

Lecture 01: population and sampling In research

In research, **population** and **sampling** are foundational concepts used to ensure that findings are valid, reliable, and generalizable. Here's an overview:

1. Population

- **Definition:** The *population* is the complete set of individuals, items, or data that possess some common characteristic of interest in a research study.
- **Types:**
 - **Target population:** The entire group the researcher wants to draw conclusions about.
 - **Accessible population:** The portion of the target population the researcher can actually reach or study.

✚ *Example:* In a study on Algerian university students' reading habits, the target population is all university students in Algeria. The accessible population might be students from three selected universities.

2. Sampling

- **Definition:** Sampling is the process of selecting a subset (sample) from the population to represent the whole.
- **Purpose:** To draw conclusions about the population without studying every individual, which saves time and resources.

Types of Sampling

A. Probability Sampling (random selection – more scientific and unbiased)

- **Simple random sampling:** Everyone has an equal chance.
- **Stratified sampling:** The population is divided into subgroups (strata), and samples are taken from each.
- **Systematic sampling:** Every *n*th individual is selected.

- **Cluster sampling:** Entire groups or clusters (e.g., schools, classes) are randomly selected.

B. Non-probability Sampling (based on researcher's judgment or convenience)

- **Convenience sampling:** Using whoever is easily available.
 - **Purposive sampling:** Selecting individuals based on specific characteristics.
 - **Snowball sampling:** Existing participants recruit future participants (common in hard-to-reach populations).
 - **Quota sampling:** Ensuring the sample meets certain quotas (e.g., 50% male, 50% female).
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Importance in Research

- Ensures **representativeness**.
- Allows for **generalization** of results.
- Minimizes **bias** when done properly.
- Determines the **validity** and **reliability** of findings.