**Research Methods in Psychology**

* Descriptive Methods
* Naturalistic observation
* Intensive individual case study
* Surveys/questionnaires/interviews
* Correlational studies
* The Experimental Method- for determining cause-effect relationships
* **Using Various Research Methods to Study a Behavior Problem**Like ADHD

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (ADHD)

* Diagnosed when a child shows
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ symptoms of inattention
* also 6 or more symptoms of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_,
* These symptoms are present at \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ & must have been present for at least 6 months.
* **Naturalistic Observation**
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ observations in classrooms show that kids with ADHD:
* \_\_\_\_\_\_\_\_\_\_stay in their seats or sit still, don’t \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, don’t complete work, are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, are rude to others, get into trouble more, & lose their temper more often.
* This method makes use of real-life situations, but it is important to use well-trained, unbiased observers.
* **Survey Results:**
* \_\_\_\_\_\_ more males than females
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_schoolkids are taking Ritalin for ADHD
* 50-60% of ADHD kids show \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ & higher risk of conduct problems as teens
* \_\_\_\_\_\_\_\_\_\_\_ continue to have symptoms as adults
* \_\_\_\_\_\_\_\_ have a parent with symptoms
* **Correlation**
* Correlation: the degree to which \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or set of data \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to another variable/set of data.
* Correlation \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_: number between \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ showing the strength and direction of this relationship.
* Correlations help us predict behavior but \_\_\_\_\_\_\_\_\_\_\_\_\_ indicate the cause of the relationship.
* **Remember: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
* Research Strategies – Scatter plot
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
Look at Correlations**
* **Is Hyperactivity Correlated in Twins?**
* Pairs of male**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** twins show almost no correlation (+.05) in their level of motor activity
* But pairs of male **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_** twins show a strong correlation (+.71) in their level of motor activity
* Supports the hypothesis that genetics play a role in ADHD but \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a cause-effect relationship.
* **Pros/Cons of Other Methods**
* Survey: Easy to collect lots of data but may be biased if sample is poor or responses are not accurate
* Case studies: Can provide in-depth data on an individual but we can’t assume it will apply to all others
* Experiment: Most able to identify cause-effect relationships but sometimes results don’t generalize to real-life situations
* **Why are experiments different?**
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the behavior of 2 or more groups of participants under very controlled conditions.
* Groups are treated as similarly as possible EXCEPT for the critical variable(s) (the **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ variable**) that the researcher is interested in. The researcher intentionally manipulates or varies the independent variable to study its impact on behavior.
* **Random \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* To make the 2 groups as equal as possible, most often participants will be *randomly assigned* to 1 group or the other. This assures that there are no systematic differences between the groups.
* **Why are experiments different?**
* If everything is kept constant except for the independent variable, then any differences in performance between groups should be caused by that independent variable.
* In other words, the experiment tests whether the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ variable causes changes behavior.
* **Definitions:**
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - the group of participants exposed to the independent variable that the researcher is really interested in
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - the group not exposed to the independent variable of interest but rather some substitute control condition.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- what the researcher manipulates or varies; the thing that is different in the experimental group versus the control group.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ - the behavior that is observed, measured, tested; the actual data collected from both groups.
* **Random \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* Assigning \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in a study such that all subjects have an equal chance of being assigned to any group of condition.
* Random assignment \_\_\_\_\_\_\_\_\_\_\_\_ any systematic differences between the groups as long as the size of your groups is sufficient
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Definition**
* A definition that describes the actions or operations that will be made to measure, manipulate, or control a variable in an experiment
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* Sometimes we need to use pre-existing groups in research (e.g. males vs females, alcoholics vs non-alcoholics). Since we can’t randomly assign participants to groups, there may other differences between the groups that impair our ability to draw conclusions.
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
* A tentative statement or prediction about the relationship between 2 or more variables
* Example:

 –  Consumption of alcohol will impair short-term memory.

 –  Relaxation training will reduce test anxiety and improve test performance

* **Random or \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Variables**
* Any other variables besides the independent variable that seem likely to influence the dependent variable in a particular study
* Every effort must be made to assure that the experimental and control groups do not differ with respect to these extraneous variables
* **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of Variables**
* When it is difficult to separate the effects of an extraneous variable from those of the independent variable
* Confounding of variables \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ about the effects of the independent variable on the dependent variable
* **Avoiding bias**
* sampling bias
* social-desirability bias in self-report data
* experimenter bias
* bias due to expectations (placebo effect)
* **Key features of the scientific process**
* always looking for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of findings