

Summary

- **Crude death rate:**

The crude death rate, the total number of deaths per year per 1000 people. The crude death rate depends on the age (and gender) specific mortality rates and the age (and gender) distribution of the population. The number of deaths per 1000 people can be higher for developed nations than in less-developed countries, despite life expectancy being higher in developed countries due to standards of health being better.

- **Specific death rates:**

In order to arrive at a more useful figure than the crude death rate, we must take into account the fact that the mortality pattern is different from different segments of the population. The various segments generally considered are Age, Sex, Occupation, Religion, Community; Social status etc. Death rate computed for a particular period specific to the section of the population is termed as specific death rate.

- **Infant Mortality Rate:**

The Infant mortality rate is defined as the chance of dying of a newly born infant within a year under a given mortality conditions. The infant mortality rate and age specific death rate for Age zero (0) have the same numerator. However the denominator in the age specific death rate at Age Zero includes all the infants up to the age below 1 year.

- **Standardized Death Rate:**

In the Crude death rate and Age specific death rate there are certain draw backs in the formulation of the calculations since the age distributions of the populations between two regions are not identical. To remove this draw back it was suggested to use the same set of weights for computing the weighted average of the age related Specific Death Rate. Such an adjusted death rate is known as Standardised death rate.

- **Specific Fertility Rate (SFR):**

The concept of specific fertility rate originated from the fact that fertility is affected by a number of factors such as age, marriage, migration, state or region etc. The fertility rate computed with respect to any specific factor is called specific fertility rate and is defined as specific fertility rate is equal to number of births to the female population of the specific section in a given period divided by total number of female population in the specified section into k where k is equal to 1000 usually.

- **Reproduction Rate:**

The fertility rates are unsuitable for giving an idea of the rate of population growth because they ignore the sex of the newly born children and their mortality. If the majority of the births are those of boys the population is bound to decrease while the reverse will be the case if majority of births are girls. Similarly, if mortality is ignored a correct idea of the growth of population cannot be formed because it is possible a number of female children may die before reaching the child-bearing age. For measuring the rate of growth of population we calculate the reproduction rates. Reproduction rates are of two types Gross reproduction rate (GRR) and Net reproduction rate (NRR).

- **Gross reproduction rate:**

It measures the rate of which a new born female would on an average add to the total female population, if they remained alive and experienced the age specific

fertility rate till the end of the child bearing period. It is the sum of fertility rate till the end of child bearing period. It is the sum of age specific fertility rates calculated from female births for each single year of age. It shows the rate at which mothers would be replaced by daughters and the old generation by the new if no mother died or migrated before reaching the upper limits of the child bearing that is 49 years.

- **Life tables:**

It is basically a list of mortality, survivorship, and life expectancy figures categorized by age class. They are frequently used by life insurance companies as a means of setting premiums. Life tables are often used by population biologists to characterize population dynamics.

Ideally, life tables should be constructed from a long historical series of mortality data from vital registration where the deaths and population of the de jure (or defacto) population-at-risk are entirely covered by the system. In order to compute life tables for a given year (i.e.1999) for which vital registration of deaths is not yet available for administrative reasons, short term projections are required from the latest available year. This will require an adequate time series of data, with at least 15-20 years of mortality statistics.

The basic criteria used in selecting countries for the time-series analysis, are availability of historical data,

- Of good quality as judged by the internal consistency of the data as well as proportion of the population covered
- With no more than 5 year gap in the most recent period
- With at least 10 observations to allow for a more robust projection