Population

Contains all items of interest that one seeks to study.

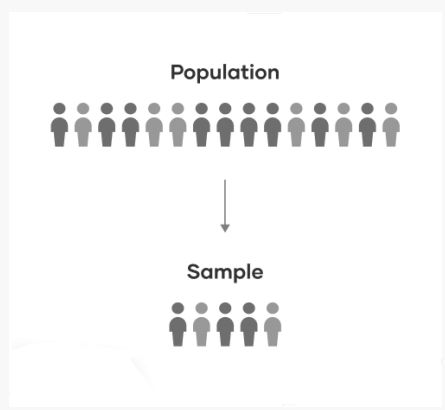A **parameter** summarizes the value for a specific variable.

Sample

Is a subset of the population.

Is analysed to estimate characteristics of an entire population.

The measurable quality is called a **statistic**.

Reports have a margin of error and confidence interval.

Population vs Sample

Types of variables

Quantitative	Qualitative
Data represent a counted or measured quantity	Data represent categories
Discrete Data that arise from a counting process.	
Continuous Data that arise from a measuring process	

Levels of measurement

THE FOUR LEVELS OF MEASUREMENT:

	Nominal	Ordinal	Interval	Ratio
Categorizes and labels variables	✓	✓	✓	✓
Ranks categories in order		✓	✓	✓
Has known, equal intervals			✓	✓
Has a true or meaningful zero				✓

Organizing and visualizing variables

Tables and charts for categorical data	Tables and charts for numerical data
Summary table	Stem-and-leaf display
Contingency table	Histogram
Bar chart	Percentage polygon
Pie chart	Cumulative percentage polygon (Ogive)
Doughnut chart	
Pareto chart	