Key concepts

- Population: Collection of ALL items/subjects of interest
- Sample: Part of a population selected to represent the population
  - Could be random or non-random
- Variable: characteristics that vary from subject to subject or from time to time
- Datum: Raw fact/information collected on one individual of interest, on a variable of interest
  - Data – Facts on two or more individuals

Types of data/variables

- Qualitative: The values of a qualitative variable divide the population into categories e.g;- Sex - Male, Female

- Quantitative: The values of a quantitative variable can either be:
  - Discrete - Characterized by gaps (interruptions) in the values that it can assume e.g number of lesions, number of children,
  - Continuous - can assume any value on the Real number line e.g. Various measurements on individuals such as weight, age, gestation age

Types of data/variables (Steven's) (Measurement scales)

- Variables are classified according to the sophistication in which they are measured
- Nominal:
  - The data are in the form of labels' dividing the population into categories.
  - There is no <u>order</u> between the various values of the variable.
  - E.g. sex, race, religion, county of origin
- Ordinal:
  - The data are in the form of 'ranks'.
  - There is <u>order</u> between the values of the variable but there is no sensible arithmetic <u>difference</u>
  - E.g. Severity of oedema, position in race

Types of data (Contd)

- Interval:
  - The data are usually in form of measurements on some scale
  - Apart from having <u>order</u> between the values of the variable, there is sensible arithmetic difference; but the zero is arbitrary
  - E.g. Temperature, calendar dates, social class, personality scales

- Ratio:
  - The data are also usually in the form of measurements
  - In this case the zero is fixed.
  - E.g. Age, Weight, height