VARIABLES AND ITS TYPES

It allows us to describe the average person to see how well that description fits or does not fits other people, and to see how much we can generalize our findings from studying a few people.

Statistics

Descriptive
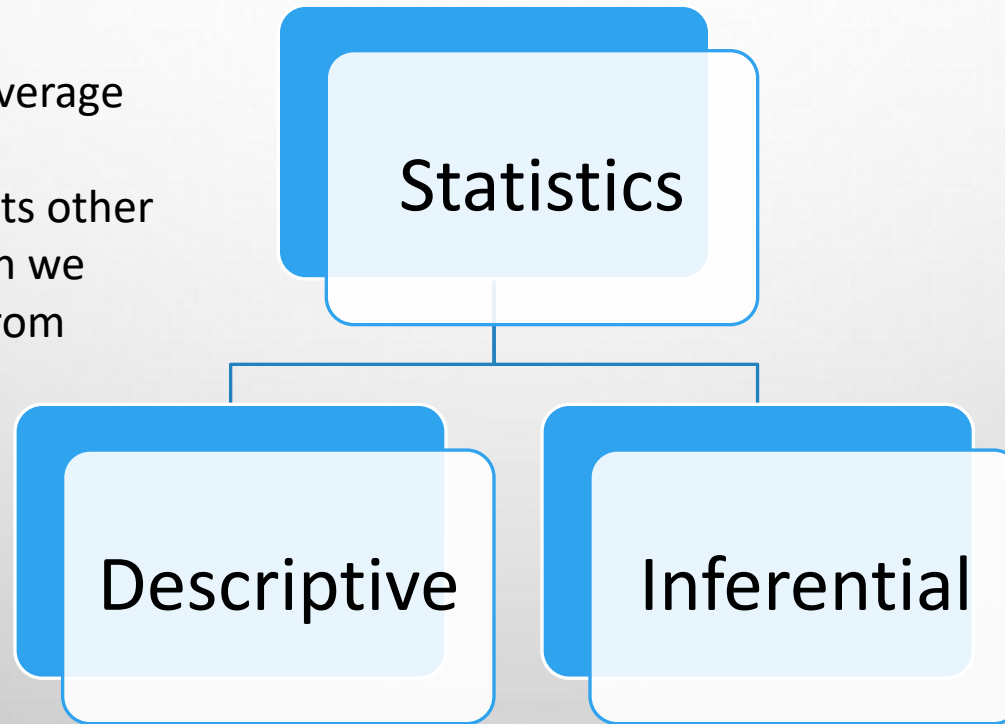
Inferential

Descriptive Statistics

- *Presentation*

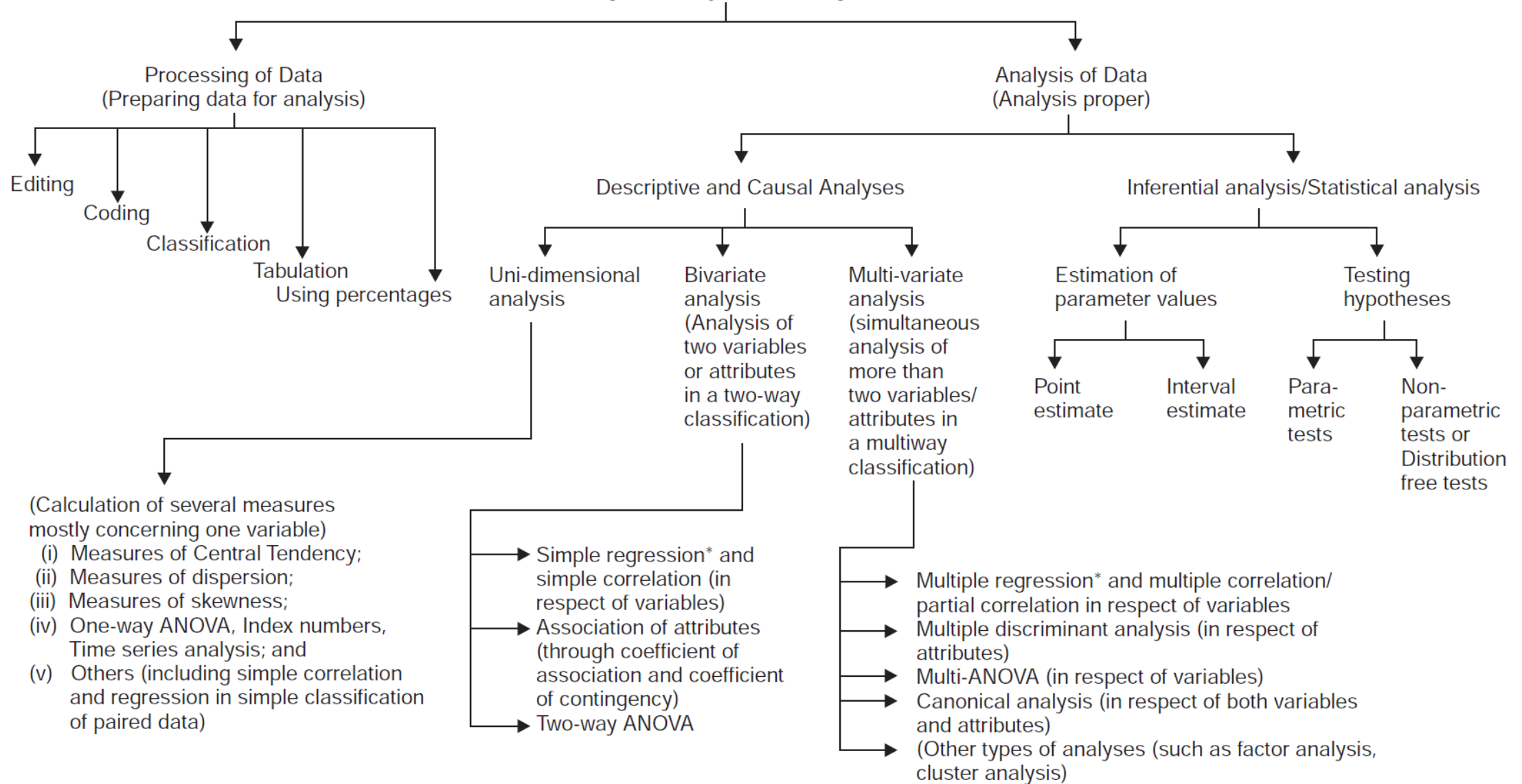- *Organization*

- *Summarization*

Inferential Statistics

- *Generalize from our sample of data to a large group of subjects*

Analysis of Data
(in a broad general way can be categorised into)

Processing of Data
(Preparing data for analysis)

Editing

Coding

Classification

Tabulation

Using percentages

(Calculation of several measures
mostly concerning one variable)
 (i) Measures of Central Tendency;
 (ii) Measures of dispersion;
(iii) Measures of skewness;
(iv) One-way ANOVA, Index numbers,
       Time series analysis; and
 (v) Others (including simple correlation
       and regression in simple classification
       of paired data)

Analysis of Data
(Analysis proper)

Descriptive and Causal Analyses

Uni-dimensional analysis

Bivariate analysis (Analysis of two variables or attributes in a two-way classification)

Multi-variate analysis (simultaneous analysis of more than two variables/ attributes in a multiway classification)

Simple regression* and simple correlation (in respect of variables)

Association of attributes (through coefficient of association and coefficient of contingency)

Two-way ANOVA

Multiple regression* and multiple correlation/ partial correlation in respect of variables

Multiple discriminant analysis (in respect of attributes)

Multi-ANOVA (in respect of variables)

Canonical analysis (in respect of both variables and attributes)

(Other types of analyses (such as factor analysis, cluster analysis)

Inferential analysis/Statistical analysis

Estimation of parameter values

Point estimate

Interval estimate

Testing hypotheses

Para-metric tests

Non-parametric tests or Distribution free tests

* Regression analysis (whether simple or multiple) is termed as Causal analysis whereas correlation analysis indicates simply co-variation between two or more variables.

Variables

- *Simply what is being observed or measured*

- *The observation made on variables are stored in the form of data*

- *Things that are changing in an experiments*

- *It is any factor, trait , state , condition which exist in differing amounts or types.*

- *Variables are quantitative or qualitative which varies from individual to another*