

# Types of Research Designs

## From Observational to Experimental Research Designs

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There are many different types of research designs. These designs can range from **observational studies** that create snapshots of current activities or assess relationships between two or more variables to **experimental designs** that assess causal impacts on treatment groups.

In the list that follows, the study types are arranged to reflect this spectrum of study designs, beginning with observational and ending with more experimental designs.

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- **Case studies:** Describe a specific group of individuals.
- **Cross-sectional studies:** Describe the prevalence of an outcome for a group at a specific point in time.
- **Prepost studies:** Compare a group of individuals directly before and after exposure to treatment.
- **Case-control studies:** Compare a group of individuals with a specific outcome to a group without that outcome.
- **Cohort studies:** Track outcomes for a group of individuals over time.
- **Correlational dosage studies:** Examine the relationship between level of exposure to treatment (or dosage) and outcomes.
- **Single-case designs:** Track outcomes for an individual or a small group of individuals before and after exposure to treatment.
- **Interrupted time series:** Compare outcomes for a group of individuals before and after exposure to treatment.
- **Nonequivalent groups studies:** Compare outcomes between groups formed by preexisting conditions (e.g., location).

- ***Regression discontinuity designs:*** Compare outcomes for groups created based on a predefined threshold (e.g., test score).
- ***Comparative interrupted time series:*** Compare outcomes for a group of individuals exposed to treatment to a nonexposed group over time.
- ***Matched comparison group studies:*** Compare outcomes for a group of individuals exposed to treatment to a similar nonexposed group identified using a matching process.
- ***Randomized-controlled trials:*** Compare outcomes between groups randomly assigned to either receive treatment or not.