

## DEMOGRAPHY AND FAMILY PLANNING

- Demography is the scientific study of human populations.
- It deals with five demographic processes namely fertility, mortality, marriage, migration and social mobility.

### Demographic cycle

#### ➤ **FIRST STAGE (High stationary)**

The stage is characterized by a high birth rate and a high death rate. The population remains stationary and at high level. Growth rate is <1%

#### ➤ **SECOND STAGE (Early expanding)**

The death rate begins to decline, while the birth rate remains unchanged. Population grows slowly. Growth rate is 1-2%.

#### ➤ **THIRD STAGE (Late expanding)**

The death rate declines still further, and the birth rate also starts declining. Population grows rapidly. Growth rate is 2%.

#### ➤ **FOURTH STAGE (Low stationary)**

The stage is characterized by a low birth and low death rate with the result that the population becomes stationary at low level. Growth rate is 0%.

#### ➤ **FIFTH STAGE: (Declining)**

Birth rate is lower than the death rate. Population goes on declining. Growth rate is less than zero.

## DEMOGRAPHIC INDICATORS

Divided into two parts

### 1) **Population statistics**

- Total Dependency ratio = 
$$\frac{\text{Number of people aged 0-14 years} + \text{and those aged 65 years and above}}{\text{Number of people aged 15-64 years}} \times 100$$
- Child Dependency ratio = 
$$\frac{\text{Number of people aged 0-14 years}}{\text{Number of people aged 15-64 years}} \times 100$$

- Old age Dependency ratio = 
$$\frac{\text{Number of people aged 65 years and above} \times 100}{\text{Number of people aged 15-64 years}}$$
- Sex Ratio = 
$$\frac{\text{No. of females}}{\text{No. of males}} \times 1000$$
- Growth Rate = (Crude Birth Rate - Crude Death Rates) x 100
- Crude Literacy Rate = Literate population/Midyear population x 100
- Effective Literacy Rate = 
$$\frac{\text{Literate population aged 7 years and above}}{\text{Population aged 7 years and above in a given area}} \times 100$$
- Density of population (per sq. km.) = Population/Area in sq. km.
- Life Expectancy: Average number of years likely to be lived by a person, who is subject to the mortality risk of the whole population at any given time.

## 2) Vital statistics

### Fertility statistics

- **Birth rate:** Number of live births per 1000 estimated **mid-year population n**.
- **General fertility rate:** Number of live births per 1000 **women** in the reproductive age group (15-44 or 49 years) in a given year.
- **General marital fertility rate:** Number of live births per 1000 **married women** in the reproductive age group in a given year.
- **Age specific fertility rate:** 
$$\frac{\text{Number of live births in a particular age group} \times 1000}{\text{Mid-year female population of the same age group}}$$
 (ASFR)

**Age specific marital fertility rate** = 
$$\frac{\text{Number of live births in a particular age group} \times 1000}{\text{Mid-year married female population of the same age group}}$$
 (ASMFR)

- **Total fertility rate:** Average number of children born to a **woman** if she experiences the current fertility pattern throughout her reproductive span.  

$$\text{TFR} = 5 \times \sum \text{ASFR} / 1000$$
- **Total marital fertility rate:** Average number of children born to a **married woman** if she experiences the current fertility pattern throughout her reproductive span.  

$$\text{TMFR} = 5 \times \sum \text{ASMFR} / 1000$$
- **Gross reproduction rate:** Average number of **girls born to a woman** if she experiences the current fertility pattern throughout her reproductive span.

$GRR = 5 \times \sum ASFR$  for female live births/1000

- **Net reproductive rate** = Average number of female live births that will occur to a newborn female will bear during her lifetime assuming fixed age-specific fertility and mortality rates.
- **Child-woman Ratio:** It is the number of children 0-4 years of age per 1000 women of child-bearing age.
- **Pregnancy Rate:** It is the ratio of number of pregnancies in a year to married women in the ages 15-44 (or 49) years.
- **Abortion Rate:** The annual number of all types of abortions, usually per 1000 women of child-bearing age.
- **Abortion Ratio:** This is calculated by dividing the number of abortions performed during a particular time period by the number of live births over the same period.
- **Marriage Rate:** It is the number of marriages in the year per 1000 population

### **FERTILITY FACTORS/ Factors responsible for high fertility in India**

- **Age of marriage:** Earlier the marriage, more will be the number of children. The minimum age prescribed for marriage in India is 18 years for girls and 21 years for boys.
- **Duration of married life:** Longer the duration of married life, more will be the fertility.
- **Universality of Marriage:** Marriage is almost universal in India as it is a religious and social necessity of the country.
- **Spacing of children:** Longer the birth interval between the pregnancies, lesser will be the fertility rate.
- **Education:** Higher the literacy level among the parents, lower will be the fertility and vice versa.
- **Economic status:** There is an inverse association between the economic status and the fertility. Higher the economic status, poorer is the fertility and vice versa.
- **Religion and caste:** Fertility is more among Muslims, medium among Hindus and lower among Christians. Again, it is observed that in these religions, fertility is higher among lower castes than higher castes.
- **Nutrition:** Better the nutritional status, lower is the fertility and vice versa
- **Family planning:** help in fertility reduction

- **Others:** place of women in society, value of children in society, widow remarriage, breast-feeding, customs and beliefs, industrialization and urbanization, better health conditions, housing, opportunities for women and local community involvement etc