PY 101 – 012

Wednesday, January 20, 2016

Week 2, Day 1 Notes

Psychology and Scientific Method

Quizlet on this lecture's terms: <https://quizlet.com/_1yzeud>

Nature vs nurture

What's responsible for how a person is?

Some people believe it's innate and some believe it's cultural

Genes provide a framework for how you'll act and culture affects how your framework responds.

I.E. You might be pre-disposed to depression

A similar argument is "Which contributes more to the area of a rectangle: its length or its width?"

Subfields of Psychology

* Forensics in law enforcement
* Sports - performance anxiety
* Health

Psychology field breakdown:

achine generated alternative text:
School/ 
educational, 
7.7% 
Neuroscience/

Different perspectives of psychology

Biological

Your brain and dna

Cognitive

Who you are

Learning

How your experiences affect you

Sociocultural

How your culture affects you

Scientific Inquiry

Scientific method

Systematic - Procedures follow orderly steps

Variables - anything that can be quantified and studied

What were Dr. Honeydew's variables? What data could he have collected?

The presence of a gorilla

The location of the machine

The exact distance that the gorilla is away from the machine

Types of studies

Descriptive studies

Naturalistic Observation

Observer separate from situation

Ex. Someone (not the therapist, not the couple) who observes couple counseling and observes the outcome down the road by looking at the couple's relationship

Participant Observation

Researcher involved in the situation

Ex. Jane Goodall went to live with chimpanzees

Benefits

Early stages of research

Real world setting

Longitudinal vs. Cross-Sectional

Longitudinal = looking at same people over time

Cross-sectional = looking at different people at different stages of their life

Problems

Observer's presence can change the behavior being witnessed

Observer bias: errors made due to observer's expectations

Correlational studies

Examine how variables are related, with no intervention by the observer

Benefits

* Naturally occurring relationships
  + We can make guesses about people based on where they are in life
    - If there are studies that say that older people are less conscientious, you can guess that about an old person with some degree of confidence.
* Real world setting
* Ethics
* Describe & predict

Positive correlations

Ice cream sales and drowning

* Ice cream is sold at the same time people drown

Negative correlations

Eating breakfast & weight

* People who frequently eat breakfast are less hungry throughout the day and have lower weight

Distance seat is from professor & grades

* The higher the distance from the professor, the harder it is to hear and see the material so the lower your grade gets.

Correlations aren't useless

Knowing that 2 phenomena are related is valuable

However "correlation does not imply causation"

Vocab

|  |  |
| --- | --- |
| Nature / nurture debate | Is individual psychology innate or cultural? |
| Scientific method | Systematic procedure for making un-biased theories about your surroundings |
| Systematic | Describes the scientific method and procedures which follow orderly steps that are carefully planned |
| Step one of scientific method | Focus on a theory |
| Step two of scientific method | Form a hypothesis |
| Step three of scientific method | Conduct research |
| Step 4 of scientific method | Analyze data |
| Step 5 of scientific method | Report and investigate further |
| Step 6 of scientific method | Refine or revise the theory |
| Theory | Model of interconnected ideas and/or concepts that explains what is observed and makes predictions about future events |
| Hypothesis | Specific prediction of what should be observed in the world if a theory is correct |
| Null hypothesis | Set up to be rejected in a test. |
| Alternative hypothesis | What will be proved assuming the null hypothesis is rejected |
| Variables | Any measurable conditions, events, characteristics, or behaviors that are controlled or observed |
| Operationalize | Means to define a variable in a way that can be measured consistently |
| Data | Objective information, observations, or measurements that support or challenge the hypothesis and theory |
| Directionality problem | A relationship between two variables has order (A might imply B, but B does not necessarily imply A) |
| Third variable problem | Researchers cannot be confident that an unmeasured variable is not the actual cause of differences in the variables of interest |
| Positive correlation | Means that high values of one value are associated with high values of the other |
| Negative correlation | Means high values of one variable are associated with low values of the other |