

DEMOGRAPHY

LECTURES

1+2+3



غير كافية للمذاكرة
إطلاقاً.. فقط
لمراجعة القوانين

SHORT SUMMARY

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DEMOGRAPHY (1)

Dependency Ratio: dependents (less than 15 and more than 65) \ self-supporting portion(between 15 and 65 years).

$$\text{Young dependency ratio} = \frac{\text{Population below 15 years}}{\text{Population aged between 15–65 years}} \times 100$$

$$\text{Old dependency ratio} = \frac{\text{Population above 65 years}}{\text{Population between 15–65 years}} \times 100$$

$$\text{Total dependency ratio} = \frac{\text{Population below 15 years} + \text{those above 65 years}}{\text{Population aged between 15–65 years}} \times 100$$

DEMOGRAPHY (2)

Rate of natural increase (%)

$$RNI = \frac{\text{No. of births} - \text{No. of deaths}}{\text{Estimated mid-year population}} \times 100$$

Or

$$RNI = \frac{\text{Crude birth rate} - \text{Crude death rate}}{10}$$

Crude Birth Rate (per 1000)

$$CBR = \frac{\text{Total number of live births}}{\text{Estimated midyear population}} \times 1000$$

Crude death rate (per 1000)

$$CDR = \frac{\text{Total number of deaths}}{\text{Estimated mid-year population}} \times 1000$$

Growth rate

GR = RNI + Net migration rate

Law of 70:

If the rate of population growth is 1% per year then the expected doubling time is 70 years.

General fertility rate (aged 15-49)

$$GFR = \frac{\text{Total number of live birth}}{\text{mid - year reproductive female population (aged 15 - 49)}} \times 1000$$

Age specific fertility rate

$$\frac{\text{Total number of live births born by females in a specific age group}}{\text{Female population}} \times 1000$$

Adolescent fertility rate (15-19)

$$AFR = \frac{\text{Total number of live births born by females in (15 - 19) age group}}{\text{Female population in the (15 - 19) age group}} \times 1000$$

Total fertility rate: (child per woman) average number of births that would be born to a woman throughout her reproductive period.

Gross Reproduction rate: (female births\ daughters) per woman.

DEMOGRAPHY (3)

Mortality rate:

$$\text{Mortality rate} = \frac{\text{deaths occurring during a given time period}}{\text{size of the population among which the deaths occurred}} \times 10^n$$

Age-specific mortality rates:

$$\frac{\text{Number of persons dying in a certain age and a certain year}}{\text{Total number in the same age group in the same year}} \times 1000$$

Infant mortality rate: probability of a child to die before reaching the age of one.

$$\text{IMR} = \frac{\text{Total number of deaths from zero up to less than one year during a year}}{\text{Total number of live births in the same year}} \times 1000$$

Neonatal mortality rate: same as IMR but for infants < 28 days of age.

Post-Neonatal mortality rate: same as IMR but for infants between 28 days and one year of age.

Stillbirth rate: stillbirths are third trimester fetal deaths (≥ 1000 grams OR ≥ 28 weeks).

$$\text{SBR} = \frac{\text{Number of stillbirths during a year}}{\text{Total births (live births + stillbirths) in the same year}} \times 1000$$

Still birth ratio:

$$\text{SBR} = \frac{\text{Number of fetal deaths of 28 weeks of gestation or more}}{\text{Number of live births}} \times 1000$$

$$\text{Perinatal Mortality Rate: Perinatal M.R.} = \frac{\text{No. of stillbirths} + \text{No. of early neonatal deaths}}{\text{Total births (Still and livebirths)}} \times 1000$$

*early neonatal: Less than 7 days of life.

Under-5 mortality rate: probability of a child to die before reaching the age of five.

$$\frac{\text{Total number of deaths in children under 5 years of age}}{\text{Total number of live births}} \times 1000$$

Adult mortality rate:

$$\frac{\text{Number of persons dying between 15 - 60}}{\text{Total number of population between 15 - 60}} \times 1000$$

Maternal mortality ratio:

$$\frac{\text{Number of Maternal deaths}}{\text{Number of live births}} \times 100,000$$

*Maternal death: death of a woman while pregnant or within 42 days after termination of pregnancy.

Cause-specific mortality rate:

$$\frac{\text{Deaths of a specific cause}}{\text{Estimated mid-year population}} \times 100,000$$

Proportionate mortality rates:

$$\text{Proportionate mortality} = \frac{\text{Deaths due to a particular cause}}{\text{Deaths from all causes}} \times 100$$

Case fatality rate (Death to case ratio):

$$\frac{\text{Total number of deaths from a certain disease}}{\text{Total number of cases having the same disease}} \times 100$$

*Reflects severity and virulence of diseases

Good luck ^^