Sampling theory
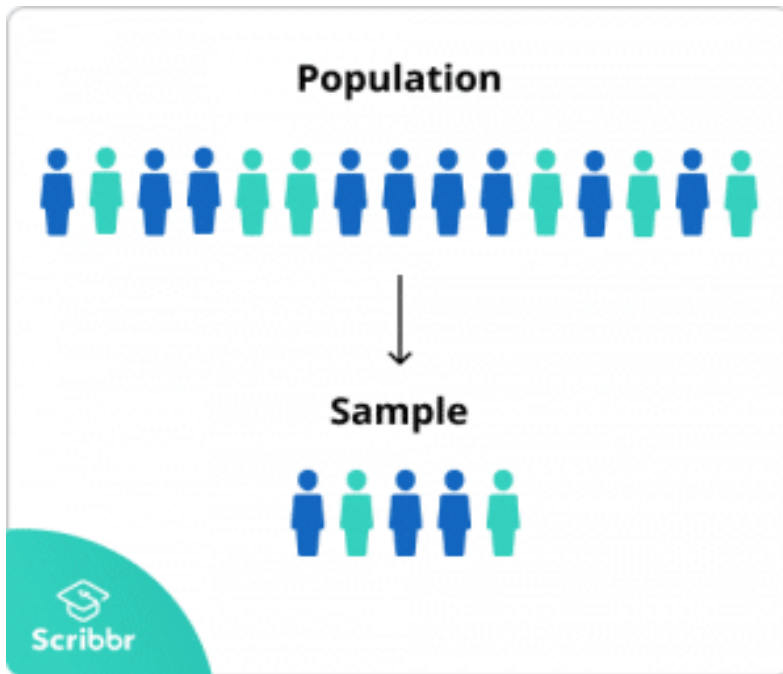# By
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BASIC TERMINOLOGIES

Population – The group of individuals understudy is called as population or universe

Population size – N

Sample – A finite subset of statistical individuals in a population is called as sample

Sample size – n ($n \leq N$)

Sampling unit – An element or a group elements which is chosen as a unit for the purpose of enumeration

TYPES OF SURVEY

- Census survey(complete enumeration)
- Sample survey
- Principles of sample survey are statistical regularity, validity and optimization

ADVANTAGES OF SAMPLING OVER CENSUS SURVEY

- Less time
- Reduced cost
- Greater accuracy
- Greater scope
- If population is too large
- Testing is destructive
- If population is hypothetical

TYPES OF SAMPLING

Probability sampling	Non-probability sampling
Simple random sampling	Quota sampling
Systematic sampling	Purposive sampling
Cluster sampling	Judgement sampling
Two-stage and multistage sampling	Snowball sampling

QUESTIONNAIRE AND ITS CHARACTERISTICS

- A list of questions to be answered by respondent is called a questionnaire.
- **Characteristic of good questionnaire**
- Questions should be clear in meaning
- Questions should be brief
- There should not be ambiguity
- No chance of guessing
- No chance of bias from interviewer

Sampling Frame

A list of sampling units is called as sampling frame

Important characteristics of sampling frame

- Only relevant units should be listed
- It should cover entire population
- It should be up-to-date
- Free from ambiguity
- Free from error of duplication

SAMPLING AND NON-SAMPLING ERRORS

Sampling errors

- Faulty selection of sample
- Substitution in non-response
- Faulty demarcation of sampling units
- Improper choice of statistics for estimating parameter

NON-SAMPLING ERRORS

Reasons of Non-sampling errors

- Faulty planning and definition

- Response errors

- Non-response biases

- Errors in coverage

- Compiling errors

- Publication errors

QUESTIONS

- Interviewing all members of a given population is called sample or census method.
- Which of the sampling method is a probability method?
- For sampling which one should be up-to-date, complete and affordable?
- Which one of the method is generally used in qualitative sampling?
- Which errors are present in both sample as well as in census survey?
- Which error is more serious ,sampling or non-sampling?

Thank you