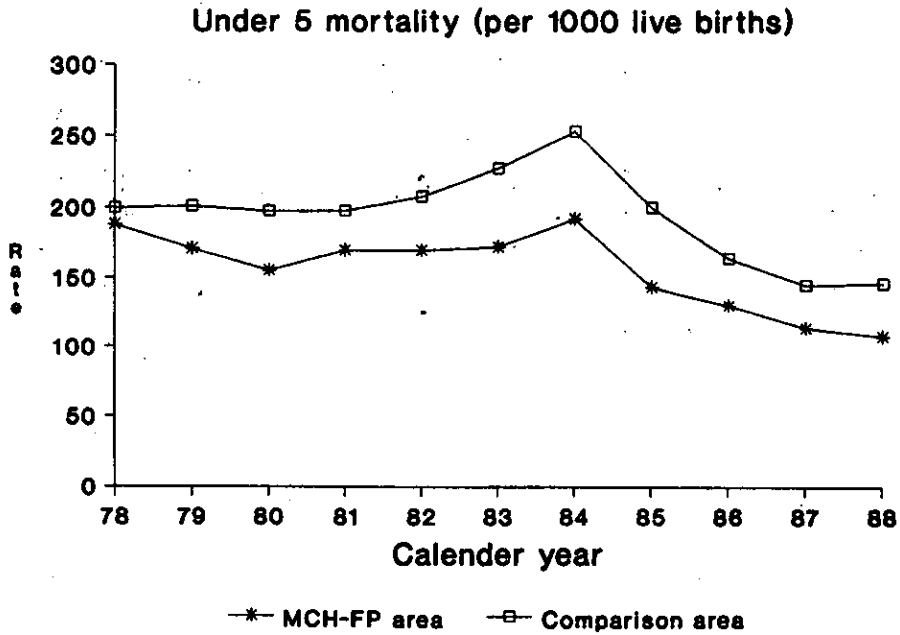
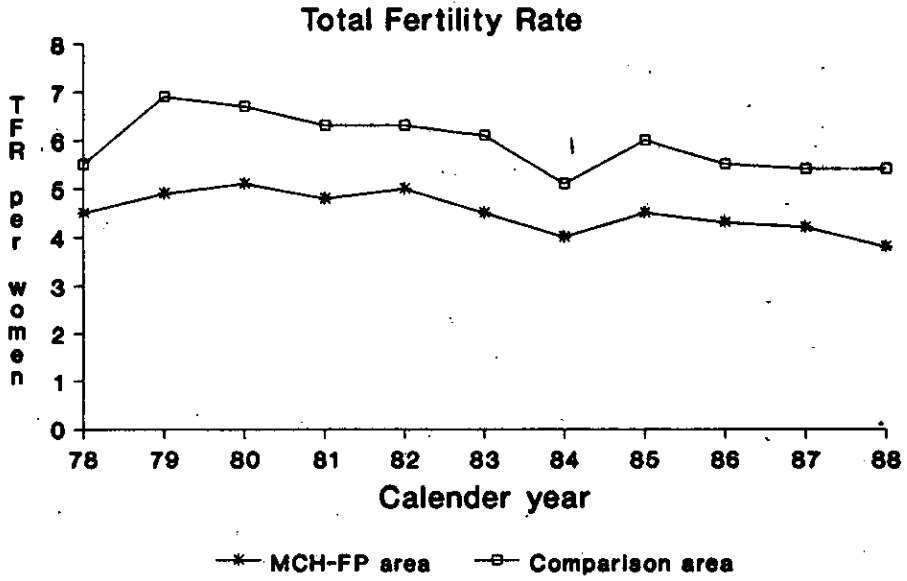


Table 2.2: Mid-year Population, Events Registered, and Population Changes in 1988

	Number			Rate per 1000		
	Total	Males	Females	Total	Males	Females
Total population as of 30 June 1988:	200041	100832	99209	-	-	-
MCH-FP area	102197	51371	50826	-	-	-
Comparison area	97844	49461	48383	-	-	-
<u>Events registered</u> (Jan - Dec 1988)						
Births						
MCH-FP area	3154	1617	1537	30.9	-	-
Comparison area	3953	1990	1963	40.4	-	-
Both areas	7107	3607	3500	35.5	-	-
Deaths						
-Infant*						
MCH-FP area	255	132	123	80.8	81.6	80.0
Comparison area	382	184	198	96.6	92.5	100.9
Both areas	637	316	321	89.6	87.6	91.7
-All deaths						
MCH-FP area	893	471	422	8.7	9.2	8.3
Comparison area	1079	531	548	11.0	10.7	11.3
Both areas	1972	1002	970	9.9	9.9	9.8
In-Migration	5294	2325	2969	26.5	23.1	29.9
Out-Migration	8306	4060	4246	41.5	40.3	42.8
Marriage	2540	-	-	12.7	-	-
Divorce**	420	-	-	165.4	-	-
<u>Population change</u> (Jan - Dec 1988)						
Net Migration	-3012	-1735	-1277	-15.1	-17.2	-12.9
Natural increase						
MCH-FP area	2261	1146	1115	22.1	22.3	21.9
Comparison area	2874	1459	1415	29.4	29.5	29.2
Both areas	5135	2605	2530	25.7	25.8	25.5
Net increase	2123	870	1253	10.6	8.6	12.6

*Rate per 1000 live births.

**Ratio per 1000 marriages.

Table 2.3: Mid-year Population by Age and Sex, 1988

Age (years)	Number			Percent		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	200041	100832	99209	100	100	100
Under 1	6382	3216	3166	3.2	3.2	3.2
1 - 4	24051	12254	11797	12.0	12.2	11.9
1	6432	3220	3212	3.2	3.2	3.2
2	6471	3331	3140	3.2	3.3	3.2
3	5557	2794	2763	2.8	2.8	2.8
4	5591	2909	2682	2.8	2.9	2.7
5 - 9	26964	14270	12694	13.5	14.2	12.8
10-14	24818	13011	11807	12.4	12.9	11.9
15-19	22406	11516	10890	11.2	11.4	11.0
20-24	19141	8933	10208	9.6	8.9	10.3
25-29	16072	8080	7992	8.0	8.0	8.1
30-34	11299	5652	5647	5.6	5.6	5.7
35-39	8488	4118	4370	4.2	4.1	4.4
40-44	8173	3587	4586	4.1	3.6	4.6
45-49	7882	3548	4334	3.9	3.5	4.4
50-54	7183	3571	3612	3.6	3.5	3.6
55-59	5777	2960	2817	2.9	2.9	2.8
60-64	4271	2250	2021	2.1	2.2	2.0
65-69	3159	1662	1497	1.6	1.6	1.5
70-74	1966	1072	894	1.0	1.1	0.9
75-79	1179	640	539	0.6	0.6	0.5
80-84	552	317	235	0.3	0.3	0.2
85+	278	175	103	0.1	0.2	0.1

Table 2.4: Mid-year Population by Area, Age, and Sex, 1988

Age (years)	MCH-FP area			Comparison area		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	102197	51371	50826	97844	49461	48383
Under 1	2970	1497	1473	3412	1719	1693
1 - 4	11530	5820	5710	12521	6434	6087
1	3086	1558	1528	3346	1662	1684
2	3136	1603	1533	3335	1728	1607
3	2624	1306	1318	2933	1488	1445
4	2684	1353	1331	2907	1556	1351
5 - 9	13123	6938	6185	13841	7332	6509
10-14	13075	6868	6207	11743	6143	5600
15-19	11749	6012	5737	10657	5504	5153
20-24	10033	4619	5414	9108	4314	4794
25-29	8333	4156	4177	7739	3924	3815
30-34	5911	2959	2952	5388	2693	2695
35-39	4466	2165	2301	4022	1953	2069
40-44	4291	1877	2414	3882	1710	2172
45-49	4131	1849	2282	3751	1699	2052
50-54	3661	1830	1831	3522	1741	1781
55-59	2975	1555	1420	2802	1405	1397
60-64	2259	1187	1072	2012	1063	949
65-69	1578	856	722	1581	806	775
70-74	1028	572	456	938	500	438
75-79	609	324	285	570	316	254
80-84	307	178	129	245	139	106
85+	168	109	59	110	66	44

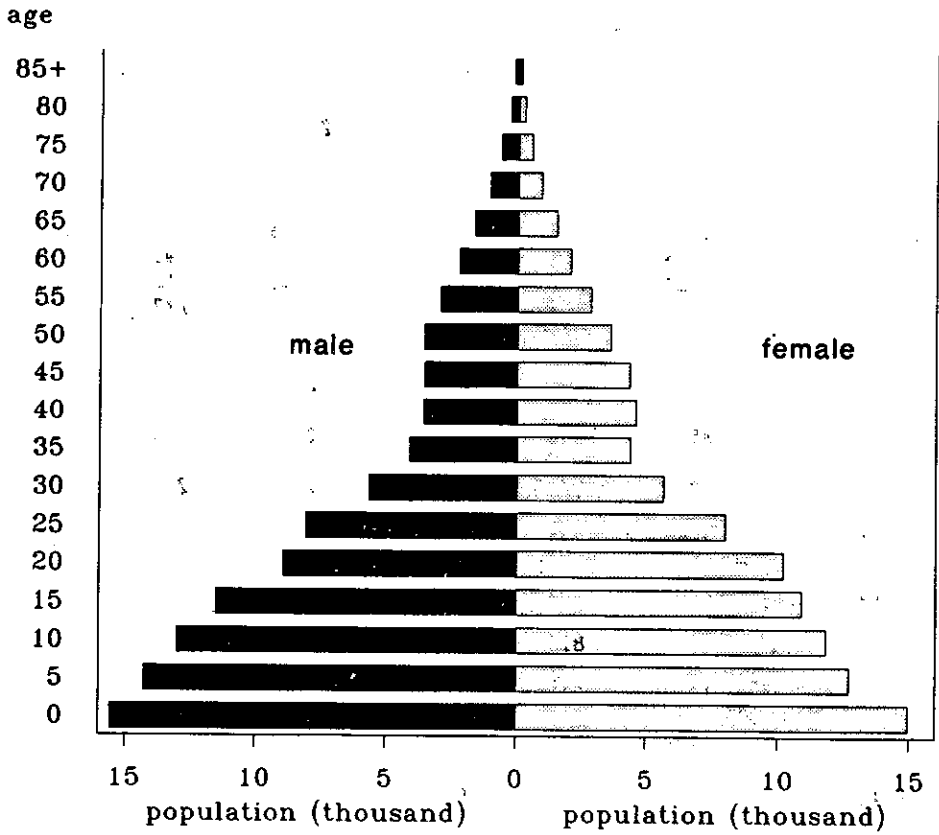
Table 2.5: Mid-year Population in MCH-FP Area by Age, Sex, and Block, 1988

Age (years)	Block A			Block B		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	27460	13830	13630	25957	12867	13090
Under 1	811	418	393	801	403	398
1 - 4	3120	1564	1556	3094	1578	1516
1	832	421	411	851	425	426
2	888	441	447	816	425	391
3	717	359	358	678	343	335
4	683	343	340	749	385	364
5 - 9	3589	1929	1660	3442	1808	1634
10-14	3508	1833	1675	3291	1711	1580
15-19	3134	1617	1517	2943	1473	1470
20-24	2870	1307	1563	2470	1101	1369
25-29	2244	1092	1152	2022	987	1035
30-34	1602	786	816	1398	675	723
35-39	1196	575	621	1148	534	614
40-44	1214	531	683	1045	424	621
45-49	1039	506	533	1008	425	583
50-54	921	500	421	935	441	494
55-59	717	372	345	773	406	367
60-64	559	302	257	634	338	296
65-69	361	189	172	392	234	158
70-74	284	147	137	258	158	100
75-79	159	80	79	153	80	73
80-84	85	49	36	92	51	41
85+	47	33	14	58	40	18

Table 2.5 (cont.): Mid-year Population in MCH-FP Area by Age, Sex, and Block, 1988

Age (years)	Block C			Block D		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	27153	13789	13364	21627	10885	10742
Under 1	764	384	380	594	292	302
1 - 4	3011	1536	1475	2305	1142	1163
1	805	413	392	598	299	299
2	787	397	390	645	340	305
3	705	367	338	524	237	287
4	714	359	355	538	266	272
5 - 9	3446	1791	1655	2646	1410	1236
10-14	3515	1844	1671	2761	1480	1281
15-19	3240	1673	1567	2432	1249	1183
20-24	2600	1234	1366	2093	977	1116
25-29	2202	1153	1049	1865	924	941
30-34	1642	814	828	1269	684	585
35-39	1222	610	612	900	446	454
40-44	1134	522	612	898	400	498
45-49	1147	523	624	937	395	542
50-54	980	503	477	825	386	439
55-59	773	430	343	712	347	365
60-64	521	267	254	545	280	265
65-69	461	234	227	364	199	165
70-74	235	129	106	251	138	113
75-79	146	74	72	151	90	61
80-84	78	49	29	52	29	23
85+	36	19	17	27	17	10

Figure 2.2: Age Pyramid of the 1988 Mid-year Population



CHAPTER 3

MORTALITY

Tables 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; and Tables 3.6 to 3.10 the abridged life tables derived from these rates.

The most important feature of these results (already noted briefly in Chapter 2) is the decline in the mortality of the 1-4 age group in the MCH-FP area. The mortality rate in this age group had declined steadily over the preceding four years, so that the 1988 rate was less than one-third of that of the peak rate in 1984. The figures for the Comparison area also show a steady decline in child mortality, but less dramatic than that in the MCH-FP area, and the 1988 rate for males in fact showed a slight increase on that of 1987. In both areas female child mortality was half as high again as male.

The decline in the 1-4 child mortality provides a contrast to the trend in that of infants under 1, which had shown little change in 1986, 1987 and 1988 in both the MCH-FP and the Comparison areas. This plateau appears to be a feature of both the neonatal and post-neonatal rates. Male mortality tends to be slightly higher in the first month of life, after which female mortality is higher.

Adult mortality can conveniently be summarized by the probability of dying between the ages of 15 and 60, sometimes denoted as $45Q_{15}$ (Feachem et al. 1992). This index can be readily calculated from the life tables shown in Tables 3.6 to 3.10. The results (expressed per 1000 persons reaching age 15) are:

	Both sexes	Males	Females
Both areas	195.1	211.2	178.4
MCH-FP area	199.4	220.4	177.2
Comparison area	190.4	201.4	179.7

There appears to be little difference between the MCH-FP and Comparison areas, and in both areas male mortality is higher than female. When compared with the corresponding figures for 1987, these rates suggest a small decline for both sexes in the Comparison areas and for males in the MCH-FP, but the female rate in the latter appeared to have risen.

Table 3.11 shows the distribution of deaths by age and month. Deaths peaked in November, December, and January, which appears to be a regular feature of Bangladesh mortality, though it is one which is characteristic of adults rather than children; for whom the seasonal fluctuations are less regular.

Tables 3.12 to 3.15 show the distribution of deaths by age, sex, and cause. These data are summarized in Table 3.16, which shows the age-standardized mortality rates by cause. The standard age distribution used for the calculation of these rates was the "World standard" used by the World Health Organization when presenting such rates in their Statistics Annual (WHO 1992). It will be seen in Table 3.16 that the mortality rates from diarrhoea, dysentery, ARI, neonatal tetanus, and "other neonatal" causes were consistently lower, for both sexes, in the MCH-FP area than in the Comparison area. Since these are the major causes of death in infancy and childhood, the differentials so revealed help to explain why under five mortality has been consistently lower in the MCH-FP than in the Comparison area.

References

Feachem, R., Kjellstrom, T., Murray, C., Over, and Phillips, M., The Health of Adults in the Developing World. New York: Oxford University Press, 1992.

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

Table 3.1: Deaths by Age and Sex, 1988

Age	Both sexes	Males	Females
All ages	1972	1002	970
Under 1 year	637	316	321
Under 1 month	363	196	167
1-5 months	182	89	93
6-11 months	92	31	61
1 - 4 years	268	107	161
1	122	44	78
2	70	29	41
3	53	22	31
4	23	12	11
5 - 9	69	32	37
10-14	19	9	10
15-19	31	14	17
20-24	35	9	26
25-29	38	18	20
30-34	25	17	8
35-39	10	7	3
40-44	28	19	9
45-49	42	13	29
50-54	67	38	29
55-59	94	55	39
60-64	113	64	49
65-69	126	75	51
70-74	123	70	53
75-79	110	52	58
80-84	77	49	28
85+	60	38	22

Table 3.2: Deaths by Area, Age, and Sex, 1988

Age	MCH-FP area			Comparison area		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	893	471	422	1079	531	548
Under 1 year	255	132	123	382	184	198
Under 1 month	135	75	60	228	121	107
1-5 months	76	37	39	106	52	54
6-11 months	44	20	24	48	11	37
1 - 4 years	88	35	53	180	72	108
1	47	19	28	75	25	50
2	23	9	14	47	20	27
3	10	4	6	43	18	25
4	8	3	5	15	9	6
5 - 9	30	14	16	39	18	21
10-14	10	3	7	9	6	3
15-19	21	12	9	10	2	8
20-24	22	7	15	13	2	11
25-29	20	11	9	18	7	11
30-34	14	11	3	11	6	5
35-39	2	2	0	8	5	3
40-44	14	10	4	14	9	5
45-49	26	8	18	16	5	11
50-54	36	23	13	31	15	16
55-59	47	26	21	47	29	18
60-64	56	33	23	57	31	26
65-69	67	40	27	59	35	24
70-74	57	31	26	66	39	27
75-79	53	25	28	57	27	30
80-84	42	27	15	35	22	13
85+	33	21	12	27	17	10

Table 3.3: Deaths in MCH-FP Area by Age, Sex, and Block, 1988

Age	Block A			Block B		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages-	234	123	111	242	131	111
Under 1 year	69	35	34	74	38	36
Under 1 month	34	17	17	40	25	15
1-5 months	19	12	7	20	6	14
6-11 months	16	6	10	14	7	7
1 - 4 years	30	15	15	28	13	15
1	15	8	7	17	9	8
2	8	4	4	7	4	3
3	5	2	3	2	0	2
4	2	1	1	2	0	2
5 - 9	5	2	3	10	6	4
10-14	3	1	2	2	1	1
15-19	7	3	4	5	3	2
20-24	5	1	4	6	1	5
25-29	5	1	4	7	6	1
30-34	4	3	1	5	3	2
35-39	1	1	0	0	0	0
40-44	3	1	2	3	3	0
45-49	5	2	3	6	3	3
50-54	11	7	4	7	4	3
55-59	14	10	4	8	2	6
60-64	13	9	4	17	13	4
65-69	14	8	6	15	9	6
70-74	13	5	8	13	6	7
75-79	10	6	4	13	7	6
80-84	13	7	6	12	6	6
85+	9	6	3	11	7	4

Table 3.3 (cont.): Deaths in MCH-FP Area by Age, Sex, and Block, 1988

Age	Block C			Block D		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	222	128	94	195	89	106
Under 1 year	62	33	29	50	26	24
Under 1 month	38	22	16	23	11	12
1-5 months	14	8	6	23	11	12
6-11 months	10	3	7	4	4	0
1 - 4 years	14	3	11	16	4	12
1	7	1	6	8	1	7
2	4	1	3	4	0	4
3	1	1	0	2	1	1
4	2	0	2	2	2	0
5 - 9	7	3	4	8	3	5
10-14	3	0	3	2	1	1
15-19	7	5	2	2	1	1
20-24	9	4	5	2	1	1
25-29	4	2	2	4	2	2
30-34	3	3	0	2	2	0
35-39	0	0	0	1	1	0
40-44	4	4	0	4	2	2
45-49	7	3	4	8	0	8
50-54	12	8	4	6	4	2
55-59	11	8	3	14	6	8
60-64	11	5	6	15	6	9
65-69	24	18	6	14	5	9
70-74	15	10	5	16	10	6
75-79	12	6	6	18	6	12
80-84	10	9	1	7	5	2
85+	7	4	3	6	4	2

Table 3.4: Death Rates by Age and Sex, 1988
(per 1000 population)

Age	Both sexes	Males	Females
All ages	9.9	9.9	9.8
Under 1 year	89.6	87.6	91.7
Under 1 month*	51.1	54.3	47.7
1-5 months*	25.6	24.7	26.6
6-11 months*	12.9	8.6	17.4
1 - 4 years	11.1	8.7	13.6
1	19.0	13.7	24.3
2	10.8	8.7	13.1
3	9.5	7.9	11.2
4	4.1	4.1	4.1
5 - 9	2.6	2.2	2.9
10-14	0.8	0.7	0.8
15-19	1.4	1.2	1.6
20-24	1.8	1.0	2.5
25-29	2.4	2.2	2.5
30-34	2.2	3.0	1.4
35-39	1.2	1.7	0.7
40-44	3.4	5.3	2.0
45-49	5.3	3.7	6.7
50-54	9.3	10.6	8.0
55-59	16.3	18.6	13.8
60-64	26.5	28.4	24.2
65-69	39.9	45.1	34.1
70-74	62.6	65.3	59.3
75-79	93.3	81.3	107.6
80-84	139.5	154.6	119.1
85+	215.8	217.1	213.6

*Rate per 1000 live births.

Table 3.5: Death Rates by Area, Age, and Sex, 1988
(per 1000 population)

Age	MCH-FP area			Comparison area		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	8.7	9.2	8.3	11.0	10.7	11.3
Under 1 year*	80.8	81.6	80.0	96.6	92.5	100.9
Under 1 month*	42.8	46.4	39.0	57.7	60.8	54.5
1-5 months*	24.1	22.9	25.4	26.8	26.1	27.5
6-11 months*	14.0	12.4	15.6	12.1	5.5	18.8
1 - 4 years	7.6	6.0	9.3	14.4	11.2	17.7
1	15.2	12.2	18.3	22.4	15.0	29.7
2	7.3	5.6	9.1	14.1	11.6	16.8
3	3.8	3.1	4.6	14.7	12.1	17.3
4	3.0	2.2	3.8	5.2	5.8	4.4
5 - 9	2.3	2.0	2.6	2.8	2.5	3.2
10-14	0.8	0.4	1.1	0.8	1.0	0.5
15-19	1.8	2.0	1.6	0.9	0.4	1.6
20-24	2.2	1.5	2.8	1.4	0.5	2.3
25-29	2.4	2.6	2.2	2.3	1.8	2.9
30-34	2.4	3.7	1.0	2.0	2.2	1.9
35-39	0.4	0.9	0.0	2.0	2.6	1.4
40-44	3.3	5.3	1.7	3.6	5.3	2.3
45-49	6.3	4.3	7.9	4.3	2.9	5.4
50-54	9.8	12.6	7.1	8.8	8.6	9.0
55-59	15.8	16.7	14.8	16.8	20.6	12.9
60-64	24.8	27.8	21.5	28.3	29.2	27.4
65-69	42.5	46.7	37.4	37.3	43.4	31.0
70-74	55.4	54.2	57.0	70.4	78.0	61.6
75-79	87.0	77.2	98.2	100.0	85.4	118.1
80-84	136.8	151.7	116.3	142.9	158.3	122.6
85+	196.4	192.7	203.4	245.5	257.6	227.3

*Rate per 1000 live births.

Figure 3.1: Probability of Survival from Birth to Age (x) by Sex, 1988

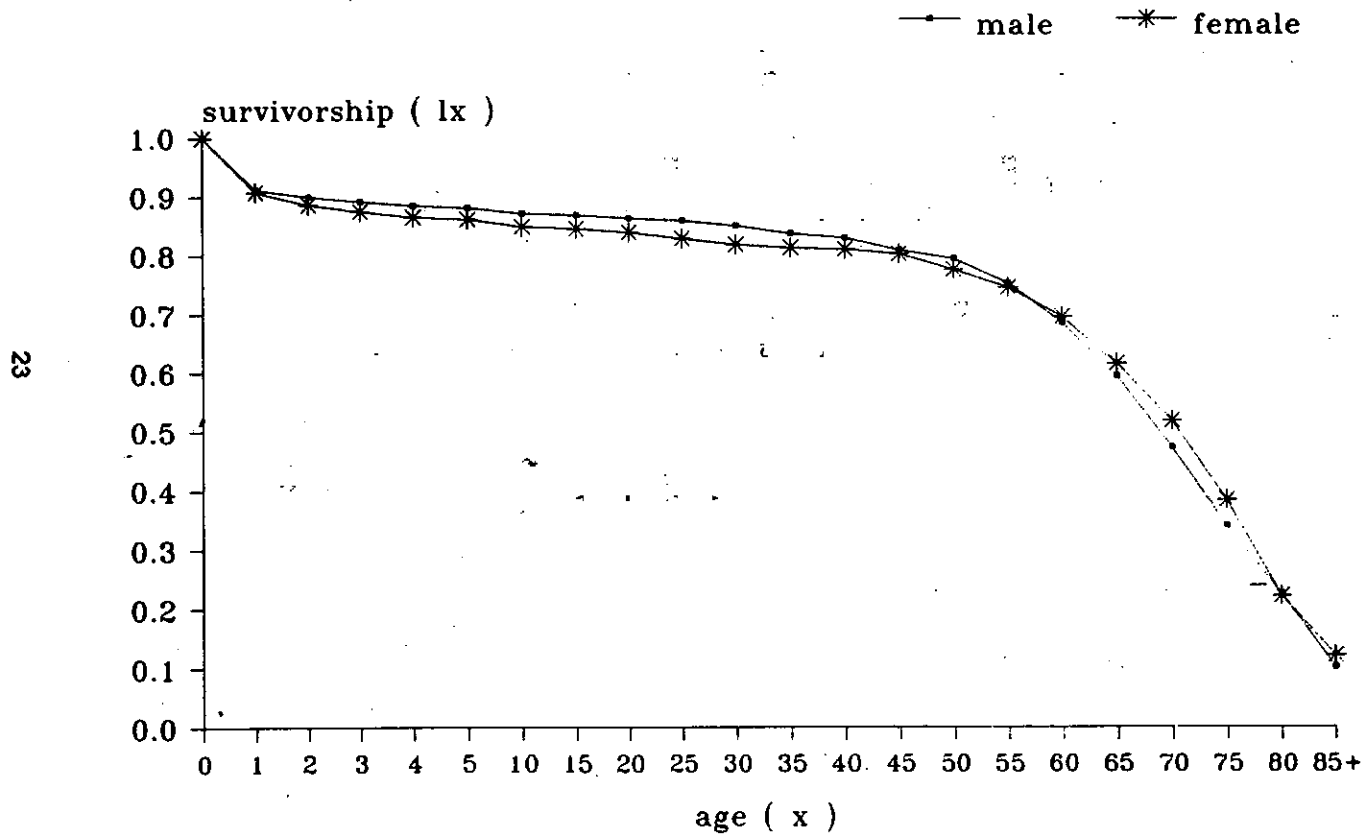


Table 3.6: Abridged Life Table, 1988

Age (years)	1000_nq_x	l_x	L_x	e^0
0	89.6	100000	93511	60.5
1	18.8	91037	90028	65.4
2	10.8	89326	88846	65.7
3	9.5	88365	87946	65.4
4	4.1	87526	87347	65.0
5	12.7	87167	433276	64.3
10	3.8	86058	429533	60.1
15	6.9	85729	427284	55.3
20	9.1	85138	423904	50.7
25	11.8	84363	419527	46.1
30	11.0	83371	414739	41.6
35	5.9	82453	411151	37.0
40	17.0	81969	406629	32.2
45	26.3	80576	397975	27.8
50	45.6	78455	383963	23.4
55	78.4	74874	360661	19.4
60	124.5	69005	324773	15.9
65	182.1	60413	275823	12.7
70	271.5	49411	214425	10.0
75	378.4	35996	145979	7.7
80	512.2	22376	82165	5.9
85+	1000.0	10915	50572	4.6

Table 3.7: Abridged Life Tables by Sex, 1988

Age (years)	Males				Females			
	1000_nq_x	n^1_x	n^L_x	e^0	1000_nq_x	n^1_x	n^L_x	e^0
0	87.6	100000	93657	60.7	91.7	100000	93360	60.3
1	13.6	91239	90509	65.5	24.0	90829	89543	65.4
2	8.7	90001	89611	65.4	13.0	88649	88074	66.0
3	7.8	89221	88871	65.0	11.2	87499	87011	65.8
4	4.1	88521	88339	64.5	4.1	86523	86346	65.6
5	11.2	88156	438514	63.8	14.5	86168	427963	64.8
10	3.5	87173	435172	59.5	4.2	84921	423778	60.7
15	6.1	86872	433147	54.7	7.8	84562	421295	56.0
20	5.0	86345	430727	50.0	12.7	83904	417071	51.4
25	11.1	85912	427361	45.2	12.4	82842	411833	47.0
30	14.9	84959	421868	40.7	7.1	81812	407726	42.6
35	8.5	83691	416819	36.3	3.4	81234	405528	37.9
40	26.2	82982	409888	31.6	9.8	80956	402954	33.0
45	18.2	80811	400664	27.3	32.9	80165	394707	28.3
50	51.9	79343	387139	22.8	39.4	77524	380534	24.2
55	89.0	75223	360439	18.9	67.1	74468	360702	20.0
60	133.3	68526	321064	15.5	114.7	69475	328629	16.3
65	203.6	59393	267990	12.5	157.6	61507	284532	13.1
70	281.7	47300	204019	10.0	259.2	51813	226497	10.0
75	338.3	33978	141480	7.9	423.0	38386	150906	7.6
80	549.8	22483	79974	5.6	456.9	22147	84929	6.4
85+	1000.0	10121	46608	4.6	1000.0	12028	56313	4.7

Table 3.8: Abridged Life Tables by Area, 1988

Age (years)	MCH-FP area				Comparison area			
	1000_nq_x	${}_n l_x$	${}_n L_x$	e^0	1000_nq_x	${}_n l_x$	${}_n L_x$	e^0
0	80.8	100000	94146	62.1	96.6	100000	93004	59.1
1	15.1	91915	91095	66.5	22.2	90336	89155	64.4
2	7.3	90526	90195	66.5	14.0	88334	87716	64.9
3	3.8	89864	89693	66.0	14.6	87097	86464	64.8
4	3.0	89522	89389	65.3	5.1	85830	85609	64.8
5	11.4	89256	443938	64.5	14.0	85388	424181	64.1
10	3.8	88241	440429	60.2	3.8	84193	420222	60.0
15	8.9	87904	437716	55.4	4.7	83871	418449	55.2
20	10.9	87122	433416	50.9	7.1	83478	416021	50.4
25	11.9	86171	428484	46.4	11.6	82884	412209	45.8
30	11.8	85143	423401	41.9	10.2	81925	407708	41.3
35	2.2	84140	420267	37.4	9.9	81093	403614	36.7
40	16.2	83952	416621	32.5	17.9	80290	398135	32.0
45	31.0	82593	407032	27.9	21.1	78854	390424	27.5
50	48.1	80031	391219	23.8	43.1	77189	378221	23.1
55	76.2	76184	367367	19.8	80.7	73860	355370	19.0
60	117.1	70380	332499	16.2	132.8	67899	318211	15.4
65	192.7	62137	282058	13.0	171.4	58884	270406	12.4
70	244.5	50162	221161	10.5	300.1	48793	208110	9.4
75	357.8	37899	155818	8.1	399.7	34150	136487	7.4
80	505.2	24338	89880	6.2	520.8	20501	74747	5.6
85+	1000.0	12042	61305	5.1	1000.0	9823	40021	4.1

Table 3.9: Abridged Life Tables for MCH-FP Area by Sex, 1988

Age (years)	Males				Females			
	1000_nq_x	${}_n l_x$	${}_n L_x$	${}_x e^0$	1000_nq_x	${}_n l_x$	${}_n L_x$	${}_x e^0$
0	81.6	100000	94090	61.8	80.0	100000	94206	62.4
1	12.1	91837	91180	66.2	18.2	91997	91012	66.9
2	5.6	90723	90469	66.0	9.1	90327	89916	67.1
3	3.1	90216	90078	65.4	4.5	89505	89302	66.7
4	2.2	89940	89840	64.6	3.7	89099	88932	66.0
5	10.0	89740	446624	63.7	12.9	88765	441191	65.2
10	2.2	88839	443750	59.4	5.6	87624	436982	61.1
15	9.9	88645	441196	54.5	7.8	87131	434084	56.4
20	7.6	87765	437296	50.0	13.8	86450	429502	51.8
25	13.2	87102	432866	45.4	10.7	85260	424191	47.5
30	18.4	85956	426123	40.9	5.1	84346	420744	43.0
35	4.6	84372	420965	36.6	0.0	83918	420485	38.2
40	26.3	83983	414805	31.8	8.3	83918	417994	33.2
45	21.4	81773	404819	27.6	38.7	83226	408654	28.4
50	61.1	80022	388734	23.1	34.9	80002	393537	24.5
55	80.5	75136	361553	19.5	71.5	77208	373166	20.3
60	130.4	69091	324184	15.9	102.1	71689	341264	16.6
65	210.1	60078	270106	12.9	171.7	64368	295534	13.2
70	239.6	47456	209820	10.7	250.5	53316	234245	10.4
75	324.2	36085	151613	8.2	394.2	39960	160316	8.0
80	542.8	24386	87274	6.0	448.7	24209	93411	6.6
85+	1000.0	11148	57865	5.2	1000.0	13348	65626	4.9

Tables 3.10: Abridged Life Tables for Comparison Area by Sex, 1988

Age (years)	Males				Females			
	1000_nq_x	${}_n l_x$	${}_n L_x$	e^0	1000_nq_x	${}_n l_x$	${}_n L_x$	e^0
0	92.5	100000	93306	59.9	100.9	100000	92697	58.4
1	14.9	90754	89954	65.0	29.3	89913	88361	64.0
2	11.5	89399	88884	64.9	16.7	87282	86555	64.9
3	12.0	88370	87839	64.7	17.2	85828	85092	65.0
4	5.8	87307	87055	64.5	4.4	84356	84169	65.1
5	12.2	86804	431574	63.8	16.0	83982	416804	64.4
10	4.9	85744	427758	59.6	2.7	82637	412676	60.4
15	1.8	85326	426275	54.9	7.7	82416	410610	55.5
20	2.3	85171	425403	50.0	11.4	81779	406740	51.0
25	8.9	84974	423131	45.1	14.3	80845	401554	46.5
30	11.1	84219	418944	40.5	9.2	79687	396740	42.2
35	12.7	83286	413984	35.9	7.2	78951	393442	37.5
40	26.0	82226	406186	31.3	11.4	78381	389834	32.8
45	14.6	80088	397740	27.1	26.5	77483	382672	28.1
50	42.2	78918	386856	22.4	44.0	75432	369458	23.8
55	98.4	75585	360475	18.3	62.5	72113	350061	19.8
60	136.4	68144	318757	15.0	128.7	67603	317492	15.9
65	196.7	58848	266549	12.0	144.3	58904	274410	12.9
70	327.1	47274	198257	9.3	268.1	50406	219191	9.6
75	352.5	31810	131239	7.5	453.9	36895	141797	7.2
80	558.7	20596	72699	5.2	466.8	20147	76682	6.2
85+	1000.0	9090	35291	3.9	1000.0	10742	47267	4.4

Table 3.11: Deaths by Age and Month, 1988

Month	Age at death				
	All age	Under 1 month	1-11 months	1-4 years	5 years and over
January	196	39	37	13	107
February	170	23	20	25	102
March	143	18	24	26	75
April	160	17	44	38	61
May	149	23	26	26	74
June	138	21	27	25	65
July	133	20	8	22	83
August	128	31	12	11	74
September	169	43	22	21	83
October	173	45	10	25	93
November	205	50	15	20	120
December	208	33	29	16	130
Total	1972	363	274	268	1067

Table 3.12: Male Deaths by Cause and Age, 1988

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	63	35	14	4	1	1	0	0	1	0	1	0	0	1	1	0	1	0	3	0
Dysentery	60	9	19	3	0	0	0	1	0	0	0	1	2	9	1	5	3	2	3	2
INFECTIOUS																				
Tuberculosis	20	0	0	0	0	0	0	0	3	0	0	2	2	1	6	2	3	1	0	0
Tetanus (non-neonatal)	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other infectious	25	5	9	2	0	1	0	0	1	0	0	1	0	3	2	1	0	0	0	0
MALIGNANT NEOPLASMS	12	0	0	0	0	1	0	0	2	0	1	1	0	3	3	1	0	0	0	0
NUTRITIONAL	23	17	4	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0
CARDIO-VASCULAR	36	0	0	0	0	0	0	0	0	0	6	2	5	2	6	4	5	2	2	2
RESPIRATORY																				
ARI, pneum, influenza	77	65	11	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
COPD*	35	1	1	0	0	0	0	1	0	0	1	1	4	5	6	10	1	1	3	0
GASTRO-INTESTINAL	43	0	0	4	1	0	0	3	3	0	4	2	6	4	4	5	5	1	0	1
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)	31	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other neonatal	136	136	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	2	0	0	0	0	0	0	1	0	0	0	0	0
Homicide	4	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	1	0	0
Drowning	54	2	35	9	2	0	1	0	1	0	1	0	1	1	1	0	0	0	0	0
*Other accidents etc.	15	2	0	0	2	4	3	1	0	1	2	0	0	0	0	0	0	0	0	0
OTHER AND UNSPECIFIED																				
Senility	176	0	0	0	0	0	0	0	0	0	0	0	0	4	33	38	37	32	32	32
Other causes n.e.c.**	94	4	5	6	1	2	1	4	2	5	1	2	8	7	14	8	12	6	6	0
Unknown	94	8	9	3	2	5	2	5	3	1	2	1	10	18	15	6	2	1	0	1
TOTAL	1002	316	107	32	9	14	9	18	17	7	19	13	38	55	64	75	70	52	49	38

*Chronic obstructive pulmonary disease.

**Not else classified

Table 3.13: Female Deaths by Cause and Age, 1988

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	98	37	47	6	0	0	0	0	0	1	0	0	1	0	2	0	1	2	0	1
Dysentery	76	16	27	3	0	0	0	0	0	0	1	3	3	5	5	5	1	4	2	1
INFECTIOUS																				
Tuberculosis	8	0	0	0	0	0	0	2	0	0	2	1	0	1	2	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	26	4	9	7	2	0	1	1	0	0	0	0	0	1	0	0	0	1	0	0
MALIGNANT NEOPLASMS	9	0	1	1	0	0	0	0	1	0	0	3	2	0	0	0	0	0	1	0
NUTRITIONAL	27	16	8	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
CARDIO-VASCULAR	14	0	0	0	0	0	1	0	0	0	0	0	3	1	2	0	6	1	0	0
RESPIRATORY																				
ARI, pneum, influenza	93	73	16	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
COPD*	17	0	2	0	0	0	2	0	0	0	0	3	5	1	2	1	1	0	0	0
GASTRO-INTESTINAL	21	0	1	0	0	1	1	3	1	1	1	5	2	3	0	1	0	1	0	0
DIRECT OBSTETRIC	18	0	0	0	0	3	8	3	3	0	0	1	0	0	0	0	0	0	0	0
NEONATAL																				
Tetanus (neonatal)	16	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other neonatal	125	125	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ACCIDENTS, INJURIES																				
Suicide	8	0	0	0	0	4	2	1	0	0	0	0	1	0	0	0	0	0	0	0
Homicide	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Drowning	39	4	29	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other accidents etc.	21	8	4	0	1	3	0	1	0	0	0	2	0	0	0	0	2	0	0	0
OTHER AND UNSPECIFIED																				
Senility	148	0	0	0	0	0	0	0	0	0	0	0	0	1	15	29	33	37	20	13
Other causes n.e.c.	105	1	8	1	4	2	9	5	2	1	4	6	2	5	16	11	8	8	5	7
Unknown	100	21	9	9	3	4	4	2	1	0	0	8	12	15	6	3	1	2	0	0
TOTAL	970	321	161	37	10	17	26	20	8	3	9	29	29	39	49	51	53	58	28	22

*Chronic obstructive pulmonary disease.

Table 3.14: Male Deaths by Cause, Age, and Area, 1988

Cause	Age at death (years)															
	All ages		<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	29	34	21	14	2	12	2	3	2	1	1	1	1	3	0	0
Dysentery	25	35	4	5	3	16	1	2	1	0	8	5	6	7	2	0
INFECTIOUS																
Tuberculosis	8	12	0	0	0	0	0	0	1	2	6	5	1	5	0	0
Tetanus (non-neonatal)	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Other infectious	10	15	2	3	1	8	0	2	2	0	4	2	1	0	0	0
MALIGNANT NEOPLASMS	11	1	0	0	0	0	0	0	4	0	6	1	1	0	0	0
NUTRITIONAL	12	11	8	9	3	1	0	0	1	0	0	1	0	0	0	0
CARDIO-VASCULAR	20	16	0	0	0	0	0	0	3	3	8	7	7	6	2	0
RESPIRATORY																
ARI, pneum, influenza	31	46	26	39	5	6	0	1	0	0	0	0	0	0	0	0
COPD*	12	23	0	1	0	1	0	0	0	2	6	10	6	9	0	0
GASTRO-INTESTINAL	25	18	0	0	0	0	2	3	6	4	10	6	7	4	0	1
DIRECT OBSTETRIC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NEONATAL																
Tetanus (neonatal)	4	27	4	27	0	0	0	0	0	0	0	0	0	0	0	0
Other neonatal	58	78	58	78	0	0	0	0	0	0	0	0	0	0	0	0
ACCIDENTS, INJURIES																
Suicide	0	3	0	0	0	0	0	0	0	2	0	1	0	0	0	0
Homicide	1	3	0	0	0	0	0	0	1	2	0	0	0	1	0	0
Drowning	30	24	2	0	18	17	6	5	3	0	1	2	0	0	0	0
Other accidents etc.	12	3	2	0	0	0	1	1	9	2	0	0	0	0	0	0
OTHER AND UNSPECIFIED																
Senility	91	85	0	0	0	0	0	0	0	0	3	1	71	69	17	15
Other causes n.e.c	48	46	3	1	2	3	3	4	6	9	16	15	18	14	0	0
Unknown	44	50	2	6	1	8	2	3	14	4	21	23	4	5	0	1
TOTAL	471	531	132	184	35	72	17	24	53	31	90	80	123	123	21	17

*Chronic obstructive pulmonary disease.

Table 3.15: Female Deaths by Cause, Age, and Area, 1988

Cause	Age at death (years)															
	All ages		<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	65	15	22	13	34	3	3	0	1	0	3	1	2	1	0
Dysentery	26	50	5	11	7	20	1	2	0	1	7	9	5	7	1	0
INFECTIOUS																
Tuberculosis	6	2	0	0	0	0	0	0	2	2	4	0	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	10	16	2	2	3	6	3	6	1	1	0	1	1	0	0	0
MALIGNANT NEOPLASMS	3	6	0	0	0	1	1	0	0	1	2	3	0	1	0	0
NUTRITIONAL	15	12	10	6	3	5	1	0	0	1	1	0	0	0	0	0
CARDIO-VASCULAR	9	5	0	0	0	0	0	0	1	0	3	3	5	2	0	0
RESPIRATORY																
ARI, pneum, influenza	27	66	20	53	6	10	1	2	0	0	0	0	0	1	0	0
COPD*	8	9	0	0	1	1	0	0	1	1	5	4	1	3	0	0
GASTRO-INTESTINAL	10	11	0	0	0	1	0	0	3	5	6	4	1	1	0	0
DIRECT OBSTETRIC	9	9	0	0	0	0	0	0	9	8	0	1	0	0	0	0
NEONATAL																
Tetanus (neonatal)	1	15	1	15	0	0	0	0	0	0	0	0	0	0	0	0
Other neonatal	54	71	54	71	0	0	0	0	0	0	0	0	0	0	0	0
ACCIDENTS, INJURIES																
Suicide	4	4	0	0	0	0	0	0	4	3	0	1	0	0	0	0
Homicide	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
Drowning	18	21	2	2	13	16	3	3	0	0	0	0	0	0	0	0
Other accidents etc.	8	13	4	4	0	4	1	0	1	3	1	1	1	1	0	0
OTHER AND UNSPECIFIED																
Senility	80	68	0	0	0	0	0	0	0	0	8	8	65	54	7	6
Other causes n.e.c.	49	56	0	1	4	4	5	0	9	14	14	15	14	18	3	4
Unknown	51	49	10	11	3	6	4	8	9	2	23	18	2	4	0	0
	422	548	123	198	53	108	23	24	40	43	75	71	96	94	12	10

*Chronic obstructive pulmonary disease.

Table 3.16: Age-standardised Mortality Rates by Cause of Death, 1988

Cause of death	Males		Females	
	MCH-FP area	Comparison area	MCH-FP area	Comparison area
Diarrhoea	51.52	57.24	64.97	110.34
Dysentery	53.35	66.80	73.94	103.80
Tuberculosis	19.48	32.12	14.51	4.57
Tetanus (non-neonatal)	00.00	1.49	00.00	00.00
Other infectious	21.02	24.47	19.76	26.51
Malignant neoplasms	25.98	2.47	5.81	18.36
Nutritional	21.06	17.35	25.86	18.76
Cardio-vascular	49.54	44.54	27.12	20.62
ARI, pneumonia, flu	52.60	68.38	44.94	101.27
C.O.P.D.	29.73	58.23	18.02	28.53
Gastro-intestinal	57.34	46.96	22.73	27.80
Direct obstetric	00.00	00.00	16.94	18.53
Neonatal tetanus	6.84	40.18	1.68	21.89
Other neonatal	99.11	116.07	90.59	103.63
Suicide	0.00	7.05	6.73	8.17
Homicide	2.05	7.38	2.54	0.00
Drowning	51.76	38.03	29.45	32.01
Other accidents	22.54	8.11	15.86	24.10
Senility	227.80	263.22	384.20	365.29
Other N.E.C.	109.16	116.88	162.36	219.37
Unknown	97.42	110.14	105.47	106.94
All causes	998.30	1127.36	1133.47	1360.47

CHAPTER 4

FERTILITY

Table 4.1 shows the number of pregnancies and their outcomes in 1988. When compared with the corresponding figures for 1987, the number of both pregnancies and live births in the MCH-FP area declined, while those in the Comparison area increased. The proportion of foetal losses declined slightly in both areas. Miscarriages are defined as foetal losses of less than seven months gestation, while those occurring at seven months or more are designated as stillbirths.

Table 4.2 and Figure 4.1 show the distribution of births by month of occurrence. They show the same marked seasonal fluctuations found in previous years, with a pronounced peak in October and November.

Tables 4.3 and 4.4 show the age-specific and total fertility, gross and net reproduction rates. The age-specific fertility rates in the MCH-FP area were lower than those in the Comparison area at all ages except 45-49, the greatest relative difference being between the ages of 30 and 45, where the MCH-FP rates were some 40% lower than the Comparison area rates. When MCH-FP rates are compared with those for 1987, declines are apparent for all ages except 20-24, the greatest relative fall being in the 35-39 age group, which dropped by 32%. In contrast the rates for the Comparison area increased at all ages except 35-39 and 45-49.

Table 4.5 shows the age-specific fertility rates for the four blocks of the MCH-FP area. Comparing with the corresponding data for 1987 shows that fertility fell in Blocks A, B and C, but in Block D the TFR remained virtually constant. However even here the fertility rates for women between the ages of 30 and 45 fell appreciably.

Table 4.1: Number and Rates of Pregnancy Outcomes by Type and Area, 1988

Type of pregnancy outcome	Both areas		MCH-FP area		Comparison area	
	No.	Rate	No.	Rate	No.	Rate
Total pregnancies*	7898	164.4	3484	137.8	4414	194.0
Live birth pregnancies**	7043	891.7	3122	896.1	3921	888.3
Fetal wastage pregnancies	855	108.3	362	103.9	493	111.7
Early (miscarriages)	632	80.0	250	71.8	382	86.5
Late (still-births)	223	28.2	112	32.1	111	25.1
Multiple birth pregnancies	81		38		43	
Live birth pregnancies	75		37		38	
Two live births	64		32		32	
One live birth	11		5		6	
Still-birth pregnancies	1		0		1	
Miscarriage pregnancies	5		1		4	

*Rate per 1000 women of age 15-49 years.

**Ratio per 1000 total pregnancies.

Table 4.2: Pregnancy Outcomes by Month, 1988

Months	Pregnancy Outcome					No. of live born children			
	All	Miscarriage		Still- birth	Live* birth	Both sexes	Males	Females	Ratio
		Induced	Spon.						
All months	7898	415	217	223	7043	7107	3607	3500	1.0305
January	670	18	13	16	623	631	304	327	0.9296
February	592	29	17	13	533	537	288	249	1.1566
March	516	32	22	17	445	449	236	213	1.1079
April	541	40	18	14	469	473	235	238	0.9873
May	521	42	22	18	439	442	231	211	1.0947
June	424	39	21	11	353	355	177	178	0.9943
July	499	56	13	12	418	421	239	182	1.3131
August	642	36	26	22	558	566	274	292	0.9383
September	780	36	14	24	706	715	361	354	1.0197
October	971	37	18	33	883	893	465	428	1.0864
November	928	22	15	25	866	872	432	440	0.9818
December	814	28	18	18	750	753	365	388	0.9407

*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, 1988

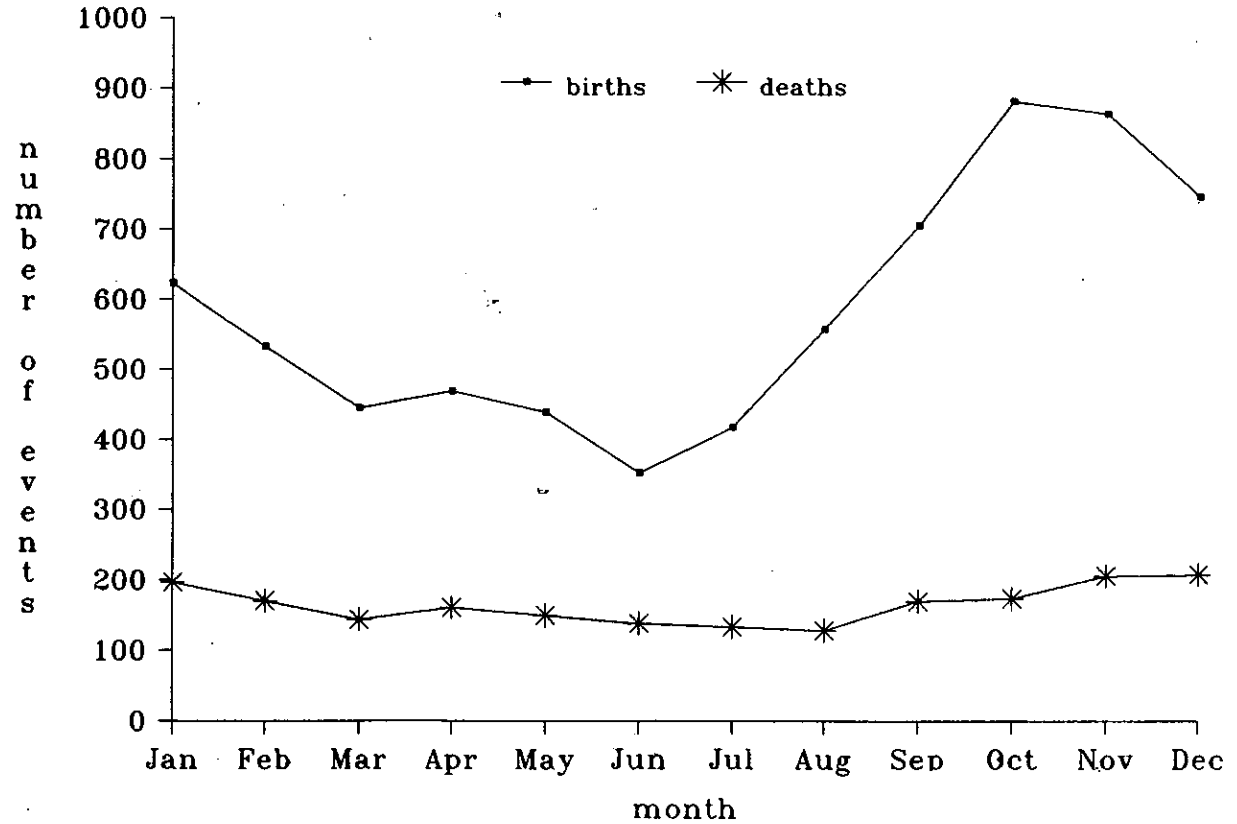


Table 4.3: Age-specific Fertility Rates and Indices, 1988

Age (years)	Number of live births	Number of women	ASFR (per 1000)
All ages	7107	48027	148.0
15-19*	893	10890	82.0
20-24	2594	10208	254.1
25-29	1966	7992	246.0
30-34	984	5647	174.3
35-39	440	4370	100.7
40-44	206	4586	44.9
45-49**	24	4334	5.5

Total Fertility Rate (TFR) = 4538

General Fertility Rate (GFR) = 148

Gross Reproduction Rate (GRR) = 2235

Net Reproduction Rate (NRR) = 1872

* 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, 1988

Age (years)	MCH-FP area		Comparison area	
	No. of live births	ASFR (per 1000)	No. of live births	ASFR (per 1000)
All ages	3154	124.8	3953	173.8
15-19*	395	68.9	498	96.6
20-24	1221	225.5	1373	286.4
25-29	872	208.8	1094	286.8
30-34	392	132.8	592	219.7
35-39	183	79.5	257	124.2
40-44	78	32.3	128	58.9
45-49**	13	5.7	11	5.4
	TFR = 3767		TFR = 5390	
	GFR = 125		GFR = 174	
	GRR = 1836		GRR = 2677	
	NRR = 1562		NRR = 2147	

*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, 1988

Age (years)	Block A		Block B	
	No. of live births	ASFR (per 1000)	No. of live births	ASFR (per 1000)
All ages	828	120.3	860	134.1
15-19*	95	62.6	110	74.8
20-24	338	216.3	324	236.7
25-29	220	191.0	230	222.2
30-34	106	129.9	109	150.8
35-39	50	80.5	51	83.1
40-44	17	24.9	33	53.1
45-49**	2	3.8	3	5.1
TFR	= 3545		TFR	= 4129
GFR	= 120		GFR	= 134
GRR	= 1717		GRR	= 1892

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

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

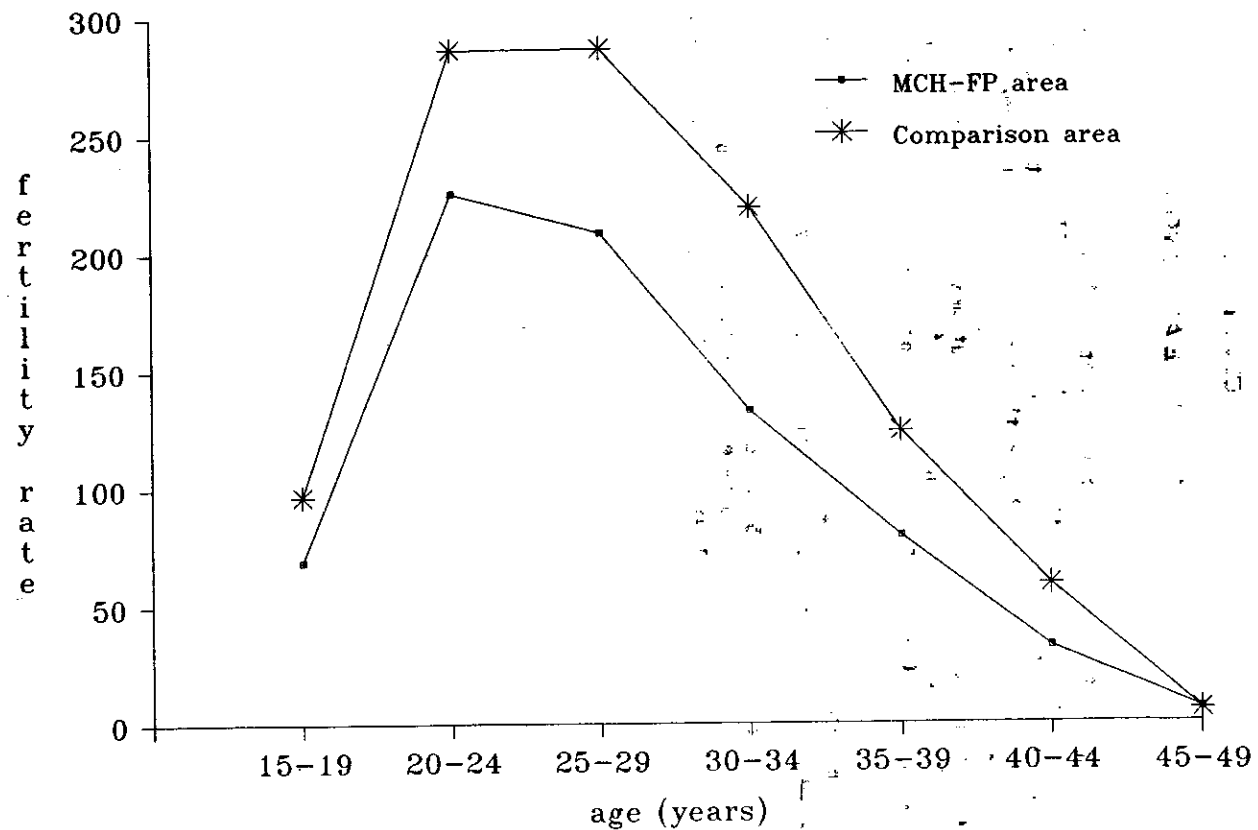
Table 4.5 (cont.): Age-specific Fertility Rates and Indices for MCH-FP Area by Block, 1988

Age (years)	Block C		Block D	
	No. of live births	ASFR (per 1000)	No. of live births	ASFR (per 1000)
All ages	787	118.2	679	127.7
15-19*	116	74.0	74	62.6
20-24	292	213.8	267	239.2
25-29	209	199.2	213	226.4
30-34	113	136.5	64	109.4
35-39	38	62.1	44	96.9
40-44	17	27.8	11	22.1
45-49**	2	3.2	6	11.1
TFR	= 3583	TFR	= 3838	
GFR	= 118	GFR	= 128	
GRR	= 1848	GRR	= 1899	

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

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

Figure 4.2: Age-specific Fertility Rates by Area, 1988



CHAPTER 5

MARRIAGE AND DIVORCE

The number of marriages registered in 1988 was 2540, which was about 11% fewer than in 1987, and about 17% less than in 1978, the first year of the study. Thus the crude marriage rates have fallen from 17.6 per thousand in 1978 to 14.4 per thousand in 1987 and 12.7 per thousand in 1988. However, the decline in the number of marriages does not imply a change in the age patterns of marriage. Tables 5.1 and 5.2 show the distributions of grooms and brides by age. The median age of brides marrying for the first time was 18.0 years, which differed insignificantly from the 1987 figure of 18.3, or indeed from the 1978 figure of 17.5.

The number of divorces, shown in Table-5.5 by partners' ages, was 420, which was also a drop on the previous year's total of 482, and on the 1978 figure of 514.

Tables 5.6 and Figure 5.1 show the distribution of marriages and divorces by month. The numbers fluctuate erratically from month to month, and the comparison of the data with previous years does not suggest a regular seasonal pattern.

Table 5.1: Groom's Age at Marriage by Previous Marital Status, 1988

Age (years)	Previous marital status											
	All grooms		Single		Married		Widowed		Divorced		Unknown	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
All ages	2540	100.0	1118	100.0	73	100.0	31	100.0	191	100.0	1127	100.0
10-14	1	0.0	1	0.1	0	0.0	0	0.0	0	0.0	0	0.0
15-19	115	4.5	99	8.9	0	0.0	0	0.0	8	4.2	8	0.7
20-24	685	27.0	428	38.3	9	12.3	2	6.5	47	24.6	199	17.7
25-29	1141	44.9	434	38.8	27	37.0	4	12.9	78	40.8	598	53.1
30-34	402	15.8	124	11.1	11	15.1	4	12.9	36	18.8	227	20.1
35-39	80	3.1	18	1.6	9	12.3	6	19.4	5	2.6	42	3.7
40-44	33	1.3	6	0.5	6	8.2	4	12.9	5	2.6	12	1.1
45-49	21	0.8	1	0.1	5	6.8	3	9.7	5	2.6	7	0.6
50-54	12	0.5	1	0.1	5	6.8	3	9.7	1	0.5	2	0.2
55-59	11	0.4	2	0.2	1	1.4	2	6.5	3	1.6	3	0.3
60-64	4	0.2	1	0.1	0	0.0	1	3.2	1	0.5	1	0.1
65+	6	0.2	2	0.2	0	0.0	2	6.5	1	0.5	1	0.1
Unknown	29	1.1	1	0.1	0	0.0	0	0.0	1	0.5	27	2.4
Median age*	27.0		25.0		30.0		39.0		27.0			
Mean age [†]	27.1		25.2		33.2		41.2		28.4			
Standard dev. ^{**}	5.9		5.0		9.0		12.6		8.0			

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

Table 5.2: Bride's Age at Marriage by Previous Marital Status, 1988

Age (years)	Previous marital status									
	All brides		Single		Widowed		Divorced		Unknown	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
All ages	2540	100.0	1556	100.0	23	100.0	304	100.0	657	100.0
10-14	121	4.8	104	6.7	0	0.0	4	1.3	13	2.0
15-19	1512	59.5	1009	64.8	2	8.7	83	27.3	418	63.6
20-24	692	27.2	380	24.4	8	34.8	131	43.1	173	26.3
25-29	159	6.3	59	3.8	4	17.4	61	20.1	35	5.3
30-34	26	1.0	1	0.1	4	17.4	15	4.9	6	0.9
35-39	13	0.5	1	0.1	2	8.7	4	1.3	6	0.9
40-44	8	0.3	0	0.0	1	4.3	3	1.0	4	0.6
45-49	4	0.2	0	0.0	2	8.7	2	0.7	0	0.0
50+	1	0.0	0	0.0	0	0.0	1	0.3	0	0.0
Unknown	4	0.2	2	0.1	0	0.0	0	0.0	2	0.3
Median age *	18.0		18.0		25.0		22.0			
Mean age *	19.2		18.2		28.7		22.8			
Standard dev. *	4.1		3.0		8.8		5.6			

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

Table 5.3: Marriage Rates by Age and Sex, 1988

Age (years)	Males		Females	
	Number	Rate*	Number	Rate*
10-14	1	0.1	121	10.2
15-19	115	10.0	1512	138.8
20-24	685	76.7	692	67.8
25-29	1141	141.2	159	19.9
30-34	402	71.1	26	4.6
35-39	80	19.4	13	3.0
40-44	33	9.2	8	1.7
45-49	21	5.9	5	0.3**
50-54	12	3.4	0	-
55-59	11	3.7	0	-
60-64	4	1.8	0	-
65+	6	1.6	0	-
Unknown	29	-	4	-

* Rates per 1000 population irrespective of previous marital status.

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

Table 5.4: Number of Marriages by Groom's and Bride's Age at Marriage, 1988

Groom's age (years)	Bride's age (years)										
	All	<15	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50+	Unknown
All ages	2540	121	1512	692	159	26	13	8	4	1	4
Under 15	1	0	1	0	0	0	0	0	0	0	0
15-19	115	10	83	22	0	0	0	0	0	0	0
20-24	685	44	498	126	15	1	0	0	0	0	1
25-29	1141	55	710	318	53	1	3	0	0	0	1
30-34	402	8	179	166	45	3	1	0	0	0	0
35-39	80	1	21	31	17	8	2	0	0	0	0
40-44	33	0	2	14	9	5	2	1	0	0	0
45-49	21	0	1	2	9	4	3	2	0	0	0
50-54	12	0	0	3	4	3	0	2	0	0	0
55-59	11	0	0	1	5	0	1	2	2	0	0
60-64	4	0	0	1	1	0	0	1	1	0	0
65+	6	0	1	0	1	1	1	0	1	1	0
Unknown	29	3	16	8	0	0	0	0	0	0	2

Table 5.5: Number of Divorces by Partners' Age at Divorce, 1988

Male's age (years)	Female's age (years)										
	All	<15	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50+	Unknown
All ages	420	4	161	177	51	16	3	2	3	1	2
Under 15	1	0	0	0	0	0	0	0	0	0	1
15-19	7	0	5	1	1	0	0	0	0	0	0
20-24	98	1	58	35	2	1	1	0	0	0	0
25-29	169	2	75	77	14	1	0	0	0	0	0
30-34	82	1	19	44	17	1	0	0	0	0	0
35-39	30	0	2	14	6	7	0	0	0	0	1
40-44	11	0	1	1	4	4	1	0	0	0	0
45-49	9	0	1	4	3	0	1	0	0	0	0
50-54	5	0	0	0	3	2	0	0	0	0	0
55-59	5	0	0	0	1	0	0	1	2	1	0
60-64	2	0	0	0	0	0	0	1	1	0	0
65+	0	0	0	0	0	0	0	0	0	0	0
Unknown	1	0	0	1	0	0	0	0	0	0	0

Table 5.6: Marriages and Divorces by Month, 1988

Month	Marriage		Divorce	
	Number	Percent	Number	Percent
January	188	7.4	48	11.4
February	216	8.5	38	9.0
March	268	10.6	26	6.2
April	161	6.3	40	9.5
May	259	10.2	38	9.0
June	198	7.8	35	8.3
July	271	10.7	37	8.8
August	290	11.4	44	10.5
September	91	3.6	29	6.9
October	181	7.1	27	6.4
November	188	7.4	30	7.1
December	229	9.0	28	6.7
All months	2540	100.0	420	100.0

Figure 5.1: Marriages and Divorces by Month, 1988

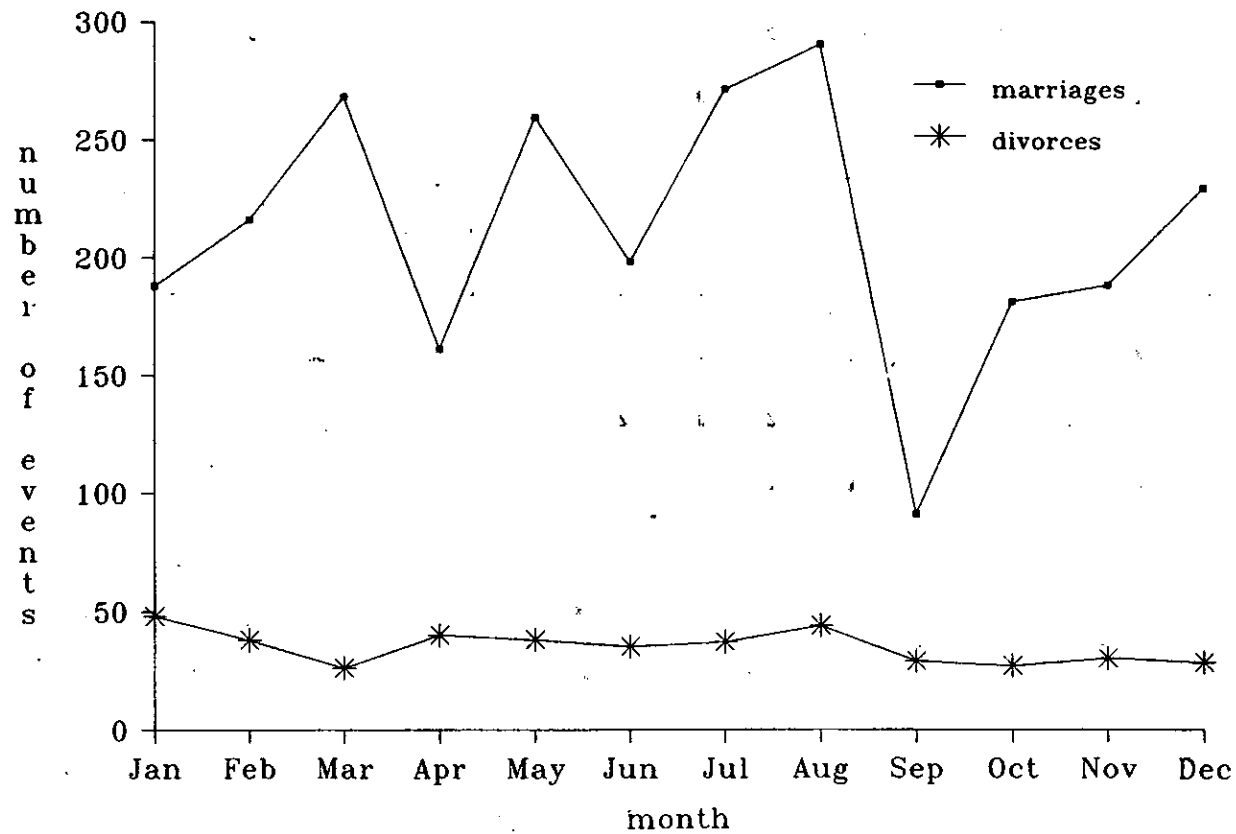


Table 5.7: Number of Divorces by Sex, Age, and Duration of Marriage, 1988

Age at divorce	Duration of marriage (months)																	
	All durations		Under 6		6-11		12-23		24-35		36-47		48-59		60+		UNK	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
All ages	420	420	92	92	74	74	132	132	48	48	3	3	3	3	38	38	30	30
Under 20	8	167	1	43	3	40	3	55	1	17	0	2	0	0	0	3	0	7
20-24	98	177	17	31	24	29	39	61	11	30	1	1	1	2	3	12	2	11
25-29	169	51	37	13	33	5	58	13	18	1	1	0	1	1	13	11	8	7
30-34	82	16	21	4	9	0	15	1	17	0	1	0	1	0	8	8	10	3
35-39	30	3	7	0	2	0	7	1	1	0	0	0	0	0	6	0	7	2
40-49	20	5	5	1	3	0	6	1	0	0	0	0	0	0	3	3	3	0
50+	12	1	4	0	0	0	3	0	0	0	0	0	0	0	5	1	0	0
Unknown	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0

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 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 areas 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 of migrants in the two areas.

The number of in-migrants in 1988 was 5,294, giving a crude rate of in-migration of 26.5 per thousand. These figures constitute a drop of over 20% on the 1987 figures, but since the latter were abnormally high and were the largest recorded since the start of the study, the 1988 figures represent a return to a more normal level of in-migration. The number of out-migrants, 8,306 in 1988, also showed a drop on that of 1987, which had likewise been a peak year in this respect.

The numbers of in-migrants were more or less evenly divided between the MCH-FP area and the Comparison area, but a rather larger number of out-migrants left from the Comparison areas, as shown in Table 6.3.

Table 6.4 shows the age-sex-specific migration rates, which are illustrated in Figure 6.1. They show the bi-modal distributions commonly found for migrant populations, with a primary peak of young adults (20-34 for males; 15-24 for females) and a secondary peak of young children moving with their parents.

Table 6.9 and Figure 6.2 show 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, 1988

Age (years)	In-migration			Out-migration		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	5294	2325	2969	8306	4060	4246
Under 5	908	465	443	1269	638	631
0	275	140	135	346	169	177
1	187	93	94	262	130	132
2	187	100	87	259	121	138
3	135	71	64	200	110	90
4	124	61	63	202	108	94
5-9	488	240	248	794	443	351
10-14	384	185	199	752	396	356
15-19	929	199	730	1515	571	944
20-24	917	218	699	1605	652	953
25-29	595	327	268	952	521	431
30-34	407	257	150	484	308	176
35-39	193	125	68	264	165	99
40-44	133	95	38	170	105	65
45-49	90	64	26	131	74	57
50-54	78	47	31	119	63	56
55-59	54	36	18	78	39	39
60-64	48	32	16	63	32	31
65+	70	35	35	110	53	57

Table 6.2: In-migration by Age, Sex, and Area, 1988

Age (years)	MCH-FP area			Comparison area		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	2628	1129	1499	2666	1196	1470
Under 5	463	241	222	445	224	221
0	142	74	68	133	66	67
1	103	57	46	84	36	48
2	86	44	42	101	56	45
3	68	35	33	67	36	31
4	64	31	33	60	30	30
5-9	240	116	124	248	124	124
10-14	171	79	92	213	106	107
15-19	437	93	344	492	106	386
20-24	511	108	403	406	110	296
25-29	293	156	137	302	171	131
30-34	207	134	73	200	123	77
35-39	91	60	31	102	65	37
40-44	71	51	20	62	44	18
45-49	38	26	12	52	38	14
50-54	31	22	9	47	25	22
55-59	15	11	4	39	25	14
60-64	23	15	8	25	17	8
65+	37	17	20	33	18	15

Table 6.3: Out-migration by Age, Sex, and Area, 1988

Age (years)	MCH-FP area			Comparison area		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	3463	1638	1825	4843	2422	2421
Under 5	511	269	242	758	369	389
0	142	72	70	204	97	107
1	102	55	47	160	75	85
2	117	59	58	142	62	80
3	77	40	37	123	70	53
4	73	43	30	129	65	64
5-9	283	147	136	511	296	215
10-14	270	141	129	482	255	227
15-19	694	231	463	821	340	481
20-24	722	282	440	883	370	513
25-29	428	233	195	524	288	236
30-34	202	130	72	282	178	104
35-39	99	69	30	165	96	69
40-44	66	39	27	104	66	38
45-49	46	24	22	85	50	35
50-54	43	22	21	76	41	35
55-59	27	16	11	51	23	28
60-64	27	14	13	36	18	18
65+	45	21	24	65	32	33

Table 6.4: Age and Sex-specific Migration Rates by Direction, 1988 (per 1000 population)

Age (years)	Both sexes		Males		Females	
	In	Out	In	Out	In	Out
All ages	26.5	41.5	23.1	40.3	29.9	42.8
Under 5	29.8	41.7	30.1	41.2	29.6	42.2
0	43.1	54.2	43.5	52.5	42.6	55.9
1	29.1	40.7	28.9	40.4	29.3	41.1
2	28.9	40.0	30.0	36.3	27.7	43.9
3	24.3	36.0	25.4	39.4	23.2	32.6
4	22.2	36.1	21.0	37.1	23.5	35.0
5-9	18.1	29.4	16.8	31.0	19.5	27.7
10-14	15.5	30.3	14.2	30.4	16.9	30.2
15-19	41.5	67.6	17.3	49.6	67.0	86.7
20-24	47.9	83.9	24.4	73.0	68.5	93.4
25-29	37.0	59.2	40.5	64.5	33.5	53.9
30-34	36.0	42.8	45.5	54.5	26.6	31.2
35-39	22.7	31.1	30.4	40.1	15.6	22.7
40-44	16.3	20.8	26.5	29.3	8.3	14.2
45-49	11.4	16.6	18.0	20.9	6.0	13.2
50-54	10.9	16.6	13.2	17.6	8.6	15.5
55-59	9.3	13.5	12.2	13.2	6.4	13.8
60-64	11.2	14.8	14.2	14.2	7.9	15.3
65+	9.8	15.4	9.1	13.7	10.7	17.4

Figure 6.1: Rate of In- and Out-migration by Sex and Age, 1988

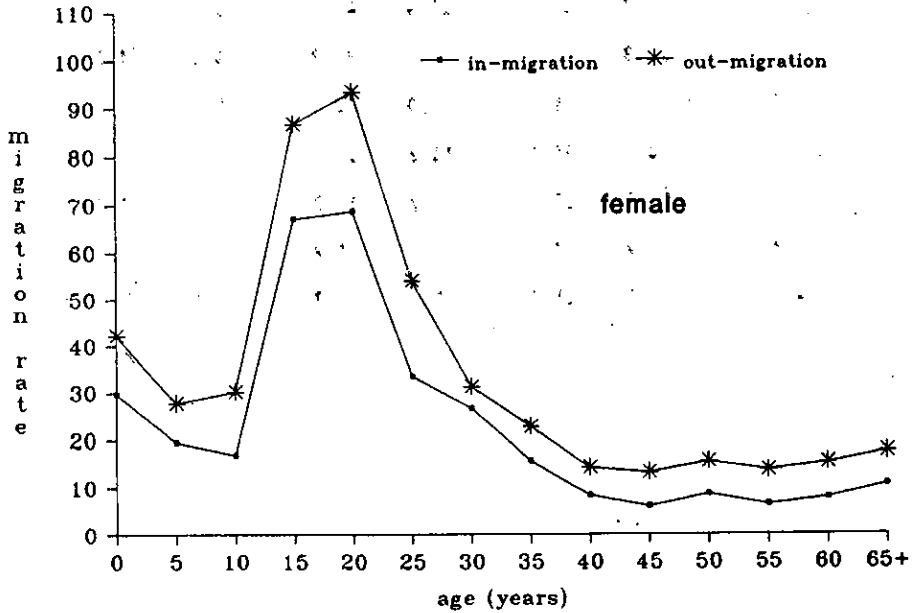
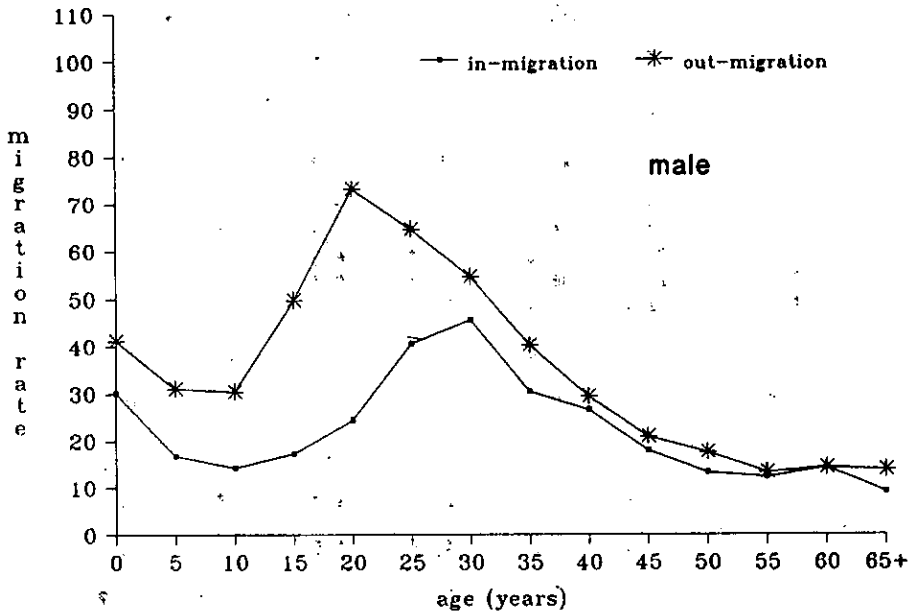


Table 6.5: Male Out-migration by Cause of Movement and Age, 1988

Cause of movement	All ages	Age (years)													
		<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	4060	638	443	396	571	652	521	308	165	105	74	63	39	32	53
1. Dependent movement	1637	633	400	240	126	65	56	31	21	11	7	9	4	7	27
- move with	1438	623	382	214	110	44	31	12	12	1	3	1	0	0	5
- move with (R)	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0
- to join	195	9	17	26	15	20	25	19	9	10	4	8	4	7	22
- to join (R)	2	0	0	0	1	1	0	0	0	0	0	0	0	0	0
parent/spouse/relative															
2. Independent	2328	3	42	155	435	581	448	261	133	87	63	48	30	22	20
2.1. Work/economic	2140	3	40	155	428	571	426	236	105	68	38	36	16	13	5
- income (desperate)	1036	0	9	77	227	273	203	104	53	32	19	21	7	8	3
- income (desperate)(R)	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
- income	809	0	1	20	115	218	200	126	50	33	16	14	9	5	2
- income (R)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- follow job	16	0	0	0	0	0	2	6	2	3	2	1	0	0	0
- follow job (R)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- work finished (R)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- study	278	3	30	58	85	80	21	0	0	0	1	0	0	0	0
2.2. Assoc. with marriage	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
- marriage	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
- separation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- divorce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- widowhood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.3. Social/family/living	187	0	2	0	6	10	22	25	28	19	25	12	14	9	15
- social/family	107	0	1	0	4	8	12	18	10	8	16	8	8	5	9
- social/family (R)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- accommodations	80	0	1	0	2	2	10	7	18	11	9	4	6	4	6
- accommodations (R)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.0. River erosion	35	0	0	1	0	2	3	4	6	4	3	4	4	1	3
4.0. New inclusion	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.0. Other	60	2	1	0	10	4	14	12	5	3	1	2	1	2	3
- other	57	2	1	0	10	4	13	11	5	3	1	2	0	2	3
- other (R)	2	0	0	0	0	0	1	0	0	0	0	0	1	0	0
- unknown/not stated	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0

(R) = Return migration.

Table 6.6: Female Out-migration by Cause of Movement and Age, 1988

Cause of movement	All ages	Age (years)													
		<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	4246	631	351	356	944	953	431	176	99	65	57	56	39	31	57
1. Dependent movement	2985	607	328	234	429	582	332	130	81	53	48	44	37	27	53
- move with	2000	593	307	193	178	246	198	84	61	36	33	30	18	12	11
- move with (R)	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
- to join	981	13	21	40	251	336	133	45	20	17	15	14	19	15	42
- to join (R)	3	0	0	1	0	0	1	1	0	0	0	0	0	0	0
parent/spouse/relative															
2. Independent	1204	2	21	120	511	361	93	44	17	10	9	9	2	3	2
2.1. Work/economic	460	2	20	95	141	102	50	26	8	5	4	4	1	2	0
- income (desperate)	322	0	7	64	96	75	38	21	6	5	4	3	1	2	0
- income (desperate)(R)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- income	26	0	1	0	3	5	11	4	2	0	0	0	0	0	0
- income (R)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- follow job	2	0	0	0	0	0	1	1	0	0	0	0	0	0	0
- follow job (R)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- work finished (R)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- study	110	2	12	31	42	22	0	0	0	0	0	1	0	0	0
2.2. Assoc. with marriage	675	0	1	21	356	241	37	12	4	2	1	0	0	0	0
- marriage	537	0	1	20	304	178	25	7	1	1	0	0	0	0	0
- separation	98	0	0	1	38	49	6	2	2	0	0	0	0	0	0
- divorce	39	0	0	0	14	13	6	3	1	1	1	0	0	0	0
- widowhood	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
2.3. Social/family/living	69	0	0	4	14	18	6	6	5	3	4	5	1	1	2
- social/family	48	0	0	4	14	13	3	2	2	1	4	2	1	1	1
- social/family (R)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- accommodations	21	0	0	0	0	5	3	4	3	2	0	3	0	0	1
- accommodations (R)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3.0. River erosion	10	0	0	0	1	2	1	2	1	1	0	1	0	0	1
4.0. New inclusion	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5.0. Other	47	22	2	2	3	8	5	0	0	1	0	2	0	1	1
- other	43	19	2	2	3	7	5	0	0	1	0	2	0	1	1
- other (R)	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0
- unknown/not stated	3	2	0	0	0	1	0	0	0	0	0	0	0	0	0

(R) = Return migration.

Table 6.7: Male In-migration by Cause of Movement and Age, 1988

Cause of movement	All ages	Age (years)													
		<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	2325	465	240	185	199	218	327	257	125	95	64	47	36	32	35
1. Dependent movement	1205	457	228	130	81	67	100	56	29	20	9	5	4	8	11
- move with	447	203	121	62	30	10	11	7	2	1	0	0	0	0	0
- move with (R)	466	238	102	56	16	14	18	14	4	1	1	0	0	0	2
- to join	128	14	4	2	9	4	21	24	15	11	7	3	3	4	7
- to join (R)	164	2	1	10	26	39	50	11	8	7	1	2	1	4	7
parent/spouse/relative															
2. Independent	532	0	5	40	66	62	95	105	55	32	27	14	9	10	12
2.1. Work/economic	242	0	5	39	38	35	40	28	20	10	10	5	4	4	4
- income (desperate)	39	0	0	3	6	10	7	3	4	2	2	0	0	1	1
- income (desperate)(R)	10	0	0	0	0	2	3	0	3	1	0	1	0	0	0
- income	78	0	0	0	7	12	18	13	6	4	6	4	2	3	3
- income (R)	22	0	0	0	4	2	9	3	2	1	1	0	0	0	0
- follow job	19	0	0	0	0	0	1	8	5	2	1	0	2	0	0
- follow job (R)	2	0	0	0	0	1	0	1	0	0	0	0	0	0	0
- work finished (R)	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
- study	71	0	5	36	21	7	2	0	0	0	0	0	0	0	0
2.2. Assoc. with marriage	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
- marriage	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
- separation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- divorce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- widowhood	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.3. Social/family/living	289	0	0	1	27	27	55	77	35	22	17	9	5	6	8
- social/family	20	0	0	0	0	0	0	9	4	2	4	0	0	1	0
- social/family (R)	178	0	0	1	23	25	50	32	17	11	7	3	4	1	4
- accommodations	86	0	0	0	3	2	4	34	13	9	6	6	1	4	4
- accommodations (R)	5	0	0	0	1	0	1	2	1	0	0	0	0	0	0
3.0. River erosion	32	1	1	1	1	1	5	7	1	5	1	4	3	0	1
4.0. New inclusion	4	1	1	0	0	0	0	1	1	0	0	0	0	0	0
5.0. Other	552	6	5	14	51	88	127	88	39	38	27	24	20	14	11
- other	17	5	3	0	0	2	2	2	1	0	0	1	0	0	1
- other (R)	535	1	2	14	51	86	125	86	38	38	27	23	20	14	10
- unknown/not stated	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(R) = Return migration.

Table 6.8: Female In-migration by Cause of Movement and Age, 1988

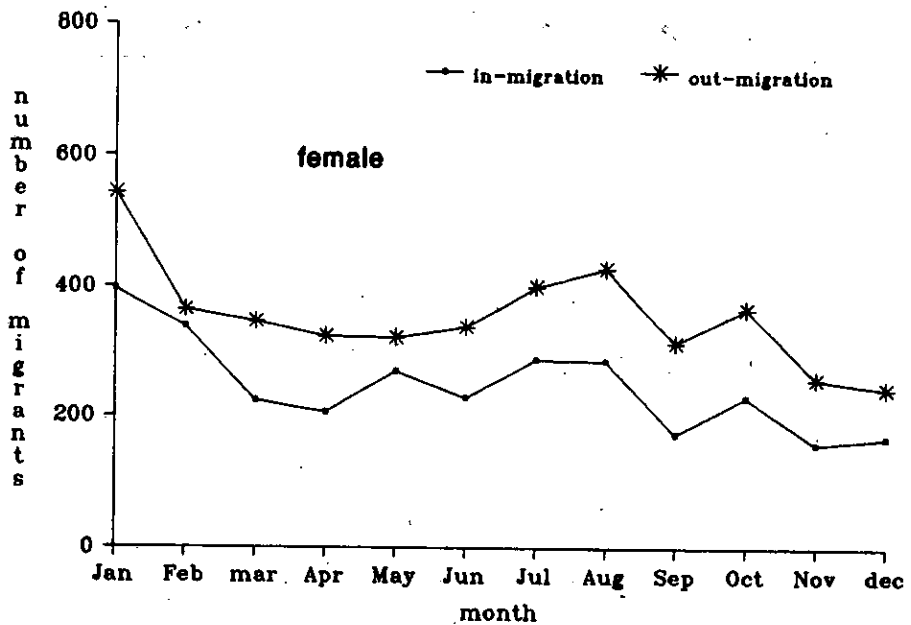
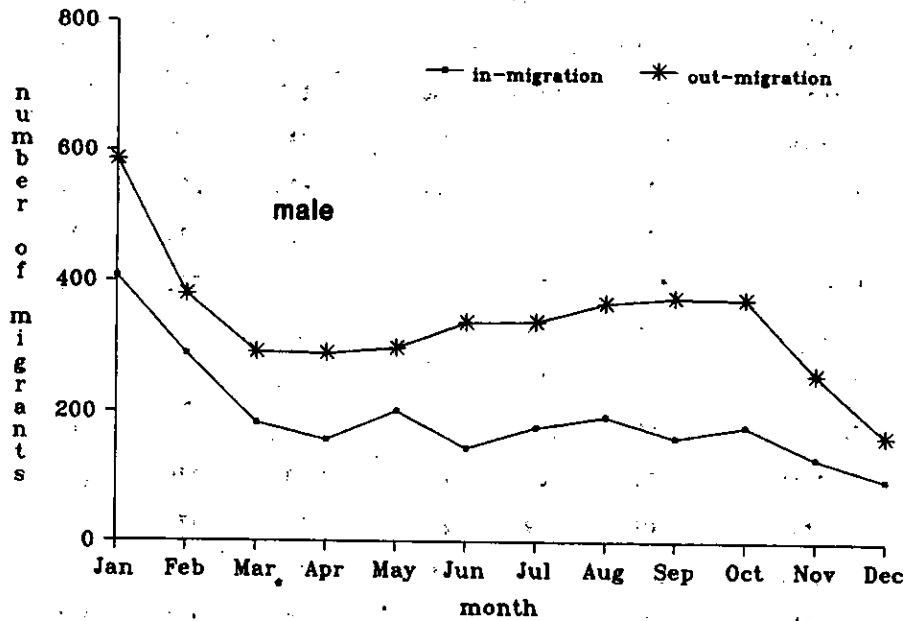
Cause of movement	All ages	Age (years)													
		<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64	65+
All migrants	2969	443	248	199	730	699	268	150	68	38	26	31	18	16	35
1. Dependent movement	2036	431	231	151	337	404	192	114	46	30	22	24	14	12	28
- move with	550	182	82	57	39	44	50	39	15	12	5	11	3	4	7
- move with (R)	707	234	133	63	57	104	41	38	13	7	4	6	1	3	3
- to join	434	13	9	12	159	148	37	18	6	5	7	3	6	2	9
- to join (R)	345	2	7	19	82	108	64	19	12	6	6	4	4	3	9
parent/spouse/relative															
2. Independent	797	1	12	30	369	271	57	25	14	4	2	3	2	3	4
2.1. Work/economic	62	0	12	20	19	8	1	1	1	0	0	0	0	0	0
- income (desperate)	18	0	0	8	4	3	1	1	1	0	0	0	0	0	0
- income (desperate)(R)	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
- income	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- income (R)	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0
- follow job	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0
- follow job (R)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- work finished (R)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
- study	41	0	12	12	13	4	0	0	0	0	0	0	0	0	0
2.2. Assoc. with marriage	657	0	0	5	346	240	40	17	5	2	1	0	0	0	1
- marriage	481	0	0	3	286	168	16	4	4	0	0	0	0	0	0
- separation	133	0	0	2	47	54	18	10	0	1	1	0	0	0	0
- divorce	41	0	0	0	13	18	5	3	1	1	0	0	0	0	0
- widowhood	2	0	0	0	0	0	1	0	0	0	0	0	0	0	1
2.3. Social/family/living	78	1	0	5	4	23	16	7	8	2	1	3	2	3	3
- social/family	21	1	0	2	1	7	7	0	1	0	0	0	1	0	1
- social/family (R)	32	0	0	3	2	12	3	1	3	2	0	2	1	2	1
- accommodations	23	0	0	0	1	3	6	5	4	0	1	1	0	1	1
- accommodations (R)	2	0	0	0	0	1	0	1	0	0	0	0	0	0	0
3.0. River erosion	27	2	3	2	2	4	4	3	2	0	1	1	1	1	1
4.0. New inclusion	3	0	0	1	0	0	1	0	0	0	0	0	0	0	1
5.0. Other	106	9	2	15	22	20	14	8	6	4	1	3	1	0	1
- other	15	9	0	1	0	4	0	0	0	0	1	0	0	0	0
- other (R)	91	0	2	14	22	16	14	8	6	4	0	3	1	0	1
- unknown/not stated	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(R) = Return migration.

Table 6.9: - In- and Out-migration by Sex and Month, 1988

Age (years)	In-migration			Out-migration		
	Both sexes	Males	Females	Both sexes	Males	Females
January	803	407	396	1128	586	542
February	627	289	338	744	379	365
March	408	184	224	638	292	346
April	364	158	206	613	290	323
May	472	202	270	619	298	321
June	375	146	229	675	337	338
July	465	177	288	738	338	400
August	480	194	286	794	367	427
September	335	161	174	690	376	314
October	409	179	230	741	374	367
November	290	131	159	518	259	259
December	266	97	169	408	164	244
All months	5294	2325	2969	8306	4060	4246

Figure 6.2: Number of In- and Out-migrants by Sex and Month, 1988



Appendix A

Names and Codes of Villages in the DSS Area, 1988

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	Uddandi	V78	Soladana
	M	Kaladi	V60	Suvankardi	B	Charwasua	V79	Pitambordi
	V10	Dhakingaon	V61	Munsabdi	C	Sarderkandi	V80	Daribond
	V11	Mabakalash	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	Baispur	V97	Dhanagoda
	V12	Bhangerpar	V56	Palipara	V01	Kadamtali	V98	Santoshpur
	V13	Baburpara	V82	Dhanarpar	V02	Milokhi	V99	Baluakandi
	V19	Lakshmi pur	V83	Padnapal	V03	Char Milokhi	V81	Taltoli
	V20	Dagorpur	V85	Bhanurpara	V04	Char Pathalia	V82	Sree Rayerchar
	V21	Khadergaon	V87	Hurmaisha	V05	Gazipur	V83	Rayerkandi
	V22	Beloti	V812	Nagda	V06	Fatepur	V84	Ramdaspur
	V23	Baluchar	V813	Naogaon	V07	Nayakandi	V85	Thakurpara
	V24	Machuakhal			V08	Goalbher	V86	Sarkerpara
					V09	Naburkandi	V87	Mirpur
					V14	Enayetnagar	V88	Farazikandi
C	K	Shahpur	V40	Masunda	V35	Durgapur	V89**	Ramanathgonj
	L	Tatkhana	V41	Paton	V36	Ludhua	V810	South Rampur
	M	Char Nayergaon	V42	Adhara (South)	V37**	Charputia	D28	Bazarkhola
	N	Aswinpur	V43	Kanachak	V38	Galimkha	D29	Kirtonkhola
	O	Nayergaon	V44	Penchdona	V45	Bakchar	D30	Banuakandi
	P	Titerkandi	V64	Kawadi	V46	Silinda	D31	Harina Bezarkhola
	Q	Char Shibpur	V86	Adhara	V47	Tulatali	D32	Khalisha
	V27	Panchghoria	V88	Datikara	V48	Gangkandi	D33	Nayanagar
	V28	Khidirpur	V811	Mehron	V49	Harina	D34	Saidkharkandi
	V30	Harion	D100	Berogaon	V50	Bhabanipara	D35	Molla Kandi
	V39	Gobindapur	D101	Naojan	V51	Bakharpur	D88	Sankibhanga
					V53	Induriakandi	D89	Sankibhanga
					V58**	Chhoto Haldia		Namapara
D	R	Nandalalpur	V52	Nayakandi	V58**	Mohishmari	D90	Zahtrabaj
	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**	Naobanghe	D94	Hazipur
	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	Bera 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, 1988

Village* code	Popula- tion	Live births	Deaths	Birth rate	Death rate
D	1663	53	12	31.9	7.2
W	2884	59	12	20.5	4.2
V10	1511	47	12	31.1	7.9
V11	1535	64	9	41.7	5.9
V31	8503	250	81	29.4	9.5
V32	2528	86	28	34.0	11.1
V59	911	25	7	27.4	7.7
V60	850	24	4	28.2	4.7
V61	670	19	6	28.4	9.0
V62	820	22	9	26.8	11.0
V72	5585	179	54	32.1	9.7
Block A	27460	828	234	30.2	8.5
H	1232	30	9	24.4	7.3
V12	524	21	3	40.1	5.7
V13	729	17	10	23.3	13.7
V19	2998	86	25	28.7	8.3
V20	1077	38	10	35.3	9.3
V21	471	10	3	21.2	6.4
V22	575	23	6	40.0	10.4
V23	547	16	6	29.3	11.0
V24	2569	77	22	30.0	8.6
V26	2566	93	22	36.2	8.6
V56	1427	44	14	30.8	9.8
V82	1387	59	13	42.5	9.4
V83	499	15	5	30.1	10.0
V85	431	22	1	51.0	2.3
V87	566	20	7	35.3	12.4
VB12	3925	139	35	35.4	8.9
VB13	4434	150	51	33.8	11.5
Block B	25957	860	242	33.1	9.3

(continued)

Appendix B (cont.)

Village* code	Popula- tion	Live births	Deaths	Birth rate	Death rate
K	919	25	10	27.2	10.9
L	449	13	4	29.0	8.9
M	154	6	2	39.0	13.0
N	2012	61	13	30.3	6.5
O	1305	32	11	24.5	8.4
P	1899	57	17	30.0	9.0
Q	348	10	0	28.7	0.0
V27	862	20	5	23.2	5.8
V28	1351	38	11	28.1	8.1
V30	549	20	2	36.4	3.6
V39	342	10	6	29.2	17.5
V40	703	23	6	32.7	8.5
V41	1425	37	6	26.0	4.2
V42	684	25	3	36.5	4.4
V43	844	27	10	32.0	11.8
V44	602	19	6	31.6	10.0
V64	4526	149	40	32.9	8.8
V86	794	27	11	34.0	13.9
V88	488	18	3	36.9	6.1
VB11	2464	55	19	22.3	7.7
D100	3190	84	26	26.3	8.2
D101	1243	31	11	24.9	8.8
Block C	27153	787	222	29.0	8.2
R	1325	36	19	27.2	14.3
S	1014	31	11	30.6	10.8
T	1523	56	9	36.8	5.9
V15	543	14	3	25.8	5.5
V16	704	23	3	32.7	4.3
V17	1032	35	10	33.9	9.7
V18	3496	112	42	32.0	12.0
V25	1246	31	9	24.9	7.2
V29	528	18	6	34.1	11.4
V33	576	17	7	29.5	12.2
V34	756	22	3	29.1	4.0
V52	233	10	1	42.9	4.3
V54	570	24	3	42.1	5.3
V55	501	16	6	31.9	12.0
V57	1079	30	9	27.8	8.3
V63	2008	60	16	29.9	8.0
V67	568	12	2	21.1	3.5
V81	575	29	6	50.4	10.4
V84	2061	72	20	34.9	9.7
V89	1289	31	10	24.0	7.8
Block D	21627	679	195	31.4	9.0
MCH-FP Area	102197	3154	893	30.9	8.7

(continued)

Appendix B (cont.)

Village* code	Popula- tion	Live births	Deaths	Birth rate	Death rate
A	2611	111	20	42.5	7.7
B	1942	74	23	38.1	11.8
C	3482	156	47	44.8	13.5
F	1202	57	14	47.4	11.6
G	2381	95	20	39.9	8.4
J	455	23	4	50.5	8.8
U	7942	325	79	40.9	9.9
V01	699	19	7	27.2	10.0
V02	506	27	6	53.4	11.9
V03	686	34	4	49.6	5.8
V04	244	13	2	53.3	8.2
V05	3271	131	39	40.0	11.9
V06	2228	83	25	37.3	11.2
V07	385	13	5	33.8	13.0
V08	1166	37	18	31.7	15.4
V09	1107	60	13	54.2	11.7
V14	862	33	10	38.3	11.6
V35	3469	139	49	40.1	14.1
V36	4743	190	55	40.1	11.6
V37	0	0	0	-	-
V38	1606	64	12	39.9	7.5
V45	1051	59	16	56.1	15.2
V46	360	17	6	47.2	16.7
V47	1794	82	19	45.7	10.6
V48	600	24	6	40.0	10.0
V49	1308	60	15	45.9	11.5
V50	269	8	2	29.7	7.4
V51	1280	49	9	38.3	7.0
V53	3122	116	38	37.2	12.2
V58	0	0	0	-	-
V65	707	23	9	32.5	12.7
V66	842	24	15	28.5	17.8
V68	868	44	12	50.7	13.8
V69	0	0	0	-	-
V70	0	0	0	-	-
V71	434	20	7	46.1	16.1
V73	791	35	8	44.2	10.1
V74	1313	60	11	45.7	8.4
V75	407	20	5	49.1	12.3
V76	1553	46	22	29.6	14.2
V78	257	6	3	23.3	11.7
V79	334	14	3	41.9	9.0
V80	1075	44	7	40.9	6.5
V90	1146	30	6	26.2	5.2
V95	1374	68	11	49.5	8.0
V96	615	31	13	50.4	21.1
V97	425	12	5	28.2	11.8
V98	204	7	1	34.3	4.9
V99	673	28	7	41.6	10.4

(continued)

Appendix B (cont.)

Village* code	Popula- tion	Live births	Deaths	Birth rate	Death rate
VB1	1092	40	13	36.6	11.9
VB2	938	36	5	38.4	5.3
VB3	2836	123	25	43.4	8.8
VB4	3283	109	32	33.2	9.7
VB5	997	39	11	39.1	11.0
VB6	733	22	6	30.0	8.2
VB7	264	11	3	41.7	11.4
VB8	1397	67	19	48.0	13.6
VB9	0	0	0	-	-
VB10	2696	121	40	44.9	14.8
D28	1168	43	18	36.8	15.4
D29	151	4	1	26.5	6.6
D30	717	30	11	41.8	15.3
D31	1083	47	10	43.4	9.2
D32	664	34	9	51.2	13.6
D33	965	38	16	39.4	16.6
D34	1384	44	9	31.8	6.5
D35	692	24	4	34.7	5.8
D88	1568	56	14	35.7	8.9
D89	1174	48	10	40.9	8.5
D90	1582	62	12	39.2	7.6
D91	0	0	0	-	-
D92	0	0	0	-	-
D93	916	53	12	57.9	13.1
D94	1149	48	13	41.8	11.3
D95	484	19	4	39.3	8.3
D96	507	17	4	33.5	7.9
D97	737	27	8	36.6	10.9
D98	2877	106	36	36.8	12.5
D99	2001	74	26	37.0	13.0
Comparison Area	97844	3953	1079	40.4	11.0

*See village name in Appendix A.

Appendix C
Life Table Equations

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

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

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

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

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

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

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

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

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

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, 1988

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. Javed Ali

Recorders:

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Ms. Monowara Begum, HA

Dhaka-based Staff

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*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 600-175
Fax: (880-2)-863116

Designed and Produced by Azim Azim/Audio-Visual Unit, ICDDR,B

My contribution to the Hospital endowment Fund is enclosed. Amount _____

Name _____

Address _____

Make out cheque and mail with this portion to:

In the USA: The International Child Health Foundation, 10630 Little Patuxent Park way, Century Plaza, Suite 325, Columbia, MD 21044, USA.

Elsewhere: ICDDR,B Hospital Endowment Fund, Mohakhali, Dhaka Bangladesh