

How to Collect the Right Data from the Right People

Welcome to week 5. This presentation will guide you through effective sampling and data collection techniques to ensure your research captures accurate, representative information. We'll explore sampling methods, data collection approaches, and practical strategies to minimize bias while maximizing the quality of your research data.



Understanding Sampling Fundamentals

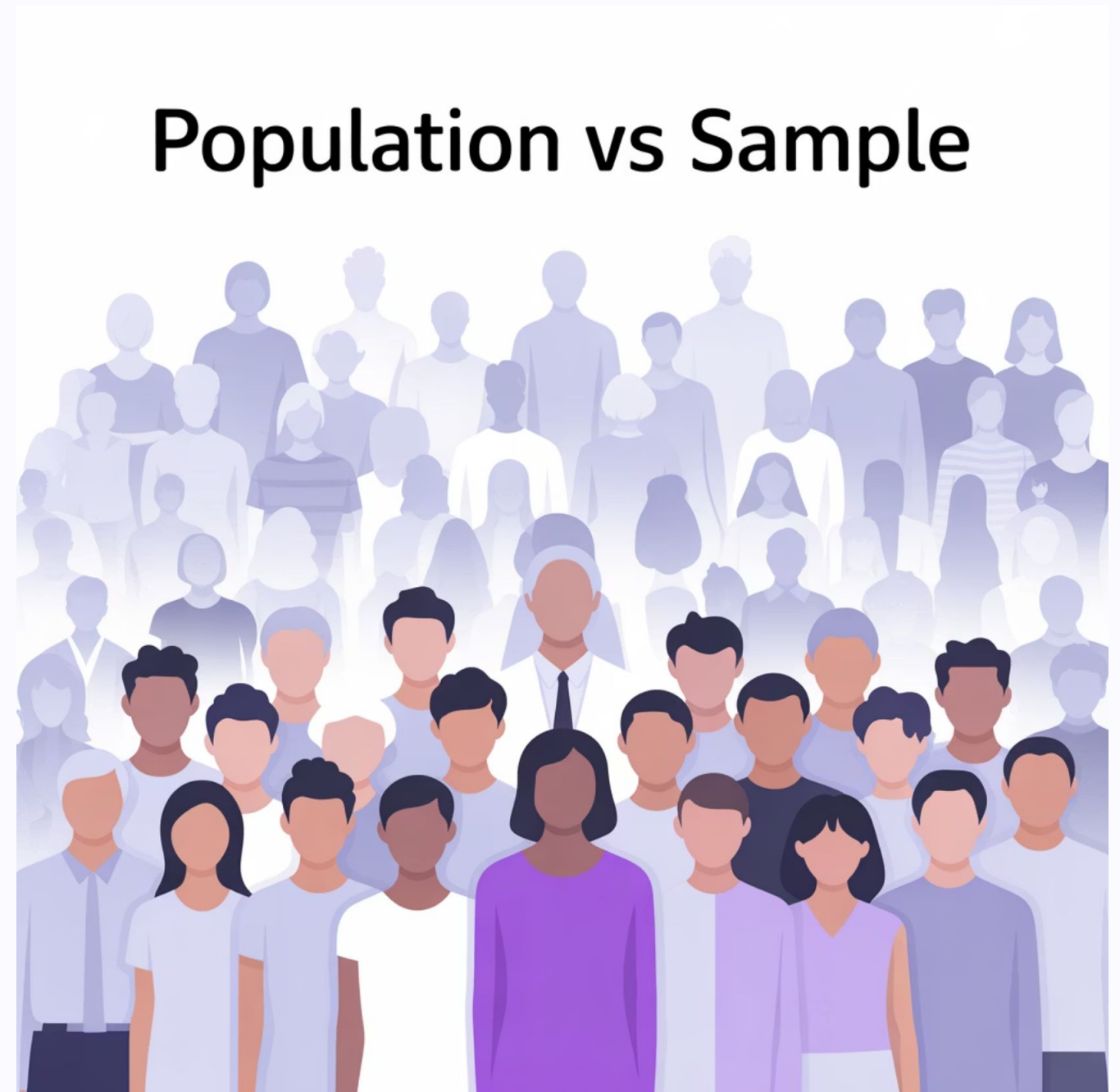
Key Definitions

Population: The entire group you want to study or draw conclusions about

Sample: A subset of the population selected for study

Sampling Frame: The complete list from which your sample will be drawn

Effective sampling ensures your research findings can be generalized back to the entire population with confidence.



Sampling Techniques



Random Sampling

Every member of the population has an equal chance of selection. Provides strong statistical foundation but requires complete sampling frame.



Stratified Sampling

Population divided into subgroups (strata) with samples drawn from each. Ensures representation of key population segments.



Convenience Sampling

Participants selected based on easy accessibility. Quick and inexpensive but may introduce significant bias.



Purposive Sampling

Deliberately selecting participants based on specific characteristics. Useful for specialized research questions and qualitative studies.



Data Collection

Methods

Interviews



In-depth conversations with participants. Can be structured, semi-structured, or unstructured. Provides rich qualitative data but is time-intensive.

Surveys



Standardized questions administered to multiple participants. Efficient for collecting large amounts of data but may lack depth.

Observation



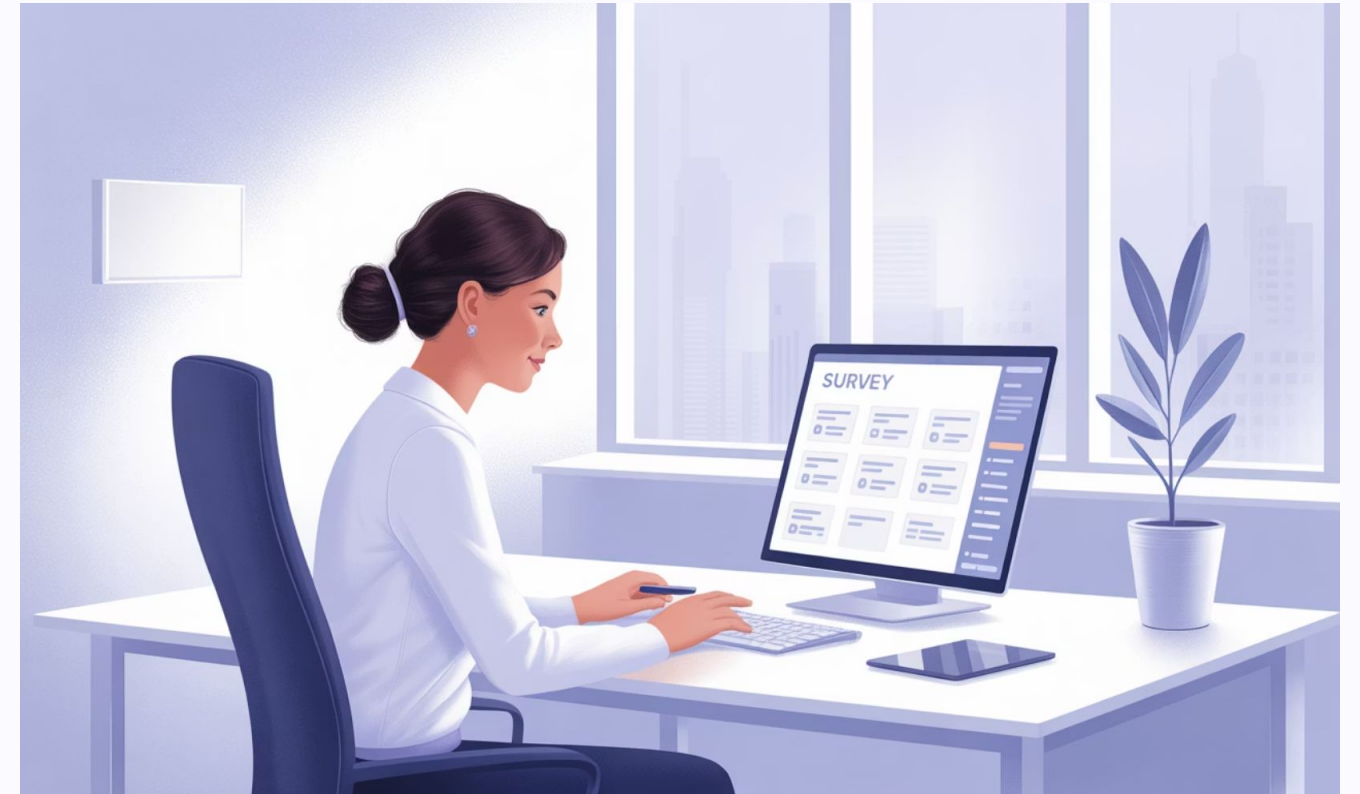
Watching and recording behavior in natural settings. Captures authentic behavior but may be subject to observer bias.



Designing Effective Survey Questions

Best Practices

- Use clear, simple language
- Ask one thing at a time
- Balance response options
- Avoid leading questions
- Include appropriate response scales
- Test questions with a pilot group



Question Types

- Multiple choice
- Likert scales
- Open-ended questions
- Ranking questions



Creating Effective Interview Guides

Establish Purpose

Define clear research objectives and what information you need to gather.

Develop Question Flow

Start with easy questions, then move to more complex or sensitive topics.

Craft Open Questions

Use "how," "what," and "why" questions that encourage detailed responses.

Include Probes

Prepare follow-up questions to explore topics more deeply when needed.

Avoiding Bias in Data Collection

Common Sources of Bias

Selection bias: Non-representative sampling

Response bias: Participants answering inaccurately

Interviewer bias: Influencing responses through verbal/non-verbal cues

Question wording bias: Leading or loaded questions

Social desirability bias: Answering to appear favorable



Mitigation Strategies

- Use proper sampling techniques
- Standardize data collection procedures
- Train data collectors thoroughly
- Pilot test all instruments
- Use multiple methods when possible