

Unit 4 *Sampling*

Introduction

Learning objectives

Here we look at finding representative samples of data from which to make conclusions or determine trends. After studying this unit you should

- understand how to avoid bias in questions
- understand what is meant by a random sample
- appreciate the concept of stratified samples
- know how to use systematic and cluster samples and appreciate their strengths and weaknesses.

Notes

We often hear about conclusions drawn from experiments (for example, medical, climatic or political) but little about either the size of the sample being used or whether it is truly representative.

Key points

- You should avoid bias in questions on questionnaires.
- To be representative of the whole population or interviewees, a sample needs to be random and also stratified if there are different groups in the population.

Facts to remember

For a sample to be truly random, each member of the population must have an equal chance of being chosen.

Glossary of terms

Biased questions: questions that encourage one particular response rather than being truly 'open'

Population: all the members of a group

Sample: a subset of the population

Random sample: sample where each member of the population has an equal chance of being included in the sample

Systematic sample: sample in which members of the population are chosen at regular intervals

Stratified sample: a sample in which the population can be divided into 2 or more distinct groups. (For example, pupils in a primary school will be divided into Reception, Year 1, etc.)

Quota sample: the sample comprises a certain number of participants from different categories (for example, age groups, geographic groups)

Cluster sample: subset of a large population from where a sample is taken.