

marriages are contracted or dissolved, and population increases due to births and decreases due to deaths. The statistics are derived from the records of events of births, deaths, marriages and divorces registered in the provinces and territories.

History of vital statistics. Historically vital statistics data for Canada and the provinces go back to 1921. These can be obtained from a variety of periodic publications as well as from the repository of unpublished tabulations at the vital statistics and disease registries section of Statistics Canada.

Summary of principal data. Table 2.34 provides a summary of the principal vital statistics for 1981 for Canada, the provinces and territories, with comparative figures by five-year periods back to 1961-65.

2.7.1 Births

Of all the demographic factors which produce changes in population (fertility, mortality, nuptiality, immigration, emigration), none exerts greater influence than the rate of reproduction or fertility.

Birth rates. Accurate figures on Canadian crude birth rates are available since 1921 when the annual collection of official national figures was initiated. The following rough estimates of the average annual crude rates of live births (per 1,000 total population) for each 10-year intercensal period between 1851 and 1921 may be inferred from studies of early Canadian census data: 1851-61, 45; 1861-71, 40; 1871-81, 37; 1881-91, 34; 1891-1901, 30; 1901-11, 31; 1911-21, 29.

The annual crude birth rates declined steadily from 29.3 in 1921 to a low of 20.1 in 1937, recovered somewhat in the late 1930s and rose slightly during the period of World War II to 24.3 in 1945. Following the war the rate rose to a high of 28.9 in 1947. Between 1948 and 1959 it remained remarkably stable at between 27.1 and 28.5, but has since declined dramatically to a record low of 15.4 by 1974. The rate increased slightly for a few years and then declined to 15.3 in 1981 and the emerging trend seems to be one of further decline. Provincial rates have followed this trend with some regional differences.

Since these crude birth rates are based on the total population they do not reflect the true fertility of the women in reproductive ages. A more accurate measure of fertility is one based on births to the number of women by age between the ages of 15 and 49 (Table 2.36).

Stillbirths. The 1,972 stillbirths of at least 28 weeks gestation reported in 1981 represented a ratio of 5.3 for every 1,000 live births (Table 2.35). The stillbirth ratio has been cut by more than half over the past quarter-century. The risk of having a stillborn child increases with the age of the mother. Although stillbirth rates for mothers of all ages have been declining, they continue to be much higher for older than for younger mothers.

2.7.2 Fertility rates

Since almost all children are born to women between the ages of 15 and 49, variations in the proportion of women in this age group to the total population will cause variations in the crude birth rate of different countries, or of different regions, even though the actual rates of reproduction or fertility of the women may be the same. It is therefore an accepted practice for comparison purposes to calculate age-specific fertility rates, the number of infants born annually to every 1,000 women in each of the age groups in the reproductive span.

Table 2.36 indicates that women in their 20s are the most reproductive. On the average, for every 1,000 women between 20 and 24, there were 97 infants born during 1981. Expressed another way, about one woman out of 10 in that age group gave birth to a live-born infant. The highest rate is found in the 25-29 age group with an average of 127 for every 1,000. Another measure of fertility is the gross reproduction rate which represents the average number of daughters that would be born to each woman throughout her child-bearing ages (15 to 49) if the fertility rate of the given year remained unchanged during the whole of her child-bearing period. A rate of 1.000 indicates that, on the basis of current fertility and without making any allowance for mortality among mothers during their child-bearing years, the present generation of child-bearing women would maintain itself.

Canada has had one of the highest gross reproduction rates among industrialized countries. Even at low birth rates in the 1930s the rate varied between 1.300 and 1.500 and since World War II has ranged from 1.640 in 1946 to a high of 1.915 in 1959. However, since 1963 the national gross reproduction rate has dropped sharply to 0.829 in 1981 — appreciably below the replacement level of 1.050. Among the provinces, Ontario and Quebec had the lowest gross reproduction rates in 1981, and all provinces had rates below the replacement level.

2.7.3 Natural increase

The excess of births over deaths, or natural increase, has been the main factor in the growth of Canada's population. Some idea of the rate of natural increase back to the mid-1800s may be obtained from the estimates of births and deaths which produce the following natural increase rates (per 1,000 population): 1851-61, 23; 1861-71, 19; 1871-81, 18; 1881-91, 16; 1891-1901, 14; 1901-11, 18; 1911-21, 16.

During the 1920s and early 1930s the birth rate declined much more rapidly than the death rate and the natural increase rate dropped to a record low of 9.7 in 1937. Higher birth rates during the 1940s and 1950s and a continued declining death rate caused the natural increase rate to rise steadily from 10.9 in 1939 to a record 20.3 in 1954. After that there was a steady drop due to declining birth rates and the