

Overview of Research Methods

Research Method	Description	Key Strength	Major Weakness	Sample Research Question for this Method
Experiment	Manipulation of an (IV) independent variable under controlled conditions and measurement of its effect on a dependent variable (DV)	Can establish cause and effect relationship between the IV and the DV	The ability to generalize to real-world behavior can be limited.	Do students who take notes by hand make higher grades than those who just use highlighters?
Quasi-experiment	Measurement of the DV when a random assignment to groups is not possible or when researchers take advantage of existing conditions	Can provide strong evidence suggesting cause and effect relationship	Lack of random assignment can weaken the conclusion	How do scores on standardized tests for elementary school students receiving virtual instruction compare to those receiving in-person instruction?
Naturalistic Observation	Careful observation of human or other animals in real-life situations	Provide descriptive data about behavior with wide applicability	Loss of experimental control	Do people use hand sanitizer when it is readily available at the entrance of a store?
Surveys	Obtain large samples of abilities, beliefs, or behaviors at a specific time and place	Ease of administration, scoring, and statistical analysis	Distorted results because of sampling error, poorly phrased questions, and response biases	Do you believe the earth has been visited by beings from another planet?
Case Studies	Intensive investigation of the behavior and mental processes associated with a specific persons or situation	Provide detailed descriptive data and analyses of new, complex, or rare phenomena	It may not be representative of phenomena	How does my family manage stress?
Correlational Studies	Studies relationship between two or more variables; one variable changes as the other changes	Indicates the strength of the relationship between two or more variables	Does NOT determine cause and effect	Is there a correlation between political affiliation and mask-wearing?