

Lecture Notes Thinking About Psychology: Module 2: Research Strategies Page 1

Research Methods

- Play “Aliens Have Landed” (11:25) Segment #3 from Scientific American Frontiers: Video Collection for Introductory Psychology (2nd edition).
- Follow with a discussion on the unbiased scientific research.

Scientific Method

- Technique using tools such as _____, _____, and _____ to learn about the world
- Through its use, psychology is thereby considered a science.

Research and Research Methodology

- Method of _____ then **drawing** _____
- Researchers need to be able to determine if conclusions _____ (critical thinking).

Common Sense

- Conclusions based solely on _____ and _____
- Can lead to _____

Observation and Bias
Module 2: Research Strategies

Observation

- Gathering of information by _____
- Can lead to _____

Bias

- Situation in which a factor _____ the likelihood of a researcher reaching a particular conclusion
- Bias should be minimized as much as possible in research

Researcher Bias

- The tendency to notice evidence which supports _____
- Objectivity tends to _____.

Critical Thinking

- Thinking that does not _____ but questions their validity

Participant Bias

- Tendency of research subjects to respond in certain ways _____
- The subjects might try to behave in ways they believe the _____
- Can be reduced by _____

Naturalistic Observation

- Method of observation where subjects are observed in their _____
- Subjects are _____ they are being watched
- Could use _____

Case Study

- In depth study of _____ with the hopes of determining _____
- This technique is very open to _____
- Difficulty of applying data from _____

Correlational Study

- Research study designed to determine the degree to which _____

How to Read a Correlation

Positive Correlation

- As the value of one variable increases (or decreases) so does the value of the other variable.
- A perfect positive correlation is _____.
- The closer the correlation is to _____.

Negative Correlation

- As the value of one variable increases, the value of the other variable _____.
- A perfect negative correlation is _____.
- The closer the correlation is to _____, the stronger the relationship.

Zero Correlation

- There is _____.

Correlational Study

- Important NOT to imply a _____ relationship between the variables
- Correlational study does _____ --just that they are related.
- Correlational studies are helpful in _____.

Survey Method

- Research method that relies on _____; uses surveys, questionnaires, interviews.
- Usually a very _____ method

Population

- The _____ from which a sample is drawn for a study

Random Sample

- A sample that represents a _____:
 - Each member of the population has an _____ of being included.
 - If a sample is not random it is said to be _____.

Developmental Psychologists

- Psychologists who study how _____

Longitudinal Study

- Developmental study where researchers _____
_____ Can be very expensive and difficult to conduct

Cross-Sectional Study

- Developmental study where researchers simultaneously study _____
- Cheaper, easier than _____, but group differences may be due to factors other than _____.
- Play “Water, Water Everywhere” (12:20) Segment #2 from Scientific American Frontiers: Video Collection for Introductory Psychology (2nd edition) _____

Hypothesis

- A _____ of the outcome of the experiment or research

Operational Definitions

- A specification of the exact procedures used to make a _____
- In evaluating others' research, first determine if you agree with the researchers' _____.

Experiments: Independent and Dependent Variables

Independent Variable

- The experimental variable which _____
- The “ _____ ”
- The _____ manipulated by the experimenter
- The variable which should change the _____

Dependent Variable

- The experimental variable which is affected by the _____
- The “ _____ ”
- The _____ of the experiment
- The variable being _____

Experiments: Groups, Random Assignment, and Confounding Variables

Experimental Group

- The subjects in an experiment who are exposed to the _____
(_____)
- Also called the _____
- The group being _____ and compared to the control group

Control Group

- Are not exposed to the _____
- Results are compared to those of the _____
- Also called the _____

Confounding Variables

- Variables, other than the independent variable, which could inadvertently influence the _____
- These variables should be _____ in order to draw a true, _____ relationship in the experiment.
- Many confounding variables can be eliminated through _____.

Name: _____ Table: _____ Period: _____

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Random Assignment

- Assigning participants to the _____
- Each participant should have an _____ of being assigned into _____

Experiments

- Video “Experimental Design” (7:24) Segment #3 from Psychology: The Human Experience _____

Experiments: Control for Other Confounding Variables

Environmental Differences

- Any differences in the experiment’s conditions--between _____

- Differences include _____, _____, _____, distractions, etc.
- Ideally, there should be a _____ between the two groups.

Confounding Variables:

Expectation Effects

- Any changes in an experiment’s results due to the _____

Blind procedure

- An experimental procedure where the research participants _____ of the experiment
- Sometimes called _____

Double Blind Procedure

- An experimental procedure where _____ to the expected outcome of the experiment

Placebo

- A _____ instead of a drug or active agent
- Given to the _____

Placebo Effect

- Video “The Placebo Effect: Mind-Body Relationship” (9:14) Segment #3 from The Mind: Psychology Teaching Modules (2nd edition)

Experiments: Data Analysis

Statistically Significant

- Possibility that the differences in results between the experimental and control groups could have occurred by chance _____
- Must be at least _____ the differences between the groups is due to the _____

Experiments: Replication

Replication

- Repeating the experiment to determine _____
- If so, the research is _____.

Ethics: Human Research (Four Basic Principles)

1. Informed Consent

- Participants must be informed, _____, about:
 - the _____ of the research, and
 - any _____.
- Participants must have the right _____ or _____ at any time.

2. Right to be Protected from Harm and Discomfort

- Studies involving _____ may be conducted only under certain circumstances, and only with the _____ of the participants.

3. Right of Confidentiality

- Individual data about research participants _____.

4. Right to Debriefing

- Participants have a right to receive _____.
- This is extremely important if the research _____.

Name: _____ Table: _____ Period: _____

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Ethics: Animal Research

Reasons for Animal Research

- Interest in animal behavior as _____
 - Data from animal studies _____.
 - Easier to do some type of studies (genetics) _____
-

Reasons for Animal Research

- Easier to _____ with animals as compared to humans
 - Procedures that are not ethical to perform on humans _____
-

Care of Animals used in Research

- Animals used in research must:
 - Have _____
 - Have appropriate _____
 - Be _____

The End