

## Analyse data

Analysing data to summarise it and look for patterns is an important part of every evaluation.

The methods for doing this have been grouped into two categories - quantitative data (number) and qualitative data (text, images).

## Methods

### Numeric analysis

- Analysing numeric data such as cost, frequency, physical characteristics.

- Correlation

Correlation is a statistical measure ranging from +1.0 to -1.0, represented by 'r', that indicates how strongly two or more variables are related and whether that relationship is positive or negative.

- Crosstabulations

Crosstabulation (or crosstab) is a basic part of survey research in which researchers can get an indication of the frequency of two variables (e.g. gender or income, and frequency of school attendance) occurring at the same time.

- Data mining

Data mining is the systematic process of discovering patterns in data sets through the use of computer algorithms.

- Exploratory techniques

Taking a 'first look' at a dataset by summarising its main characteristics, often by using visual methods.

- Frequency tables

A frequency table provides collected data values arranged in ascending order of magnitude, along with their corresponding frequencies.

- Measures of central tendency

Measures of Central Tendency provide a summary measure that attempts to describe a whole set of data with a single value that represents the middle or centre of its distribution.

- Measures of dispersion

Measures of dispersion provide information about how much variation there is in the data, including the range, inter-quartile range and the standard deviation.

- Multivariate descriptive

Multivariate descriptive statistics involves analysing relationships between more than two variables.

- [Non-parametric inferential statistics](#)

Inferential statistics suggest statements or make predictions about a population based on a sample from that population. Non-parametric tests relate to data that are flexible and do not follow a normal distribution.

- [Parametric inferential statistics](#)

Parametric inferential tests are carried out on data that follow certain parameters.

- [Summary statistics](#)

Summary statistics provide a quick summary of data and are particularly useful for comparing one project to another, or before and after.

- [Time series analysis](#)

A time series is a collection of observations of well-defined data items obtained through repeated measurements over time.

## Textual analysis

- Analysing words, either spoken or written, including questionnaire responses, interviews, and documents.

- [Content analysis](#)

Content analysis is a research method in the social sciences used to reduce large amounts of unstructured textual content into manageable data relevant to the (evaluation) research questions.

- [Thematic coding](#)

Thematic coding is a form of qualitative analysis that involves recording or identifying passages of text or images that are linked by a common theme or idea allowing you to index the text into categories and therefore establish a “framework of thematic

- [Framework Matrices](#)

A framework matrix is a way of summarizing and analyzing qualitative data in a table of rows and columns.

- [Timelines and time-ordered matrices](#)

Timelines and time-ordered matrices are useful ways of displaying and analysing time-related data.

## Resources

## Websites

- [WISE: Web Interface for Statistics Education](#)

WISE's website organises a large amount of statistics resources available on the web into one central place.

## Tools

- For an overview of specialist tools for qualitative data analysis, see the [CAQDAS](#) site at the University of Surrey which compares ten packages including Atlas.Ti, HyperResearch and NVivo.