

الكلية : كلية طب العام الفرع : طب الاسرة والمجتمع المرحلة : الرابعة أستاذ المادة : د بديعه ثامر يحيى اسم المادة باللغة العربية: وبائيات اسم المادة باللغة الانكليزيه :Epidemiology اسم المحاضره الأولى باللغة العربيه : الخصائص السكانية والصحية اسم المحاضره الاولى باللغة الانطليزية :Population and health characteristics

1- **Population and health characteristics:**

Q1- The age and sex distribution of a certain population is given in the following Table:

Age in years	Male	Female	Total
0<1	96	86	182
1-4	358	355	713
5-14	993	1057	2050
15-44	1530	1562	3092
45-64	301	312	613
65 and above	98	119	217
Total	3376	3491	6867

- 1. Describe the Table above and try to compare the relative composition with respect to age and sex. Comment on your findings.
- 2. Draw a population pyramid for this population.
- 3. What type of countries does this population belong to?
- 4. What health problems are expected to be prevailing in such a population?
- 5. What will happen to this distribution if:
 - Fertility declined
 - Mortality declined .:

0 1	
NO	•
501	•

Age in years	Male	Rf%	Female	RF%	Total
0<1	96	2.8	86	2.5	182
1-4	358	10.6	355	10.2	713
5-14	993	29.4	1057	30.3	2050
15-44	1530	45.3	1562	44.7	3092
45-64	301	8.9	312	8.9	613
65 and above	98	2.9	119	3.4	217
Total	3376	99.9	3491	100	6867

1.

• The age distribution have six groups from 0<1 to 65+ according to sex.

• Unequal class interval :
$$0 < 1 = less$$
 than one year

$$1-4 = \text{pre} - \text{school age} = \text{less than 5}$$

 $5-14 = \text{school age}$
 $15-44 = \text{young age}$
 $45-64 = \text{middle age}$
 $65+= \text{elderly}$

- The highest RF% of male is 45.3% at age group (15-44)which near the highest RF % of female at the same age group 44.7% at the same age group .
- The lowest RF% of males is 2.8 % at the age group (0<1) which also near the lowest RF% of females .



2. Developed countries : education and health care to large portion of population



Population Pyramid for a Developed country



4- Health problem

Health problems in developed countries include chronic disease

Health problems in developing countries include related to infant and mother

5- Decline fertility and decline mortality: reduction in fertility is usually associated with a reduction in mortality

Low fertility \rightarrow less people \rightarrow better health \rightarrow less death

Q2- A community has the following data for the year 2012:

Total population	50000
Number of total births (LB+SB)	2200
Number of live births	2000
Number of total deaths	400
Number of deaths during first year of life	120
Number of deaths during first week of life	18
Number of persons who developed disease(x)	100
Number of persons who died from disease(x)	4

Calculate for this population epidemiological parameters related to fertility, morbidity and mortality in the year 2012.

Total population in the same year

= 40\ 1000

No. of live births

General fertility rate = ----- X K

Total no. of women (15 -49)years at child bearing age

no. of live birth in a specific place

Marital specific fertility rate = -----X K

No. of married women age (15 – 49) years in the same place and time

Measurement of morbidity: لاينطبق القانون الاول

no. of new cases of a disease in a year in a given population incidence = ------X K total population at risk in the same year

NO. OF EXIST CASES (OLD + NEW) OF A DISEASE IN A YEAR IN A GIVEN POPULATION Prevalence rate = ------x k\ TOTAL POPULATION AT RISK

= 2\ **1000**

Measurements of mortality:

8\1000

 2- AGE -SPECIFIC DEATH RATE لاينطبق القانون No. of death of an infant at age less than one year
 3- Infant mortality rate = -----X k No. of live births in the same year

= 60 \1000

4- Neonatal mortality rate = ------X K Total no. of live birth in the same year

لا يطبق هذا القانون على السؤال

No. of deaths among infants aged 7 days

1. Early neonatal mortality = ------x k no. of live births in the same year

= 9\1000

No. of death among infants aged between 7 days and 28 days Late neonatal mortality rate = -----Xk Total no. of live births in the same year

لاينطبق القانون على السؤال

No . of deaths among infants aged between 28 days and 1 year Post-neonatal mortality rate=------X K Total no. of live births in the same year

لاينطبق القانون على السؤال

No. of fetal death after 24 weeks of

gestation occurring in a year

Still birth rate = ------ Xk

Total births in the same year

= 90\1000

No. of stillbirths + no. of infant

deaths in the first week after birth in a year

Perinatal mortality rate = -----XK Total births in the same year

= 99.1\1000

No. of deaths of pregnant mother from causes related to pregnancy, delivery and puerperium which occurred among the female population in a given year 10 – maternal mortality rate = ------X 100000 number of total births (live births + stillbirth) which occurred among the population of the given geographic area during the same year

لا ينطبق السؤال على القانون

No. of deaths due to specific cause 11-proportional mortality rate = -----

Total no. of deaths

= 1\1000

No. of deaths due to particular disease

12 – case fatality rate = -----XK Total no. cases diagnosed with the same disease

= 4 %