

Psychology Research Methods



Types of Psychological Research: Naturalistic Observation

Psychologists allow behavior to occur without interferences, intervention by the researcher

- Sometimes research subjects do not even know they are involved.
- Considered to be a scientific version of people watching
- Strength of Method: Sees the behavior in a real situation
- Weaknesses of Method: Difficult to observe without getting involved. Can also be considered an invasion of privacy



Types of Psychological Research: Case Study

- An in-depth investigation of an individual. Tries to reconstruct the major events of a persons life by using interviews, observations, testing, and examine prior records
- Strengths of Method: Good for tracking change over time and assessing disorders
- Weaknesses of Method: Relies on records and memories that can sometimes leave gaps



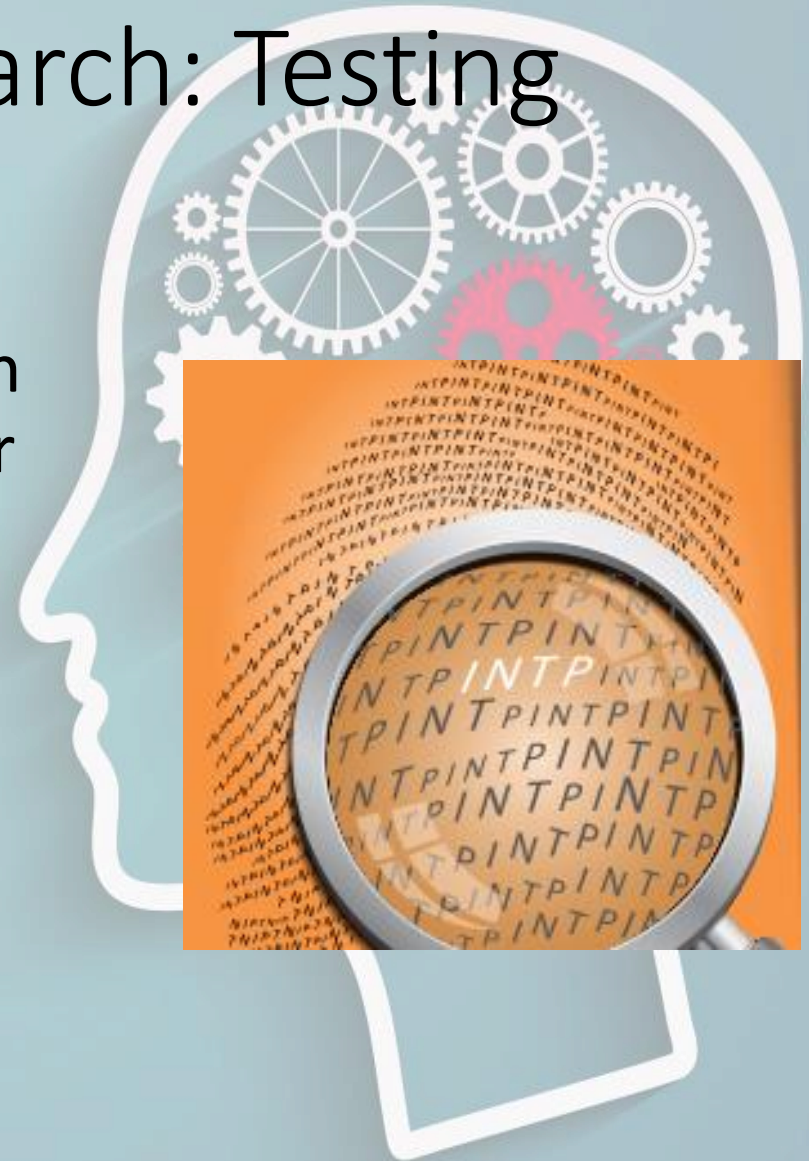
Types of Psychological Research: Survey

- A series of written or verbal questions asked in order to gather information about a specific topic.
- Strengths of Method: Can gather a lot of information in a short period on topics that may not be easily observable
- Weaknesses of Method: People being surveyed are not always honest



Types of Psychological Research: Testing

- A formal test which can be examined to create conclusions. Series of questions can suggest things like a person's readiness for the rigors of college (ex. A.C.T.) or their Personality (ex. Myers Briggs)
- Strengths of Method: If designed well and answered honestly can be predictive
- Weaknesses of Method: Questions of honesty on answers can lead to questions of the validity of the test



Types of Psychological Research: Experimental Research

- Method of controlling all variables except the variable of interest which is manipulated by the investigator to determine if it affects another variable.
- Strengths of Method: Allows researchers to collect specific data quickly instead of waiting for a behavior to happen
- Weaknesses of Method: Hard to make well designed experiments that isolates variables



Experiment Variables

- A Variable is any measurable condition, event, characteristic, or behavior that can be controlled or observed in a study.
 - Independent Variable (IV)- The variable that is manipulated by the researcher to see how it affects the dependent variable.
 - Dependent Variable (DV)- The behavior or response outcome that the researcher measures, which is hoped to have been affected by the IV.
 - Extraneous variable - Any variable other than the IV that may influence the DV in a specific way, and that you have not controlled.



Example Experiment Using Variables

- Situation: A scientist is doing a study to find out what type of connection there is between changing someone's diet and weight loss
 - The DV would be the amount of weight lost
 - Changes are effected by the changes in the IV
 - The IV would be the changes in diet
 - Can be measured and changed by the scientist
 - An EV might be the amount of exercise
 - Not part of the study, but would impact the results



Experimental Bias and Controls

- Bias are things that may lead to unreliable results (otherwise known as confounds)
- Experimenter Bias: if the researcher (or anyone on the research team) acts differently towards those in one group it may influence participants' behaviors and thus alter the findings. Can be very difficult to control
- Participant Bias: Participants may act in ways they believe correspond to what the researcher is looking for. Thus, the participant may not act in a natural way.
- Controls are methods used to try to eliminate bias and extraneous variables



Use of Groups in an Experiment

- When conducting an experiment different groups may be used to test the results
 - The experimental group is the one actually being tested how they react to the IV
 - The control is treated the exact same way as the experimental group, but the IV is removed



Validity and Reliability

- Validity: Tests are considered to be valid if they actually measure what they are suppose to.
 - Ex. Does a stress test actually measure the amount of stress in someone's life or something else?
- Reliability: Test questions are designed to get consistent information without too many outliers
 - Ex. A test that a person would be able to take over and over and get the same results.

