

Recent Levels and Trends of Fertility and Mortality in Myanmar

*Fertility is still high, but there has been
some decline. Mortality has declined, but
the decline has slowed in recent years*

By Nyan Myint*

In Myanmar, the vital registration system was first introduced into some parts of Lower Myanmar in the late nineteenth century and gradually expanded to other parts of the country. It was introduced into the towns of Upper Myanmar in 1906 and the villages of Upper Myanmar in 1907 (Kyin,

* The author of this article is from the Department of Statistics, Institute of Economics, Yangon, Union of Myanmar. An earlier version was presented as a paper at the Seminar on Population and Development, which was jointly organized by the Institute of Economics and the United Nations Population Fund (UNFPA) at Yangon, 21-23 August 1990.

1959, p. 6). By 1931, about 82.5 per cent of the population was covered by the registration system (United Nations, 1959, p. 47). In those days, vital statistics were collected by municipal health offices in urban areas and by village headmen in the rural areas. The reports were published by the Department of Public Health (Sundrum, 1957, p. 7).

Although vital registration was completely stopped during the Second World War, it was revived soon after the war and covered 78 municipalities (Hpu, 1984, p. 3). Then a new system of vital registration, starting with Yangon City and 15 other towns, was introduced on 8 February 1962. It was gradually extended to other towns in the country and by the end of 1984, 245 out of 288 towns were covered (Central Statistical Organization (CSO), 1990, p. 1). However, the vital registration system for the rural areas covers only 25 out of 314 townships. According to a Vital Statistics Report (CSO, 1990, p.1), in 1984 the vital registration system covered 97.4 per cent of the total urban population, but only 33 per cent of the total rural population.

Nowadays, the vital statistics are collected under the authority of the Department of Health, and compiled and published jointly by the Central Statistical Organization. However, the vital registration system covers births (live and still births) and deaths only. Moreover, the latest published report is for the year 1984.

Current level of fertility

Table 1 shows that the crude birth rate (CBR) in the urban areas fluctuated around 40 per thousand until the early 1970s, except for the years 1952 to 1954; thereafter, a fertility decline has been in progress. Between 1971 and 1976, the reported CBR declined by more than 28 per cent. Comparing the reported CBR for five-year averages, there was an 11.7 per cent decline from 1966-1970 to 1971-1975, and a 21.0 per cent decline between 1971-1975 and 1976-1980. Because of variable coverage and probable under-registration, the levels of fertility given in table 1 could hardly be considered reliable and are more likely to be under-estimates. Nevertheless, the fertility decline in urban areas started around 1970. It accelerated in the late 1970s and became stable again at around 28 per thousand women in the 1980s.

However, since the vital registration system fails to represent the whole country, it was decided to make indirect estimates using the census information. The 1983 census reports include tables on the number of live births by the age of the mother. The age-specific fertility rates (ASFRs) and the total fertility rates (TFRs) are calculated, with proper adjustments for errors in reporting by means of the Brass (Brass and Coale, 1968, p. 88),

Table 1: Number of towns covered by vital registration and vital rates in urban Myanmar, 1948-1989

Year	No. of towns	CBR	CDR	MMR	IMR
1948	n.a.	37.2	31.9	n.a.	266.8
1949	n.a.	38.3	48.4	n.a.	350.6
1950	n.a.	39.6	46.8	n.a.	304.0
1951	n.a.	46.1	39.3	n.a.	252.8
1952	n.a.	31.7	34.2	n.a.	239.2
1953	n.a.	31.7	21.6	n.a.	230.6
1954	n.a.	33.9	20.0	6.3	196.3
1955	n.a.	36.6	20.7	5.1	175.9
1956	n.a.	35.6	21.7	5.8	166.8
1957	n.a.	35.8	21.3	6.4	164.3
1958	n.a.	36.6	19.4	4.9	147.6
1959	n.a.	39.8	19.7	4.7	136.9
1960	n.a.	42.3	20.0	4.2	148.6
1961	n.a.	35.8	18.4	3.8	129.9
1962	n.a.	36.2	16.0	8.8	121.5
1963	50	42.7	18.3	4.6	121.8
1964	78	41.0	17.9	3.5	115.4
1965	104	41.3	16.4	3.1	115.0
1966	119	39.5	13.1	2.9	82.8
1967	145	40.6	11.6	2.3	63.7
1968	152	39.1	11.7	1.6	60.2
1969	128	39.6	12.1	1.6	62.4
1970	139	37.6	10.4	1.8	55.8
1971	138	39.2	10.9	1.9	57.7
1972	126	38.0	10.9	1.7	59.0
1973	170	32.5	9.5	1.6	49.9
1974	178	34.1	10.5	1.5	49.3
1975	164	29.7	10.1	1.4	51.9
1976	145	28.2	9.8	1.6	49.2
1977	115	27.2	9.1	1.4	50.8
1978	159	27.0	8.6	1.5	46.0
1979	158	27.8	8.6	1.4	46.2
1980	146	26.9	8.1	1.3	44.0
1981	145	27.7	8.7	1.3	47.3
1982	151	27.6	8.6	1.2	47.1
1983	167	28.3	9.0	1.2	47.2
1984	167	28.3	9.0	1.4	47.1
1985	168	28.6	8.7	0.9	44.7
1986	169	28.5	8.5	1.0	44.5
1987	169	28.6	8.4	0.9	44.5
1988	169	28.6	8.9	1.0	47.0
1989	169	28.5	8.8	1.0	47.1

Sources: Nyan Myint (1988, pp. 35,69); CSO (1990); Ministry of Planning and Finance, MPF (1990, p. 207).

Note: CBR = crude birth rate; CDR = crude death rate; MMR = maternal mortality rate; IMR = infant mortality rate, all of which data are per thousand; and n.a. = not available.

Trussell (United Nations, 1983, p. 32) and Arriaga (1983) methods, using information on children ever born (CEB).

From [table 2](#), the rural-urban differential in fertility can be clearly seen. The reported TFR in the rural areas exceeded that in the urban areas by about 1.8 live births per woman. The difference is almost the same after adjusting for under-reporting. Among the States and Divisions, Chin State had the highest TFR with 6.5 live births per woman and Yangon Division, where the capital city, Yangon, is situated, had the lowest TFR, i.e. 4.2. The level of fertility in the States exceeded 5.5 births per woman except for Shan

Table 2: Reported and adjusted values of total fertility rate by State and Division in 1983 (per woman)

Region	1983 census	Brass	Trussell	Arriaga
Myanmar	4.81	5.24	5.26	5.27
Rural	5.29	5.73	5.73	5.67
Urban	3.47	3.88	3.92	4.11
States				
Kachin	4.94	5.46	5.62	5.73
Kayah	5.37	6.25	6.18	6.22
Kayin	4.84	5.59	5.69	5.67
Chin	5.26	6.31	6.39	6.45
Mon	5.09	5.56	5.59	5.53
Rakhine	5.17	6.00	6.00	5.87
Shan	3.81	5.01	5.01	4.99
Divisions				
Sagaing	5.20	5.73	5.74	5.85
Bago	4.78	5.07	5.09	5.06
Magway	5.45	5.54	5.55	5.58
Mandalay	4.81	5.43	5.43	5.52
Tanintharyi	4.83	6.13	6.17	6.00
Yangon	3.77	4.03	4.06	4.19
Ayeyarwady	5.33	5.06	5.05	4.97

Source: Nyan Myint (1988, p. 39).

State, which had only 5.0 births per woman. Among the Divisions, only Magway, Sagaing and Tanintharyi had a TFR of over 5.5.

CBR was estimated indirectly using the adjusted ASFR obtained from the afore-mentioned methods using the enumerated population for each area/region. In the 1983 census, there were quite large estimated populations in some States. However, since the information on fertility and age distribution of these estimated populations was not available, they were assumed to be the same as those of the enumerated population. The various

Table 3: Reported and estimated values of crude birth rates by State and Division in 1983 (per thousand mid-year population)

Region	Census	Brass	Trussell	Arriaga	VSR
Myanmar	34.4	37.5	38.3	38.4	n.a.
Rural	36.9	40.0	40.7	40.3	n.a.
Urban	26.9	30.1	31.0	32.5	27.7
States					
Kachin	35.4	39.1	41.1	41.8	33.7
Kayah	37.0	43.1	43.4	43.7	45.6
Kayin	33.7	39.0	40.3	40.3	30.1
Chin	37.7	45.2	46.6	47.0	32.4
Mon	35.3	38.6	39.6	39.2	29.2
Rakhine	37.8	43.9	44.7	43.8	27.4
Shan	28.1	36.9	37.6	37.4	33.3
Divisions					
Sagaing	36.4	40.2	41.0	41.7	27.0
Bago	33.6	35.7	36.4	36.2	25.5
Magway	38.1	38.8	39.4	39.7	28.8
Mandalay	34.1	38.6	39.3	39.9	28.2
Tanintharyi	32.9	41.8	42.9	41.8	27.1
Yangon	28.8	30.8	31.6	32.6	26.9
Ayeyarwady	38.0	36.1	36.7	36.1	26.7

Sources: Nyan Myint (1988, p. 42).

Note: VSR = 1981 Vital Statistics Report (CSO, 1986, p. 13).

CBR estimates for Myanmar as a whole, urban areas, rural areas and the States and Divisions are presented in [table 3](#).

From [table 3](#), it may be observed that the estimates from the Vital Statistics Report of CBR for urban areas of the States and Divisions lie between 27 and 33 per thousand population, except for Kayah State with 46. However, Kayah State is the smallest, in terms of population among the States and Divisions, with fewer than 20,000 urban females. Also, the high fertility in urban Kayah State could hardly affect the fertility level of Myanmar or urban areas as a whole. All States, except Rakhine and Mon States, had a CBR of more than 30 per thousand whilst all Divisions had a CBR of less than 29. Thus, the States had a higher level of fertility than the Divisions.

As with TFR, the three indirect estimates of CBR (by the Brass, Trussell and Arriaga methods) varied mostly within 1.1 per thousand mid-year population or within 3 per cent. The estimates of CBR by the Arriaga method for Myanmar as a whole, rural and urban areas were 38.4, 40.3 and 32.5 per thousand mid-year population, respectively. Two out of seven States had a CBR of less than 40.0 whereas five out of seven Divisions had a CBR of less than 40.0. The lowest CBR, i.e. 32.6, was found to be in Yangon Division; Chin State was highest with 47.0.

From [table 3](#), it can also be seen that the estimate of CBR for the urban areas given by the Vital Statistics Report was an underestimate. However, when compared with the CBR from the 20 per cent sample of the 1983 census, the 1981 Vital Statistics Report seems to give a reasonable estimate for urban areas as a whole. The estimate from the vital registration referred to the year 1981, and the census referred to the period 1982-1983: the Vital Statistics Report was 1.5 years previous to that and indicated that CBR was 0.8 birth higher.

Recent fertility trends and determinants

For recent trends in fertility, the indirect estimates of fertility, using two census age distributions, were computed by the Palmore method. The "Class 3, Type 1" equations are applied in this study. These equations require the census age distribution, female marital status distribution and an estimate of infant mortality only. Infant mortality was estimated by the Trussell method (in subsequent sections). The Rele method was also applied, but estimates of TFR were much lower than the TFR given by the 1983 census ([see table 2](#)).

Table 4: Recent trends and levels of fertility in Myanmar (estimated by the Palmore method)

Period	Area	TFR	% change	CBR	% change	TFR (R)
1973	Myanmar	5.65	n.a.	39.4	n.a.	5.13
	Rural	5.66	n.a.	39.4	n.a.	5.27
	Urban	5.29	n.a.	37.3	n.a.	4.68
1983	Myanmar	4.59	- 18.8	35.0	- 11.2	4.20
	Rural	4.87	- 14.0	36.4	- 7.6	4.59
	Urban	3.52	- 33.5	28.8	- 22.8	3.15

Sources: Nyan Myint (1988, p. 45).

Notes: CBR = crude birth rate; TFR = total fertility rate;
TFR(R) = TFR estimated by the Rele method.

The decline in fertility during the period 1973-1983 and differential fertility by rural/urban residence can be seen clearly in [table 4](#). It is apparent that the rate of fertility decline was much faster in urban areas. In 1973, the TFR differed by only 0.4 birth per woman, but by 1983, the difference between rural and urban was 1.4 births per woman. During the recent intercensal period, 1973-1983, the TFR declined by 19 per cent in Myanmar as a whole, 14 per cent in rural areas and 34 per cent in urban areas. Similarly, during the same period, CBR declined by 11, 8 and 23 per cent in Myanmar as a whole, rural areas and urban areas, respectively. Within 10 years, CBR declined by 8.5 per thousand population. If these estimates are correct, the population growth rate declined nearly 1 per cent between 1973 and 1983.

To examine the causes of fertility decline, the singulate mean age at marriage (SMAM) and Coale's indices of fertility were computed. In computing Coale's indices of fertility, it was assumed that there was only an insignificant number of ex-nuptial births; thus, I_h , the index of fertility of non-married women, is set at zero. Since there is no fertility information available from the 1973 census, the number of births given by the Arriaga method was used.

From [table 5](#), it can be seen that the SMAMs in 1983 as compared with those in 1973 were one year higher for females in rural areas and 1.5 years higher for females in urban areas. Since the increase in the age at

Table 5: Some fertility determinants in Myanmar

Period	Area	SMAM	I _f	I _m	I _g
1973	Myanmar	21.3	0.467	0.705	0.663
	Rural	21.1	0.480	0.718	0.668
	Urban	21.9	0.429	0.664	0.646
1983	Myanmar	22.4	0.400	0.654	0.612
	Rural	22.1	0.434	0.673	0.645
	Urban	23.4	0.304	0.599	0.507

Sources: Nyan Myint (1988, p. 46).

Notes: SMAM = singulate mean age at marriage;

I_f = index of overall fertility;

I_m = index of proportion married; and

I_g = index of marital fertility.

marriage has played an important role in fertility decline in most developing countries (United Nations, 1987, p. 371), the increase in SMAM in Myanmar might also be an important factor for fertility decline during 1973-1983 although SMAM was already high in 1973. This can be seen clearly by analysing the Coale indices of fertility.

Since I_h was assumed to be negligible, I_f, the index of overall fertility, may be expressed as the product of two other indices, I_m, and I_g.

I_m, the index of the proportion married, is expressed as the Malthusian factor in fertility control; it shows the extent of limitation of fertility through delay of marriage. The decline in I_m revealed a greater delay of marriage. On the other hand, I_g, the index of the fertility of married women, usually explains the control of fertility within marriage. It reflects the effect of neo-Malthusian fertility reduction (Coale, 1967, p. 206). The decline in I_g shows greater use of fertility control methods.

The overall fertility, I_f, in Myanmar fell from 0.47 to 0.40 of national fertility, a fall of 15 per cent within 10 years. Of the 15 per cent decline, the increase in age at marriage, I_m, accounted for 8 per cent and fertility control within marriage, I_g, the other 7 per cent. It seems as if fertility control within marriage increased in the period 1973-1983. Moreover, fertility control was much higher in urban areas than in rural areas. During the same period, the index of overall fertility fell by 10 per cent in rural areas and by 29 per cent in urban areas.

Increasing fertility control within marriage is related to the availability of cheap contraceptives through various ways and means since the mid-1970s. Nowadays, although Myanmar has no official family planning programme, personal observations indicate that the use of modern contraceptives is widespread in almost all regions and by various classes of people.

A factor associated with increasing age at marriage and the use of fertility control methods is higher female literacy. During the period 1973-1983, the literacy rate for females aged 10 and above increased from 61 to 74 per cent in Myanmar as a whole, from 7.5 to 84 per cent in urban areas and from 56 to 70 per cent in rural areas. However, the level of fertility can be studied neither through the level of education nor the literacy of women because of data limitations.

Recent levels of mortality

Although the new vital registration system covers most of the urban areas, Hpu (1984, p. 88) revealed that the published death rates are lower by 30 per cent for males and 40 per cent for females when compared with the perceived rates during 1972-1974. On the other hand, Ueda (1975, p. 42) found that the birth and death rates given by the vital registration system were consistent since the composition of the base population was balanced and the recorded rates were relatively accurate.

Some surveys on health and the nutritional status of children have been carried out, but the coverage and scope were too limited to represent the whole country. Therefore, the censuses are considered the most dependable source for demographic data. Currently only a rough picture of the levels and trends of recent mortality for the urban areas can be obtained from the vital registration system, and indirect estimates, from the census age distribution or from census response to fertility and mortality questions, are needed to study the recent levels and trends of mortality.

Recent levels and trends in urban areas

From [table 1](#), it may be seen that the levels of mortality have gradually declined since the mid-1950s. CDR has declined more than 83 per cent from the peak of 48.4 per thousand population in 1949 to 8.1 in 1980. More drastic changes can be seen in IMR and MMR. In 1950, IMR was 351 per thousand live births, that is, one in every three new-born babies died before the end of the first year of life. IMR declined gradually until the late 1970s. Recently, IMR in urban areas fluctuated around the high rate of 40 to 50

deaths per thousand live births. Similarly, MMR has gradually declined since 1963.

During the 1950s and early 1960s, MMR varied at a level of well over 4 per thousand live births and it declined to just over 1 per thousand live births in the 1980s. Even though the recent level of MMR has been high compared with that of developed countries, it is the lowest among the countries neighbouring Myanmar. The lower MMR compared with neighbouring countries can be explained by a higher proportion of births attended by trained health personnel. In 1984, 97 per cent of births were attended by trained health personnel; this is very high compared with 33 per cent in both India and Thailand (United Nations Children's Fund (UNICEF), 1988, pp. 76-77). The extremely high mortality rates observed during the early 1950s were due mainly to the then unsettled conditions of the country.

Differential mortality

By place of residence (or by State and Division)

Myanmar is quite diverse in terms of geographical situations: most of the States are situated in hilly and mountainous regions, whilst the Divisions are situated in the flat plains. Thus, it is important to study differential mortality by the place of residence or by State and Division. Even though the rates given by the vital registration system are defective, the IMR from the 1981 Vital Statistics Report is also presented in [table 6](#) together with some other indirect estimates.

Four indirect techniques were employed to estimate the infant mortality in this study. These techniques were based on the Brass method (Brass and Coale, 1968, p. 45), and widely used in estimating infant and child mortality. Trussell (1975, p. 97) developed four sets of equations based on the Coale-Demeny model life tables (Coale and Demeny, 1966). Similarly, Palloni and Heligman (1985, pp. 10-33) developed five sets of equations to estimate infant and child mortality together with the reference period using the new United Nations model life tables. Feeney (1980, p. 109) also developed another variant of the Brass method, and the method gives a series of IMR estimates together with their appropriate reference periods. The resultant IMR estimates are given in [table 6](#).

It may be observed from [table 6](#) that the rates in the Vital Statistics Report were severely under-estimated, particularly in some States. Even though it represents only the urban portions of the region, the lowest IMR, i.e. 16 per thousand live births for Chin State, is not realistic since all other

Table 6: Indirect estimates of infant mortality rates by State and Division around 1982 (per thousand live births)

Regional	Trussell	Feeney	Brass	Palloni	VSR
Myanmar	97	98	97	90	n.a.
Rural	104	106	106	97	n.a.
Urban	57	66	63	53	47
States					
Kachin	133	145	138	123	28
Kayan	84	80	84	78	26
Kayin	64	51	53	59	43
Chin	111	125	129	103	16
Mon	56	57	57	52	46
Rakhine	114	113	100	110	41
Shan	90	86	85	85	41
Divisions					
Sagaing	130	130	132	121	39
Bago	70	73	72	65	35
Magway	115	116	118	108	41
Mandalay	96	105	104	89	44
Tanintharyi	96	96	93	88	42
Yangon	58	65	62	54	59
Ayeyarwady	93	94	90	87	44

Source: Nyan Myint (1988; p. 72).

Note: VSR = 1981 Vital Statistics Report and represents urban areas only.

alternative estimates for the whole State were found to be more than 100. This revealed the severe under-registration of infant deaths in Chin State. Similarly, the estimates given in the Vital Statistics Report for all States and Divisions, except Yangon Division, also appear to have been severely underestimated. According to the 1981 Vital Statistics Report (CSO, 1986, pp. 5-11), 37 per cent of the population covered by the Report lived in Yangon Division and 36 per cent of live births were also recorded in Yangon Division. However, 45 per cent of infant deaths occurred in Yangon Division where the best medical facilities were available. Therefore, the Vital Statistics Report does not provide adequate information for estimating IMR.

The West regional model life tables are considered appropriate for urban areas of Myanmar (Nyunt, 1978, p. 87); IMR estimates obtained by

using the Trussell method have been chosen as the standard. Infant mortality, in general, was very high in Myanmar. Even in 1982, Chin, Kachin and Rakhine States, and Magway and Sagaing Divisions had IMRs of more than 100. Mon State and Yangon Division, economically the most developed regions among the States and Divisions of Myanmar, had the lowest IMR of just less than 60.

Thus, even the lowest IMR among the States and Divisions is unacceptably high. The highest IMR was found in the mountainous and economically least developed States and Divisions, which are located in the country's dry zone.

Type of residence (rural-urban residence)

As in many countries, differential mortality by rural-urban residence is obvious in Myanmar. In [table 6](#), differential infant mortality by type of residence can be seen clearly. IMR in rural areas was nearly twice the IMR in urban areas; whilst the IMR for urban areas was 57 per thousand live births, the IMR for rural areas was 104.

Sex differentials

According to the 1981 Vital Statistics Report (CSO, 1986, p. 5), CDR for males was 9.2 per thousand mid-year population when the CDR for females was 8.2. Similarly, IMR for males was 48.0 and for females 46.5. CDR and IMR for the urban areas of the States and Divisions are presented in [table 7](#).

From [table 7](#), it can be seen that the CDR for urban males was higher than the CDR for females in all States and Divisions, except Kayah State. However, Kayah State is the smallest State in Myanmar and only one of its towns provided input for the 1981 Vital Statistics Report (CSO, 1986, p. 5).

With regard to infant mortality, the sex differential was less pronounced. Except for Kayin and Rakhine States, IMR for females was higher than that for males in all States. However, except for Magway and Sagaing Divisions, the IMR for females was lower than for males in all Divisions. Generally, the sex differential in mortality was less pronounced compared with the pre-war period. Nevertheless, the findings would be appropriate only if the levels of under-registration were the same for both sexes. Since the number of children ever born and children still living was not given by sex in the 1983 census reports, it is not possible to study the sex differential by means of indirect techniques.

Table 7: Crude death rate and infant mortality rate by sex in States and Divisions (urban areas), 1981

Region	CDR		IMR	
	Male	Female	Male	Female
All urban	9.23	8.23	48.0	46.5
States				
Kachin	11.48	8.20	30.6	23.9
Kayah	6.83	7.34	25.6	25.7
Kayin	11.64	8.74	37.0	49.0
Chin	7.85	6.95	11.4	21.0
Mon	9.21	8.36	45.1	45.9
Rakhine	9.55	7.78	42.4	39.1
Shan	10.18	8.61	41.0	41.2
Divisions				
Sagaing	7.60	6.79	38.6	39.5
Bago	8.60	7.30	36.6	32.9
Magway	8.43	7.96	40.8	41.7
Mandalay	9.43	8.84	45.6	42.5
Tanintharyi	11.50	9.10	46.4	38.2
Yangon	9.12	8.38	58.8	58.7
Ayeyarwady	9.74	8.29	47.3	41.0

Source: Nyan Myint (1988, p. 74).

Note: See table 1 for abbreviations.

Infant and child mortality

To study the mortality trends for Myanmar as a whole and the rural and urban areas separately, two indirect methods, namely the Feeney and Trussell methods, are used in this study. IMRs by the Feeney and Trussell methods, and CMR and expectation of life by the Trussell equations with West regional model life tables are presented in table 8.

It may be observed from that table that the decline in IMR occurred faster in the urban areas. During the period 1960 to 1982, infant mortality estimated by Feeney's method declined by 45 per thousand live births in urban areas, 19 in rural areas and 24 in the country as a whole. During the period 1972-1982, IMR (estimated by Trussell's method) declined by 18 per cent for Myanmar as a whole, while that for rural and urban areas fell by 16 and 37 per cent, respectively. The uneven decline in IMR could be due to differences in socio-economic development and the uneven distribution of medical services. Although the Government tried to narrow the gap between the rural and urban situations in terms of health care, only 31 per cent of the rural population had access to health services compared with 100 per cent in urban areas (UNICEF, 1988, p. 69).

Table 8: Recent trends and levels of infant and child mortality and life expectancy for Myanmar, urban and rural areas

Year	Area	IMR(Fy.)	IMR	CMR	e ₀
1960	Myanmar	122	n.a.	n.a.	n.a.
	Rural	125			
	Urban	111			
1963	Myanmar	119	n.a.	n.a.	n.a.
	Rural	123			
	Urban	106			
1966	Myanmar	117	n.a.	n.a.	n.a.
	Rural	121			
	Urban	102			
1969	Myanmar	113	121	65	50.0
	Rural	118	126	68	49.1
	Urban	96	106	53	52.9
1972	Myanmar	109	118	62	50.6
	Rural	116	124	66	49.6
	Urban	90	100	49	54.1
1975	Myanmar	100	108	55	52.4
	Rural	106	114	59	51.3
	Urban	80	90	42	56.0
1977	Myanmar	94	102	51	53.5
	Rural	100	108	55	52.4
	Urban	73	83	37	57.5
1980	Myanmar	88	95	46	54.9
	Rural	93	102	50	53.7
	Urban	67	76	32	58.9
1981	Myanmar	85	91	43	55.7
	Rural	89	96	47	54.7
	Urban	67	72	30	59.6
1982	Myanmar	98	97	47	54.6
	Rural	106	104	52	53.3
	Urban	66	57	21	62.9

Source: Nyan Myint (1988, p. 76).

Notes: n.a. = not available; IMR(Fy.) = IMR estimated by the Feeney method. See table 1 for all other abbreviations.

Similarly, during the period 1972 to 1982, CMR for urban areas fell by more than 60 per cent, from 53 to 21 per thousand children aged one. At the same time, CMR for rural areas fell by only 23 per cent. In 1972, the expectation of life at birth for both sexes was 49.1 years for the rural population and 52.9 years for the urban population. The rural-urban difference was only 3.8 years. In 1982, the expectation of life at birth increased to 53.3 and 62.9 years for rural and urban areas, respectively. Therefore, the rural-urban difference became 9.6 years. Thus, it is evident that the decline in mortality was much faster in urban areas than in rural areas and future health policies should be aimed at rural health improvements.

Population and health policies

Myanmar is one of those countries which perceive population growth as beneficial and thus it has limited access to modern methods of contraception (United Nations, 1987, p. 92). The Government considered the country to be under-populated. In a statement to the United Nations World Population Conference in August 1974, the Government stated its pro-natalist attitude thus:

“...under the prevailing circumstances, due to the geographical, social and economic situations in relation to population, we are confident that the country can support a larger population than at present.... We have as yet no programme oriented toward curtailment of the population.” (United Nations, 1979, P. 3).

Similarly, population problems were not viewed in terms of controlling population growth, but of equipping and mobilizing the people for economic growth. The perceived population growth rate was considered satisfactory and population growth was accepted as a factor contributing to social and economic development. In 1974, the Central Population Commission was formed to formulate and implement national population policies. There has been no explicit policy to intervene in fertility and population growth, but Government policies have generally been aimed at the improvement of health, and economic and social development (United Nations, 1979, p. 2; and 1986, p. 8; United Nations Fund for Population Activities (UNFPA), 1987, p. 79). However, the Government has recognized that family planning is desirable if, and only if, it improves maternal and child health (United Nations, 1986, p. 8). In 1986, Family Planning International Assistance provided some family planning commodities (UNFPA, 1987, p. 81). Abortion and sterilization were strictly restricted to maternal health concerns.

Since the time of independence, the general consensus has been that the level of mortality is high and undesirable. Thus, health promotion programmes aimed at narrowing the gap between urban and rural situations in terms of health care and at promoting the mental and physical fitness of all citizens have been implemented (MPF, 1987, p. 211). Mortality decline was mainly a result of the improvements in medical services and also because of the Government's health plans. One of the most successful programmes has been the “People's Health Plan”, which has been providing primary health care for the people since 1 April 1978.

Conclusion

As the Government of Myanmar considers the country under-populated, no official family planning programmes have come into existence yet. Fertility is still high, especially in the States, but fertility decline was initiated in urban areas in the mid-1970s. The fertility decline in rural areas is slower than in the urban areas; thus the rural-urban differential in fertility has become more pronounced. A gradually higher age at marriage for females was observed in Myanmar, from 18.2 years in 1952 (Hauser and Kitagawa, 1954, p. 124) to 22.4 years in 1983 and this could be a factor in fertility decline. However, the decline in fertility seems to have stopped at a moderately high level in the early 1980s.

Currently Myanmar still seems to maintain a pro-natalist attitude, although the establishment of a child-spacing programme has recently been accepted by the Government. However, since Myanmar is a Buddhist country and Buddhism does not oppose any kind of contraception, and because the people are familiar with modern methods of contraception, especially condoms and pills, if the Government were to set up a family planning programme, fertility decline could be faster than in some neighbouring countries such as Bangladesh and India.

Since the mid-1950s, mortality has gradually declined, but seems to have slowed down in recent years even though the health plans have been successful. As Ruzicka and Hansluwka (1982, p. 567) stated for South and East Asian countries, the various disease control programmes, which had been initiated to bring about a decline in mortality and morbidity during the pre-war period, were exhausted and more intractable degenerative diseases have remained in Myanmar. Mortality decline was relatively fast from the late 1960s until the mid-1970s. It has remained almost unchanged since the early 1980s.

The geographical distribution of recent levels of mortality is quite diverse: the north-western States and Divisions have the highest mortality whilst the south-eastern States and Divisions have comparatively lower mortality. During recent decades, a decline in mortality has occurred in various States and Divisions and both rural and urban areas. However, the mortality decline was faster in urban areas than in rural areas.

Although Myanmar is still considered as under-populated, population growth must be controlled in order to bring about significant economic development. Since Myanmar is one of the less developed countries, economic development is certainly hampered by the currently moderately

high population growth rate. For instance, even though the magnitude of food production has steadily increased, per capita food production has declined. According to the World Bank (1981, p. 212), per capita food production in 1977-1979 was only 97 per cent of the 1969-1971 level of production. Therefore, it is necessary to slow population growth by controlling fertility in order to achieve economic and social development in Myanmar.

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