

**Intro to Psych Outline- Mary Dew**  
**The Research Enterprise in Psychology- Ch. 2**

**Why is research in psychology important?**

**Goals of Scientific Research**

1. \_\_\_\_\_ - **the use of measurement techniques allows scientists to objectively describe behavior** (behavior of a person, of a neuron, etc.)
2. \_\_\_\_\_ - when a scientist tries to explain why “something happened” (behavior).
3. \_\_\_\_\_ - when a scientist tries to solve a practical problem.

**Scientific Approach to Behavior**

- For example, in studying the effectiveness of muscle relaxation techniques in reducing anxiety, a psychologist must first develop a means of measuring anxiety.
- A \_\_\_\_\_ is a tentative statement about the relationship between 2 or more variables. It is a prediction.
- \_\_\_\_\_ are the things that are observed or controlled in a study.
- The purpose of an experiment is to find out how one variable, let’s call it X, affects another variable, which we’ll call Y.

Which goal would a theory be most associated with? (explain)

Which goal would a hypothesis be most closely associated with?

***Steps in a Scientific Investigation:***

- 1.
- 2.
- 3.
- 4.
- 5.

## **2 Research Categories:**

1. **Experiment**- A research method in which the investigator manipulates a variable under carefully controlled conditions and observes whether any changes occur in a second variable as a result. An experiment can determine cause and effect.
2. **Descriptive/Correlational Research**- more on this later. *Cause and effect cannot be proven.*

### **Experimental Research**

• The \_\_\_\_\_ is a condition or event manipulated by experimenter.  
Ex.

• The \_\_\_\_\_ is an aspect of behavior thought to be affected by the independent variable. (Because it “depends” on is a reaction to the independent variable).  
Ex.

• The \_\_\_\_\_ consists of participants who receive special treatment.  
Ex.

• The \_\_\_\_\_ consists of similar subjects who do not receive treatment given to experimental group.  
Ex.

• **Extraneous variables-**

• **Random assignment-**

### **Advantages and Disadvantages of Experimental Research:**

#### ***Descriptive/Correlational Research***

• The **correlation coefficient** is a numerical index that measures the degree or strength of the relationship between two variables.

• *Positive Correlation #'s:*

• *Negative Correlation #'s:*

• A **positive correlation-**

Ex.

• A **negative correlation-**

Ex.

• *Note Relationship:*

### ***Methods of Collecting Data:***

- **Naturalistic observation**- is when a researcher engages in careful observation of behavior without intervening directly with the subjects - allowing researchers to study behavior under conditions that are less artificial than experiments.
  - It can be particularly useful for studying animals in their natural habitats.
- A **case study** is an in-depth and generally highly subjective or impressionistic report on a single individual that may be based on interviews, psychological testing, and so on.
- **Surveys** use questionnaires or interviews to find out about specific aspects of people's backgrounds, attitudes or opinions.
- The textbook fails to mention in this chapter section that there are also:
  - When, if ever, do you think deception is justified?

### ***Advantages and Disadvantages of Descriptive/Correlational Research***

#### ***Bias in Research-***

- We already saw how *an unrepresentative sample of the population can lead to inaccuracy* - this is called the **sampling bias**.
- Social desirability bias-
- Experimenters are fallible, and their *research can be affected by a tendency to see what they want to see*. This bias is called **experimenter bias**.
- Important *way to prevent experimenter bias is by conducting a double-blind study* - one where neither the participants nor the researcher knows which is the control group and which is the experiment group.

#### ***Placebo Effect***

- **Placebo effect**- *The fact that subjects' expectations can lead them to experience some change in behavior or some reaction even though they receive an empty, fake, or ineffectual treatment.*

Ex.

***Ethics in Research- the textbook is insufficient.*** The APA (American Psychological Association) has a strict research ethics committee that develops guidelines to protect participants.

1.

2.

3.

4.