Life expectancy at birth

Rationale for use

Life expectancy at birth reflects the overall mortality level of a population. It summarizes the mortality pattern that prevails across all age groups - children and adolescents, adults and the elderly.

Definition

Average number of years that a newborn is expected to live if current mortality rates continue to apply.

Associated terms

A life table presents a set of tabulations that describe the probability of dying, the death rate and the number of survivors for each age or age group. Accordingly, life expectancy at birth is an output of a life table.

Data sources

Vital registration, census and surveys: Age-specific mortality rates required to compute life expectancy at birth.

Methods of estimation

WHO has developed a model life table based on about 1800 life tables from vital registration judged to be of good quality.

For countries with vital registration, the level of completeness of recorded mortality data in the population is assessed and mortality rates are adjusted accordingly. Where vital registration data for 2003 were available, these were used directly to construct the life table. For countries where the information system provided a time series of annual life tables, parameters from the life table were projected using a weighted regression model, giving more weight to recent years. Projected values of the two life table parameters were then applied to the modified logit life table model, where the most recent national data provided an age pattern, to predict the full life table for 2003.

In case of inadequate sources of age-specific mortality rates, the life table is derived from estimated under-5 mortality rates and adult mortality rates that are applied to a global standard (defined as the average of all the 1800 life tables) using a modified logit model.

Disaggregation

By sex, location (urban/rural, major regions/provinces).

References

- Modified logit life table system: principles, empirical validation and application

Database

- WHO Mortality Database: Civil registration data (http://www.who.int/healthinfo/morttables)

Comments

The lack of complete and reliable mortality data, especially for low income countries and particularly on mortality among adults and the elderly, necessitates the application of modelling (based on data from other populations) to estimate life expectancy.