PY 101 – 012

Friday, January 22, 2016

Week 2, Day 2 Notes

Research Terms and Techniques

Quizlet for terms on this lecture: <https://quizlet.com/_1yzec2>

IV and DV

IV = Independent variable

DV = Dependent variable. depends on IV

Sample:

Sample participants from the population

Case study

Ex. Genie

Study of a person who never socialized or learned how to speak

Advantages

You can't manipulate case studies

Disadvantages

You have no control over events

You could be biased in your observation

Small sample size

Can't replicate it

Self-report methods

* Data collected by asking people about themselves
  + Surveys
* Advantages
  + Large sample
  + Easy to do
* Disadvantages
  + Self-report bias
    - Socially desirable responses/faking good
    - Better-than average effect
      * People tend to consider themselves to be better than average even when they aren't

Response performance

* Types
  + Reaction time
  + Response accuracy
  + Stimulus judgments

Psychophysiological assessment

* Major types
  + Polygraph
  + Electrodermal activity
  + Brain imaging
  + Transcranial

Animal Research

* Many important research findings in psychology have been studying the behavior of nonhuman animals
  + Testing drugs.
  + Things that could harm people
* Ethical issues
  + Strict guidelines maintained by colleges
  + Major issues
    - Privacy
    - Access to Data
    - Informed Consent
    - Related Risks

Validity, Reliability, & Accuracy

* Validity
* Reliability
* Accuracy

Random error

Within-group differences

Random chance

Systematic error

Flaw in the experiment itself

* Correlation coefficient
  + Defines the relationship between two variables

Vocab

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| --- | --- |
| Experimental study | Test causal hypotheses by measuring |
| Independent variable | Variable manipulated by researcher |
| Dependent variable | Variable affected by the manipulation or the outcome measured |
| Sample | A group of participants that accurately represents the larger population that the researcher is interested in |
| Population | The entire group of people that research is interested in |
| Random assignment | Helps divide groups so that their personal attributes don't bias the research |
| Selection bias | Bias that occurs from selecting a sample that doesn't accurately affect the population |
| Conditions | Another word for the different groups in experiments |
| Observational techniques | Systematic assessment and coding of behavior |
| Reactivity | Presence of the observer alters the behavior of those being observed |
| Case study | Intensive study and analysis of single individual or a few individuals |
| Response performance | Method in which researchers quantify perceptual or cognitive processes in response to a specific stimulus |
| Psychophysiological Assessment | Researchers examine how bodily functions change in association with behaviors or mental states |
| Institutional Review Boards (IRBs) | Committees responsible for reviewing proposed research to ensure that it meets the accepted standards of science and provides for the physical and emotional well-being of research participants |
| Internal validity | Extent to which the data collected in a study address the research hypothesis (address the question) |
| Reliability | Extent to which a measure is stable and consistent over time in similar conditions |
| Accuracy | Extent to which an experimental measure is free from error |
| Descriptive statistics | Statistics that summarize the data collected in a study |
| Measures of central tendency | Describe/represent typical response of behavior of group as a whole |
| Variability | How widely dispersed values are from each other and the mean |
| Scatterplot | Graphical depiction of the relationship between two variables |