

SYNOPSIS

This thesis concerns the levels and patterns of mortality in the Bangladeshi past, with special focus on the 1970s, the decade plagued by the outbreaks of war, famine and epidemics. By levels, I mean various measures of mortality rate, such as life expectancy (e_0) and infant mortality rate (IMR), which tend to improve over time. By patterns, I mean both the shape of age-specific mortality rates, which may represent a set of conditions a particular country has regardless of the general level of mortality, on the one hand, and the relationship between male and female mortality rates, on the other. The latter issue is my particular concern since gender inequality has long been a social problem embedded in culture and society in Bangladesh as well as in South Asia in general. My approach is to make an in-depth analysis of mortality data at the time of a crisis. Of the several mortality crises Bangladesh experienced in the 1970s, the most devastating was the famine of 1974. It was so serious that the death toll peaked in the next year, so that the famine period extended from 1974 to

1975. The study makes much use of life tables. I utilize those officially estimated by government bureaus, but at the same time, since official data for the whole country are not always in good quality, I will make extensive use of data collected by a demographic surveillance system in Matlab, a rural area in southeast Bangladesh, from which I will construct generation life tables as well as period life tables.

There are four issues. One is the age patterns of mortality. This will be explored, in Chapter Three, in terms of the Coale-Demeny model life table typology. Since Coale and Demeny present a four-set framework of regional model life tables, I examine the Bangladeshi patterns in this framework and ask if there took place a change in pattern over time. As far as the age-specific shape of mortality in Bangladesh in general and rural Bangladesh in particular is concerned, on the face of it any of the four C-D model life table families does not fit. But we may conclude that it is comparatively closer to the North pattern at early ages, turning to the West at higher ages. Matlab's age pattern of mortality also shows a comparatively high early childhood mortality rate like national. However, it looks much closer to the C-D South model. It can probably be classified as an extreme case of the South pattern. Indeed, Matlab was consistently of the South type over the decades despite an improvement in the level of mortality from Level 16 of male (i.e., $e_0 = 54.12$ years by

the C-D West and 54.10 years by C-D South model etc. in level 16 for male population) and Level 13 of female (50.0 and 50.0 respectively) in 1966-1970 to Level 20 for both sexes in 2000 (in level 20, e_0 =63.63 and 63.65 respectively for male, and 67.5 and 67.5 for female respectively). The only change we can find is that the Matlab pattern now looks typically South type. All this may be interpreted as reflecting a disease pattern in which diarrhea in early stages of life is particularly marked.

A second set of issues is concerned with the famine of 1974-75. There are two sub-issues in this set and are examine in Chapters Four and Five. The first is a re-examination of the stylized facts in famine demography and the second is gender inequality. Historical and contemporary studies point to a number of generalizations concerning age-sex patterns of mortality at the time of famine. The response of sex differential in mortality to famine is the core issue of study focusing on deaths in early ages. The techniques of analysis are: a proportional-rise method used by Tim Dyson in his South Asian famines, and a separate technique adopted from Bourgeois-Pichat and Hiroshi Maruyama for very early periods of life. This paper finds that from 1974 through 1977 the proportional rise in female mortality relative to that in male mortality was pronounced in childhood, especially in the 5-9 age group, suggesting

that the later the greater the female disadvantage. Also found is that in 1975, the peak year of the Bangladesh famine, female IMR tended to rise more than male IMR and the magnitude of proportional rise in IMR leveled with that for the 5-9 age groups. It argue that it was because the female disadvantage started soon after the neonatal period, and that it was heightened, rather than lowered, during the most disastrous year of the famine period.

The final issue is cohort experience. Almost all studies in mortality rely on period measures of mortality, especially life tables. However, mortality situations an actual cohort experiences cut through various period life tables. Different birth cohorts are thus examined in Chapter Six by constructing generation life tables for Matlab. While the generation life table is usually used for population projection, it is a useful tool to measure the effect of age at which one cohort encountered a particular mortality disaster and to assess the combined effect of a few separate disasters on the survival rate over the longer period of life. I focus on war, famine and measles epidemic on the survival rate of the Matlab population. It turns out that the 1971 birth cohort had the lowest survival rate for both sexes if the survival rate is measure up to the age of 25. They were born in the year of civil war, met the famine at ages 3 to 4, then experienced measles at age 5. If measured up to age 4, the infants, both male and

female, born in 1975 were most disadvantaged with the lowest survival rates. Generally, females suffered from lower rates of survival among the generations considered. More important is the finding that the period of life when famine hit seems to have been crucial especially for the gender-specific differences in the survival rate. If born in the peak period in the famine process, female children would suffer from an even lower chance of survival than male children.

Overall, Bangladesh, one of the most densely populated areas of the South Asian region, is similar to the South type in terms of climate and agriculture. It is sometimes argued that wet rice allows women to get involved in productive activity in the fields more than in wheat growing areas, but as far as Bangladesh is concerned, its traits are undoubtedly closer to north Indian culture regarding religion and some social behavior that has reflection on its population and demographic behavior. More important perhaps is that the North and Bangladesh patterns seem to share similar cultural and social characters of discrimination against females. Despite several unmistakable improvements in mortality and survivability over the generations, the sex differential in mortality did not change noticeably. Only the level of mortality improved, whereas gender inequality, especially at infant and childhood ages, remained intact.