



Health policy

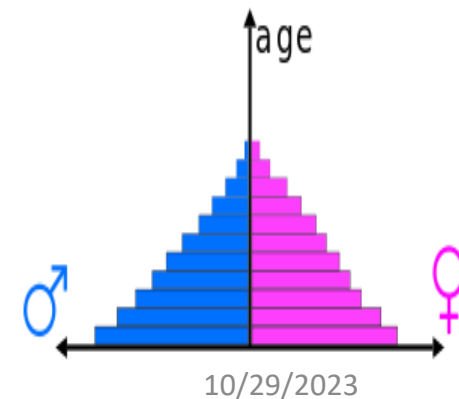
Subject 2, Cont.....

Population pyramid

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Objectives:

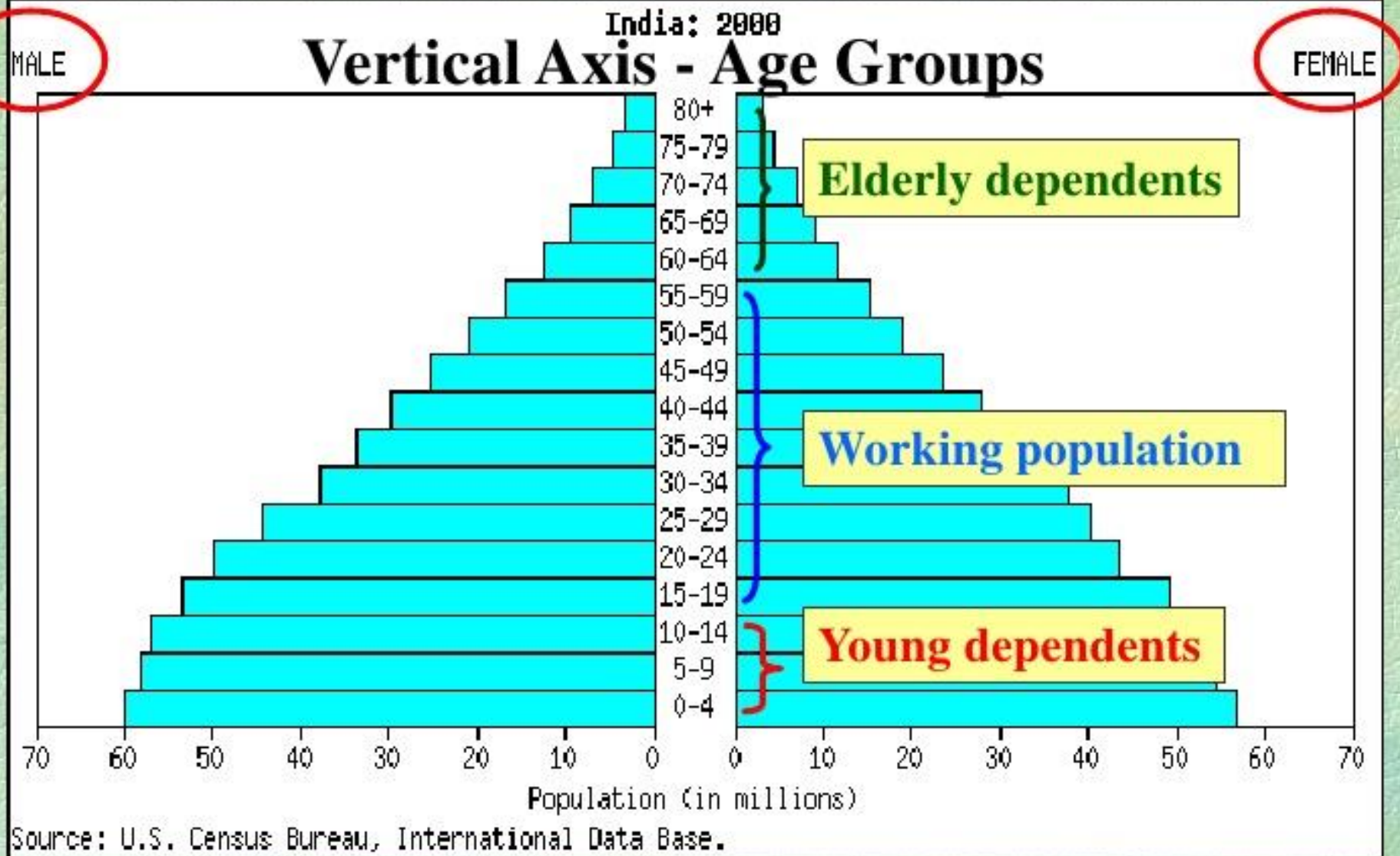
At the end of this subject , the student understand:

- **What is a Population pyramid?**
- **How to describe a Population pyramid?**
- **Recognize shapes of Population pyramid with different example.**
- **Importance and uses of Population pyramid**

What is a population pyramid?

- It is a diagram that gives information about the **proportion (%) of males and females in each age group.**
- Also shows:
 - proportion of young people (0 -14)
 - proportion of working people (15 – 59)
 - proportion of elderly people (60+)
- It **reflects the health status** of the population.
- It **reflects the extent of the development** of the country.

What is a population pyramid?



Horizontal Axis - Percentage / number

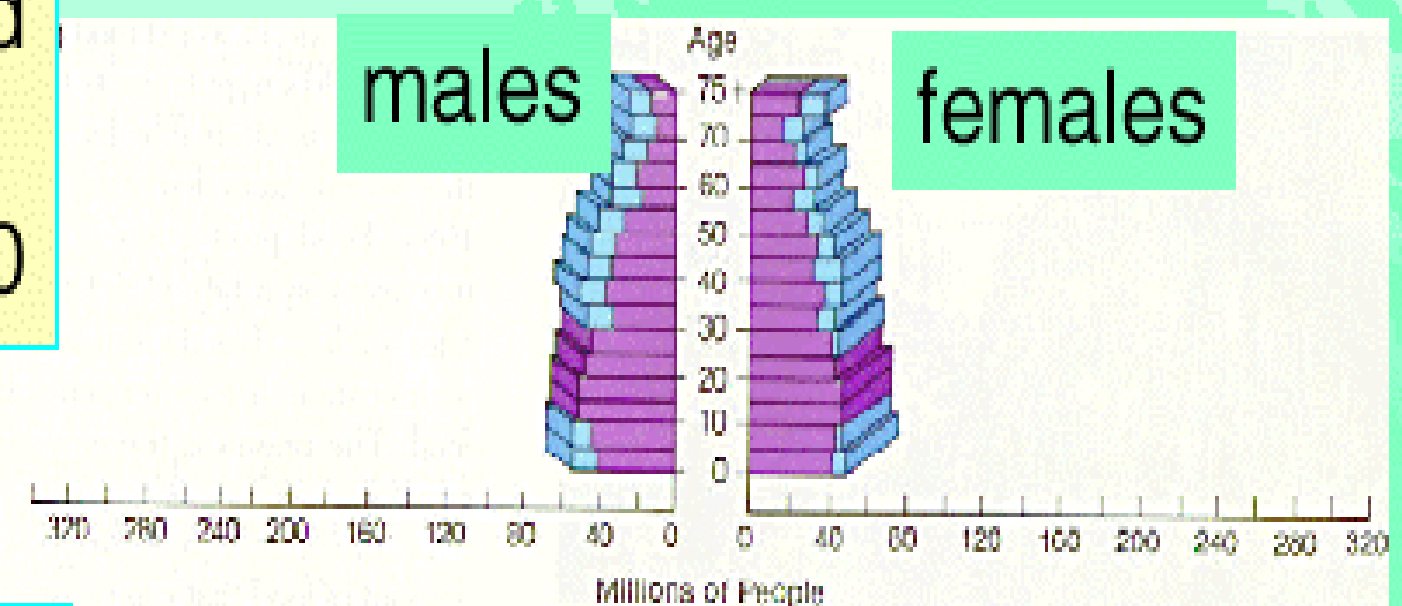
Population pyramid is the presentation of the age-sex distribution of the human population of a particular region.

A great deal of information about the population can be read from a population pyramid.

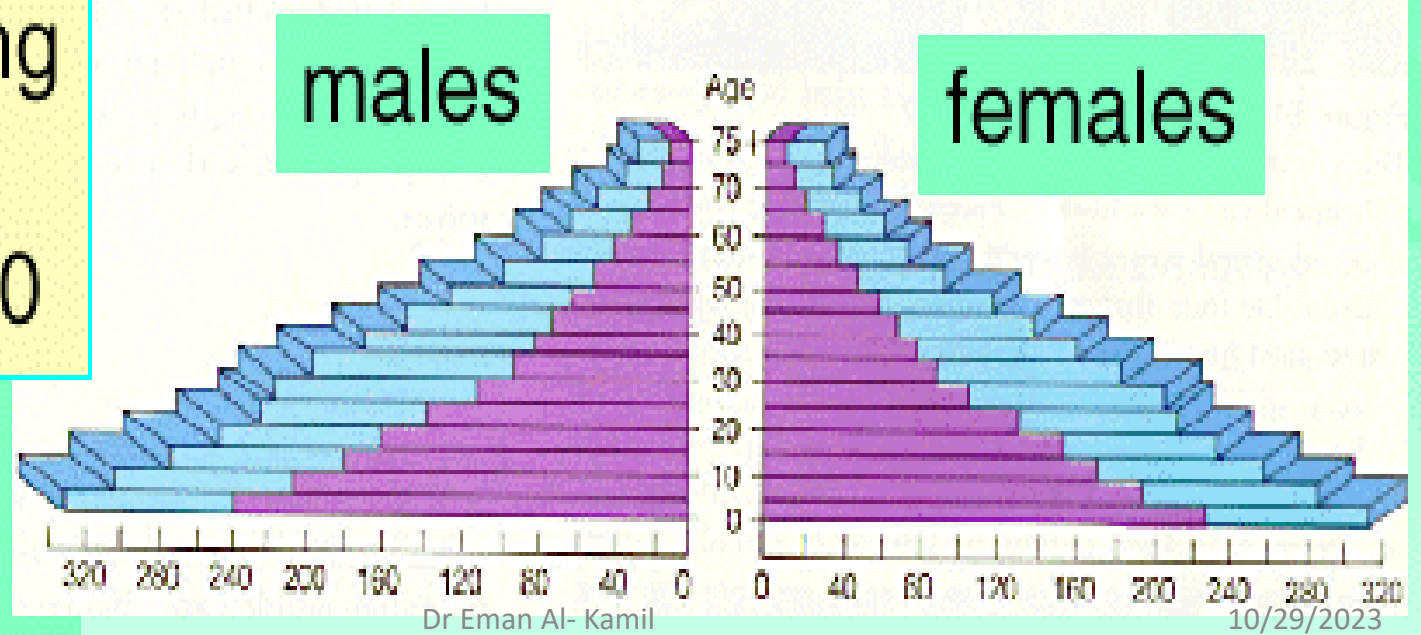
1. picture of a population's age-sex structure, and
2. can also be used for displaying historical and future trends (past, present & future) .
3. The shape of population pyramids vary from country to another and for the same country in different times.
4. The difference is usually attributed to the history of birth and death rates, also migration could play a major role in the shaping of a population pyramid.

- A population pyramid is a special type of bar graph.
- Male and female populations are plotted on the opposite sides.
- Number (or proportion) of males and females in each age group is represented by the length of the horizontal bar.
- Each year a new cohort (group) is born and added to the bottom of the pyramid, while the older cohorts move up as they age.
- The pyramid keeps narrowing with loss of members due to death (assuming no migration in or out).
- Rapidly increasing death rates after age 45 result in a narrowing peak in all population pyramids.

Developed World
1975-2000



Developing World
1975-2000



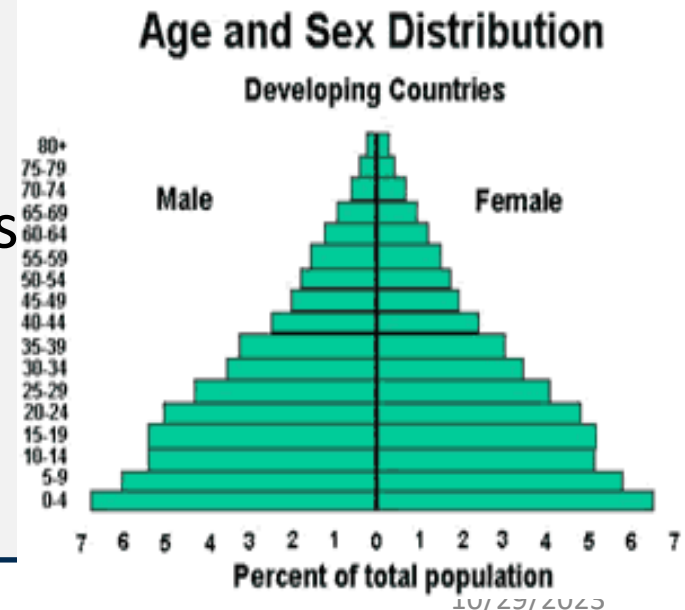
Types of population pyramid

- **Expansive pyramid:** (developing countries):

A population pyramid showing:

- a **broad base** fo notroporp hgih a gntiacidni , ,nerdlihc
- a **rapid rate** of population growth, and
- a **low proportion of older people** .
- larger number or percentage of population in the **younger age** groups
- **Population growth is rapid.**

“Expansive” population distribution



■ **A steady upwards narrowing** show that more people die at each higher age band. This type of pyramid indicates a population in which there is:

- a high birth rate,
- a high death rate and
- a **short life expectancy** .
- This is the typical pattern for **developing countries** and ,
:ot
 - little access to and use of birth control ,
 - **negative environmental factors** (for example, lack of clean water) and
 - **poor access to health care.**

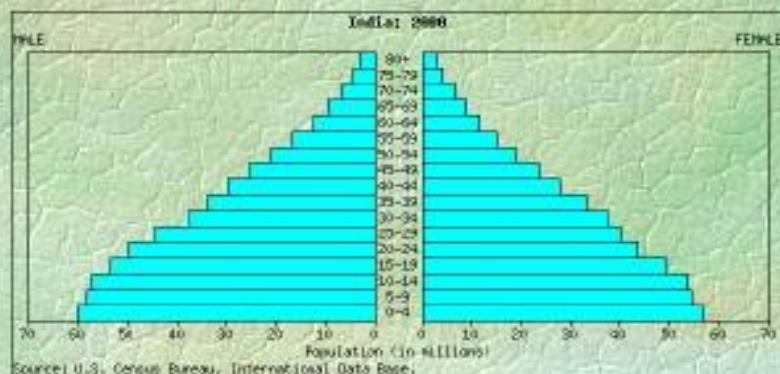
Broad-based Pyramid

Title: India, 2000

Shape: Broad Base - high birth rates
Narrow Top - small elderly pop
- high death rate

Proportion: - Large proportion of young
- high young dependency ratio

Sex Ratio: Balance pyramid - Balance sex ratio

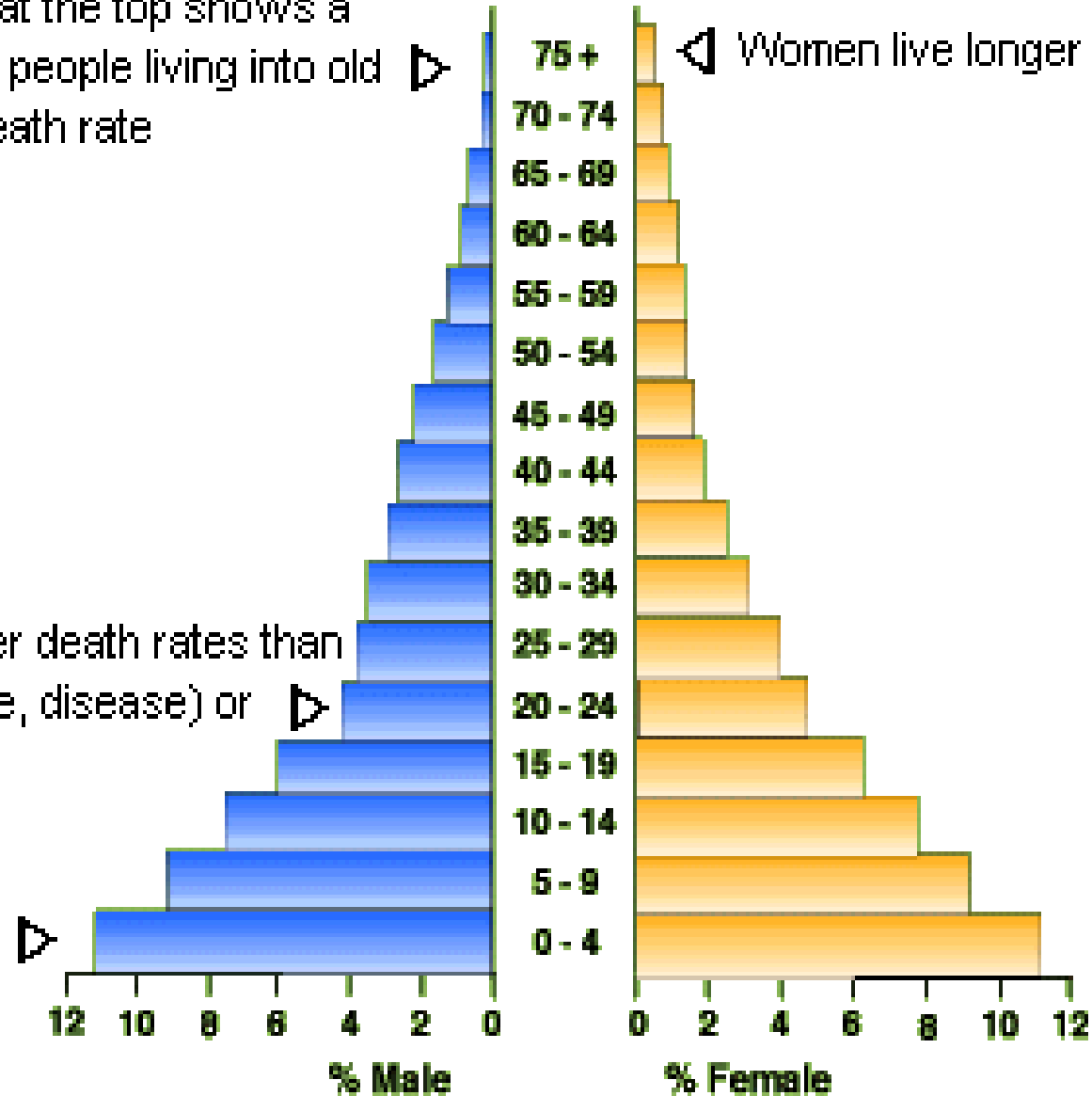


A Typical Developing Country Pyramid

A narrow shape at the top shows a low proportion of people living into old age and a high death rate

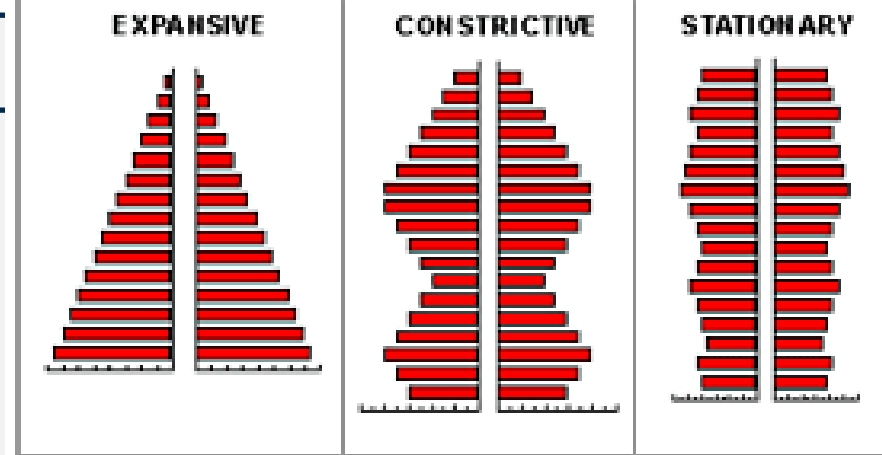
Indents show higher death rates than normal (war, famine, disease) or through emigration

A wide base shows a large number of children (high birth rate)

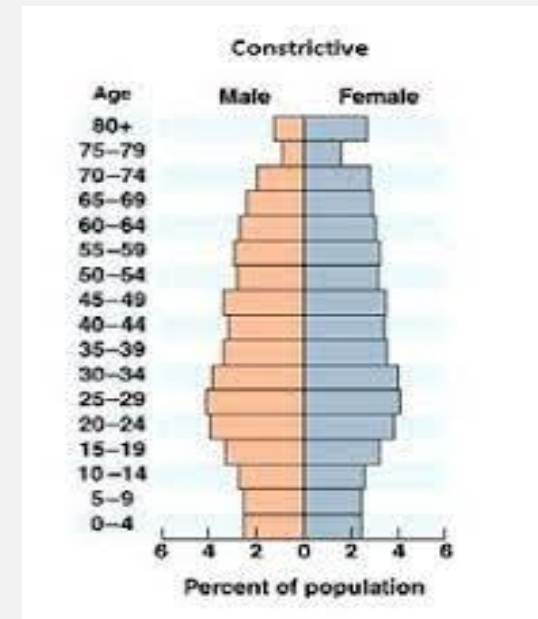


Constrictive pyramid

A population pyramid showing:
(developed country)



- Lower numbers or percentages of younger people .
 - The country will have a **graying population** which means that people are generally older, as the country has:
 - long life expectancy ,
 - a low death rate ,
 - a low birth rate .
 - This pyramid has been occurring more frequently, especially when immigrants are factored out, and



It reflects :

1. a high over-all education
2. easy access and use family planning (birth control,)
3. good health care and
4. few or no negative environmental factors.

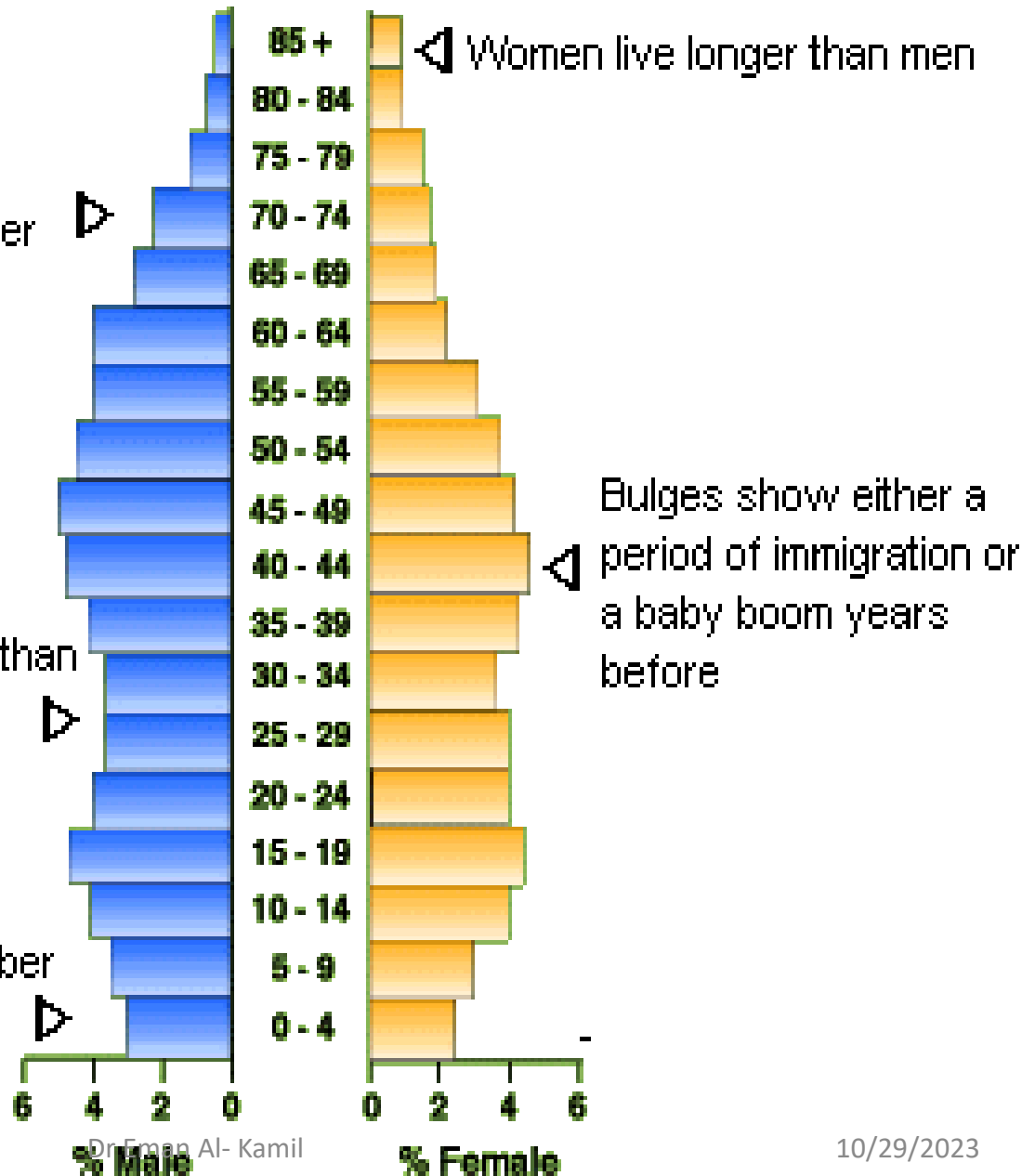
Population growth is negative.

A Typical Developed Country Pyramid

A broad shape at the top shows a high proportion of people living longer

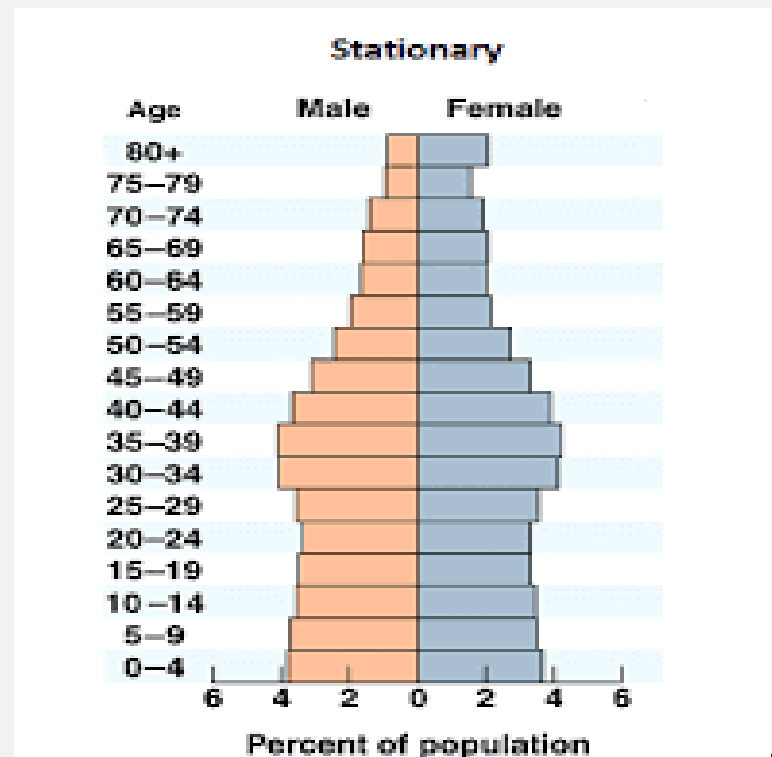
Indents show higher death rates than normal (war, famine, disease) or through emigration

A narrow base shows a small number of children (low birth rate)



• Stationary pyramid

- It shows similar or nearly percentages for almost all age groups.
- A population pyramid typical of countries with **low fertility and low mortality**.
- The population pyramids of the Scandinavian countries tend to fall in this group.
- **population growth is neutral or stable.**

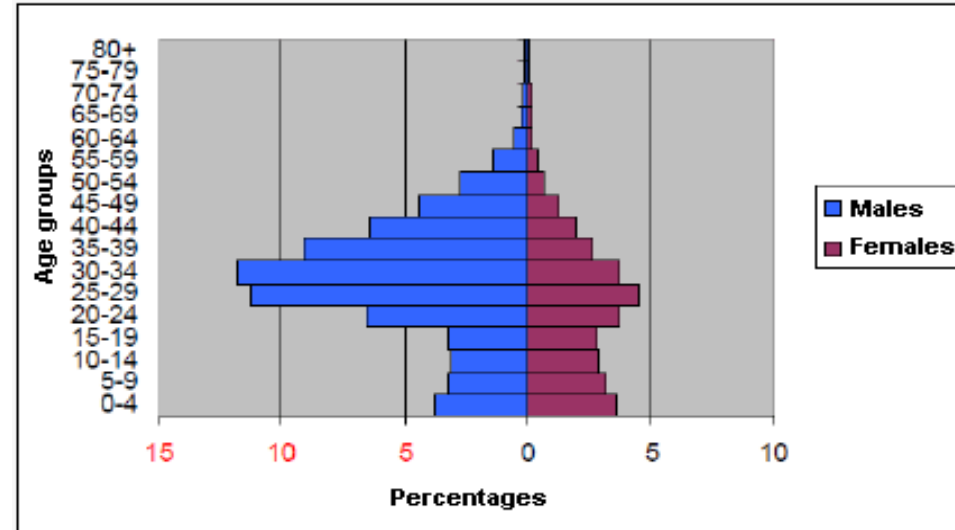


How to read population pyramid ?

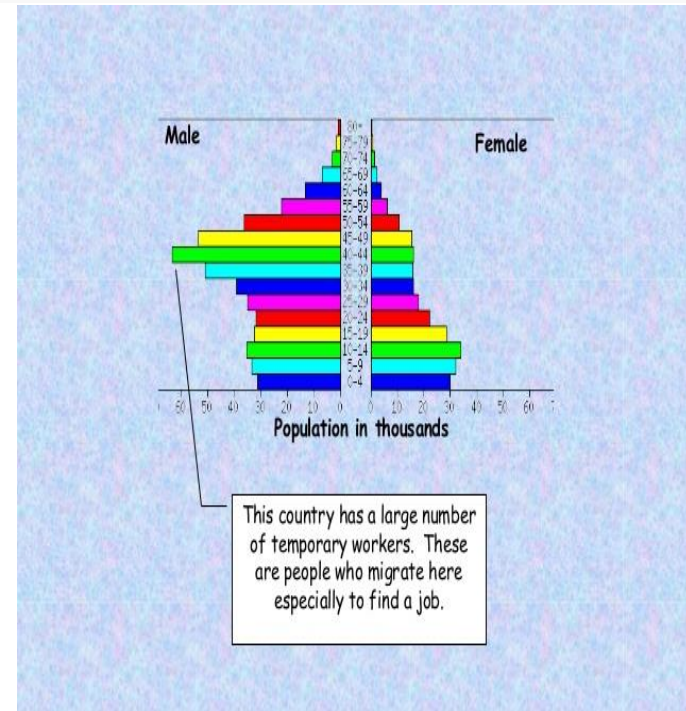
- 1. Width of the base:** birth rate varies with the width of the base. A wide base indicate high birth rate and a narrow base indicate low birth rate.
- 2. Symmetry:** statistically speaking the pyramid should be relatively symmetrical .
Any asymmetry indicates difference in the male and female population.
- 3. Shape of the sides:**
Concave sides indicate high death rate and convex sides indicate low death rate
- 4. Bumps in the sides:** indicates anomaly in the demography of the population .
- 5. Tip** of the pyramid: narrow tip (small % of elderly people)

UAE Population Pyramid

The large number of male in the productive age groups (20-50 yrs) indicates a migrant workforce.



Each pyramid tells a story about the past, present & future of a country & its people.



Uses of population pyramids

- Population pyramids can be used to find the number of **economic dependents** being supported in a particular population .
- In **some developing** countries children start work well before the age of 15 yrs. , and in some **developed countries** it is common to not start work until 30 yrs., and people may work beyond the age of 65yrs.
- In many countries, the government plans the economy in such a way that the **working population can support these dependents**. This number can be further used to **calculate the dependency ratio** in that population.
- Population pyramids can be used **to observe the natural increase, birth, and death rate**.

■ Population pyramids are also useful in **planning for the future**.

■ They can be used in helping to **predict changes in the age structure of the population over the next fifty** years so that plans can be introduced to cope with the predicted changes in human needs; social , economic, health, medical, nutrition, environmental, and educational).

Importance of Population Pyramids

✚ Policy Planning

■ future housing estates

■ future schools

■ future jobs

✚ Comparison with other countries :

~ developed (US) vs developing (India)

The youth bulge

- The youth bulge is a common phenomenon in many developing countries, and in particular, in the least developed countries.
- It is often **due to a stage of development** where a country achieves success in reducing infant mortality, but mothers still have a high fertility rate.
- The result is that a **large proportion of the population is comprised of children and young adults.**
- As the young adults enter the working age, the country's **dependency** will decline the level of average income per capita should increase as a result.

■ If a large proportion of young people cannot find employment and earn satisfactory income, the youth bulge will become a demographic bomb, because a large mass of frustrated youth is likely to become a potential source of social instability .

■ Therefore, one basic measure of a country's success is the youth (un)employment rate.

■ While unemployment rates are naturally higher for young people, nearly 20 percent or even higher.

■ In addition, informality is more prevalent among youth in MENA (Middle East and North Africa) , so even for those who are employed, there may be problems with job quality.

