

## Psychology Chapter 1 Research Methods 8/27

---

**The scientific method**- A set of assumptions, attitudes, and procedures that guide researchers in creating questions to investigate in generating evidence, and in drawing conclusions.

**-Theory-** A tentative explanation that tries to integrate and account for the relationship of various findings and observations.

-Allows for testable predictions to be made.

-self-correcting- theories are expanded, modified, and even replaced based on new research.

**-Empirical Evidence-** Verifiable evidence that is based upon objective observations, measurement and/or experimentation.

**Pseudoscience-** Fake or false science that makes claims based on little or no scientific evidence. (testimonials rather than scientific evidence, "miracle pill that made me lose 70 pounds!")

**Confirmation Bias-** The tendency to seek out evidence that confirms an existing belief while ignoring evidence that might contradict or undermine the belief. (Politicians)

### **STEP 1:**

**Operationally defined-** a precise description of how the variables in a study will be manipulated or measured.

## STEP 2:

**Descriptive research:** scientific procedures that involve systematically observing behavior in order to describe the relationship among behaviors and events. (use word "associated") (correlational)

**Experimental research:** a method of investigating used to demonstrate cause-and-effect relationships by purposely manipulating one factor though to produce change in another factor. (ideally casual)

## Step 3:

**Statistics-** A branch of math used by researchers to organize, summarize, and interpret data.

-If something is statistically significant- this is an indication that the research results are not very likely to have occurred by chance.

## Step 4:

**Replication:** to repeat or duplicate a scientific study in order to increase confidence in the validity of the original findings. (rarely happens in psych)

## TYPES OF DESCRIPTIVE RESEARCH

**-Naturalistic observation:** the systematic observation and recording of behaviors as they occur in their natural setting. Goal- to see things as they're happening naturally.

**-Case study-** an intensive study on a single individual or small group of individuals. Goal- an in-depth investigation, providing as much detailed info as possible.

**-Correlational studies:** A research strategy that allows the precise calculation of how strongly two factors are related to each other.

-Positive correlation- two factors vary in the same direction -Negative correlation- two factors vary in the opposite direction.

**Experimental Research:**

**Independent Variable (IV)**- The manipulated variable that changes in an experiment.

**Dependent Variable (DV)**- The factor that is observed and measured.

**Confounding Variable**- a factor or variable than the ones being studied that, if not controlled for, could affect the outcome of the experiment. (Cause and effect that has other factors involved that could change outcomes) (ice cream sales go up as crime goes up)

**Double-blind techniques**- control in which neither the participants nor the researchers interacting with the participants are aware of the group or conditions to which the participants have been assigned.

**Demand characteristics**-Subtle cues or signals expressed by the researcher that communicate the kind of response or behavior that is expected from the participant.

**Natural experiment**- a study investigating the effects of a naturally occurring event on the research participants. (Ex. 9/11)