

DEMOGRAPHIC SURVEILLANCE SYSTEM-MATLAB

VOLUME THIRTY

REGISTRATION OF DEMOGRAPHIC EVENTS 1997

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ICDDR,B: Centre for Health and Population Research
Mohakhali, Dhaka 1212
Bangladesh



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(see inside of the back cover)

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SUMMARY

This report presents the vital registration data for events taking place in 1997 in Matlab, Bangladesh. These data were collected by the Demographic Surveillance System of the International Center for Diarrhoeal Disease Research, Bangladesh (ICDDR,B). The surveillance area is divided into a Maternal and Child Health and Family Planning (MCH-FP) intervention area and a Comparison area which receives government services.

Fertility and mortality continued to maintain their long-term decline in both the MCH-FP and comparison areas, though the rate of decline has been slower, particularly in the MCH-FP area during the last five years. Some fluctuations in the decline have been observed. These fluctuations are thought to be due to random errors, not due to any specific factors.

In 1997 the crude birth rate was 23.7 per 1,000 and the total fertility rate was 2.8 births per woman in the MCH-FP area. These rates were 26.8 and 3.4 respectively in the Comparison area. In the MCH-FP area the crude death rate was 6.6 per 1,000 and in the Comparison area it was 8.0. In the MCH-FP area, infant mortality was 49.5 per 1,000 live births and in the Comparison area it was 78.6.

Child mortality between 1 to 4 years of age decreased in both the MCH-FP and Comparison areas. Under-5 mortality in the MCH-FP area was 67.7 and in the Comparison area was 104.4. The trends in under-5 mortality are illustrated in Figure 2.1(b).

The rate of in-migration for the surveillance area was 34.6 per 1,000 and out-migration was 41.7 per 1,000, leaving a net out-migration of 7.2 per 1,000, thus offsetting the rate of natural increase, which amounted to 17.9 per 1,000 in 1997. The overall rate of population growth was 1.1 percent per annum. Marriage rate was 13.5 per 1,000 population and divorce rate was 111.0 per 1,000 marriages.

CHAPTER 1

INTRODUCTION

Since 1963 the International Center for Diarrhoeal Disease Research, Bangladesh (ICDDR,B), formerly the Cholera Research Laboratory, has been conducting a health-related research program 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 major components of this field program. Since 1966 the DSS has maintained the registration of births, deaths, and migrations, in addition to carrying out periodical censuses. In 1975 the system was augmented to include marriages and divorces. Recording of change in household headship and household split started in 1993. This information is gathered by Community Health Workers and 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) Program 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). Due to river erosion 7 villages disappeared from the Comparison area in 1987. There are now 142 villages in the DSS, Matlab.

This is the thirtieth volume of a series of scientific reports of the Demographic Surveillance System produced by ICDDR,B. Presented here are results obtained from the Matlab DSS in 1997, along with brief notes and explanations of the tables.

Figure 1.1 Map of Bangladesh Showing the Study Area

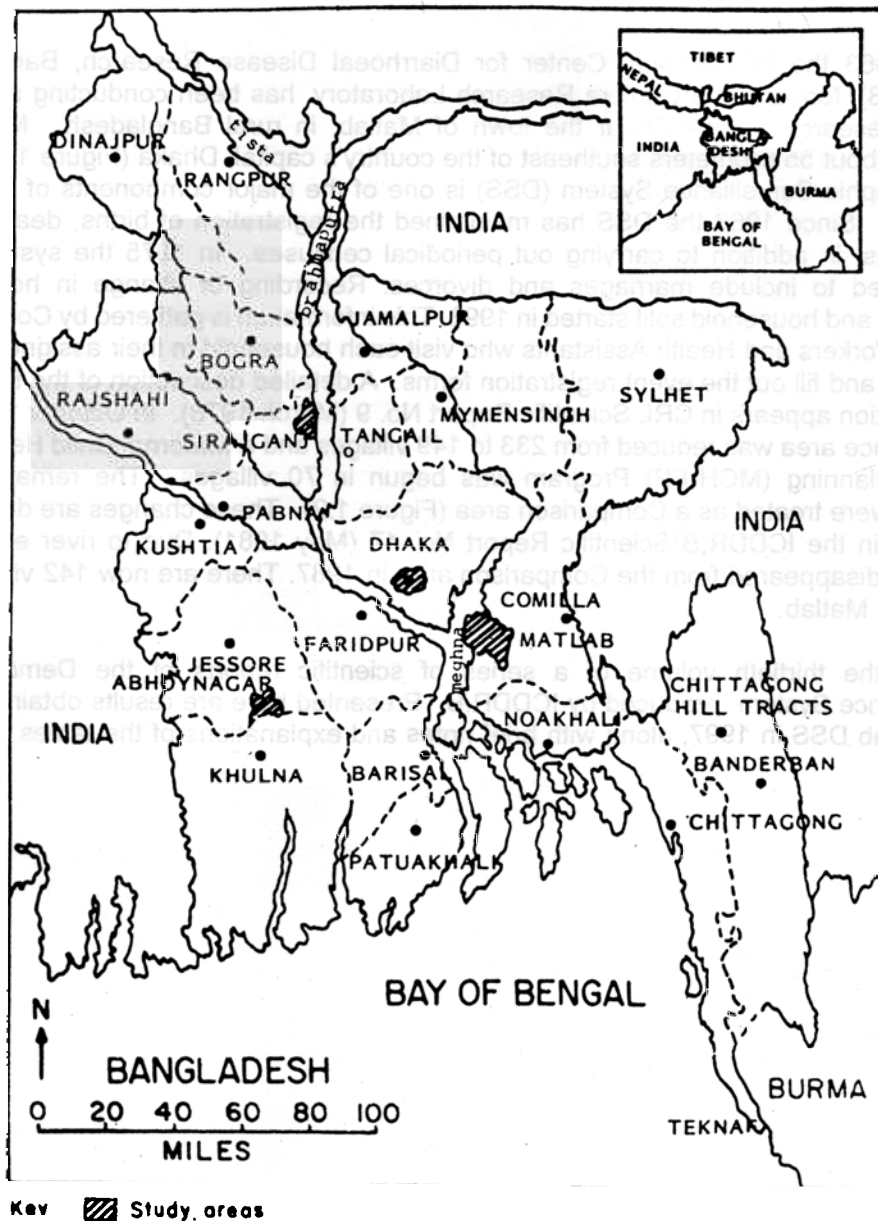
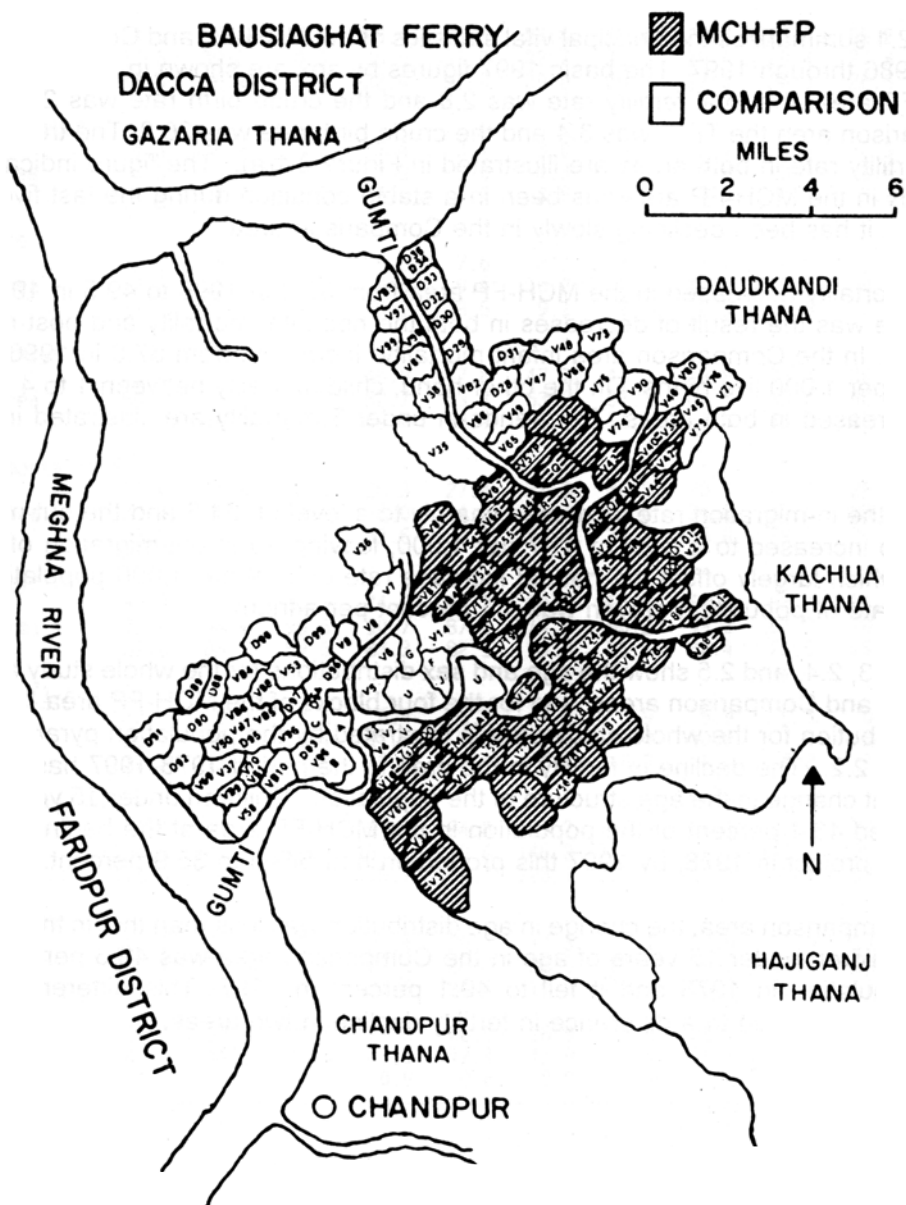


Figure 1.2: Matlab Area Showing Villages of Demographic Surveillance System



CHAPTER 2

POPULATION CHANGES

Table 2.1 summarizes the principal vital statistics of the MCH-FP and Comparison areas from 1986 through 1997. The basic 1997 figures by sex are shown in Table 2.2. In the MCH-FP area, the total fertility rate was 2.8 and the crude birth rate was 23.7. In the Comparison area the TFR was 3.4 and the crude birth rate was 26.8. The trends in the total fertility rate in both areas are illustrated in Figure 2.1(a). The figure indicates that the TFR in the MCH-FP area has been in a stable condition during the last five years, although it has been declining slowly in the Comparison area.

Infant mortality decreased in the MCH-FP area from 66.2 in 1996 to 49.5 in 1997. This decrease was the result of decreases in both the neonatal mortality and post-neonatal mortality. In the Comparison area infant mortality increased from 67.0 in 1996 to 78.6 in 1997 per 1,000 live births. On the other hand, child mortality between 1 to 4 years of age decreased in both areas. The trends in under-5 mortality are illustrated in Figure 2.1(b).

In 1997 the in-migration rate increased sharply to a level of 34.6 and the out-migration rate also increased to a level of 41.7 per 1,000, leaving a net out-migration of 7.2 per 1,000, which largely offset the natural increase rate of 17.9 per 1,000 population. The overall rate of population growth was 1.1 percent 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 whole study area is illustrated by the population pyramid shown in Figure 2.2. The decline in fertility in the area in the period 1978-1997 has caused a significant change in the age structure of the population. Children under 15 years of age constituted 43.4 percent of the population in the MCH-FP area at the beginning of the MCH-FP project in 1978; by 1997 this proportion had fallen to 35.9 percent.

In the Comparison area, the change in age distribution was less than that in the MCH-FP area. Children under 15 years of age in the Comparison area was 43.3 percent of the total population in 1978 and it fell to 40.1 percent in 1997. This difference in age distribution was due to a difference in fertility decline in two areas.

Table 2.1 Vital Statistics of the Matlab MCH-FP and Comparison Areas, 1986-1997

Vital rates (per 1000)	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Crude birth rate												
MCH-FP area	33.6	33.6	30.9	28.4	28.3	25.4	25.4	24.7	25.9	25.2	22.4	23.7
Comparison area	39.6	39.2	40.4	36.6	37.8	32.7	31.1	29.4	29.4	27.8	26.7	26.8
Both areas	36.5	36.4	35.5	32.4	32.9	29.0	28.2	27.0	27.6	26.5	24.5	25.2
Total fertility rate**												
MCH-FP area	4.3	4.2	3.8	3.4	3.4	3.0	3.0	2.9	3.0	2.9	2.7	2.8
Comparison area	5.5	5.4	5.4	4.9	5.0	4.3	4.0	3.8	3.8	3.6	3.5	3.4
Both areas	4.9	4.8	4.5	4.1	4.1	3.6	3.5	3.3	3.4	3.2	3.0	3.1
Crude death rate												
MCH-FP area	9.9	9.3	8.7	8.0	7.6	8.1	8.3	7.7	8.0	7.3	7.6	6.6
Comparison area	12.2	11.2	11.0	9.5	9.4	10.2	9.8	10.2	9.2	8.4	7.9	8.0
Both areas	11.0	10.2	9.9	8.7	8.5	9.1	9.0	8.9	8.6	7.9	7.7	7.3
Neonatal mortality*												
MCH-FP area	45.4	43.8	42.8	46.0	47.8	47.7	49.6	42.8	36.4	30.6	39.5	33.1
Comparison area	53.0	54.9	57.7	52.7	53.3	63.2	53.3	64.5	56.4	50.3	42.1	50.0
Both areas	49.4	49.7	51.1	49.7	50.9	56.3	51.6	54.4	46.9	40.8	40.9	41.9
Post-neonatal mortality*												
MCH-FP area	36.4	34.6	38.0	28.3	27.4	32.3	30.8	20.3	27.3	20.6	26.6	16.4
Comparison area	39.7	39.5	39.0	38.0	34.1	51.7	37.0	34.8	30.8	28.3	24.8	28.6
Both areas	38.2	37.2	38.6	33.6	31.2	43.0	34.1	28.0	29.2	24.6	25.7	22.7
Infant mortality*												
MCH-FP area	81.8	78.4	80.8	74.3	75.2	80.0	80.5	63.1	63.7	51.1	66.2	49.5
Comparison area	92.7	94.4	96.6	90.7	87.5	114.9	90.2	99.3	87.2	78.6	67.0	78.6
Both areas	87.6	86.9	89.6	83.3	82.1	99.2	85.7	82.4	76.0	65.3	66.6	64.7
Child mortality (1-4 yrs)												
MCH-FP area	13.4	9.9	7.6	6.4	5.3	7.0	5.9	5.9	5.3	6.7	6.0	4.5
Comparison area	20.7	15.0	14.4	11.5	9.3	9.1	10.4	10.0	7.0	8.4	8.0	7.0
Both areas	17.2	12.6	11.1	9.0	7.4	8.1	8.3	8.1	6.2	7.6	7.1	5.8
Under five mortality***												
MCH-FP area	129.8	113.1	107.4	97.5	94.8	105.7	102.0	86.1	83.6	76.7	87.9	66.7
Comparison area	164.0	145.2	146.1	131.1	120.4	146.2	127.1	135.1	113.1	109.5	96.4	104.4
Both areas	148.0	130.2	128.3	115.7	108.7	128.1	115.7	112.5	99.1	93.8	92.3	86.3
Rate of natural increase												
MCH-FP area	23.7	24.3	22.1	20.4	20.7	17.3	17.1	17.0	17.9	17.9	14.8	17.1
Comparison area	27.4	28.0	29.4	27.1	28.4	22.5	21.2	19.2	20.2	19.4	18.8	18.7
Both areas	25.5	26.1	25.7	23.6	24.4	19.9	19.1	18.1	19.1	18.6	16.8	17.9
In-migration	28.3	33.6	26.5	29.3	26.0	26.9	33.6	25.5	26.5	27.0	25.1	34.6
Out-migration	41.7	44.3	41.5	43.9	42.4	41.9	48.5	36.1	41.4	37.4	35.0	41.7
Growth (%)	1.2	1.5	1.1	0.9	0.8	0.5	0.4	0.8	0.4	0.6	0.7	1.1

*Per 1000 live births.

**Per woman.

***Calculated from life table

Figure 2.1 Trends in Fertility and Under Five Mortality by Area, in 1986-1997

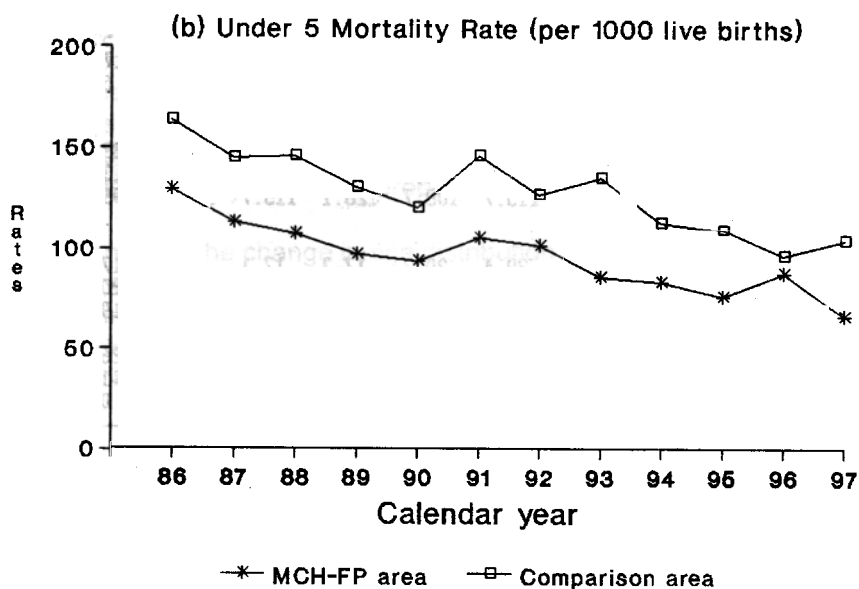
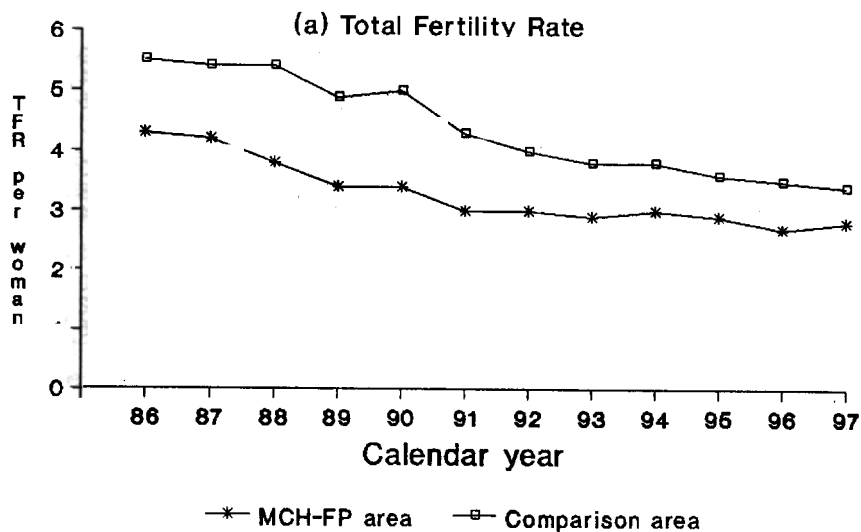


Table 2.2: Mid-year Population, Events Registered, and
Population Changes in 1997

	Number			Rate per 1000		
	Total	Males	Females	Total	Males	Females
Total population as of 30 June 1997:						
MCH-FP area	108363	53183	55180			
Comparison area	104661	51435	53226			
Both areas	213024	104618	108406			
<u>Events registered</u> (Jan - Dec. 1997)						
Births						
MCH-FP area	2565	1317	1248	23.7		
Comparison area	2800	1411	1389	26.8		
Both areas	5365	2728	2637	25.2		
Deaths						
-Infant*						
MCH-FP area	127	63	64	49.5	47.8	51.3
Comparison area	220	110	110	78.6	78.0	79.2
Both areas	347	173	174	64.7	63.4	66.0
All deaths						
MCH-FP area	715	374	341	6.6	7.0	6.2
Comparison area	840	472	368	8.0	9.2	6.9
Both areas	1555	846	709	7.3	8.1	6.5
In-migration	7363	3395	3968	34.6	32.5	36.6
Out-migration	8887	4474	4413	41.7	42.8	40.7
Marriage	2882	-	-	13.5	-	-
Divorce**	320	-	-	111.0		
<u>Population change</u> (Jan - Dec. 1997)						
Net migration	-1524	-1079	-445	-7.2	-10.3	-4.1
Natural increase						
MCH-FP area	1850	943	907	17.1	17.7	16.4
Comparison area	1960	939	1021	18.7	18.3	19.2
Both areas	3810	1882	1928	17.9	18.0	17.8
Net increase	2286	803	1483	10.7	7.7	13.7

*Rate per 1000 live births

**Rate per 1000 marriages.

Table 2.3: Mid-year Population by Age and Sex, 1997

Age (years)	Number			Percent		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	213024	104618	108406	100.0	100.0	100.0
Under 1	5013	2500	2513	2.4	2.4	2.3
1 - 4	20412	10314	10098	9.6	9.9	9.3
1	4937	2471	2466	2.3	2.4	2.3
2	5190	2656	2534	2.4	2.5	2.3
3	5091	2530	2561	2.4	2.4	2.4
4	5194	2657	2537	2.4	2.5	2.3
5 - 9	27778	13946	13832	13.0	13.3	12.8
10-14	27589	14201	13388	13.0	13.6	12.3
15-19	22698	11993	10705	10.7	11.5	9.9
20-24	18382	8906	9476	8.6	8.5	8.7
25-29	15060	6548	8512	7.1	6.3	7.9
30-34	14775	6358	8417	6.9	6.1	7.8
35-39	13797	6899	6898	6.5	6.6	6.4
40-44	9783	4826	4957	4.6	4.6	4.6
45-49	7652	3645	4007	3.6	3.5	3.7
50-54	7748	3378	4370	3.6	3.2	4.0
55-59	6852	3167	3685	3.2	3.0	3.4
60-64	6030	2978	3052	2.8	2.8	2.8
65-69	4080	2066	2014	1.9	2.0	1.9
70-74	2667	1416	1251	1.3	1.4	1.2
75-79	1553	822	731	0.7	0.8	0.7
80-84	746	425	321	0.4	0.4	0.3
85+	409	230	179	0.2	0.2	0.2

Table 2.4: Mid-year Population by Age, Sex, and Area 1997

Age (years)	MCH-FP area			Comparison area		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	108363	53183	55180	104661	51435	53226
Under 1	2409	1226	1183	2604	1274	1330
1 - 4	9962	5004	4958	10450	5310	5140
1	2419	1186	1233	2518	1285	1233
2	2594	1314	1280	2596	1342	1254
3	2473	1235	1238	2618	1295	1323
4	2476	1269	1207	2718	1388	1330
5 - 9	12912	6505	6407	14866	7441	7425
10-14	13579	6916	6663	14010	7285	6725
15-19	11416	6059	5357	11282	5934	5348
20-24	9914	4844	5070	8468	4062	4406
25-29	7983	3486	4497	7077	3062	4015
30-34	7863	3352	4511	6912	3006	3906
35-39	7257	3616	3641	6540	3283	3257
40-44	5179	2586	2593	4604	2240	2364
45-49	4029	1900	2129	3623	1745	1878
50-54	4109	1812	2297	3639	1566	2073
55-59	3621	1659	1962	3231	1508	1723
60-64	3102	1563	1539	2928	1415	1513
65-69	2143	1106	1037	1937	960	977
70-74	1452	763	689	1215	653	562
75-79	793	416	377	760	406	354
80-84	421	248	173	325	177	148
85+	219	122	97	190	108	82

Table 2.5: Mid-year Population in MCH-FP Area by Age, Sex, and Block, 1997

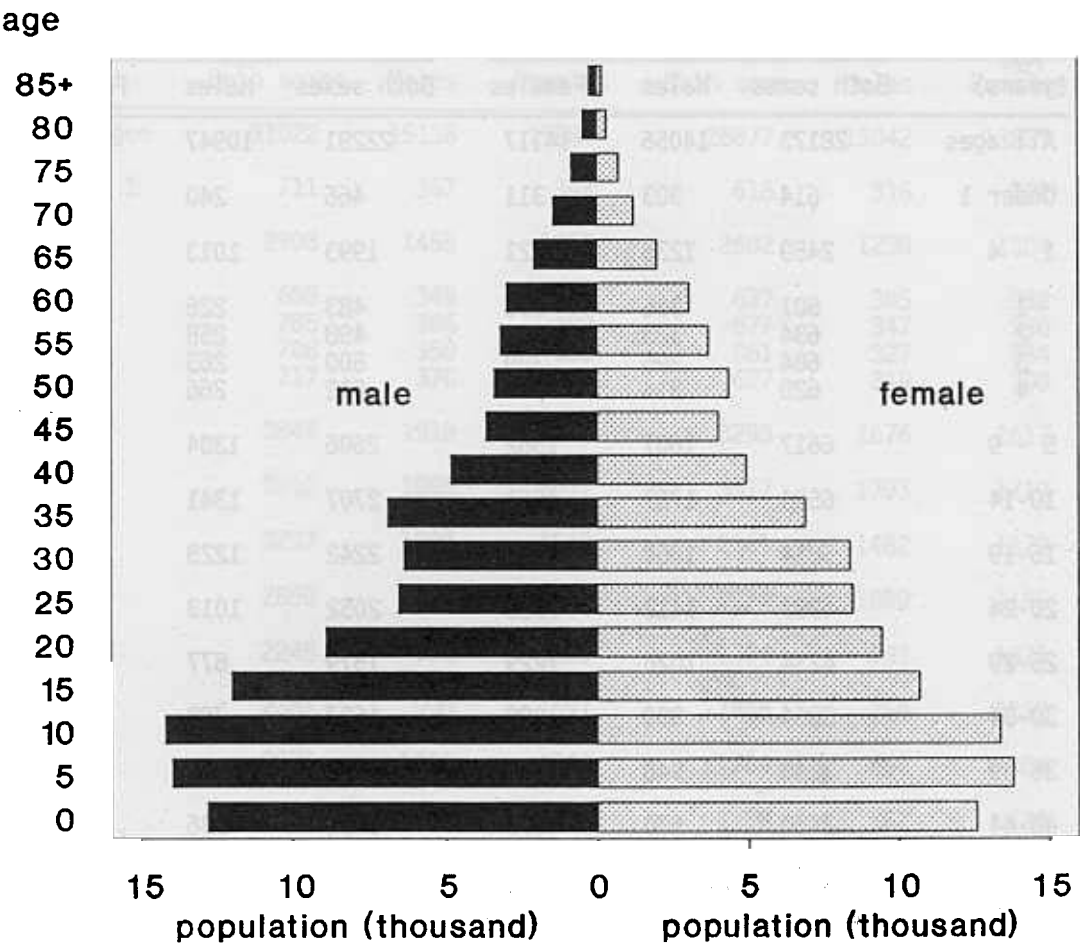
Age (years)	Block A			Block B		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	31022	15138	15884	26877	13042	13835
Under 1	711	367	344	618	316	302
1 - 4	2908	1455	1453	2602	1298	1304
1	698	349	349	637	305	332
2	785	386	399	677	347	330
3	708	350	358	661	327	334
4	717	370	347	627	319	308
5 - 9	3844	1918	1926	3293	1676	1617
10-14	3912	1995	1917	3512	1793	1719
15-19	3237	1689	1548	2861	1482	1379
20-24	2850	1330	1520	2274	1089	1185
25-29	2245	950	1295	1904	833	1071
30-34	2381	990	1391	1866	754	1112
35-39	2071	1031	1040	1709	851	858
40-44	1522	768	754	1196	562	634
45-49	1119	540	579	1010	461	549
50-54	1175	511	664	977	404	573
55-59	929	476	453	887	388	499
60-64	781	418	363	814	392	422
65-69	557	289	268	577	302	275
70-74	381	200	181	401	215	186
75-79	197	98	99	189	107	82
80-84	130	72	58	114	77	37
85+	72	41	31	73	42	31

(continued)

Table 2.5 (cont.): Mid-year Population in MCH-FP Area by Age, Sex, and Block, 1997

Age (years)	Block C			Block D		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	28173	14056	14117	22291	10947	11344
Under 1	614	303	311	466	240	226
1 - 4	2459	1238	1221	1993	1013	980
1	601	306	295	483	226	257
2	634	323	311	498	258	240
3	604	295	309	500	263	237
4	620	314	306	512	266	246
5 - 9	6617	1607	1562	2606	1304	1302
10-14	6524	1787	1661	2707	1341	1366
15-19	5814	1660	1416	2242	1228	1014
20-24	4993	1412	1326	2052	1013	1039
25-29	4234	1026	1229	1579	677	902
30-34	3864	880	1099	1637	728	909
35-39	3248	948	937	1592	786	806
40-44	2430	670	693	1098	586	512
45-49	2182	510	557	833	389	444
50-54	2081	523	592	842	374	468
55-59	1781	441	525	839	354	485
60-64	1336	419	396	692	334	358
65-69	862	274	247	488	241	247
70-74	562	175	166	329	173	156
75-79	320	108	113	186	103	83
80-84	141	56	43	78	43	35
85+	42	19	23	32	20	12

Figure 2.2: Age Pyramid of the 1997 Mid-year Population



CHAPTER 3

MORTALITY

Tables 3.1 to 3.3 show the distribution of deaths by age and sex 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 already noted in Chapter 2, a conspicuous feature of the 1997 results was the decrease in infant mortality in the MCH-FP area, from 66.3 in 1996 to 49.5 in 1997. This was the result of decreases in both neonatal and post-neonatal mortality. In the Comparison area a rise in infant mortality occurred in 1997 but mortality of children aged 1-4 years dropped in both areas in comparison with the previous year.

Table 3.6 and 3.7 show the basic life table parameters; the e_x values are plotted in Figure 3.1. The expectation of life at birth was 64.6 years for males and 66.9 for females (Table 3.7). Overall expectation of life was higher in the MCH-FP area (67.7) than in the Comparison area (63.9) (Table 3.8). The difference in the expectation of life between the two areas was more pronounced for males (5.1) than for females (2.1) (Tables 3.9 and 3.10).

The expectation of life at birth in the MCH-FP area increased, although it declined slightly in the Comparison area. As a whole it increased compared to 1996. Although there was no remarkable difference between male and female mortality up to age 30, male mortality was higher in each age group from 30 to 70. For 75 and higher age groups, it was higher for females (Table 3.7). Infant mortality was much lower in MCH-FP area than in the Comparison area (49.4 vs. 78.6) (Table 3.8). Expectation of life at each age in each area was higher for females than males except age 60 and over in the MCH-FP area (Tables 3.9 and 3.10).

The level of adult mortality decreased in 1997 in comparison with 1996, as can be derived from the finding that the probability of dying between the ages of 15 and 60, who were already at age 15 ($_{45}q_{15}$) decreased from 161 per thousand in 1996 to 158 in 1997. There were compensating movements between the two areas and between the sexes. This comparison between 1996 and 1997 should not lose sight of the difference between male and female adult mortality in both areas with higher male mortality in age groups between 30 and 60 years old.

Table 3.11 and Figure 4.1 show the distribution of deaths by age and month of occurrence. Deaths of those aged five or more tend to peak in the winter months. Neonatal deaths were most frequent in October through January. It is mainly due to

seasonal variation in births as described in Chapter 4. Post-neonatal deaths, on the other hand, generally tend to be distributed fairly regularly throughout the year.

Tables 3.12 to 3.15 show the distribution of deaths by age, sex, area and cause, and Table 3.16 gives the age-standardized mortality rates by cause of death, using the WHO "World Standard" age distribution shown in Appendix-D (WHO 1992). When compared with the corresponding figures for 1996 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 of dysentery decreased, so that there was little change in statistics.

A striking feature of Table 3.16 as well as Tables 3.12 - 3.15 is the large number of deaths classified in the older age groups under senility, other causes of death (not elsewhere classified) and unknown. It means that the quality of cause of death data in these age groups is still unsatisfactory. Plans are currently being formulated to change the procedure of classification of causes of death. The percentage of deaths in the age groups below 5 classified as other causes and unknown is in general small, indicating that the quality of data on causes of death in these age groups is better.

Table 3.1: Deaths by Age and Sex, 1997

Age	Both sexes	Males	Females
All ages	1555	846	709
Under 1 year	347	173	174
Under 1 month	225	121	104
1-5 months	91	43	48
6-11 months	31	9	22
1 - 4 years	118	59	59
1	66	33	33
2	28	14	14
3	12	8	4
4	12	4	8
5 - 9	35	21	14
10-14	19	13	6
15-19	27	9	18
20-24	22	9	13
25-29	16	6	10
30-34	23	11	12
35-39	27	16	11
40-44	29	20	9
45-49	36	20	16
50-54	49	27	22
55-59	91	58	33
60-64	134	79	55
65-69	157	100	57
70-74	141	78	63
75-79	125	65	60
80-84	91	48	43
85+	68	34	34

Table 3.2: Deaths by Area, Age, and Sex, 1997

Age	MCH-FP area			Comparison area		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	715	374	341	840	472	368
Under 1 year	127	63	64	220	110	110
Under 1 month	85	48	37	140	73	67
1-5 months	33	13	20	58	30	28
6-11 months	9	2	7	22	7	15
1 - 4 years	45	25	20	73	34	39
1	25	15	10	41	18	23
2	9	4	5	19	10	9
3	7	4	3	5	4	1
4	4	2	2	8	2	6
5 - 9	18	11	7	17	10	7
10-14	6	3	3	13	10	3
15-19	13	3	10	14	6	8
20-24	13	4	9	9	5	4
25-29	10	5	5	6	1	5
30-34	16	7	9	7	4	3
35-39	18	10	8	9	6	3
40-44	12	7	5	17	13	4
45-49	16	10	6	20	10	10
50-54	28	15	13	21	12	9
55-59	43	25	18	48	33	15
60-64	61	35	26	73	44	29
65-69	75	43	32	82	57	25
70-74	67	38	29	74	40	34
75-79	55	27	28	70	38	32
80-84	49	24	25	42	24	18
85+	43	19	24	25	15	10

Table 3.3: Deaths in MCH-FP Area by Age, Sex, and Block, 1997

	Block A			Block B		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	201	94	107	164	90	74
Under 1 year	32	15	17	33	17	16
Under 1 month	19	11	8	20	12	8
1-5 months	11	4	7	11	5	6
6-11 months	2	0	2	2	0	2
1 - 4 years	12	6	6	16	9	7
1	6	4	2	12	8	4
2	4	1	3	2	1	1
3	1	1	0	1	0	1
4	1	0	1	1	0	1
5 - 9	6	3	3	5	4	1
10-14	2	0	2	2	2	0
15-19	2	1	1	5	0	5
20-24	2	1	1	3	0	3
	3	1	2	3	0	3
30-34	6	3	3	3	0	3
35-39	6	2	4	0	0	0
40-44	3	2	1	1	1	0
45-49	2	1	1	5	4	1
	9	5	4	6	3	3
55-59	15	7	8	7	4	3
60-64	18	8	10	12	7	5
65-69	20	13	7	10	8	2
70-74	14	8	6	12	8	4
75-79	16	9	7	13	6	7
80-84	18	4	14	17	11	6
85+	15	5	10	11	6	5

(continued)

Table 3.3 (cont.): Deaths in MCH-FP Area by Age, Sex, and Block, 1997

Age	Block C			Block D		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	188	94	94	162	96	66
Under 1 year	39	16	23	23	15	8
Under 1 month	30	14	16	16	11	5
1-5 months	7	1	6	4	3	1
6-11 months	2	1	1	3	1	2
1 - 4 years	7	4	3	10	6	4
1	2	1	1	5	2	3
2	1	1	0	2	1	1
3	3	1	2	2	2	0
4	1	1	0	1	1	0
5 - 9	2	1	1	5	3	2
	2	1	1	0	0	0
15-19	5	1	4	1	1	0
20-24	4	2	2	4	1	3
25-29	2	2	0	2	2	0
	5	2	3	2	2	0
35-39	5	3	2	7	5	2
40-44	5	3	2	3	1	2
45-49	7	4	3	2	1	1
	7	4	3	6	3	3
55-59	12	7	5	9	7	2
60-64	15	9	6	6	11	5
	23	10	13	22	12	10
70-74	18	8	10	23	14	9
75-79	15	8	7	11	4	7
	10	6	4	4	3	1
85+	5	3	2	12	5	7

Table 3.4: Death Rates by Age and Sex, 1997
(per 1000 population)

Age	Both sexes	Males	Females
All ages	7.3	8.1	6.5
Under 1 year*	64.7	63.4	66.0
Under 1 month*	41.9	44.4	39.4
1-5 months*	17.0	15.8	18.2
6-11 months*	5.8	3.3	8.3
1 - 4 years	5.8	5.7	5.8
1	13.4	13.4	13.4
2	5.4	5.3	5.5
3	2.4	3.2	1.6
4	2.3	1.5	3.2
5 - 9	1.3	1.5	1.0
10-14	0.7	0.9	0.4
15-19	1.2	0.8	1.7
20-24	1.2	1.0	1.4
25-29	1.1	0.9	1.2
30-34	1.6	1.7	1.4
35-39	2.0	2.3	1.6
40-44	3.0	4.1	1.8
45-49	4.7	5.5	4.0
50-54	6.3	8.0	5.0
55-59	13.3	18.3	9.0
60-64	22.2	26.5	18.0
65-69	38.5	48.4	28.3
70-74	52.9	55.1	50.4
75-79	80.5	79.2	82.1
80-84	122.0	112.9	134.0
85+	166.3	147.8	189.9

*Rate per 1000 live births

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

Age	MCH-FP area			Comparison area		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	6.6	7.0	6.2	8.0	9.2	6.9
Under 1 year*	49.5	47.8	51.3	78.6	78.0	79.2
Under 1 month*	33.1	36.4	29.6	50.0	51.7	48.2
1-5 months*	12.9	9.9	16.0	20.7	21.3	20.2
6-11 months*	3.5	1.5	5.6	7.9	5.0	10.8
1 - 4 years	4.5	5.0	4.0	7.0	6.4	7.6
1	10.3	12.6	8.1	16.3	14.0	18.7
2	3.5	3.0	3.9	7.3	7.5	7.2
3	2.8	3.2	2.4	1.9	3.1	0.8
4	1.6	1.6	1.7	2.9	1.4	4.5
5 - 9	1.4	1.7	1.1	1.1	1.3	0.9
10-14	0.4	0.4	0.5	0.9	1.4	0.4
15-19	1.1	0.5	1.9	1.2	1.0	1.5
20-24	1.3	0.8	1.8	1.1	1.2	0.9
25-29	1.3	1.4	1.1	0.8	0.3	1.2
30-34	2.0	2.1	2.0	1.0	1.3	0.8
35-39	2.5	2.8	2.2	1.4	1.8	0.9
40-44	2.3	2.7	1.9	3.7	5.8	1.7
45-49	4.0	5.3	2.8	5.5	5.7	5.3
50-54	6.8	8.3	5.7	5.8	7.7	4.3
55-59	11.9	15.1	9.2	14.9	21.9	8.7
60-64	19.7	22.4	16.9	24.9	31.1	19.2
65-69	35.0	38.9	30.9	42.4	59.4	25.6
70-74	46.1	49.8	42.1	60.9	61.3	60.5
75-79	69.4	64.9	74.3	92.2	93.8	90.4
80-84	116.4	96.8	144.5	129.2	135.6	121.6
85+	196.3	155.7	247.4	131.6	138.9	122.0

*Rate per 1000 live births

Table 3.6: Abridged Life Table, 1997

Age (years)	nq_x	l_x	L_x	e^0
0	64.7	100000	95317	65.7
1	13.3	93532	92799	69.3
2	5.4	92290	92041	69.2
3	2.4	91793	91685	68.6
4	2.3	91577	91471	67.7
5	6.3	91366	455505	66.9
10	3.4	90792	453239	62.3
15	5.9	90479	451160	57.5
20	6.0	89943	448475	52.8
25	5.3	89406	445935	48.1
30	7.8	88931	443066	43.3
35	9.7	88241	439224	38.7
40	14.7	87382	433938	34.0
45	23.3	86095	425841	29.5
50	31.2	84091	414386	25.1
55	64.4	81470	395123	20.8
60	105.6	76222	362206	17.1
65	176.3	68173	312234	13.8
70	234.4	56155	249017	11.2
75	335.9	42990	179284	8.8
80	464.9	28550	108818	7.0
85+	1000.0	15276	91880	6.0

Figure 3.1: Probability of Survival from Birth to Age (x)
by Sex, 1997

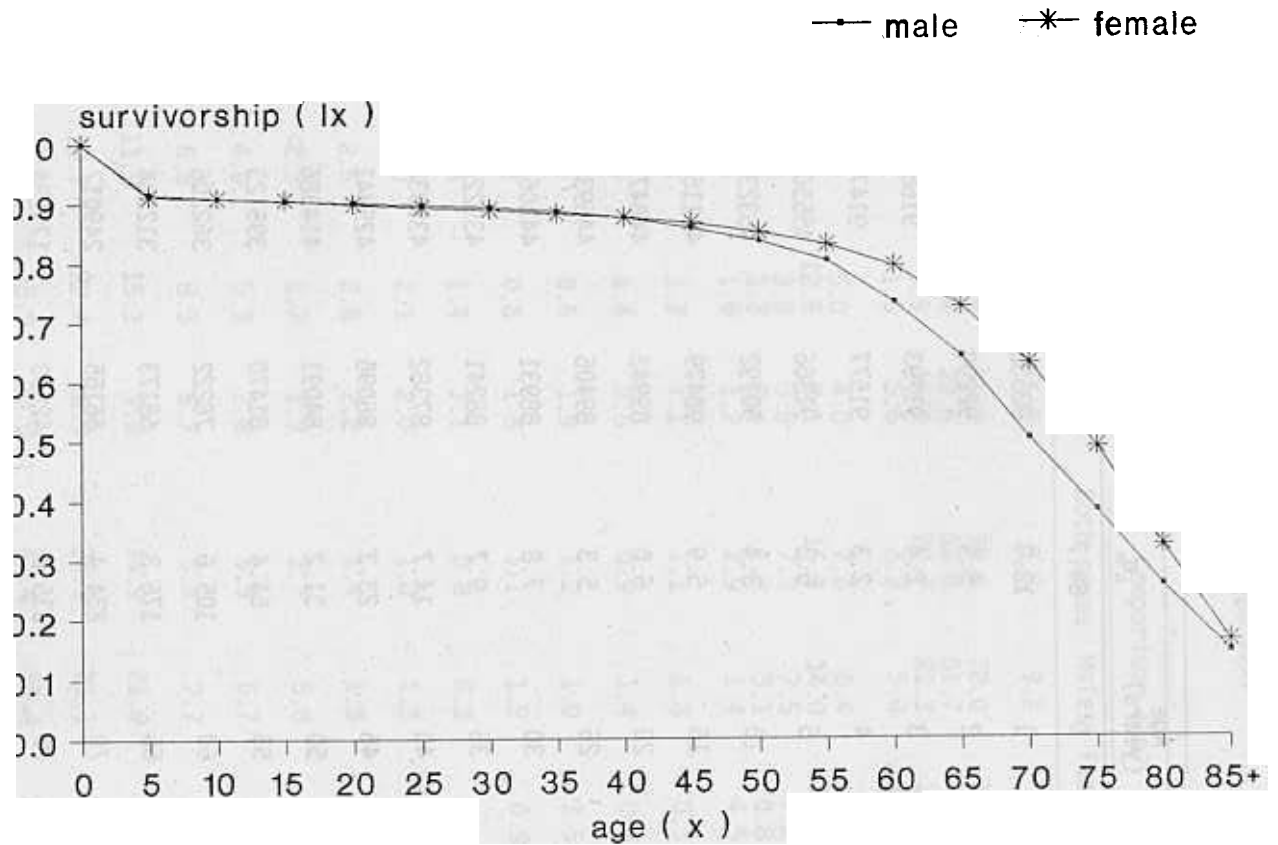


Table 3.7: Abridged Life Tables by Sex, 1997

Age (years)	Males				Females			
	${}_nq_x$	l_x	L_x	e^0	${}_nq_x$	l_x	L_x	e^0
0	63.4	100000	95409	64.6	66.0	100000	95223	66.9
1	13.3	93658	92925	67.9	13.3	93402	92669	70.6
2	5.3	92415	92172	67.8	5.5	92160	91906	70.5
3	3.2	91929	91784	67.2	1.6	91652	91581	69.9
4	1.5	91639	91570	66.4	3.1	91509	91365	69.0
5	7.5	91501	455923	65.5	5.1	91221	455044	68.2
10	4.6	90815	453118	61.0	2.2	90760	453334	63.6
15	3.7	90400	451219	56.2	8.4	90557	451036	58.7
20	5.0	90061	449260	51.4	6.8	89798	447575	54.2
25	4.6	89607	447091	46.7	5.9	89184	444713	49.5
30	8.6	89197	444213	41.9	7.1	88661	441850	44.8
35	11.5	88428	439788	37.2	7.9	88030	438540	40.1
40	20.5	87408	432893	32.6	9.0	87331	434834	35.4
45	27.1	85613	422700	28.3	19.8	86541	428749	30.7
50	39.2	83294	408889	24.0	24.9	84828	419261	26.3
55	87.8	80025	383682	19.8	43.9	82718	405166	21.9
60	124.8	72999	343511	16.5	86.5	79088	379444	17.7
65	216.8	63886	286149	13.5	132.7	72250	338614	14.2
70	243.1	50036	220785	11.5	224.6	62662	279439	10.9
75	331.2	37874	158425	9.3	341.1	48590	201955	8.3
80	438.9	25331	98443	7.7	497.7	32014	118942	6.4
85+	1000.0	14213	96144	6.8	1000.0	16080	84659	5.3

Table 3.8: Abridged Life Tables by Area, 1997

Age (years)	MCH-FP area				Comparison area			
	${}_nq_x$	l_x	L_x	e^0	${}_nq_x$	l_x	L_x	e^0
0	49.5	100000	96415	67.7	78.6	100000	94311	63.9
1	10.3	95049	94472	70.2	16.2	92143	91264	68.4
2	3.5	94071	93908	69.9	7.3	90654	90323	68.5
3	2.8	93746	93613	69.2	1.9	89992	89907	68.0
4	1.6	93480	93405	68.4	2.9	89821	89689	67.1
5	7.0	93330	465153	67.5	5.7	89557	446607	66.3
10	2.2	92681	462934	62.9	4.6	89046	444281	61.7
15	5.7	92476	461172	58.1	6.2	88634	441905	56.9
20	6.5	91951	458369	53.4	5.3	88085	439350	52.3
25	6.3	91350	455433	48.7	4.2	87618	437235	47.5
30	10.1	90779	451773	44.0	5.1	87247	435218	42.7
35	12.3	89859	446739	39.4	6.9	86806	432656	37.9
40	11.5	88751	441394	34.9	18.3	86210	427406	33.2
45	19.7	87728	434648	30.3	27.3	84632	417822	28.8
50	33.5	86001	423322	25.8	28.5	82325	406200	24.5
55	57.8	83116	404406	21.6	71.8	79981	386504	20.1
60	94.0	78314	374321	17.8	117.7	74237	350608	16.5
65	161.6	70953	327539	14.3	192.3	65496	297372	13.3
70	207.7	59490	267812	11.6	265.3	52901	230416	10.9
75	296.5	47132	201473	9.0	374.9	38867	157992	8.9
80	449.0	33158	127910	6.7	485.0	24296	91181	7.7
85+	1000.0	18271	93055	5.1	1000.0	12513	95096	7.6

Table 3.9: Abridged Life Tables for MCH-FP Area by Sex, 1997

Age (years)	Males				Females			
	${}_nq_x$	l_x	L_x	e^0	${}_nq_x$	l_x	L_x	e^0
0	47.8	100000	96537	67.2	51.3	100000	96287	68.1
1	12.6	95216	94510	69.6	8.1	94872	94420	70.8
2	3.0	94020	93877	69.5	3.9	94105	93922	70.4
3	3.2	93734	93582	68.7	2.4	93739	93625	69.6
4	1.6	93431	93357	67.9	1.7	93511	93434	68.8
5	8.4	93284	464607	67.0	5.5	93357	465610	67.9
10	2.2	92498	462028	62.5	2.2	92848	463757	63.3
15	2.5	92298	460962	57.7	9.3	92639	461207	58.4
20	4.1	92069	459473	52.8	8.8	91777	457013	53.9
25	7.1	91690	456938	48.0	5.6	90965	453662	49.4
30	10.4	91034	452990	43.3	9.9	90460	450228	44.6
35	13.7	90088	447583	38.8	10.9	89561	445549	40.1
40	13.5	88850	441490	34.3	9.6	88582	440951	35.5
45	26.0	87654	432998	29.7	14.0	87732	435823	30.8
50	40.6	85374	418830	25.4	27.9	86503	426924	26.2
55	72.8	81907	395624	21.4	44.9	84087	411667	21.9
60	106.4	75945	360753	17.9	81.3	80310	386297	17.8
65	177.9	67867	310561	14.7	143.8	73784	343814	14.1
70	222.4	55793	249115	12.3	191.2	63174	287004	11.0
75	280.2	43386	187301	10.0	314.0	51094	216050	8.0
80	389.5	31229	125693	7.9	525.0	35048	127339	5.6
85+	1000.0	19066	122421	6.4	1000.0	16647	67280	4.0

Table 3.10: Abridged Life Tables for Comparison Area by Sex, 1997

Age (years)	Males				Females			
	${}_nq_x$	l_x	L_x	e^0	${}_nq_x$	l_x	L_x	e^0
0	78.0	100000	94356	62.1	79.2	100000	94266	66.0
1	13.9	92204	91447	66.3	18.5	92081	91076	70.6
2	7.4	90920	90582	66.2	7.2	90379	90055	70.9
3	3.1	90244	90105	65.7	0.8	89732	89698	70.5
4	1.4	89966	89902	64.9	4.5	89665	89463	69.5
5	6.7	89837	447798	64.0	4.7	89261	445339	68.8
10	6.8	89235	444769	59.4	2.2	88841	443751	64.1
15	5.0	88625	442093	54.8	7.5	88643	441693	59.3
20	6.1	88178	439640	50.1	4.5	87982	438993	54.7
25	1.6	87636	437851	45.4	6.2	87583	436663	49.9
30	6.6	87493	436127	40.4	3.8	87039	434427	45.2
35	9.1	86912	432737	35.7	4.6	86705	432609	40.4
40	28.6	86121	424899	31.0	8.4	86307	429857	35.6
45	28.3	83655	412802	26.8	26.3	85580	422689	30.8
50	37.6	81290	399354	22.5	21.5	83328	412499	26.6
55	104.1	78229	372033	18.3	42.7	81537	399607	22.1
60	144.8	70088	326416	15.1	91.7	78056	373512	18.0
65	259.5	59938	261960	12.2	120.8	70897	334313	14.5
70	266.6	44384	193170	10.6	263.7	62333	271748	11.2
75	380.1	32551	131857	8.6	368.9	45893	187300	9.3
80	502.0	20180	74714	7.3	463.9	28962	110474	8.2
85+	1000.0	10049	72351	7.2	1000.0	15526	127312	8.2

Table 3.11: Deaths by Age and Month, 1997

Month	All ages	Age at death			
		Under 1 month	1-11 months	1-4 years	5 years and over
January	163	27	16	12	108
February	123	13	6	11	93
March	101	9	13	8	71
April	126	11	17	15	83
May	116	14	14	10	78
June	104	16	6	8	74
July	125	12	5	9	99
August	119	14	7	8	90
September	106	16	4	13	73
October	135	30	7	10	88
November	153	38	11	12	92
December	184	25	16	2	141
Total	1555	225	122	118	1090

Table 3.12: Male Deaths by Cause and Age, 1997

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	57	16	12	1	2	0	0	0	1	0	0	3	0	4	3	4	6	3	1	1
Dysentery	6	0	1	0	0	0	0	0	0	0	0	0	1	0	0	3	0	1	0	0
INFECTIOUS																				
Tuberculosis	39	0	0	0	0	0	1	1	1	2	2	2	3	7	2	5	9	4	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	13	1	1	0	2	1	0	0	1	0	1	0	0	1	2	2	1	0	0	0
MALIGNANT NEOPLASMS	55	0	0	2	1	1	0	1	2	0	3	4	6	7	10	10	5	1	2	0
NUTRITIONAL	18	8	4	1	0	0	1	0	0	1	1	1	0	0	1	0	0	0	0	0
CARDIO-VASCULAR	95	0	0	0	0	0	1	0	0	4	1	1	4	6	26	21	9	12	9	1
RESPIRATORY																				
ARI, pneum, influenza	58	47	5	1	0	0	0	0	0	0	0	0	0	0	0	0	3	1	1	0
COPD*	46	0	1	0	0	0	0	0	0	0	0	1	1	6	8	6	9	4	6	4
GASTRO-INTESTINAL	58	1	1	3	1	2	0	0	2	2	5	2	3	9	6	6	7	2	5	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)	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other neonatal	89	89	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	1	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0
Homicide	4	2	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0
Drowning	32	0	27	4	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
Other accidents, etc.	24	0	1	1	3	0	4	2	0	3	1	0	1	1	1	2	0	1	0	3
OTHER AND UNSPECIFIED																				
Senility	79	1	1	1	0	0	0	0	0	0	0	0	0	1	3	12	14	17	15	14
Other causes n.e.c.**	117	2	2	5	2	1	1	0	1	2	4	3	3	9	11	23	13	18	9	8
Unknown	50	4	3	2	1	3	0	2	2	1	2	2	5	6	6	6	2	1	0	2
TOTAL	846	173	59	21	13	9	9	6	11	16	20	20	27	58	79	100	78	65	48	34

*Chronic obstructive pulmonary disease.

**Not elsewhere classified.

Table 3.13: Female Deaths by Cause and Age, 1997

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	58	14	14	0	0	1	0	0	0	1	0	4	0	0	3	4	3	6	7	1
Dysentery	17	1	6	2	0	2	0	0	0	1	0	0	0	0	3	0	0	1	1	0
INFECTIOUS																				
Tuberculosis	11	0	0	0	0	0	0	0	0	3	0	0	2	3	1	1	1	0	0	0
Tetanus (non-neonatal)	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other infectious	19	2	4	0	1	0	1	1	0	0	0	1	1	2	3	0	1	1	0	1
MALIGNANT NEOPLASMS	31	0	0	1	0	2	0	0	2	1	1	4	7	2	3	2	3	2	1	0
NUTRITIONAL	22	11	6	1	0	1	0	0	0	0	0	0	2	0	0	0	0	1	0	0
CARDIO-VASCULAR	61	0	0	0	0	1	0	0	0	0	0	4	2	5	9	14	9	10	3	4
RESPIRATORY																				
ARI, pneum, influenza	67	54	6	0	1	0	0	0	0	0	0	1	0	1	0	0	2	0	2	0
COPD*	31	0	0	0	0	0	1	0	0	0	2	0	0	4	5	5	6	3	2	3
GASTRO-INTESTINAL	20	1	0	0	1	1	0	0	1	2	0	0	0	2	4	4	2	1	0	1
DIRECT OBSTETRIC	15	0	0	0	0	2	2	6	3	1	0	1	0	0	0	0	0	0	0	0
NEONATAL																				
Tetanus (neonatal)	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other neonatal	77	77	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	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Homicide	6	3	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0
Drowning	19	0	12	5	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
Other accidents, etc.	14	2	2	0	0	1	3	0	1	0	0	0	0	1	2	0	1	1	0	0
OTHER AND UNSPECIFIED																				
Senility	91	0	1	0	0	0	0	0	0	0	0	0	0	1	3	9	19	23	20	15
Other causes n.e.c.**	105	3	4	2	0	4	1	3	2	1	5	0	7	9	10	15	15	8	7	9
Unknown	40	5	4	3	1	0	4	0	3	1	1	0	1	3	9	3	1	1	0	0
TOTAL	709	174	59	14	6	18	13	10	12	11	9	16	22	33	55	57	63	60	43	34

*Chronic obstructive pulmonary disease

**Not elsewhere classified

Table 3.14: Male Deaths by Cause, Age, and Area, 1997

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	15	42	3	13	2	10	0	3	0	1	5	5	5	9	0	1
Dysentery	3	3	0	0	0	1	0	0	0	0	1	0	2	2	0	0
INFECTIOUS																
Tuberculosis	21	18	0	0	0	0	0	0	6	1	6	8	9	9	0	0
Tetanus (non-neonatal)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other infectious	4	9	0	1	0	1	0	2	3	0	0	3	1	2	0	0
MALIGNANT NEOPLASMS	27	28	0	0	0	0	1	2	5	2	12	15	9	9	0	0
NUTRITIONAL	8	10	5	3	2	2	0	1	1	2	0	2	0	0	0	0
CARDIO-VASCULAR	50	45	0	0	0	0	0	0	4	2	18	19	28	23	0	1
RESPIRATORY																
ARI, pneum, influenza	16	42	13	34	1	4	0	1	0	0	0	0	2	3	0	0
COPD*	21	25	0	0	1	0	0	0	0	0	8	8	10	15	2	2
GASTRO-INTESTINAL	29	29	1	0	1	0	2	2	4	7	12	8	9	11	0	1
DIRECT OBSTETRIC	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
NEONATAL																
Tetanus (neonatal)	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0
Other neonatal	38	51	38	51	0	0	0	0	0	0	0	0	0	0	0	0
ACCIDENTS, INJURIES																
Suicide	4	0	0	0	0	0	1	0	2	0	1	0	0	0	0	0
Homicide	1	3	1	1	0	0	0	0	0	1	0	1	0	0	0	0
Drowning	18	14	0	0	15	12	3	1	0	1	0	0	0	0	0	0
Other accidents, etc.	11	13	0	0	1	0	2	2	4	6	1	2	2	1	1	2
OTHER AND UNSPECIFIED																
Senility	37	42	0	1	1	0	0	1	0	0	3	1	24	34	9	5
Other causes n.e.c.**	53	64	1	1	0	2	4	3	3	6	12	14	26	37	7	1
Unknown	18	32	1	3	1	2	1	2	4	6	6	13	5	4	0	2
TOTAL	374	472	63	110	25	34	14	20	36	35	85	99	132	159	19	15

*Chronic obstructive pulmonary disease.

**Not elsewhere classified.

Table 3.15: Female Deaths by Cause, Age, and Area, 1997

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	27	31	6	8	5	9	0	0	1	1	2	5	12	8	1	0
Dysentery	9	8	1	0	2	4	1	1	2	1	2	1	1	1	0	0
INFECTIOUS																
Tuberculosis	7	4	0	0	0	0	0	0	2	1	3	3	2	0	0	0
Tetanus (non-neonatal)	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Other infectious	8	11	2	0	1	3	0	1	0	2	5	2	0	2	0	1
MALIGNANT NEOPLASMS	19	12	0	0	0	0	0	1	6	0	7	9	6	2	0	0
NUTRITIONAL	8	14	5	6	1	5	0	1	1	0	1	1	0	1	0	0
CARDIO-VASCULAR	33	28	0	0	0	0	0	0	1	0	12	8	18	18	2	2
RESPIRATORY																
ARI, pneum, influenza	22	45	16	38	1	5	1	0	0	0	1	1	3	1	0	0
COPD*	13	18	0	0	0	0	0	0	1	2	5	4	4	12	3	0
GASTRO-INTESTINAL	8	12	0	1	0	0	1	0	3	1	2	4	2	5	0	1
DIRECT OBSTETRIC	6	9	0	0	0	0	0	0	5	9	1	0	0	0	0	0
NEONATAL																
Tetanus (neonatal)	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Other neonatal	28	49	28	49	0	0	0	0	0	0	0	0	0	0	0	0
ACCIDENTS, INJURIES																
Suicide	2	1	0	0	0	0	0	1	2	0	0	0	0	0	0	0
Homicide	4	2	2	1	0	0	0	1	1	0	1	0	0	0	0	0
Drowning	11	8	0	0	8	4	2	3	0	0	0	0	1	1	0	0
Other accidents etc.	9	5	2	0	0	2	0	0	5	0	1	2	1	1	0	0
OTHER AND UNSPECIFIED																
Senility	45	46	0	0	0	1	0	0	0	0	2	2	31	40	12	3
Other causes n.e.c.**	63	42	1	2	2	2	2	0	10	6	13	13	29	16	6	3
Unknown	19	21	1	4	0	4	3	1	6	3	5	8	4	1	0	0
TOTAL	341	368	64	110	20	39	10	10	46	27	63	63	114	109	24	10

*Chronic obstructive pulmonary disease.

**Not elsewhere classified.

Table 3.16: Age-standardized Mortality Rates by Cause of Death, 1997
(per 100,000 population)*

Cause of death	Males		Females	
	MCH-FP area	Comparison area	MCH-FP area	Comparison area
Diarrhoea	29.66	84.94	82.44	71.18
Dysentery	6.47	6.31	19.86	16.47
Tuberculosis	42.46	41.62	14.39	8.13
Tetanus (non-neonatal)	-			
Other infectious	7.86	17.40	15.61	28.90
Malignant neoplasms	54.79	61.81	41.38	29.27
Nutritional	16.06	20.32	15.87	27.46
Cardio-vascular	98.03	100.35	92.35	89.14
ARI, pneumonia, influenza	32.62	83.61	50.64	85.10
COPD**	40.36	56.82	39.25	55.46
Gastro-intestinal	57.77	63.53	15.49	34.18
Direct obstetric	-		10.90	17.47
Neonatal Tetanus	-			1.86
Other neonatal	79.29	102.40	58.49	90.97
Suicide	-		3.59	1.43
Homicide	-			3.29
Drowning	33.51	24.96	21.89	15.39
Other accidents	21.10	28.48	18.77	11.05
Senility	72.17	96.15	176.00	190.66
Other cause n.e.c.***	107.11	141.02	175.82	119.54
Unknown	36.91	67.82	37.38	42.68
Total	745.93	1007.71	898.13	941.42

*Age distribution of standard population is given in Appendix D.

**Chronic obstructive pulmonary disease.

***Not else classified.

CHAPTER 4

FERTILITY

Table 4.1 shows the number of pregnancies and their outcomes in 1997. Compared with 1996, the number of live births rose overall by 185 or 3.6 percent. In the MCH-FP area the number of live births was 162 more than in 1996, and in the Comparison area there were 23 more than in 1996. In the study area as a whole, 87.5 percent of pregnancies resulted in a live birth, a proportion which remains remarkably constant from year to year.

Table 4.2 and Figure 4.1 show the distribution of pregnancies by outcome, and live births by sex and month of occurrence. The data show the usual marked seasonal variation of births, peaking in October-December. The sex ratio of the live births was 103.5 males per 100 females.

Table 4.3 shows the age-specific fertility rates for the study area, together with the total fertility 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; Table 4.5 shows the rates for the four blocks of the MCH-FP area.

Table 4.6 shows the distribution of births by mother's age and live birth order, and Table 4.7 shows the age-order-specific fertility rates derived from these figures. The totals of the order-specific rates represent the components by birth order of the total fertility rates. Just as the TFR represents the average number of children borne by a woman who goes through life having children at the current rates, the total for birth order N represents the proportion of women who would have at least N children.

Thus the tables highlight the differences between the MCH-FP and Comparison areas. There is comparatively little difference between the two areas for birth orders 1 and 2, but thereafter they widen dramatically: for birth orders 7 and 8, the Comparison area rates are twice as high as those of the MCH-FP area, and for birth order 9, they are more than four times as great.

Table 4.1 Number and Rates of Pregnancy Outcomes
by Type and Area, 1997

Type of pregnancy outcome	Both areas		MCH-FP area		Comp. area	
	No.	Rate	No	Rate	No	Rate
Total pregnancies*	6088	114.9	2839	102.1	3249	129.1
Live birth preg.**	5326	874.8	2546	896.8	2780	855.6
Fetal wastage	762	125.2	293	103.2	469	144.4
Early (miscarriage)	576	94.6	209	73.6	367	113.0
Late (stillbirths)	186	30.6	84	29.6	102	31.4
Multiple birth pregnancies	50		24		26	
Live birth pregnancies	46		21		25	
Two live births	39		19		20	
One live birth	7		2		5	
Still birth pregnancies	1		1		0	
Miscarriage pregnancies	3		2		1	

*Rates per 1000 women of age 15-49 years

**Ratio per 1000 total pregnancies.

Table 4.2: Pregnancy Outcomes by Month, 1997

Months	Pregnancy outcome					No. of live born children			
	All	Miscarriage		Still birth	Live birth*	Both sexes	Males	Females	Ratio
		Induced	Spon.						
All months	6088	246	330	186	5326	5365	2728	2637	1.0345
January	572	15	24	10	523	527	257	270	0.9519
February	438	16	15	15	392	394	223	171	1.3041
March	425	20	25	12	368	372	165	207	0.7971
April	452	25	32	15	380	381	198	183	1.0820
May	375	25	32	9	309	309	153	156	0.9808
June	344	23	35	10	276	280	137	143	0.9580
July	411	29	36	9	337	339	183	156	1.1731
August	461	20	30	9	402	407	206	201	1.0249
September	567	25	36	13	493	494	254	240	1.0583
October	699	22	27	26	624	630	329	301	1.0930
November	709	17	20	21	651	659	335	324	1.0340
December	635	9	18	37	571	573	288	285	1.0105

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

Figure 4.1: Number of Births and Deaths by Month, 1997

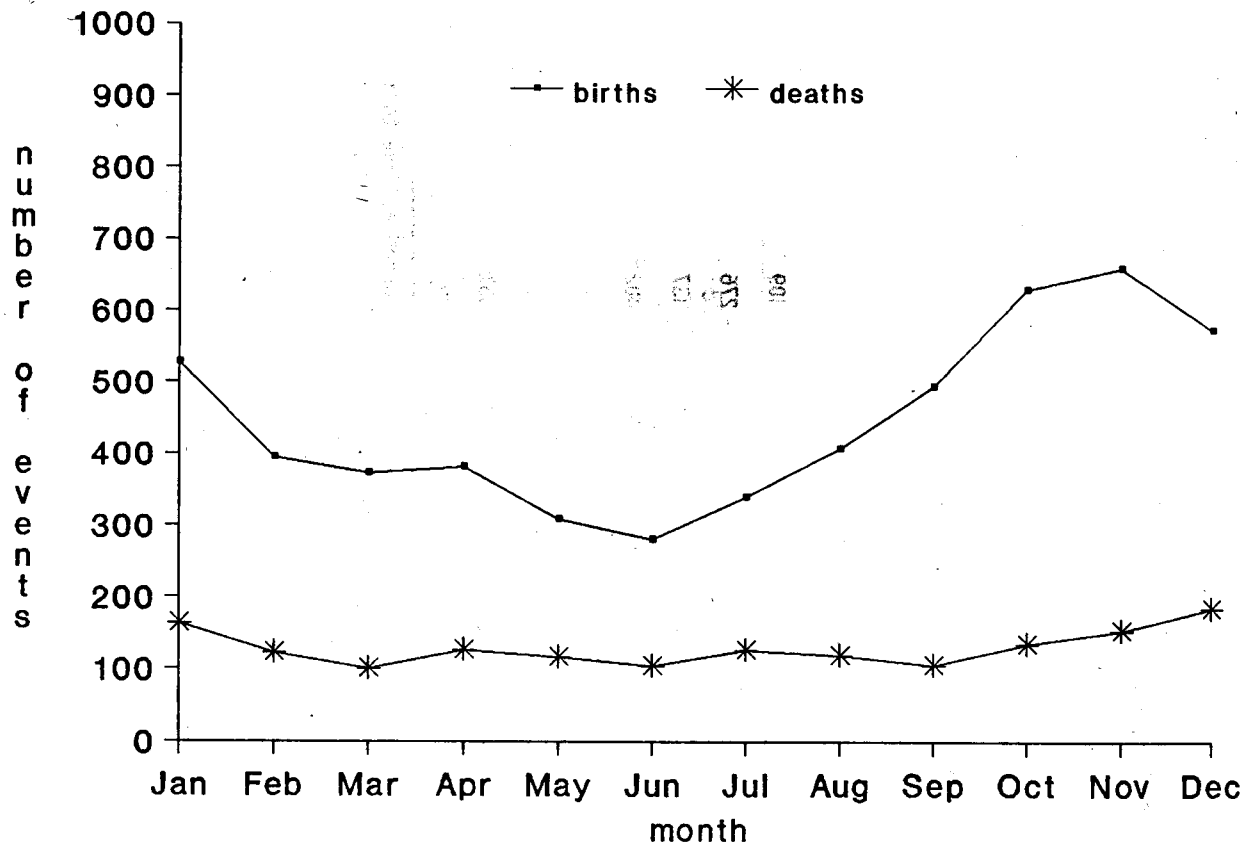


Table 4.3: Age-specific Fertility Rates and Indices 1997

Age (years)	Number of live births	Number of women	ASFR (per 1000)
All ages	5365	52972	101.3
15-19*	604	10705	56.4
	1705	9476	179.9
25-29	1599	8512	187.9
30-34	1003	8417	119.2
35-39	382	6898	55.4
	62	4957	12.5
45-49**	10	4007	2.5

Total Fertility Rate (TFR) = 3069

General Fertility Rate (GFR) = 101

Gross Reproduction Rate (GRR) = 1508

Net Reproduction Rate (NRR) = 1342

*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, 1997

Age (years)	MCH-FP area			Comparison area		
	Births	Women	Rate	Births	Women	Rate
All ages	2565	27798	92.3	2800	25174	111.2
15-19*	297	5357	55.4	307	5348	57.4
20-24	829	5070	163.5	876	4406	198.8
25-29	758	4497	168.6	841	4015	209.5
30-34	493	4511	109.3	510	3906	130.6
35-39	156	3641	42.8	226	3257	69.4
40-44	27	2593	10.4	35	2364	14.8
45-49**	5	2129	2.3	5	1878	2.7
	TFR	=	2762	TFR	=	3416
	GFR	=	92	GFR	=	111
	GRR	=	1344	GRR	=	1694
	NRR	=	1220	NRR	=	1480

*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, 1997

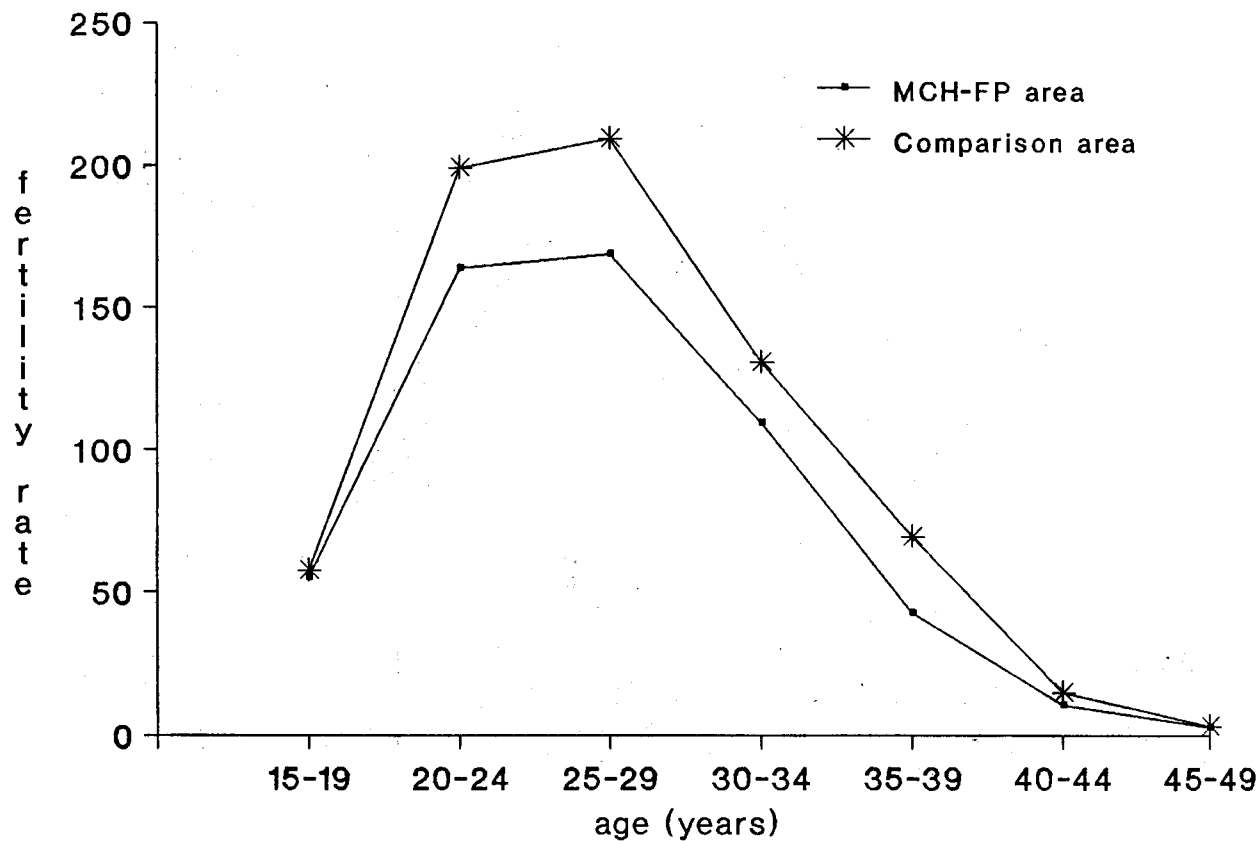


Table 4.5: Age-specific Fertility Rates and Indices for
MCH-FP Area by Block, 1997

Age (years)	Block A			Block B		
	Births	Women	Rate	Births	Women	Rate
All ages	748	8127	92.0	654	6788	96.3
15-19*	77	1548	49.7	77	1379	55.8
20-24	251	1520	165.1	198	1185	167.1
25-29	230	1295	177.6	185	1071	172.7
30-34	141	1391	101.4	137	1112	123.2
35-39	41	1040	39.4	43	858	50.1
40-44	7	754	9.3	10	634	10.0
45-49**	1	579	1.7	4	549	7.3
	TFR	=	2721	TFR	=	2931
	GFR	=	92	GFR	=	96
	GRR	=	1288	GRR	=	1466

(continued)

Table 4.5 (cont.): Age-specific Fertility Rates and Indices for
MCH-FP Area by Block, 1997

Age (years)	Block C			Block D		
	Births	Women	Rate	Births	Women	Rate
All ages	675	7257	93.0	488	5626	86.7
15-19*	86	1416	60.7	57	1014	56.2
20-24	220	1326	165.9	160	1039	154.0
25-29	208	1229	169.2	135	902	149.7
30-34	115	1099	104.6	100	909	110.0
35-39	40	937	42.7	32	806	39.7
40-44	6	693	8.7	4	512	7.8
45-49**	0	557	0.0	0	444	0.0
	TFR	=	2759	TFR	=	2587
	GFR	=	93	GFR	=	87
	GRR	=	1369	GRR	=	1230

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

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

Table 4.6: Births by Mother's Age, Live-birth Order and Area, 1997

Age (years)	Total women	Total births	Live-birth order									
			1	2	3	4	5	6	7	8	9	10+
Both areas												
<15	13388	3	3	0	0	0	0	0	0	0	0	0
15-19	10705	601	529	64	7	1	0	0	0	0	0	0
20-24	9476	1705	817	659	190	35	4	0	0	0	0	0
25-29	8512	1599	137	467	550	320	99	20	3	3	0	0
30-34	8417	1003	26	80	219	267	216	123	56	12	3	1
35-39	6898	382	2	13	33	50	73	70	63	35	31	12
40-44	4957	62	0	0	2	4	4	11	14	12	9	6
45-49	4007	10	0	0	1	0	1	1	1	4	1	1
MCH-FP area												
<15	6663	2	2	0	0	0	0	0	0	0	0	0
15-19	5357	295	269	22	4	0	0	0	0	0	0	
20-24	5070	829	432	323	68	5	1	0	0	0	0	
25-29	4497	758	63	265	268	118	35	8	0	1	0	0
30-34	4511	493	11	47	137	133	96	48	19	2	0	0
35-39	3641	156	1	5	21	23	33	29	19	11	8	6
40-44	2593	27	0	0	1	0	1	8	7	6	1	
45-49	2129	5	0	0	1	0	1	1	0	1	0	1
Comparison area												
<15	6725	1	1	0	0	0	0	0	0	0	0	0
15-19	5348	306	260	42	3	1	0	0	0	0	0	0
20-24	4406	876	385	336	122	30	3	0	0	0	0	0
25-29	4015	841	74	202	282	202	64	12	3	2	0	0
30-34	3906	510	15	33	82	134	120	75	37	10	3	1
35-39	3257	226	1	8	12	27	40	41	44	24	23	6
40-44	2364	35	0	0	1	4	3	3	7	6	8	3
45-49	1878	5	0	0	0	0	0	0	1	3	1	0

Table 4.7 Age-order-specific Fertility Rates by Area, 1997

Age (years)	Total	Live-birth order									
		1	2	3	4			7	8	9	10+
Both areas											
<15	0.0002	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
15-19	0.0561	0.0494	0.0060	0.0007	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20-24	0.1799	0.0862	0.0695	0.0201	0.0037	0.0004	0.0000	0.0000	0.0000	0.0000	0.0000
25-29	0.1879	0.0161	0.0549	0.0646	0.0376	0.0116	0.0023	0.0004	0.0004	0.0000	0.0000
30-34	0.1192	0.0031	0.0095	0.0260	0.0317	0.0257	0.0146	0.0067	0.0014	0.0004	0.0001
35-39	0.0554	0.0003	0.0019	0.0048	0.0072	0.0106	0.0101	0.0091	0.0051	0.0045	0.0017
40-44	0.0125	0.0000	0.0000	0.0004	0.0008	0.0008	0.0022	0.0028	0.0024	0.0018	0.0012
45-49	0.0025	0.0000	0.0000	0.0002	0.0000	0.0002	0.0002	0.0002	0.0010	0.0002	0.0002
Total	3.0685	0.7767	0.7089	0.5839	0.4058	0.2468	0.1479	0.0961	0.0514	0.0346	0.0166
MCH-FP area											
<15	0.0003	0.0003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
15-19	0.0551	0.0502	0.0041	0.0007	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20-24	0.1635	0.0852	0.0637	0.0134	0.0010	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000
25-29	0.1686	0.0140	0.0589	0.0596	0.0262	0.0078	0.0018	0.0000	0.0002	0.0000	0.0000
30-34	0.1093	0.0024	0.0104	0.0304	0.0295	0.0213	0.0106	0.0042	0.0004	0.0000	0.0000
35-39	0.0428	0.0003	0.0014	0.0058	0.0063	0.0091	0.0080	0.0052	0.0030	0.0022	0.0016
40-44	0.0104	0.0000	0.0000	0.0004	0.0000	0.0004	0.0031	0.0027	0.0023	0.0004	0.0012
45-49	0.0023	0.0000	0.0000	0.0005	0.0000	0.0005	0.0005	0.0000	0.0005	0.0000	0.0005
Total	2.7617	0.7622	0.6927	0.5537	0.3151	0.1959	0.1197	0.0606	0.0324	0.0129	0.0164
Comparison area											
<15	0.0001	0.0001	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
15-19	0.0572	0.0486	0.0079	0.0006	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
20-24	0.1988	0.0874	0.0763	0.0277	0.0068	0.0007	0.0000	0.0000	0.0000	0.0000	0.0000
25-29	0.2095	0.0184	0.0503	0.0702	0.0503	0.0159	0.0030	0.0007	0.0005	0.0000	0.0000
30-34	0.1306	0.0038	0.0084	0.0210	0.0343	0.0307	0.0192	0.0095	0.0026	0.0008	0.0003
35-39	0.0694	0.0003	0.0025	0.0037	0.0083	0.0123	0.0126	0.0135	0.0074	0.0071	0.0018
40-44	0.0148	0.0000	0.0000	0.0004	0.0017	0.0013	0.0013	0.0030	0.0025	0.0034	0.0013
45-49	0.0027	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0005	0.0016	0.0005	0.0000
Total	3.4154	0.7936	0.7266	0.6179	0.5080	0.3045	0.1802	0.1361	0.0728	0.0587	0.0168

CHAPTER 5

MARRIAGE AND DIVORCE

The number of marriages registered in 1997 was 2,882, giving a crude marriage rate of 13.5 per thousand. These figures show an increase over those of 1996.

Tables 5.1 and 5.2 show the distribution of grooms and brides by age at marriage and previous marital status. The mean ages at marriage -- 27.3 and 19.9 for all grooms and brides; 26.0 and 19.1 for those marrying for the first time -- is almost similar to those of 1996. In general there appears to be a rise in age at marriage of females in Matlab: the mean age has been over 18 for every year since 1984, while prior to that date it was consistently below that age.

Table 5.3 shows marriage rates by age and sex and makes it clear that some changes occurred compared to 1996. Marriages increased for both men and women in all the age groups except among men aged 40-44 years old. Table 5.4 presents data on a cross-tabulation of marriages by groom's and bride's age.

Table 5.5 shows that divorces numbered 320 in 1997. In general, the incidence of divorce in Matlab appears to have fallen. The number of divorces was more than 500 each year during 1978-81. Since 1981 this figure has been less than 500. Table 5.5 also presents data on the number of divorces by partner's age, indicating that the peak ages of divorce for men were 25-29, compared to 20-24 for women.

Table 5.6 and Figure 5.1 show the distribution of marriages and divorces by month. There has been no strong seasonal pattern for marriages or divorces in 1997.

Table 5.7 gives data on divorces by marriage duration, age and sex. The largest percentage of divorces occurs among couples married 12-23 months.

It may be noted that the DSS definitions specify that if either partner in a marriage has been resident in the study area, the marriage should be registered. Thus if a bride from the study area marries a groom from outside the area, the marriage will be included in the marriage statistics but because of her move out of the area, all her subsequent childbearing goes unrecorded by the DSS. This leads to an imbalance between the numbers of marriages and the numbers of births, and caution is needed if, for any reason, the two datasets have to be related.

Table 5.1: Groom's Age at Marriage by Previous Marital Status, 1997

Age (years)	Previous marital status									
	All grooms		Single		Married		Divorced		Widowed	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
All ages	2882	100.0	2439	100.0	85	100.0	248	100.0	110	100.0
10-14	1	0.0	1	0.0	0	0.0	0	0.0	0	0.0
15-19	148	5.1	141	5.8	3	3.5	4	1.6	0	0.0
20-24	776	26.9	717	29.4	7	8.2	48	19.4	4	3.6
25-29	1229	42.6	1130	46.3	12	14.1	73	29.4	14	12.7
30-34	488	16.9	382	15.7	28	32.9	65	26.2	13	11.8
35-39	135	4.7	62	2.5	17	20.0	34	13.7	22	20.0
40-44	41	1.4	5	0.2	6	7.1	12	4.8	18	16.4
45-49	23	0.8	0	0.0	5	5.9	5	2.0	13	11.8
50-54	15	0.5	1	0.0	3	3.5	2	0.8	9	8.2
55-59	10	0.3	0	0.0	1	1.2	3	1.2	6	5.5
60-64	7	0.2	0	0.0	2	2.4	1	0.4	4	3.6
65+	9	0.3	0	0.0	1	1.2	1	0.4	7	6.4
Median age*	27.0		26.0		33.0		29.0		40.5	
Mean age*	27.3		26.0		34.7		30.5		42.3	
Standard dev.*	6.5		4.2		9.8		7.9		12.7	

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

Table 5.2: Bride's Age at Marriage by Previous Marital Status, 1997

Age (years)	Previous marital status							
	All brides		Single		Divorced		Widowed	
	No.	Percent	No.	Percent	No.	Percent	No.	
All ages	2882	100.0	2546	100.0	295	100.0	41	100.0
10-14	84	2.9	84	3.3	0	0.0	0	0.0
15-19	1519	52.7	1459	57.3	57	19.3	3	7.3
20-24	945	32.8	842	33.1	95	32.2	8	19.5
25-29	216	7.5	138	5.4	71	24.1	7	17.1
30-34	75	2.6	21	0.8	43	14.6	11	26.8
35-39	28	1.0	1	0.0	24	8.1	3	7.3
40-44	6	0.2	1	0.0	2	0.7	3	7.3
45-49	4	0.1	0	0.0	3	1.0	1	2.4
50-54	5	0.2	0	0.0	0	0.0	5	12.2
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
Median age*	19.0		19.0		24.0		30.0	
Mean age*	19.9		19.1		25.3		32.7	
Standard dev.*	4.6		3.2		6.2		12.1	

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

Table 5.3: Marriage Rates by Age and Sex, 1997

Age (years)	Males			Females		
	Marriages	Population	Rate*	Marriages	Population	Rate*
10-14	1	14201	0.1	84	13388	6.3
15-19	148	11993	12.3	1519	10705	141.9
20-24	776	8906	87.1	945	9476	99.7
25-29	1229	6548	187.7	216	8512	25.4
30-34	488	6358	76.8	75	8417	8.9
35-39	135	6899	19.6	28	6898	4.1
40-44	41	4826	8.5	6	4957	1.2
45+	64	18127	3.5	9	19610	0.5

*Rates per 1000 population irrespective of previous marital status

Table 5.4: Number of Marriages by Groom's and Bride's Age at Marriage, 1997

Groom's age (years)	Bride's age (years)								
	All	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45+
All ages	2882	84	1519	945	216	75	28	6	9
10-14	1	0	0	0	0	1	0	0	0
15-19	148	9	116	19	4	0	0	0	0
20-24	776	34	535	186	16	3	2	0	0
25-29	1229	28	646	472	69	14	0	0	0
30-34	488	10	188	196	78	15	0	0	1
35-39	135	3	23	60	31	14	4	0	0
40-44	41	0	8	7	8	13	5	0	0
45-49	23	0	0	2	5	5	8	2	1
50-54	15	0	2	1	2	6	2	2	0
55-59	10	0	1	1	1	1	3	2	1
60-64	7	0	0	1	1	1	0	0	4
65+	9	0	0	0	1	2	4	0	2

Table 5.5: Number of Divorces by Partners' Age at Divorce, 1997

Male's age (years)	Female's age (years)									
	All	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45-49	50+
All ages	334	8	108	118	56	25	11	4	1	3
10-14	0	0	0	0	0	0	0	0	0	0
15-19	13	1	8	1	2	1	0	0	0	0
20-24	63	3	37	19	3	1	0	0	0	0
25-29	115	3	46	51	12	2	1	0	0	0
30-34	74	0	15	30	21	6	1	1	0	0
35-39	43	0	2	13	14	9	4	1	0	0
40-44	11	1	0	4	1	3	2	0	0	0
45-49	4	0	0	0	1	2	1	0	0	0
50-54	3	0	0	0	1	1	1	0	0	0
55-59	5	0	0	0	1	0	0	1	1	2
60-64	2	0	0	0	0	0	0	1	0	1
65+	1	0	0	0	0	0	1	0	0	0

Table 5.6: Marriages and Divorces by Months, 1997

Month	Marriage		Divorce	
	Number	Percent	Number	Percent
January	203	7.0	35	10.9
February	254	8.8	21	6.6
March	268	9.3	28	8.8
April	236	8.2	23	7.2
May	266	9.2	32	10.0
June	246	8.5	29	9.1
July	261	9.1	23	7.2
August	287	10.0	33	10.3
September	217	7.5	33	10.3
October	251	8.7	28	8.8
November	172	6.0	18	5.6
December	221	7.7	17	5.3
Total	2882	100.0	320	100.0

Figure 5.1: Marriages and Divorces by Month, 1997

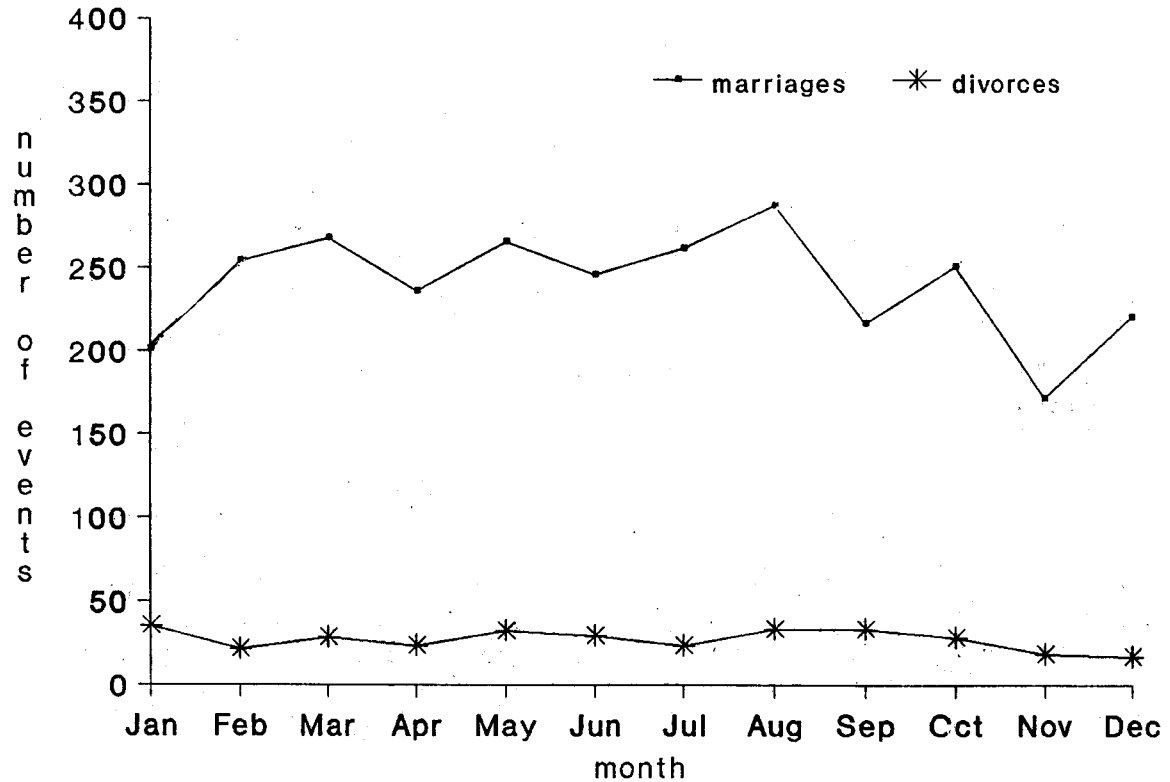


Table 5.7: Number of Divorces by Sex, Age, and Duration of Marriage, 1997

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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 last 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 of migrants in the two areas.

Table 6.1 shows that the number of in-migrants in 1997 was 7,363 giving a crude rate of in-migration of 34.6 per thousand. Out-migrants numbered 8,887 and the out-migration rate was 41.7 per thousand. Both in-migration and out-migration rates increased over those of 1996. The net loss of migrants were 7.2 per 1,000 in 1997 which is lower than in 1996. Female in-migrants once again outnumbered males, but there were more male out-migrants than female. The numbers for the MCH-FP and Comparison areas, shown in Tables 6.2 and 6.3 by age and sex, are fairly evenly distributed between the two areas.

Table 6.4 shows the age-specific migration rates, which are illustrated in Figure 6.1. They show the bi-modal age distribution 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 more similar.

Tables 6.5 to 6.8 show the distributions of in- and out-migrants by age, sex and the cause of the movement. Table 6.9 and Figure 6.2 show the numbers moving in and out by month. January seems to be the preferred month for migration.

Tables 6.10 and 6.11 show the number of males and females migrating in and out of the Matlab DSS area by location of origin or destination. For locations in Bangladesh the Division and whether the location is rural or urban is given. For numerically important origins or destinations the District is also shown. Roughly equal numbers of men and women move into and out of rural areas of Chandpur district, neighboring Matlab, probably due to marriage. There is a net loss of both men and women to urban Dhaka, primarily of young adults. There is also a net loss to India, but more evenly distributed across age groups. Migration to the Middle-East and other Asian locations is heavily concentrated among out-migrating males age 15-44.

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

Age (years)	In-migration			Out-migration		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	7363	3395	3968	8887	4474	4413
Under 5	1158	605	553	1048	530	518
0	344	174	170	261	127	134
1	218	122	96	224	123	101
2	239	123	116	231	116	115
3	168	82	86	169	80	89
4	189	104	85	163	84	79
5 - 9	751	369	382	725	371	354
10-14	557	246	311	751	399	352
15-19	1012	227	785	1656	676	980
20-24	1195	316	879	1871	898	973
25-29	879	420	459	1112	592	520
30-34	681	436	245	672	384	288
35-39	447	313	134	405	276	129
40-44	227	166	61	198	146	52
45-49	157	118	39	99	61	38
50-54	90	55	35	79	41	38
55-59	67	39	28	65	27	38
60-64	65	42	23	73	23	50
65+	77	43	34	133	50	83

Table 6.2: In-migration by Age, Sex, and Area, 1997

Age (years)	MCH-FP area			Comparison area		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	3216	1400	1816	4147	1995	2152
Under 5	512	272	240	646	333	313
0	164	87	77	180	87	93
1	85	47	38	133	75	58
2	105	58	47	134	65	69
3	89	45	44	79	37	42
4	69	35	34	120	69	51
5-9	328	158	170	423	211	212
10-14	242	97	145	315	149	166
15-19	456	91	365	556	136	420
20-24	544	112	432	651	204	447
25-29	363	159	204	516	261	255
30-34	292	188	104	389	248	141
35-39	174	110	64	273	203	70
40-44	108	78	30	119	88	31
45-49	74	56	18	83	62	21
50-54	39	23	16	51	32	19
55-59	27	17	10	40	22	18
60-64	31	27	4	34	15	19
65+	26	12	14	51	31	20

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

Age (years)	MCH-FP area			Comparison area		
	Both sexes	Males	Females	Both sexes	Males	Females
All ages	3676	1821	1855	5211	2653	2558
Under 5	404	201	203	644	329	315
0	105	53	52	156	74	82
1	91	42	49	133	81	52
2	82	43	39	149	73	76
3	65	29	36	104	51	53
4	61	34	27	102	50	52
5 - 9	283	149	134	442	222	220
10-14	281	153	128	470	246	224
15-19	692	245	447	964	431	533
20-24	790	369	421	1081	529	552
25-29	498	270	228	614	322	292
30-34	290	160	130	382	224	158
35-39	172	119	53	233	157	76
40-44	92	70	22	106	76	30
45-49	46	33	13	53	28	25
50-54	30	14	16	49	27	22
55-59	29	14	15	36	13	23
60-64	22	10	12	51	13	38
65+	47	14	33	86	36	50

Table 6.4: Age and Sex-specific Migration Rates by Direction, 1997
(per 1000 population)

Age (years)	Both sexes		Males		Females	
	In	Out	In	Out	In	Out
All ages	34.6	41.7	32.5	42.8	36.6	40.7
Under 5	45.5	41.2	47.2	41.4	43.9	41.1
0	68.6	52.1	69.6	50.8	67.6	53.3
1	44.2	45.4	49.4	49.8	38.9	41.0
2	46.1	44.5	46.3	43.7	45.8	45.4
3	33.0	33.2	32.4	31.6	33.6	34.8
4	36.4	31.4	39.1	31.6	33.5	31.1
5 - 9	27.0	26.1	26.5	26.6	27.6	25.6
10-14	20.2	27.2	17.3	28.1	23.2	26.3
15-19	44.6	73.0	18.9	56.4	73.3	91.5
20-24	65.0	101.8	35.5	100.8	92.8	102.7
25-29	58.4	73.8	64.1	90.4	53.9	61.1
30-34	46.1	45.5	68.6	60.4	29.1	34.2
35-39	32.4	29.4	45.4	40.0	19.4	18.7
40-44	23.2	20.2	34.4	30.3	12.3	10.5
45-49	20.5	12.9	32.4	16.7	9.7	9.5
50-54	11.6	10.2	16.3	12.1	8.0	8.7
55-59	9.8	9.5	12.3	8.5	7.6	10.3
60-64	10.8	12.1	14.1	7.7	7.5	16.4
65+	8.1	14.1	8.7	10.1	7.6	18.5

Figure 6.1: Rate of In- and Out-migration by Sex and Age, 1997

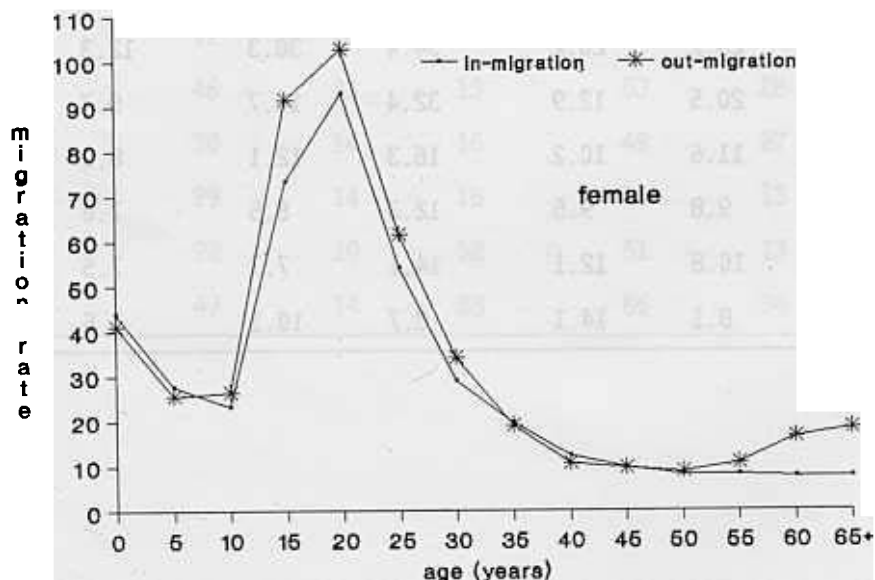
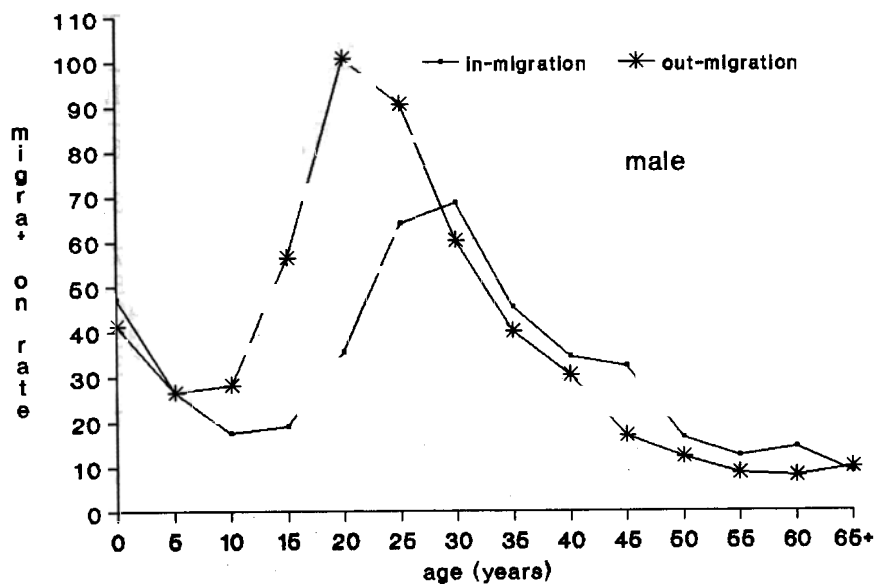


Table 6.5: Male Out-migration by Cause of Movement and Age, 1997

Cause of movement	Total	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			371	399	676	898	592	384	276	146	61	41	27	23	50
Work/Economic/Educational															
-acquired/seeking job	2541	0	0	92	456	707	506	324	226	118	46	32	14	10	10
-job completion/retirement	16	0	0	1	1	1	2	1	3	0	1	1	3	1	1
-to acquire education	320	2	23	67	89	100	25	11	2	0	1	0	0	0	0
-educ. completed/interrupt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-student lodging	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-student	3	0	0	0	0	1	1	1	0	0	0	0	0	0	0
Housing/Environmental															
-acquired/seeking new land/house	127	0	0	3	4	4	18	24	19	15	9	6	6	4	15
-river erosion	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Marriage/Familial															
-marriage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-separation/divorce/widow	3	1	0	0	0	2	0	0	0	0	0	0	0	0	0
-move with or join spouse/parents	1403	526	346	235	117	72	29	16	16	11	3	2	4	6	20
-adoption	3	1	1	0	0	0	0	0	1	0	0	0	0	0	0
-family friction/breakdown	25	0	0	0	3	6	5	4	5	0	0	0	0	1	1
-health or old age care	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Legal problems	15	0	0	0	0	4	5	2	3	1	0	0	0	0	0
Other and not stated															
-other n.e.c.*	16	0	1	1	6	1	1	0	1	1	1	0	0	1	2
-unknown or not stated	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

*Not elsewhere classified

Table 6.6: Female Out-migration by Cause of Movement and Age, 1997

Cause of movement	Total	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	4413		354	352	980	973	520	288	129	52	38	38	38	50	83
Work/Economic/Educational															
-acquired/seeking job	532	-	8	81	198	110	61	42	18	7	1	1	2	2	0
-job completion/retirement	9	0	0	0	4	3	0	1	0	0	0	0	0	0	1
-to acquire education	140	2	18	43	37	25	12	2	1	0	0	0	0	0	0
-educ. completed/interrupt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-student lodging	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-student	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Housing/Environmental															
-acquired/seeking new land/house	49	2	2	2	6	3	8	5	7	3	1	2	2	3	3
-river erosion	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marriage/Familial															
-marriage	713	0	1	24	357	244	56	22	6	0	1	1	1	0	0
-separation/divorce/widow	111	0	0	0	23	46	23	13	1	3	0	0	0	1	1
-move with or join spouse/parents	2797	500	324	200	347	530	353	197	95	39	35	33	32	41	71
-adoption	14	13	1	0	0	0	0	0	0	0	0	0	0	0	0
-family friction/breakdown	24	0	0	1	4	7	6	2	1	0	0	0	0	2	1
-health or old age care	10	0	0	0	0	1	0	0	0	0	0	1	1	1	6
Legal problems	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other and not stated															
-other n.e.c.*	14	0	0	1	4	4	1	4	0	0	0	0	0	0	0
-unknown or not stated	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

*Not elsewhere classified.

Table 6.7: Male In-migration by Cause of Movement and Age, 1997

Cause of movement	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	3395	605	369	246	227	316	420	436	313	166	118	55	39	42	43
Work/Economic/Educational															
-acquired/seeking job	409	0	0	10	30	48	89	90	67	32	20	12	3	6	2
-job completion/retirement	586	0	0	1	24	61	111	127	103	54	44	20	16	15	10
-to acquire education	173	2	38	46	48	29	7	1	2	0	0	0	0	0	0
-educ. completed/interrupt	7	0	0	0	0	1	2	1	2	0	0	0	0	0	1
-student lodging	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-student	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Housing/Environmental															
-acquired/seeking new land/house	336	0	0	1	15	35	58	76	60	30	19	13	13	7	9
-river erosion	20	0	0	0	0	0	2	6	3	2	2	0	1	3	1
Marriage/Familial															
-marriage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-separation/divorce/widow	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-move with or join spouse/parents	1800	595	330	187	108	129	144	127	67	44	31	10	4	8	16
-adoption	9	8	0	1	0	0	0	0	0	0	0	0	0	0	0
-family friction/breakdown	15	0	0	0	0	4	5	2	3	0	1	0	0	0	0
-health or old age care	22	0	0	0	2	1	1	3	4	3	1	0	1	2	4
Legal problems	8	0	0	0	0	5	1	2	0	0	0	0	0	0	0
Other and not stated															
-other n.e.c.*	9	0	1	0	0	2	0	1	2	1	0	0	1	1	0
-unknown or not stated	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0

*Not elsewhere classified

Table 6.8: Female In-migration by Cause of Movement and Age, 1997

Cause of movement	Total	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	3968	553	382	311	785	879	459	245	134	61	39	35	28	23	34
Work/Economic/Educational															
-acquired/seeking job	97	0	0	14	8	21	31	10	6	1	3	1	1	0	1
-job completion/retirement	62	0	0	5	20	15	12	4	2	2	0	1	0	1	0
-to acquire education	145	2	34	58	38	11	2	0	0	0	0	0	0	0	0
-educ. completed/interrupt	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-student lodging	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
-student	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Housing/Environmental															
-acquired/seeking new land/house	74	0	0	1	3	7	16	13	12	4	7	4	4	1	2
-river erosion	6	0	0	0	0	2	2	0	2	0	0	0	0	0	0
Marriage/Familial															
-marriage	801	0	0	8	424	291	38	21	12	2	3	1	0	0	1
-separation/divorce/widow	123	0	0	0	28	46	17	16	6	5	3	1	1	0	0
-move with or join spouse/parents	2597	537	347	224	255	470	333	178	92	47	23	27	17	19	28
-adoption	15	13	1	1	0	0	0	0	0	0	0	0	0	0	0
-family friction/breakdown	29	0	0	0	6	11	7	1	2	0	0	0	2	0	0
-health or old age care	8	0	0	0	1	0	0	0	0	0	0	0	3	2	2
Legal problems		1	0	0	0	0	0	0	0	0	0	0	0	0	0
Other and not stated															
-other n.e.c.*	10	0	0	0	2	5	1	2	0	0	0	0	0	0	0
-unknown or not stated	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

*Not elsewhere classified

Table 6.9: In- and Out-migration by Sex and Month 1997

Age (years)	In-migration			Out-migration		
	Both sexes	Males	Females	Both sexes	Males	Females
January	1451	669	782	1433	746	687
February	890	400	490	833	395	438
March	579	265	314	721	373	348
April	800	361	439	956	475	481
May	574	257	317	785	417	368
June	622	307	315	810	418	392
July	490	227	263	697	376	321
August	570	267	303	731	367	364
September	431	209	222	570	274	296
October	463	204	259	619	296	323
November	308	149	159	424	212	212
December	185	80	105	308	125	183
All months	7363	3395	3968	8887	4474	4413

Figure 6.2: Number of In- and Out-migrants by Sex and Month, 1997

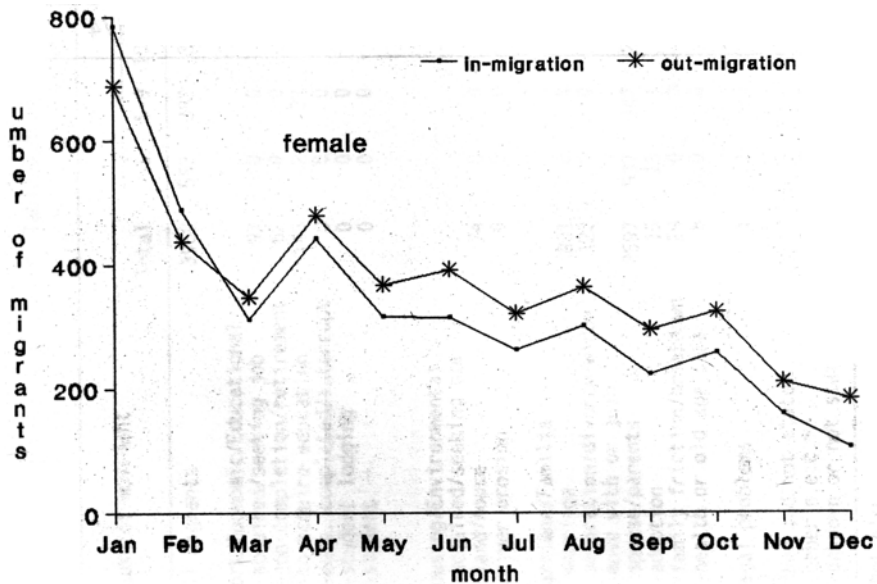
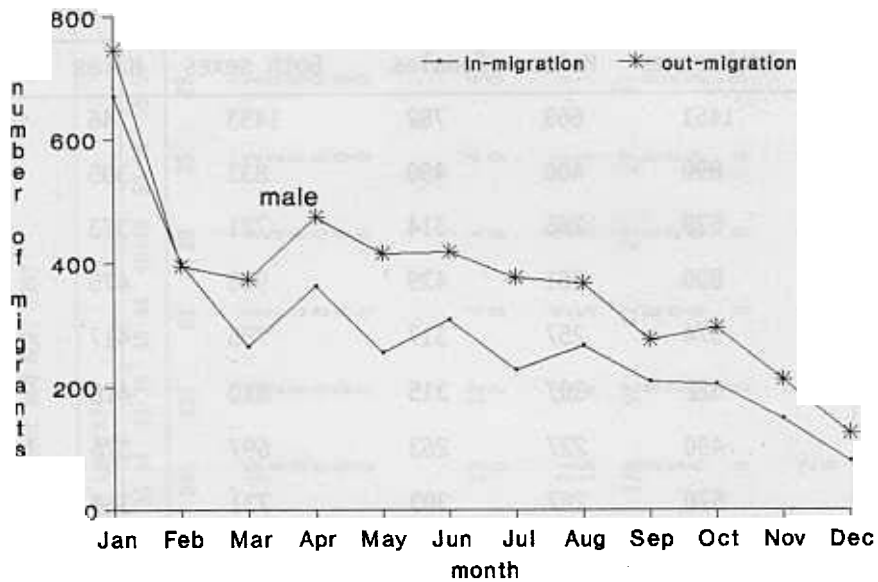


Table 6.10: Male Migration by Destination or Origin, 1997

Destination/origin			Out-Migration						In-Migration					
Division	rural/ urban	District			45+		Total			45+		Total		
All migrants			1125	1469	906	388	285	4173	1220	543	856	479	297	3395
Rajshahi	rural		2	1	0	0	1	4	5	1	1	1	0	8
	urban		7	16	7	2	2	34	9	4	3	1	2	19
Khulna	rural		3	2	3	1	2	11	7	4	2	1	1	15
	urban		29	17	12	4	6	68	22	14	11	9	15	71
Dhaka	rural	Dhaka	3	2	2	1	0	8	6	1	1	2	1	11
	rural	Narayanganj	5	2	1	3	1	12	8	2	3	1	3	17
	rural	Narsinghi	2	1	1	1	2	7	3	1	2	2	2	10
	rural	rest	7	4	3	2	3	19	23	8	3	4	2	40
	urban	Dhaka	467	706	289	98	107	1667	333	212	297	132	98	1072
	urban	Narayanganj	81	104	62	21	19	287	107	35	82	26	21	271
	urban	Narsingdi	11	8	6	3	2	30	14	1	5	2	3	25
	urban	Gazipur	15	17	7	5	5	49	9	6	6	4	4	29
	urban	rest	13	12	6	4	3	38	14	9	6	3	4	36
Chittagong	rural	Comilla	45	24	13	10	8	100	74	14	27	15	5	135
	rural	Chandpur	275	104	80	51	76	586	369	92	113	83	50	707
	rural	rest	3	6	3	2	1	15	14	1	2	4	1	22
	urban	Sylhet	31	34	16	4	5	90	56	18	27	19	13	133
	urban	Comilla	25	11	10	5	4	55	14	9	11	4	4	42
	urban	Chandpur	14	8	9	11	5	47	14	4	6	5	3	32
	urban	Chittagong	47	97	42	11	8	205	85	47	42	32	26	232
	urban	rest	26	12	9	5	2	54	26	12	7	10	3	58
India			14	7	9	4	6	40	8	8	11	2	3	32
Other Asia			0	161	171	61	6	399	0	29	81	50	9	169
Middle-East			0	112	145	78	11	346	0	11	106	67	24	208
Other			0	0	0	0	0	0	0	0	0	0	0	0
Unknown			0	1	0	1	0	2	0	0	1	0	0	1

Table 6.11: Female Migration by Destination or Origin, 1997

Destination/origin			Out-Migration						In-Migration					
Division	rural/ urban	District					45+	Total					45+	Total
All migrants			1023	1820	753	163	364	4123	1246	1664	704	195	159	3968
Rajshahi	rural		0	1	0	0	0	1	2	3	2	1	0	8
	urban		8	6	9	0	4	27	11	9	4	1	0	25
Khulna	rural		5	6	2	0	1	14	9	4	2	3	3	21
	urban		7	13	10	6	6	42	28	17	18	2	7	72
Dhaka	rural	Dhaka	5	5	5	0	0	15	4	8	1	2	1	16
	rural	Narayanganj	6	9	2	2	0	19	12	10	5	1	1	29
	rural	Narsingdi	3	6	1	0	0	10	2	3	0	2	0	7
	rural	rest	10	24	6	1	3	44	19	38	10	4	2	73
	urban	Dhaka	415	580	268	68	149	1480	339	337	208	59	43	986
	urban	Narayanganj	77	114	54	15	32	292	95	64	62	12	11	244
	urban	Narsingdi	15	9	9	1	1	35	21	7	8	1	0	37
	urban	Gazipur	13	11	11	2	4	41	11	10	5	0	3	29
	urban	rest	11	17	10	1	2	41	11	17	4	3	1	36
Chittagong	rural	Comilla	40	138	44	5	13	240	76	186	47	10	2	321
	rural	Chandpur	262	668	198	46	93	1267	358	787	213	49	44	1451
	rural	rest	3	4	6	0	2	15	5	7	5	2	1	20
	urban	Sylhet	17	30	15	4	9	75	61	34	24	10	15	144
	urban	Comilla	19	19	16	2	4	60	11	13	9	2	2	37
	urban	Chandpur	17	2	16	0	5	40	12	20	3	4	1	40
	urban	Chittagong	61	117	42	5	14	239	109	59	51	16	11	246
	urban	rest	10	17	14	1	6	48	41	24	11	9	4	89
India			13	9	8	2	15	47	5	4	6	1	6	22
Other Asia			1	1	1	0	0	3	2	1	3	0	0	6
Middle-east			4	10	5	2	1	22	2	2	3	1	1	9
Other			0	0	0	0	0	0	0	0	0	0	0	0
Unknown			1	4	1	0	0	6	0	0	0	0	0	0

Appendix-A

Names and Codes of Villages in the DSS Area, 1997

Block*	MCH-FP area				Comparison area			
	Village code	Village name	Village code	Village name	Village code	Village name	Village code	Village name
A	D	Charmukundi	V59	Doshpara	A	Uddamdi	V78	Soladana
	W	Kaladi	V60	Suvankardi	B	Charmasua	V79	Pitambordi
	V10	Dhakirgaon	V61	Munsabdi	C	Sarderikandi	V80	Daribond
	V11	Nabakalash	V62	Shilmondi	F	Sepoykandi	V90	Narinda
	V31	Dighaldi	V72	Upadi	G	Thatalia	V95	Baluchar
B	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
	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
C	V24	Machuakha			V09	Naburkandi	VB7	Mirpur
					V14	Enayetnagar	VB8	Farazikandi
	K	Shahpur	V40	Masunda	V35	Durgapur	VB9**	Ramanathgonj
	L	Tatkhana	V41	Paton	V36	Ludhua	VB10	South Rampur
	M	Char Nayergaon	V42	Adhara (South)	V37**	Charputia	D28	Bazarkhola
	N	Aswinpur	V43	Kanachak	V38	Galimkha	D29	Kirtankhola
	O	Nayergaon	V44	Panchdona	V45	Bakchar	D30	Banuakandi
	P	Titerkandi	V64	Kawadi	V46	Silinda	D31	Harina Bazarkhola
	Q	Char Shibpur	V86	Adhara	V47	Tulatali	D32	Khalisha
	V27	Panchghoria	V88	Datikara	V48	Gangkandi	D33	Nayanagar
D	V28	Khidirpur	VB11	Mehron	V49	Harina	D34	Saidkharkandi
	V30	Harion	D100	Barogaon		Bhabanipara	D35	Molla Kandi
	V39	Gobindapur	D101	Naojan	V50	Bakharpur	D88	Sankibhanga
					V51	Induriakandi	D89	Sankibhanga
					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
	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, Birth, and Deaths by Village, 1997

Village code*	Population	Live births	Deaths	Birth rate	Death rate
MCH-FP area:					
D	1921	42	8	21.9	4.2
W	4210	76	16	18.1	3.8
V10	1670	46	6	27.5	3.6
V11	1929	43	14	22.3	7.3
V31	8711	230	69	26.4	7.9
V32	2785	71	17	25.5	6.1
V59	1189	40	6	33.6	5.0
V60	905	26	5	28.7	5.5
V61	638	12	4	18.8	6.3
V62	881	12	7	13.6	7.9
V72	6183	150	49	24.3	7.9
Block A	31022	748	201	24.1	6.5
H	1275	24	12	18.8	9.4
V12	559	10	3	17.9	5.4
V13	708	15	2	21.2	2.8
V19	2797	65	17	23.2	6.1
V20	1209	26	12	21.5	9.9
V21	462	9	4	19.5	8.7
V22	538	14	1	26.0	1.9
V23	507	13	4	25.6	7.9
V24	2754	64	14	23.2	5.1
V26	2637	53	13	20.1	4.9
V56	1497	29	4	19.4	2.7
V82	1512	36	8	23.8	5.3
V83	540	16	5	29.6	9.3
V85	468	14	2	29.9	4.3
V87	641	12	4	18.7	6.2
VB12	4151	129	22	31.1	5.3
VB13	4622	125	37	27.0	8.0
Block B	26877	654	164	24.3	6.1

(continued)

Appendix-B (cont.)

Village code*	Population	Live births	Deaths	Birth rate	Death rate
K	910	17	3	18.7	3.3
L	505	13	2	25.7	4.0
M	173	6	0	34.7	0.0
N	2071	55	12	26.6	5.8
O	1557	41	6	26.3	3.9
P	1953	50	15	25.6	7.7
Q	364	10	4	27.5	11.0
V27	838	14	9	16.7	10.7
V28	1474	35	11	23.7	7.5
V30	585	13	3	22.2	5.1
V39	320	8	3	25.0	9.4
V40	713	12	2	16.8	2.8
V41	1661	46	5	27.7	3.0
V42	740	17	2	23.0	2.7
V43	855	21	6	24.6	7.0
V44	596	12	6	20.1	10.1
V64	4506	103	44	22.9	9.8
V86	772	13	4	16.8	5.2
V88	509	18	5	35.4	9.8
VB11	2512	67	15	26.7	6.0
D100	3290	76	27	23.1	8.2
D101	1269	28	4	22.1	3.2
Block C	28173	675	188	24.0	6.7
R	1401	30	6	21.4	4.3
S	949	19	9	20.0	9.5
T	1524	34	13	22.3	8.5
V15	651	13	4	20.0	6.1
V16	794	19	5	23.9	6.3
V17	1065	22	4	20.7	3.8
V18	3766	96	37	25.5	9.8
V25	1211	22	5	18.2	4.1
V29	451	11	6	24.4	13.3
V33	475	9	4	18.9	8.4
V34	777	20	8	25.7	10.3
V52	205	2	0	9.8	0.0
V54	643	10	2	15.6	3.1
V55	507	14	4	27.6	7.9
V57	1022	19	5	18.6	4.9
V63	1975	48	18	24.3	9.1
V67	603	11	2	18.2	3.3
V81	668	12	3	18.0	4.5
V84	2248	49	13	21.8	5.8
V89	1356	28	14	20.6	10.3
Block D	22291	488	162	21.9	7.3
MCH-FP area	108363	2565	715	23.7	6.6

(continued)

Appendix-B (cont.)

Village code*	Population	Live births	Deaths	Birth rate	Death rate
Comparison area:					
A	3067	90	26	29.3	8.5
B	2143	59	11	27.5	5.1
C	3903	116	26	29.7	6.7
F	1401	27	16	19.3	11.4
G	2608	58	22	22.2	8.4
J	628	16	3	25.5	4.8
U	8435	211	55	25.0	6.5
V01	571	15	7	26.3	12.3
V02	544	12	3	22.1	5.5
V03	645	19	4	29.5	6.2
V04	306	6	2	19.6	6.5
V05	3331	99	29	29.7	8.7
V06	2397	72	19	30.0	7.9
V07	379	8	5	21.1	13.2
V08	1247	33	10	26.5	8.0
V09	1197	37	8	30.9	6.7
V14	809	19	6	23.5	7.4
V35	3832	106	45	27.7	11.7
V36	5417	159	38	29.4	7.0
V37	0	0	0	0	0
V38	1684	40	12	23.8	7.1
V45	1113	25	6	22.5	5.4
V46	415	11	3	26.5	7.2
V47	1842	46	16	25.0	8.7
V48	610	13	4	21.3	6.6
V49	1344	47	15	35.0	11.2
V50	154	1	0	6.5	0.0
V51	880	27	12	30.7	13.6
V53	3193	76	29	23.8	9.1
V58	0	0	0	0	0
V65	792	23	8	29.0	10.1
V66	857	25	4	29.2	4.7
V68	986	37	11	37.5	11.2
V69	0	0	0	0	0
V70	0	0	0	0	0
V71	474	18	3	38.0	6.3
V73	799	17	7	21.3	8.8
V74	1422	30	9	21.1	6.3
V75	382	11	2	28.8	5.2
V76	1726	41	11	23.8	6.4
V78	256	6	0	23.4	0.0
V79	321	10	1	31.2	3.1
V80	1134	31	8	27.3	7.1

(continued)

Appendix-B (cont.)

Village code*	Population	Live births	Deaths	Birth rate	Death rate
V90	1186	23	16	19.4	13.5
V95	1898	76	16	40.0	8.4
V96	596	15	2	25.2	3.4
V97	419	8	3	19.1	7.2
V98	175	2	0	11.4	0.0
V99	643	12	12	18.7	18.7
VB1	1134	35	12	30.9	10.6
VB2	1072	30	7	28.0	6.5
VB3	3076	84	26	27.3	8.5
VB4	3856	84	28	21.8	7.3
VB5	979	30	3	30.6	3.1
VB6	606	16	4	26.4	6.6
VB7	325	15	0	46.2	0.0
VB8	1429	51	16	35.7	11.2
VB9	0	0	0	0	0
VB10	2810	78	19	27.8	6.8
D28	1190	32	10	26.9	8.4
D29	193	7	2	36.3	10.4
D30	754	23	9	30.5	11.9
D31	1079	30	10	27.8	9.3
D32	714	20	9	28.0	12.6
D33	1130	31	9	27.4	8.0
D34	1385	31	10	22.4	7.2
D35	635	11	6	17.3	9.4
D88	1428	36	14	25.2	9.8
D89	1259	35	8	27.8	6.4
D90	1028	28	8	27.2	7.8
D91	0	0	0	0	0
D92	0	0	0	0	0
D93	1285	32	10	24.9	7.8
D94	1450	39	8	26.9	5.5
D95	492	11	3	22.4	6.1
D96	911	18	5	19.8	5.5
D97	775	14	6	18.1	7.7
D98	3386	89	33	26.3	9.7
D99	2119	57	20	26.9	9.4
Comp. area	104661	2800	840	26.8	8.0

*See village name in Appendix-A.

Appendix-C

Life Table Equations

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

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

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

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

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

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

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

$${}_nL_{85} = \frac{\ell_{85}}{{}_nm_{85}} \quad \text{for the last age group 85+}$$

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

Note: Greville's method, as suggested in Shryock, H.S., Siegel, 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
New Standard Populations

Age group (years)	Males	Females	Both sexes combined
0	2,558	2,471	2,396
1-4	9,513	9,231	9,490
5-9	10,824	10,472	10,649
10-14	9,954	9,609	9,783
15-19	9,989	9,627	9,809
20-24	9,477	9,137	9,308
25-29	8,458	8,204	8,332
30-34	7,355	7,175	7,266
35-39	6,585	6,476	6,531
40-44	5,326	5,253	5,290
45-49	4,341	4,335	4,338
50-54	3,994	4,061	4,027
55-59	3,486	3,604	3,544
60-64	2,912	3,179	3,045
65-69	2,167	2,591	2,378
70-74	1,424	1,837	1,629
75-79	958	1,406	1,181
80-84	429	814	602
85+	250	518	402
Total	100,000	100,000	100,000

Appendix-E

List of DSS Staff - 1997

Project Director

Dr Jeroen K. van Ginneken

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

Senior Health Assistants:

Mr Md. Sirajul Hoque
Mr K.J.M. Mannan Pathan
Mr M. Abdur Rashid Mia
Mr M.A. Latif Patwari
Mr A.F.M. Aminul Islam Khan
Mr M.A. Mannan Bakaul
Mr Monoranjan Das
Mr Md. Aftekharuzzaman
Mr Md. Mozammel Haque

Paramedic:

Mr. M. Monirul Alam Bhuiyan

Admin. Assistant:

Mr. A.K.M. Mozibul Hoque
Mr. Md. Anisur Rahman

Health Assistants:

Mr. M. Idris Ali Miah I
Mr. M. Abul Kashem
Mr. M. Idris Ali Miah II
Mr. Zahirul Hoque
Mr. Md. Nurul Haque
Mr. Fazlur Rahman
Mr. Golam Hossain
Mr. P.C. Chakraborty
Mr. Md. Jasimuddin
Mr. Nasir Ahmed
Mr. Alfaz Uddin A. Chowdhury
Mr. Md. Sadiquzzaman
Mr. Shah Mostafa Kamal
Mr. Sheikh Abdul Jabber
Mr. Md. A. Malek Patwari
Mr. Md. Monirul Hoque
Mr. Javed Ali

Recorders:

Ms. Shahana Ahmed, HA
Ms. Monowara Begum HA

Note Besides these 110 CHWs contributed to the DSS data collection

Dhaka-based Staff

Dr. M. A. Kashem Shaikh
Mr. Saker A. Chowdhury
Ms. Lutfun Nahar
Mr. Md. Golam Mostafa
Mr. Sentu B. Gomes
Mr. M.A. Jalil Sarker
Ms. Rahima Mazhar
Mr. A.B.M. Delwar Hossain

Mr. Md. Kapil Ahmed
Mr. Sajal K. Saha
Mr. Harun-ur-Rashid
Ms. Habiba Rahman
Mr. Md. Arifur Rahim
Ms. Nasrin Aktar
Mr. Birendra Nath Adhikary
Ms. Ayesha Siddiqua

(from inside of the front cover)

the potential of developing countries to promote Essential National Health Research (ENHR). The Centre has shared knowledge through research by training more than 18,000 health professionals from over 77 countries in five continents of the world. Various courses provide practical experiences in the hospital, laboratory and field settings.

The **Computer Information Services (CIS)** offers a Centre-wide backbone that allows office staff to connect to an array of computer information systems. CIS provides an on-line e-mail system that allows users to send/receive e-mails and browse Web pages from their desktops.

Dissemination and Information Services Centre (DISC) provides easy access to literature on diarrhoeal diseases, nutrition, population studies, environmental and behavioural studies in general by means of Current Contents (Life Sciences and Clinical Medicine), MEDLINE, NUTRITION, POPLINE, and AHEAD databases, 31,200 books and bound journals, 12,750 reprints of articles and documents, 355 current periodicals, etc. DISC maintains several in-house databases for its users and publishes the quarterly Journal of Diarrhoeal Diseases Research (and bibliography on diarrhoeal diseases within the Journal), two quarterly newsletters Glimpse (in English) and Shasthya Sanglap (in Bangla), a staff news bulletin ICDDR,B News, the electronic DISC bulletin (current awareness service), working papers, scientific reports, monographs, and special publications.

Staff: The Centre currently has over 240 researchers and medical staff from more than ten countries doing research and providing expertise in many disciplines relating to the Centre's areas of research. Over 1,200 personnel are working in the Centre.

What is the Centre's Plan for the Future?

In the 38 years of its existence, ICDDR,B has evolved into a research centre whose scientists have wide-ranging expertise. Future research will be directed toward finding cost-effective and sustainable solutions to the health and population problems of the most disadvantaged people in the world. The Centre's Strategic Plan: "To The Year 2000" outlines work in the following key areas:

Child Survival: Priority areas for research in child survival include: improvement of the case management of diarrhoea; acute respiratory infections; risk factors for low birth rate and potential interventions; nutritional deficiency states (including micronutrients); immunization-preventable infectious diseases; and strategies for prevention, including modifications in personal and domestic hygiene behaviours, provision of appropriate water supply to and sanitation for the households, and the development of effective vaccines.

Population and Reproductive Health: The Centre played a key role in conducting pioneering research in the areas of population and family planning and raising the contraceptive use rate among women of reproductive age in Bangladesh to almost 45% through its technical assistance and operations research. The 1994 Cairo Conference hailed Bangladesh as a family planning success story, using Matlab as the model for MCH-FP programmes throughout the world. The Centre continues its research in maternal health and safe motherhood and has initiated community-based research on reproductive health and STD/RTI/HIV infections.

Application and Policy: The Centre recognizes, and has given a high priority to, the need to transform research findings into actions by replicating the successful interventions piloted in its projects and through its research and training activities. The Centre will increase its communication, dissemination and training in its efforts to influence international and national health policies in the areas of its expertise.

New Initiatives and Approaches to Research: As a means of addressing the new initiatives in child survival and population and health research and structuring our existing programmes into Centrewide initiatives, interdivisional scientific research work and training courses are proposed. The key areas include: Nutrition; Emerging and Re-emerging Infectious Diseases; Integrated Management of Childhood Illnesses; Vaccine Trials; and Reproductive Health. The interdivisional research centres will be interdisciplinary with scientists from each of the four scientific divisions engaged in the dialogue of formulating policy, developing research protocols, and conducting clinical, hospital-based and community-based trials. Outputs will include research findings, policy development and training capacity that will be used locally and nationally and can be applied regionally and globally.

