Research

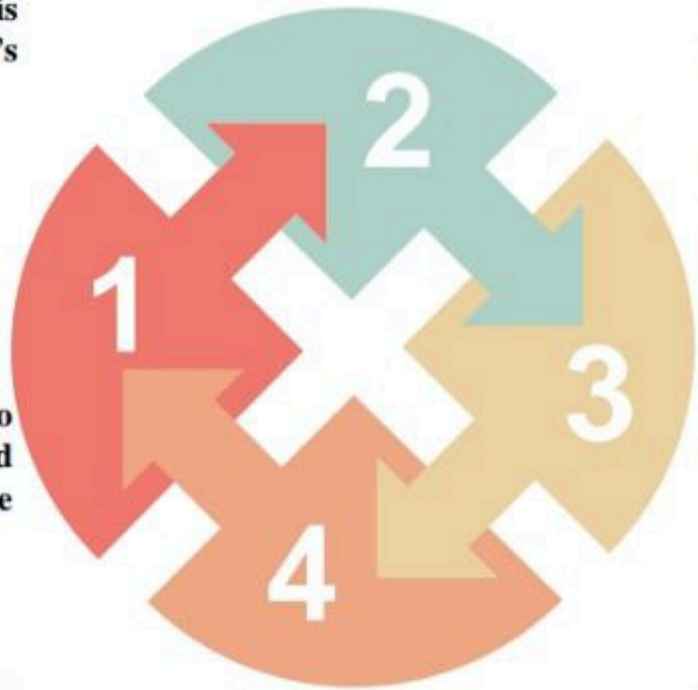
Questions

Question 1: The careful detailed report that is given by clinicians to profiles a single patient's case is called:

A. Case report.
B. Case series.
C. Correlation study.
D. Cross-section study.
E. Cohort study.

Question 2: Which of the following is useful to study the non-fatal and chronic conditions and not suitable to study the rare disease or disease with short duration?

A. Case report.
B. Cohort study.
C. Correlation study.
D. Case series study.
E. Cross-section study.



Question 3: Which of the following is known as prevalence study?

A. Case series.
B. Case report.
C. Case-control study.
D. Cross-section study.
E. Cohort study.

Question 4: First step of research process:

A. Formulate a research problem.
B. Research design.
C. Construct tools for data collection.
D. Select a sample (size & method).
E. Write research proposal.

Case Scenario

Hepatitis B and C Seropositivity among Nursing Students at a Turkish University:

Background: In particular, healthcare workers are at high risk for contracting viral hepatitis. Therefore, preventive measures to minimize occupational exposure to blood borne pathogens are needed to protect both health care workers and nursing students. **Objectives:** The study was conducted to determine the prevalence of Hepatitis B and C infections among nursing students. **Methods:** Venous bloods were obtained from nursing students and were serologically tested using the ELISA method. A questionnaire form was also used to obtain data related to demographic and socio-economic characteristics of the participants. **Results:** 0.7% of the nursing students were serologically positive for HBsAg, 17.0% for Anti-HBs and 7.5% were positive for Anti-HBc (IgG).

1. **What is the type of this epidemiologic study?**
2. **What does the underlined number signify?**

Case scenario or Clinical Correlate

- One hundred patients with cancer tongue were matched for age and sex to one hundred individuals who did not have cancer . Among cases with cancer , 50 cases were smokers , while in those without cancer , 15 only were smokers.
- What is the type of this study?
- .....
  .....
- Calculate two risk measure from this previous data

Questions
(At least 5 questions with answers and explanations)

Q1 Enumerate basic steps of CCS?

Q2 Describe source of control in CCS?

Q3 Mention main outcomes of CCS?

Q4 Outline main advantages of CCS?

Q5 Outline main disadvantages of CCS?

Reference:

Brain storming question or another related case scenario

- Fifty persons diagnosed with obesity and another fifty without obesity were asked if they consume excess chocolates. From the first group 20 persons confirmed chocolate consumption whiles they were 5 in the second group.
- What is the type of this study?
- .....
  .....
- Calculate two risk measure from this previous data

Reference: https://www.genpharmservices.com/aspire-educational-series-mitochondrial-myopathy-mm-part-13/

Questions
(At least 5 questions with answers and explanations)

Q1. In a cohort study, an exposure is assessed and then participants are :-

A) followed prospectively to observe development of the outcome.

B) asked retrospectively to check occurrence of the outcome.

C) divided into groups according to outcome.

D) treated from the outcome.

E) randomly divided into groups.

Answer :- **A**

Reference:

Questions

Q2.Cohort Studies generally look at which of the following?

A) Determining the sensitivity and specificity of diagnostic methods.

B) Identifying patient characteristics or risk factors associated with a disease or outcome.

C) Variations among the clinical manifestations of patients with a disease.

D)The impact of blinding or masking a study population.

E) Impact of intervention on the outcome.

Answer :- **B**

Questions

Q3. A Study involved 100 contraceptive pills users and 100 non users, both were followed up for 10 years to study relationship between oral contraceptive pills and breast cancer. Among pills users group, there were 20 cases reported for breast cancer while 15 cases were reported in non-pill users group. The correct calculated relative risk is:

A) RR=3/4

B) RR=1/2

C) RR=4/3

D) RR=1/5

E) RR= 2/5

- **Answer: C**

Reference:

Questions

Q4. A Study involved 100 contraceptive pills users and 100 non users, both were followed up for 10 years to study relationship between oral contraceptive pills and breast cancer. Among pills users group, there were 20 cases reported for breast cancer while 15 cases were reported in non-pill users group. The correct calculated overall incidence is:

A) 20/100

B) 15/100

C) 35/100

D) 35/200

E) 5/100

- Answer: **D**

Reference:

Questions

Q5. A Study involved 100 contraceptive pills users and 100 non users, both were followed up for 10 years to study relationship between oral contraceptive pills and breast cancer. Among pills users group, there were 20 cases reported for breast cancer while 15 cases were reported in non-pill users group. The correct calculated attributable risk is:

A) 20/100

B) 15/100

C) 35/100

D) 35/200

E) 5/100

- Answer: **E**

Reference:

Questions

Q6.In a cohort study, the risk ratio of developing diabetes was 0.86 when comparing consumers of tea (the exposed) to those who did not drink tea (the unexposed). Which one statement is correct?

A) The tea drinkers have lower risk of developing diabetes.

B) The tea drinkers have higher risk of developing diabetes.

C) Based on the information given we cannot tell if the observed difference in disease risk is the result of chance.

D) The risk ratio is close to the value one, so there is no difference in disease risk between the two group.

E) The tea drinkers have equal risk of developing diabetes.

Answer :- **A**

Reference:

Questions

Q7. An investigator takes a sample of healthy individuals, record their ongoing solar exposure, and relate that to the subsequent occurrence of skin cancer in the same group.

A) Case-control study.

B) Ecological study.

C) Cohort study.

D) Cross-sectional study.

E) An intervention study.

Answer :- **C**

Brain storming question or another related case scenario

- This prospective cohort study explored "the joint effects of sleep quality and sleep duration on the development of coronary heart disease." The study included 60,586 participants and an association was shown between increased risk of coronary heart disease and individuals who experienced short sleep duration and poor sleep quality. Long sleep duration did not demonstrate a significant association.
- So exposure is **short sleep duration and poor sleep quality**
- Outcome is **coronary heart disease**

Reference:

Questions
"sampling"

1.A computer generates 100 random numbers, and 100 people whose names correspond with the numbers on the list are chosen What is the type of sampling technique?

A.Simple random sample

B.Systematic random sample

C.Cluster sample

D.Multi-stage random sample

E.Stratified random sample

Questions

2. A researcher wishes to investigate covid 19 immunization coverage in Egypt. The best sampling technique is:

A.Simple random sample

B.Systematic random sample

C.Cluster sample

D.Multi-stage random sample

E.Stratified random sample

Answer is

Questions

3. Number of covid 19 vaccine doses for each health care workers in a set of data is considered as :

A.quantitative discrete

B.qualitative variable

C.quantitiative continous

D.nominal variable

E.ordinal variable

Questions

4.Heamoglobin variable in blood coded as (Aneamic & normal) was examined in two groups. This variable can be represented in tables by :

A. Mean and standard deviation

B. Median and range

C. Number and percent

D. Variance

E. Ratio

Questions

5. The best summary measure for body mass index variable in a set of cardiac patients when the variable is normally distributed is :

A. Median

B. Mean

C. Mode

D. Frequency

E. Percentage

Questions

1. You are preparing a report to present mortality & morbidity from covid 19 according to age groups(<20 years,20-40,>40) during the last 12 months. Which graph best describes these data?

A) Simple bar chart

B) Multiple bar chart

C) Frequency polygon

D) Histogram

E) Pie chart

Q2. Serum cholesterol levels in a group of young adults found to be approximately normally distributed with mean level 170 mg/dl and standard deviation 8 mg/dl. which of the following intervals include approximately 68% of serum cholesterol in this group؟

A)160-180 mg/dl

B)162-178 mg/dl

C)150-190 mg/dl

D)154-186 mg/dl

E)140-200 mg/dl

Questions

3. **Graph showing the relation between serum calcium and bone mineral density variables is called:**

(a) Scatter diagram
(b) Frequency polygon
(c) Picture chart
(d) Histogram
(e) pie chart

4. Which of the following data is best described by Histogram?

a. Height of infants in cm of

b. Gender of a group of patients

c. Type of treatment

d. Severity of pain

e. Height of patients (short-average-tall)

Case scenario or Clinical Correlate

On testing the results of mammography as screening test for diagnosis of breast cancer , a study was performed on 1000 cases of high risk group of which 100 cases were eventually determined by biopsy to have cancer and 200 were determined by mammography to be positive among them 50 were also confirmed by biopsy.

Calculate diagnostic accuracy of mammography compared to biopsy?

Reference:

Questions
(At least 5 questions with answers and explanations)

Q1 Enumerate five differences between screening test & diagnostic test?

Q2 Describe different types of Screening?

Q3 Outline requirements of ideal screening test?

Q4 Mention 4 requirements of screening program regarding disease under screening?

Q5 Define different domains of validity?

Reference:

Brain storming question or another related case scenario

- Calculate & interpret the validity of X ray examination in the screening of Oral Cancer.
- Calculate the prevalence of oral cancer.

Reference: https://www.genpharmservices.com/aspire-educational-series-mitochondrial-myopathy-mm-part-13/

X ray examination	Oral cancer		Total
	Positive	Negative	
Positive	35	190	225
Negative	15	760	775
Total	50	950	1000

Reference:

Case Scenario

In 2000, a chest hospital manager decided to perform TB screening in the city for detection of cases. Sputum smear was used as a screening test. The total number of the population was 500 000.

The screening detected 5000 cases. At the end of the year, rescreening resulted in additional 50 new cases.

- **Calculate prevalence rate**
- **Calculate incidence rate**

Case Scenario

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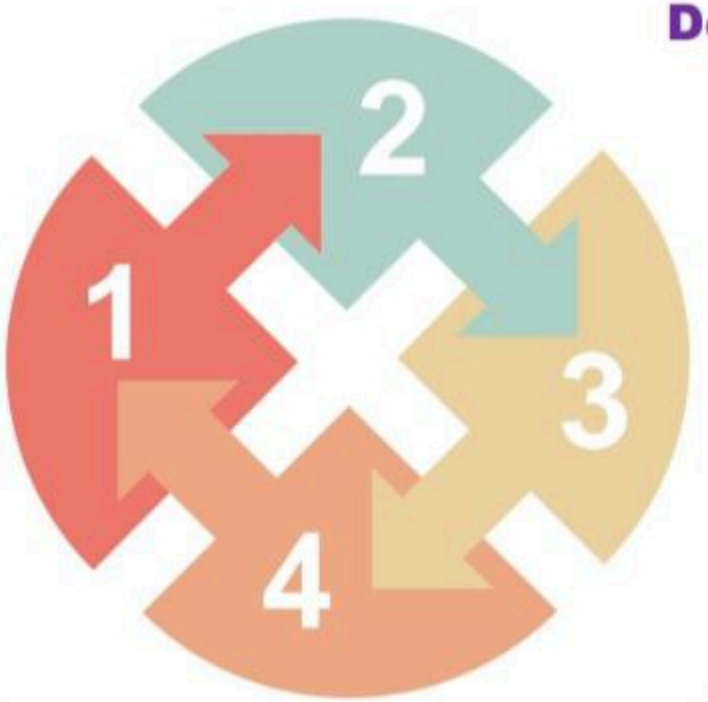
- **Calculate prevalence rate**
- **Calculate incidence rate**

Questions

What is the meaning of morbidity statistics and give examples?

Define incidence rate?



Define prevalence rate?

Questions

What are the causes of maternal mortality rate?

What are the causes of still birth?

What are the causes of infant mortality rate?

What are the causes of child mortality rate?

Reference: