



- What is a population pyramid?

- It is a graph which shows information about the age and gender of people in a specific country.

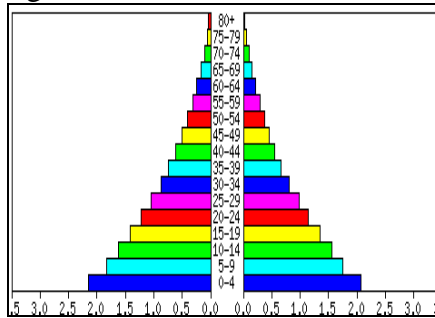
- What are the characteristics of a population pyramid?

- Females on the right and males on the left.
- Horizontal scale measured in numbers or percentage.
- Vertical scale represents age groups or year of birth.
- **Histogram:** area of each bar must be proportional to size of population group.

- Types of population pyramids:

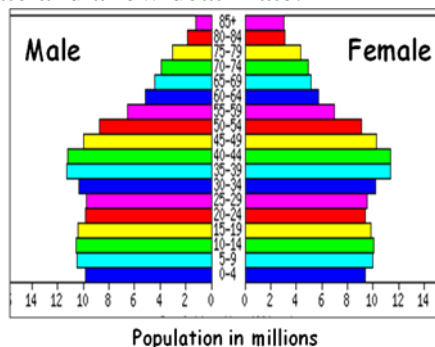
• **Expanding pyramid:**

- ✓ Seen in less developed or poor countries (example: Palestine).
- ✓ There is a high birth rate.
- ✓ In addition, there is a high death rate.



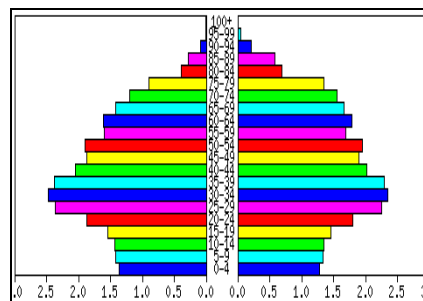
• **Stationary pyramid:**

- ✓ Seen in middle-developed countries (example: Bahrain).
- ✓ There is a low birth rate and a low death rate.



• **Contracting pyramid:**

- ✓ Seen in many of the world's rich countries (example: Japan).
- ✓ There is a decreased birth rate.
- ✓ In future, elderly will make up the largest section of the population in this country.



- What is life expectancy and what does it depend on?

- It is a statistical measure of the average time an organism is expected to live, based on the year of its birth, its current age and other demographic factors including sex. In addition, life expectancy depends on the level of development of the country (availability of different services, war... etc).



- **The top five countries with highest birth rates –arranged in order- are:**

1. Niger.
2. Mali.
3. Uganda.
4. Zambia.
5. Burkina Faso.

- **Countries with lowest birth rate include the following:**

1. Taiwan.
2. Germany.
3. South Korea.
4. Monaco.
5. Japan.

- **What is crude mortality rate and how is it calculated?**

- **Definition:** it is a measure of the number of deaths (in general or due to a specific cause) in a particular population, scaled to the size of that population, per unit of time.
- **Calculation** =  $\frac{\text{number of deaths in a specified period}}{\text{total population during that period}} \times 1000$
- Notice that the highest age-standardized mortality rate is in Africa.

- **What is total fertility rate?**

- **Definition:** it is the average number of children that would be born to a women over her lifetime if:
  - ✓ She were to experience the exact current age-specific fertility rates through her lifetime.
  - ✓ She were to survive from birth through the end of her reproductive life.
- KSA and Oman have the highest total fertility rates among GCC countries.
- UAE and Qatar have the lowest total fertility rates among GCC countries.

- **Dependency ratio:**

- It is an age-population ratio of those typically not in the labor force (the dependent part) and those typically in the labor force (the productive part). It is used to measure pressure on productive population.
- **Calculation:**  $\frac{\text{people below 15+people 65 and above}}{\text{people between 15-64 years}} \times 100$
- **Dependency ration is higher in Europe (why?)** → because of higher number of elderly among European countries.

- **Overcrowding:**

- **Health risks are mostly seen among:**
  - ✓ Elderly.
  - ✓ Children.
  - ✓ Disabled.

Notice that the most common health problem is respiratory illness.
- There will be increase in susceptibility of the disease, severity of the disease, spread of the disease and mortality.
- There will be increased accidents in home.
- Increased physical and emotional burden on mother and other care givers.
- **Social effects of overcrowding:**
  - ✓ It places strains on social relations.
  - ✓ Overcrowding in schools is related to substandard education.
  - ✓ Overcrowding is considered as a push factor in decisions → leading to early marriage (before the age of 18).
- **Psychological effects of overcrowding:**
  - ✓ Lack of privacy.
  - ✓ Psychological frustrations (إحباط وخيبة أمل).
  - ✓ Affects perception of options and how a person sees his future.
- **Crowding indicators:**



- ✓ The most commonly used indicators for in-house crowding are:
  - ❖ Person/ room.
  - ❖ Room area/ person.
- **Poverty:** there are two types of poverty:
  - **Absolute poverty:**
    - ✓ Definition: a measure of quantifies the number of people below a poverty threshold (this poverty threshold is independent of time and place).
    - ✓ In 2015, poverty line threshold (based on the daily income of a person) was considered to be: 1.90\$
    - ✓ Example on countries below the poverty line:
      - ❖ Chad.
      - ❖ Haiti.
      - ❖ Liberia.
  - **Relative poverty:**
    - ✓ Definition: people lacking the minimum amount of income needed in order to maintain the average standard of living in the society in which they live.
- **What are the roles of epidemiologists in disasters?**
  - Identify the priority health problems.
  - Determine the extent of a disease.
  - Identify the cause of a disease and the risk factors.
  - Determine priority health interventions.
  - Determine the extent of damage.