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SUBJECT = RESEARCH METHODOLOGY

PROGRAMME = BS DENTAL TECHNOLOGY (6TH SEMESTER)

QNO 5:

ANSWERE:

WHAT IS HYPOTHESES

A testable theory, or statement of belief used in evaluation of a population parameter of interest e.g mean or proportion

NULL HYPOTHESIS

There is no difference between the two regimens in term of improvement (null hypothesis)

A null hypothesis is usually a statement that there is no difference between groups are that one factor is not dependent on another and correspond to the no answer.

ALTERNATIVE HYPOTHESIS

There is a difference in term of improvement achieved by a three days treatment with the ORS and that of the herbal solution (alternative hypothesis).

STEP IN HYPOTHESIS TESTING:

1. Statement of research question in terms of statistical hypothesis (null and alternative hypothesis)
2. Selection of an appropriate level of significance. The significance level is the risk we are willing to take that a sample which showed a difference was miss leading. 5% significance level means that we are ready to take a 5% chance of wrong results.
3. Choosing an appropriate statistics t test, z test for continuous data, chi square for proportion etc.
   Test statistics is computed from the sample data and is used to determine whether the null hypothesis should be rejected or retained.
4. performing calculation and obtaining p value
5. drawing conclusion, rejecting null hypothesis if the p value is test less then the set significance level.

QNO 4:

ANSWER:

PREVALENCE:

 in epidemiology is the proportion of a particular population found to be affected by a medical condition (typically a disease or a risk factor such as smoking or seat-belt use) at a specific time. It is derived by comparing the number of people found to have the condition with the total number of people studied, and is usually expressed as a fraction, a percentage, or the number of cases per 10,000 or 100,000 people.

POINT PREVALENCE:

 is a measure of the proportion of people in a population who have a disease or condition at a particular time, such as a particular date. It is like a snapshot of the disease in time. It can be used for statistics on the occurrence of chronic diseases. This is in contrast to period prevalence which is a measure of the proportion of people in a population who have a disease or condition over a specific period of time, say a season, or a year.

PERIOD PREVALENCE:

It represent the proportion of cases that exist within population at any point during a specified period of time.

The numerator thus includes cases that were present at the start of the period plus new cases that developed during this time

e.g. frequency of patients receiving psychiatric RX between may 31- December 01 2008.

QNO 1. :

ANSWER:

MEAN =

48, 50, 68, 70, 77, 79, 89, 90, 92 = 663/9 = 73.66

MODE = No mode

MEDIAN = 48, 50, 68, 70, 77, 79, 89, 90, 92

Median = 77

QNO 3.

ANSWER:

1) **RELATIVE RISK:**
   Incidence in exposed individual s = a/a +b or proportion of exposed people who developed the disease
   Incidence is non exposed individual s = c/c + d or proportion of non exposed people who developed disease
   Relative risk = incidence in exposed/incidence in non exposed

   Relative risk = a/a + b /c/c +d
   Example   CHD + CHD –   total
   Smoker   112   176   288
   Non smoker 88   224   312

   Incidence in exposed   =   a/a + b = 112/288 = 0.38
   Incidence in non exposed =   c/c + d = 88/312= 0.28

   Relative risk = 0.38/0.28=1.38

2) ODDS RATIO:

Incidence cannot be measure in case control studies because we start with the disease people (cases) and non diseased people (control) hence we calculate or

Example

	Case	control	
Exposed	a	b	a+b
Non exposed	c	d	c+d

Or= a/c / b/d or ad/bc

			Total
Exposed	140a	370 b	510
Non exposed	40c	234d	274

Odds = 140/40 = 3.5

0dds = 370/234 = 1.6

0r = 3.5/ 1.6 = 2.2

Compare to the control the odds of being a passive smoker are 2.2 > in ca brest case.

QNO2

ANSWER

PRESENTATION OF DATA

This refers to the organization of data into tables, graphs or charts, so that logical and statistical conclusion can be derived from the collected measurement

Data may be present in three methods

Textual

Tubular or

Graphical

TEXTUAL PRESENTATION

The data getherd are praesented in paragraphs form.

Data are written and read.

It is a combination of text in figure

TUBULAR PRESENTATION

Method a presenting data using the statistical table

A symmetric organization of data in colums and rows.