

Data

A collection of information; a result of observation, measurement or experiment. It may consist of words, numbers or images.

What is a variable?

Any characteristic of the population being studied or observed.

Qualitative and Quantitative Data

Qualitative data is represented using numbers

Quantitative data cannot be measured

Discrete and Continuous Variables

Discrete variables is the result of a count and is only represented using whole numbers

Continuous variables are measured and can take on any value

Components of a Reliability Assessment

Author's credentials

The reason the data was collected

How the data was collected

How up-to-date the data is

Other expert opinions

Sample vs Population

A **sample** is the part of the population that is observed or measured.

The **population** is the entire group you want to know about in a study

Types of Samples

A **simple random sample** requires that every selection is equally likely to be selected, and every combination of selections is equally likely of being selected

A **systematic random sample** has a random starting point. Every nth number is selected for inclusion in the sample

A **stratified random sample** requires that data be divided into groups and a random sample from each group is taken

A **cluster random sample** requires that the data be divided into groups. A random sample of the groups is selected, and each member of the selected groups are chosen for the sample.

A **multi-stage** random sample requires the population be divided into groups. Then, a random sample of groups is chosen, then a random sample of members from each group is selected.

A **convenience sample** is a sample that is used because it is convenient.

A **voluntary random sample** is any sample that is made by making a general appeal for participants.

Types of Questions

An **open question** allows the respondent to answer in their own words

A **closed question** requires the respondent to choose from a given list of alternatives

Types of Questions (cont)

An **information question** is a type of closed question used to collect objective data about a subject

A **rating question** is a type of closed question that requires the respondent to rate something according to a scale

A **ranking question** is a type of closed question that requires the respondent to sort a list of alternatives into their preferred order

A **checklist question** is a type of closed question that gives the respondent a list of alternatives a list of alternatives and allows them to choose as many or few as they like

Types of Bias

A **sampling bias** is when the sample chosen does not accurately represent the entire population

Non-response bias occurs when the results are influenced because some of the surveys are not returned at all, or all of the questions are not answered

Household bias occurs when one type of respondent is over-represented because groups of different sizes are surveyed equally, so that the smaller group gets more representatives in the sample than they should

Response bias occurs when factors in the sampling influence the result

Bias Assessment Components

What is the sample size?

What method was used to collect data?

Who funded the study?