Review of Key Concepts and Terms (Unit 0)

Scientific Foundations of Psychology

Important but NOT TESTABLE vs. New this year(24-25), TESTABLE; add to your notes

Psychology is the scientific study of behavior and mental processes. As scientists, psychologists collect data and make observations about the ways in which humans and animals behave and think in order to understand behavior and mental processes. Psychologists use a variety of research methods and designs to conduct their research. These tools help them develop psychological theories about behavior and mental processes. To ensure that their results are valid and reliable, psychologists' research must adhere to strict ethical and procedural guidelines. Historical research is the foundation of the field of psychology and has become the basis for the subfields within psychology that exist today.

Topic 1.1: Introducing Psychology

Learning Target 1.A

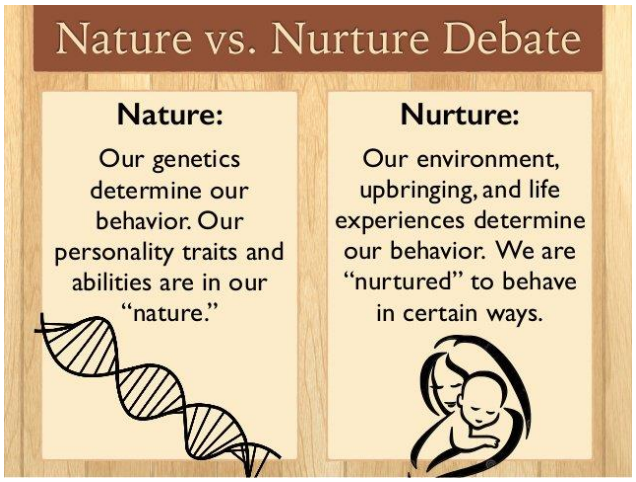
Recognize how philosophical and physiological perspectives shaped the development of psychological thought

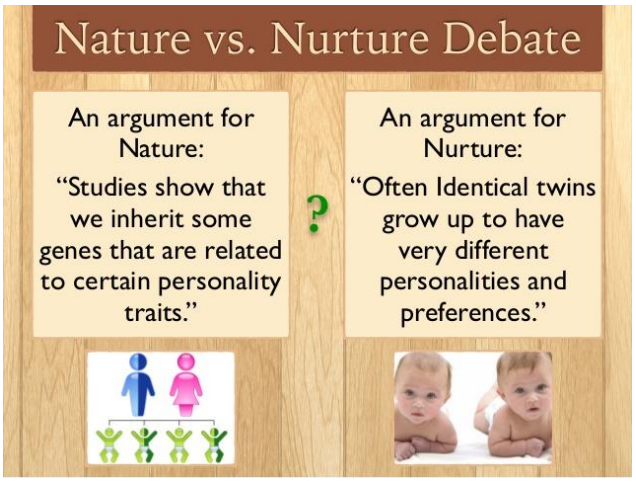
- The term Psychology comes from two Greek words: Psyche (meaning the soul) and Logos (meaning the study of). Thus, early use of the term often referred to the Study of the Soul. It wasn't until the 18th century when the term acquired its literal meaning: The study of behavior. Today, the term is used to refer to the general field of psychology, which is the systematic and scientific study of behavior and mental processes.
- Compared to other sciences, the field of psychology is relatively new. It emerged from two parental disciplines:
    - Physiology (Biology) and Philosophy, just a little over 100 years ago (1879). Since the birth of psychology, several subfields have emerged.
- Psychology traces its roots back through recorded history to India, China, the Middle East, and Europe. Buddha, Confucius, and Hebrew scholars philosophized on the mind in a broad sense.
- Ancient Greek philosophers observed and interpreted their environment and organized their findings, forming the basis for empirical investigation in psychology.
    - **Empiricism**: the view that knowledge originates in experience and that science should, therefore, rely on observation and experimentation.
    - **Dualism** – ***Socrates and Plato*** believed the body and mind were separate and that only the mind survived after death; also believed ideas were innate (nature/born with)
    - **Monism** – ***Aristotle*** disagreed with his mentors suggesting that the mind could not be separated from the body because mind and body were different aspects of the same thing; believed ideas resulted from experience (nurture)
- Little happened through the Dark Ages until the Renaissance (1500s) that awakened people.
    - In the 1600s, ***Rene Descartes*** agreed with Socrates' and Plato's ideas. He was interested in how the physical body and non-physical mind work together. Trying to figure out the body-mind connection, he

dissected animals to view their brains and nerves. The combination of philosophy and physiology is seen as an important step in the birth of psychology.
    - At the same time, ***Francis Bacon*** used the scientific method to conduct experiments. For this, he's known as the father of modern science.
    - ***John Locke*** wrote that people are born with minds that are a "blank slate" (tabula rasa). Everything we know has been learned since then. This is the birth of modern "empiricism" –knowledge comes from experiences. Locke then agreed with Bacon: we must use experiments.
- Many of the classical techniques and theory of psychophysics were formulated in 1860 when ***Gustav Theodor Fechner*** published *Elemente der Psychophysik*. He coined the term "psychophysics", and described research relating physical stimuli with how they are perceived and set out the philosophical foundations of the field.
    - Fechner wanted to develop a theory that could relate matter to the mind. It was through his establishment of the relationship between the world and the way it is perceived that Fechner's work formed the basis of psychology as a science.
- ***Wilhelm Wundt*** is generally considered the "Father of Psychology" because he was the first to establish a psychological laboratory.
    - Wundt believed that psychology should be an independent discipline rather than a stepchild of physiology and philosophy. He thought that this new psychology should be a science modeled after fields such as physics and chemistry and that the focus should be on the consciousness (i.e., the awareness of immediate experience).
    - In 1879, Wundt opened the world's first Psychology research lab (located in Leipzig, Germany). Psychology became The Scientific Study of Conscious Experience. Wundt had participants listen to a metronome and report the sensations they experienced. Wundt also published a journal devoted to research in psychology.(1881)
    - *"Wundt is the founder because he wedded physiology and philosophy and made the resulting offspring independent. He brought the empirical methods of physiology to the questions of philosophy."* (Tom Leahey – historian of psychology)

Nature-Nurture Controversy – the extent to which behavior results from heredity or experience

- Plato and Descartes believed that behavior is inborn (nature).
- Aristotle, Locke, Watson and Skinner believed that behavior results from experience (nurture).





Learning Target 1.B

Identify the research contributions of major historical figures in psychology.

Mary Whiton Calkins
- Studied psychology under William James.
- Denied PhD at Harvard.
- First elected female president of the APA

Charles Darwin
- British naturalist
- Theory of evolution
- Ideas of "natural selection" continue to influence the modern evolutionary perspective

Dorothea Dix
- American activist who successfully pressured lawmakers to construct & fund asylums for the mentally ill

Sigmund Freud
- One of the most influential thinkers of the 20th century
- Founded the "psychoanalytic" school of psych emphasizing the role of the unconscious (studied dreams) and how childhood experiences influence adult personality

G. Stanley Hall
- Studied under William James
- First psych lab in the U.S.
- First president of the APA

William James
- Harvard professor
- Key role in establishing psychology in the U.S.
- Emphasized the purpose, or "function" of behavior and mental experiences
- James-Lange theory of emotion

Ivan Pavlov
- Russian physiologist
- 532 experiments devoted to studying and formulating the principles of "classical learning"
- Pavlov's dogs

Jean Piaget
- Swiss psychologist
- Focused on cognitive development
- "Stage Theory of Development" describes how infants, children, and adolescents use different cognitive abilities

Carl Rogers
- Humanist
- Optimist view that people are innately good
- "Self-concept" is the cornerstone for personality
- People are motivated to achieve their full potential (self-actualize)

B.F. Skinner
- "Behaviorist" focusing on the observable and objective
- Formulated the principle of "operant conditioning"
- Skinner box

Margaret Floy Washburn
- First American woman to be awarded a PhD in Psychology
- Best known for her experimental work in animal behavior

John B. Watson
- Early American psychologist who focused on "observable behaviors" rather than subjective mental processes
- One of the founders of behaviorism

Wilhelm Wundt
- German scientist
- First psychology laboratory
- Pioneered the method of "introspection"

Learning Target 1.C

Describe and compare different theoretical approaches in explaining behavior.

(borrowed from the site of Mrs. Short at Hillard Davidson High School in Ohio)

Schools of Psychology

School of STRUCTURALISM – early psychological perspective that emphasized units of consciousness and identification of elements of though using ***introspection***.

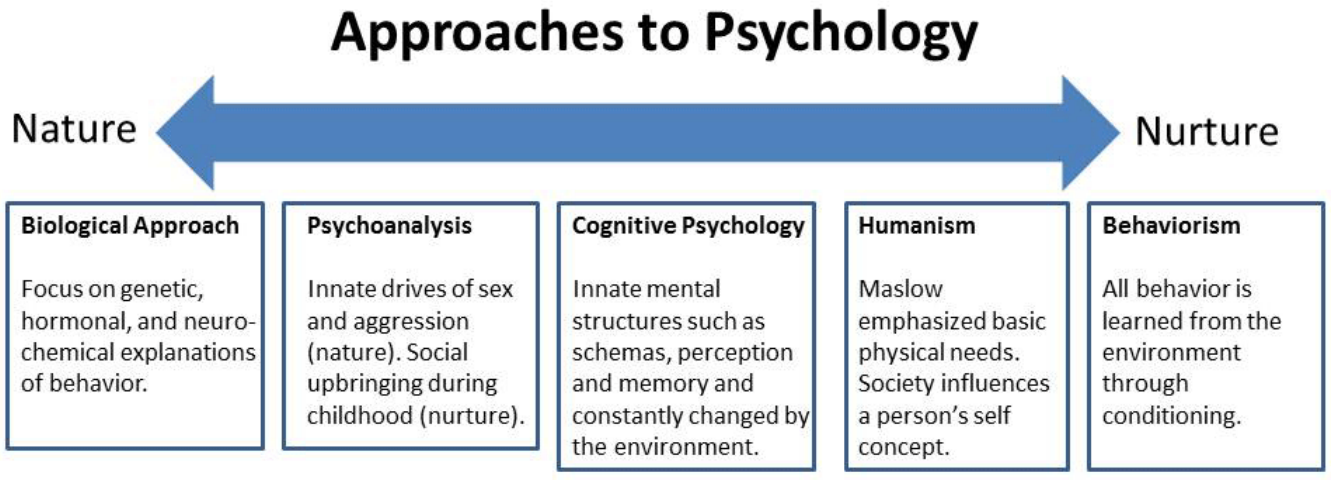
- **Wilhelm Wundt –** founder of scientific psychology in Leipzig, Germany; studied consciousness using introspection
- **G. Stanley Hall** – brought introspection to his lab at Johns Hopkins University in the United States; first president of the American Psychological Association
- **Edward Titchener** – studied elements of consciousness at his Cornell University lab
- **Margaret Floy Washburn** – first woman to complete her Ph.D. in psychology

School of FUNCTIONALISM – early psychological perspective concerned with how an organism uses its perceptual abilities to adapt to its environment

- **William James**– wrote *Principles of* Psychology
- **Mary Whiton Calkins** – first woman president of the American Psychological Association

GESTALT PSYCHOLOGY– refers to form, or organization, of consciousness, rather than content of behavior; tied the whole is greater than the sum of the parts; heavily influenced modern cognitive psychology (Gestalt means shape or form in Germany)

Principal Approaches to Psychology



Behavioral approach – psychological perspective concerned with behavior reactions to stimuli; learning as a result of experience

- **Ivan Pavlov** – known for classical conditioning of dogs
- **John Watson**– known for experiments in classical aversive conditioning
- **B.F. Skinner** – known for experiments in operant conditioning

Psychoanalytic/Psychodynamic approach – psychological perspective concerned with how unconscious instincts, conflicts, motives, and defenses influence behavior

- **Sigmund Freud** – "Father of Psychoanalysis"
- **Jung, Adler, Korney, Kohut** – psychodynamic psychologists

Humanistic approach – psychological perspective concerned with individual potential for growth and the role of unique perceptions in growth towards one's potential

- **Carl Rogers, Abraham Maslow** – humanistic psychologists

Biological Approach – psychological perspective concerned with physiological and biochemical factors that determine behavior and mental processes

Cognitive approach – psychological perspective concerned with how we receive, store and process information; think/reason; and use language

- **Jean Piaget** – studied cognitive development in children

Evolutionary approach– psychological perspective concerned with how natural selection favored behaviors that contributed to survival and spread of our ancestors' genes; evolutionary psychologists take a Darwinian approach to the study of human behavior

Sociocultural approach – psychological perspective concerned with how cultural differences affect behavior

Eclectic – use of techniques and ideas from a variety of approaches: **BIOPSYCHOSOCIAL**

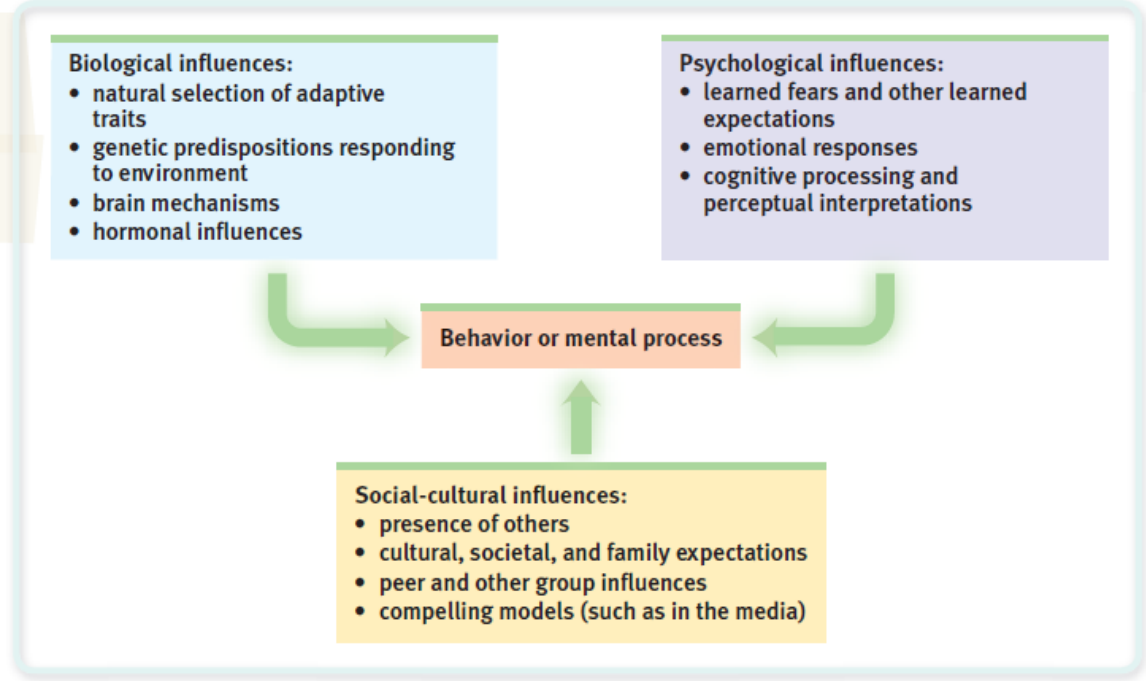
Learning Target 1.D

Recognize the strengths and limitations of applying theories to explain behavior

- An approach is a perspective (i.e. view) that involves certain assumptions (i.e. beliefs) about human behavior: the way they function, which aspects of them are worthy of study and what research methods are appropriate

for undertaking this study. There may be several different theories within an approach, but they all share these common assumptions.

- You may wonder why there are so many different psychology perspectives and whether one approach is correct and others wrong. ***Most psychologists would agree that no one perspective is correct.***
- Each perspective has its strengths and weaknesses, and brings something different to our understanding of human behavior. For this reason, it is important that psychology does have different perspectives to the understanding and study of human and animal behavior.



Learning Target 1.E

Distinguish the different domains of psychology.

Psychologists Specialize in Different Domains

- **Clinical psychologists** – evaluate and treat mental, emotional, and behavioral disorders; can be generalists who work with a wide variety of populations or specifically work with unique groups
- **Counseling psychologists** – help people adapt to change or make changes in their lifestyle; much like clinical psychologists but focus more on modifying a person's behavior and lifestyle rather than those with psychological disorders
- **Developmental psychologists** – study psychological development throughout the lifespan; study how people develop intellectually, socially, emotionally, and morally; some specialize in one period of life - such as adolescents or geriatric

- **Educational psychologists** – focus on how effective teaching and learning take place; concerned with how humans learn and study the various aspects of learning, with the goal to produce materials and strategies to assist and enhance the learning process
- **Experimental psychologists** – do research to add new knowledge to the field
- **Forensic psychologists** – apply psychological principles to legal issues; concerned with the numerous facets of the law, such as determining a defendant's competency to stand trial, or whether a victim has suffered psychological or neurological trauma
- **Health psychologists** – concentrate on biological, psychological, and social factors involved in health and illness; concerned with psychology's role in the promotion and maintenance of good health and the prevention and treatment of illness.
- **Industrial-Organizational psychologists** – aim to improve productivity and the quality of work life by applying psychological principles and methods to the workplace; focus on the management of organizational efficiency through the proper use of human resources
- **Neuropsychologists** – explore the relationships between brain/nervous systems and behavior; also called biological psychologists or biopsychologists, behavioral geneticists, physiological psychologists, and behavioral neuroscientists
- **Personality psychologists** – focus on traits, attitudes, and goals of the individual
- **Psychometricians** (also known as psychometric or measurement psychologists) – focus on methods for acquiring and analyzing psychological data
- **Rehabilitation psychologists** – help clients with mental retardation, developmental disabilities, and disabilities resulting from stroke or accidents adapt to their situation
- **School psychologists** – assess and counsel students, consult with educators and parents, and perform behavioral intervention when necessary
- **Social psychologists** – focus on how a person's mental life and behavior are shaped by interactions with other people
- **Sports psychologists** – help athletes refine their focus on competition goals, increase motivation, and deal with anxiety and fear of failure

PSYCHOLOGY DEGREES & SPECIALTIES

Counseling

Help people with problems like stress management and substance abuse.

Career requirements:

- Master's degree in psychology, usually with specialization in counseling
- State licensing

Social Work

Develop plans to improve people's situation and well-being.

Career requirements:

- Bachelor's or Master's degree in social work
- May need state licensing

Psychology

Focus on research, or treat patients in a clinical setting.

Career requirements:

- Doctoral degree in psychology (PhD or PsyD)
- State licensing

Marriage & Family Therapy

Help couples and families with emotional and behavioral problems.

Career requirements:

- Master's degree in psychology
- State licensing

Psychologist vs. Psychiatrist

- **Psychologist**
  - PhD in psychology
  - NOT a medical doctor
  - Cannot prescribe drugs
  - Variety of specialties
- **Psychiatrist**
  - MD (medical doctor)
  - Same basic training as any medical doctor
  - Specializes in mental problems
  - Can prescribe drugs

PSYCHOLOGY DEGREES & SPECIALTIES

Cognitive-Behavioral Psychology

Help patients understand the thoughts and feelings that influence behavior.

Developmental and Child Psychology

Work with children who have emotional problems, behavioral issues and physical or mental disabilities.

Clinical Psychology

See patients in a private practice or conduct research in the academic or healthcare fields.

Counseling

Help people cope with emotional problems and stressful situations one-on-one.

Forensic Psychology

Apply psychology to the criminal justice system by helping in investigations and trials.

Industrial-Organizational Psychology

Use psychology in the business world to help companies better serve consumers.

Sports Psychology

Help athletes focus better and break through barriers to improve their performance.

Topic 1.2: Research Methods in Psychology

Learning Target 1.F

Differentiate types of research with regard to purpose, strengths, and weaknesses.

Theories – organized sets of concepts that explain phenomena

Hypothesis – prediction of how two or more factors are likely related

- NOTE TO STUDENTS: When writing about research, students often describe the goal as proof of the hypothesis. However, proving a hypothesis is impossible. Rather, research aims to gather data that either supports or disproves a hypothesis.

Replication – repetition of the methods used in a previous experiment to see whether the same methods will yield the same results

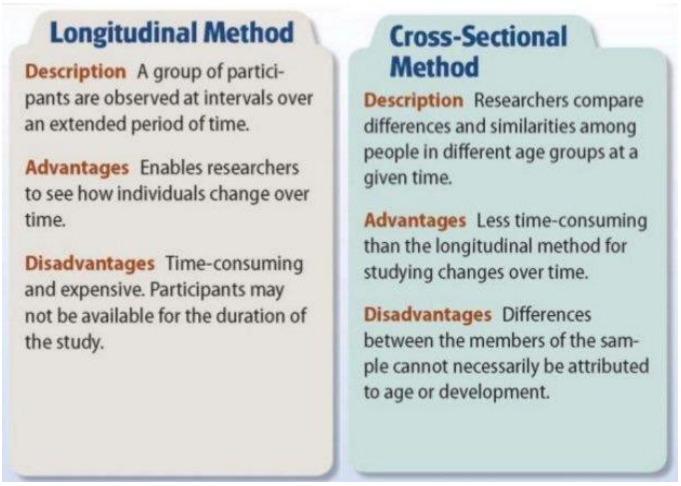
Table 6.1 Overview of Research Methods

Research Method	*Description*	*Key Strength*	*Major Weakness*
Experiment	Manipulation of an (IV) independent variable under controlled conditions and measurement of its effects on a dependent variable (DV)	Can establish cause and effect relationships between the IV and the DV	Ability to generalize to real world behavior can be limited
Quasi-experiment	Measurement of DV when random assignment to groups is not possible	Can provide strong evidence suggesting cause and effect relationships	Lack of random assignment can weaken conclusions
Naturalistic observation	Careful observations of humans or other animals in real-life situations	Provides descriptive data about behavior with wide applicability	Loss of experimental control
Surveys and Tests	Obtain large samples of abilities, beliefs, or behaviors at a specific time and place	Ease of administration, scoring, and statistical analysis	Distorted results because of sampling error, poorly phrased questions, and response biases
Case studies	Intensive investigation of the behavior and mental processes associated with a specific person or situation	Provide detailed descriptive data and analyses of new, complex, or rare phenomena	May not be representative of phenomena

See also: meta-analysis, correlational study, quantitative (e.g. Likert scales) vs. qualitative (structured interviews) measures

Research Methods in Psychology

- Correlational Research
  - Research technique based on the naturally occurring relationship between two or more variables
  - Used to make **PREDICTIONS**, such as the relation between SAT scores and success at college
  - Cannot be used to determine cause and effect
  - Asks: Do the two variables vary together?



Longitudinal Method

Description A group of participants are observed at intervals over an extended period of time.

Advantages Enables researchers to see how individuals change over time.

Disadvantages Time-consuming and expensive. Participants may not be available for the duration of the study.

Cross-Sectional Method

Description Researchers compare differences and similarities among people in different age groups at a given time.

Advantages Less time-consuming than the longitudinal method for studying changes over time.

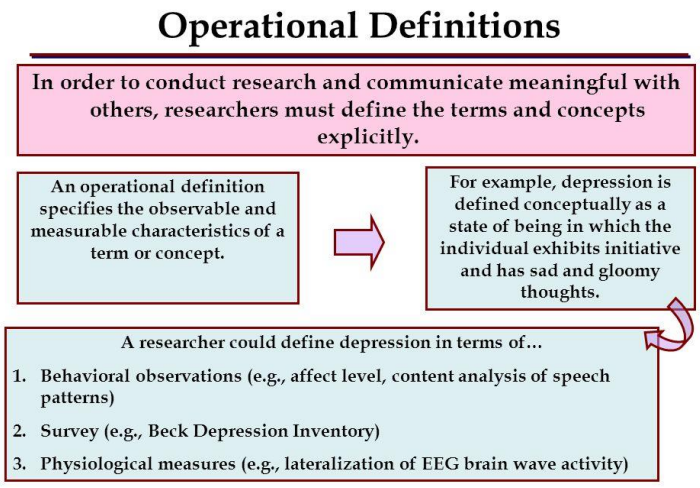
Disadvantages Differences between the members of the sample cannot necessarily be attributed to age or development.

Learning Target 1.F

Discuss the value of reliance on operational definitions and measurement in behavioral research.

Operational Definitions

- **Operational Definition**: is the definition of a variable in terms of the actual procedures used by the researcher to measure and/or manipulate it.
- Similar to a 'recipe,' operational definitions specify exactly how to measure and/or manipulate the variables in a study.
- Good operational definitions define procedures precisely so that other researchers can **replicate** the study.



Operational Definition – a description of the specific procedure used to determine the presence of a variable

- When you operationalize a variable, you explain how you will measure it. For example, if you were doing any type of experiment where you measure "doing well" in school, you would need an operational definition for "doing well." Would you use class rank? Would you use GPA? Would you use attendance and assignment completion percentages? There are lots of possible definitions for "doing well."

Topic 1.3: The Experimental Method

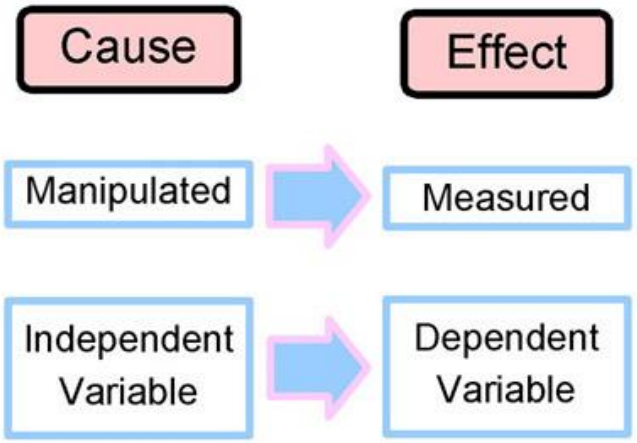
Learning Target 1.H

Identify independent, dependent, confounding, and control variables in experimental designs.

Independent Variable (IV) – the factor the researcher

TABLE 4.1 Operational Definitions

Conceptual Variable	Operational Definitions
Employee satisfaction	Number of days per month that the employee shows up to wo Rating of job satisfaction from 1 (not at all satisfied) to 9 (extre
Aggression	Number of presses of a button that administers shock to anoth Time taken to honk the horn at the car ahead after a stoplight
Attraction	Number of inches that an individual places his or her chair awa person
	Number of millimeters of pupil dilation when one person looks
Depression	Number of negative words used in a creative story
	Number of appointments with a psychotherapist
Decision-making	Number of people correctly solving a group performance task
	Speed at which a task is solved



manipulates in a controlled experiment (the cause)

Dependent Variable (DV) – the behavior or mental process that is measured in an experiment or quasi-experiment (the effect)

Confounding Variables – factors other than the independent variable that may cause a result. Confounds often arise due to differences between the groups that exist before the independent variable is imposed!

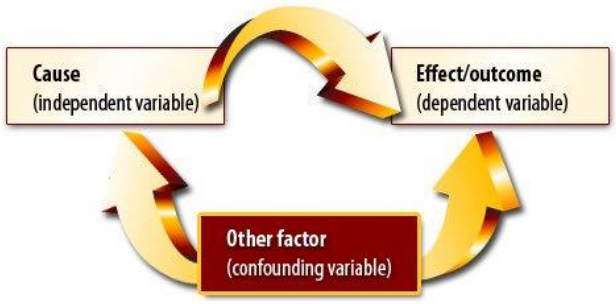


TABLE 1.1
Examples of Independent and Dependent Variables in Experimental Research

Independent Variables	Dependent Variables
Type of treatment: different types of drug treatments or psychological treatments	Behavioral variables: measures of adjustment, activity levels, eating behavior, smoking behavior
Treatment factors: brief vs. long-term treatment, inpatient vs. outpatient treatment	Physiological variables: measures of physiological responses such as heart rate, blood pressure, and brain wave activity
Experimental manipulations: types of beverage consumed (alcoholic vs. nonalcoholic)	Self-report variables: measures of anxiety, mood, or marital or life satisfaction

Learning Target 1.I

Describe how research design drives the reasonable conclusions that can be drawn.

EXAMPLES

- 1.I.1 Experiments are useful for determining cause and effect.
- 1.I.2 The use of experimental controls reduces alternative explanations.
- 1.I.3 Random assignment is needed to demonstrate cause and effect.
- 1.I.4 Correlational research can indicate if there is a relationship or association between two variables but cannot demonstrate cause and effect.

Learning Target 1.J

Distinguish between random assignment of participants to conditions in experiments and random selection of participants, primarily in correlational studies and surveys.

Population – all of the individuals in the group to which the study applies. The population includes anyone or anything that could possibly be selected to be in the sample. In order to select a **sample** (the group of participants), one must first identify the **population** from which the sample will be selected.

Sample – the subgroup of the population that participates in the study

- The goal in selecting a sample is that it will be *representative* of a large population.

- When you are looking at the sample being studied, it should be a random sample (see NOTE TO STUDENTS under random sample).

Random Selection – choosing of members of a population so that every individual has an equal chance of being chosen to participate in a study

- When explaining or defining a random sample you will always start with the expression, "a random sample of _____."
- NOTE TO STUDENTS: Selecting a sample randomly maximizes the chance that it will represent the population from which it was drawn and allows researchers to draw generalizations about the population based on their findings about their sample.

Random Assignment – division of the sample into groups so that every individual has an equal chance of being put in any group or condition

Experimental Group – a subgroup of the sample that receives the treatment or independent variable

Control Group – the comparison group; the subgroup of the sample that is similar to the experimental group in every way except for the presence of the independent variable

Single-Blind Procedure – research design in which participants don't know whether they are in the experimental or control group

Double-Blind Procedure – research design in which neither the experimenter nor the participants know who is in the experimental group and who is in the control group

Placebo – a physical or psychological treatment given to the control group that resembles the treatment given to the experimental group, but that contains no active ingredient

Placebo Effect – a response to the belief that the independent variable will have an effect, rather than the actual effect of the independent variable, which can be a confounding variable

See also: convenience samples, sampling bias

Learning Target 1.K

Predict the validity of behavioral explanations based on the quality of research design.

Reliability – consistency or repeatability of results

Validity – the extent to which an instrument measures or predicts what it is supposed to measure or predict

Confounding variables limit confidence in research conclusions.

Experimenter Bias – a phenomenon that occurs when a researcher's expectations or preferences about the outcome of a study influence the results obtained

Hindsight Bias – the tendency upon hearing about research finding (and many other things) to thinking that one knew it all along

Demand Characteristics – clues participants discover about the purpose of the study that suggest how they should respond

Topic 1.5: Statistical Analysis in Psychology

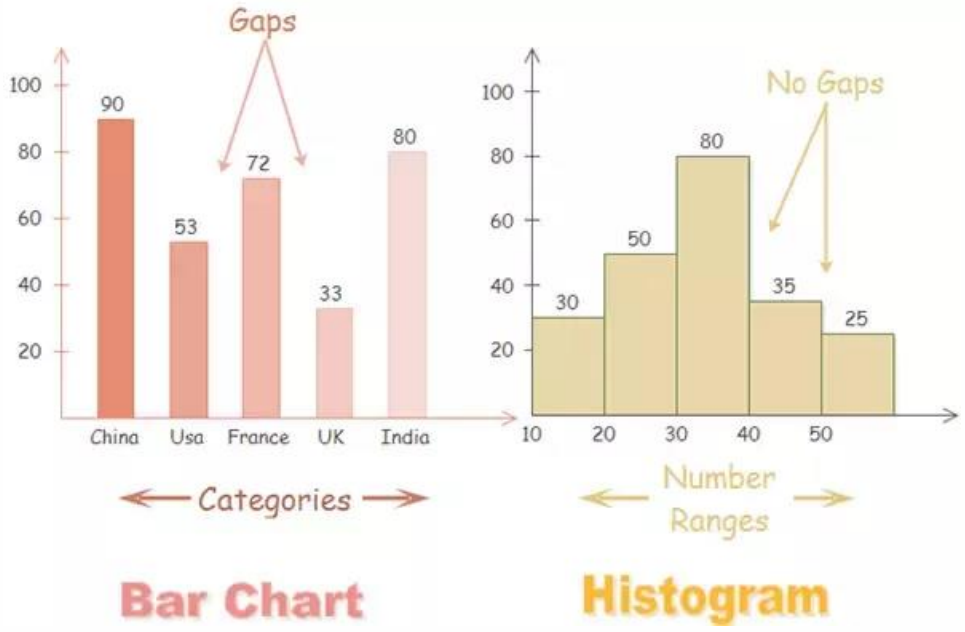
Learning Target 1.L

Apply basic descriptive statistical concepts, including interpreting and constructing graphs and calculating simple descriptive statistics.

Statistics – a field that involves the analysis of numerical data about representative samples of populations

Descriptive Statistics – numbers that summarize a set of research data obtained from a sample.

- **Frequency Distribution** – an orderly arrangement of scores indicating the frequency of each score or group of scores (see table to the right)



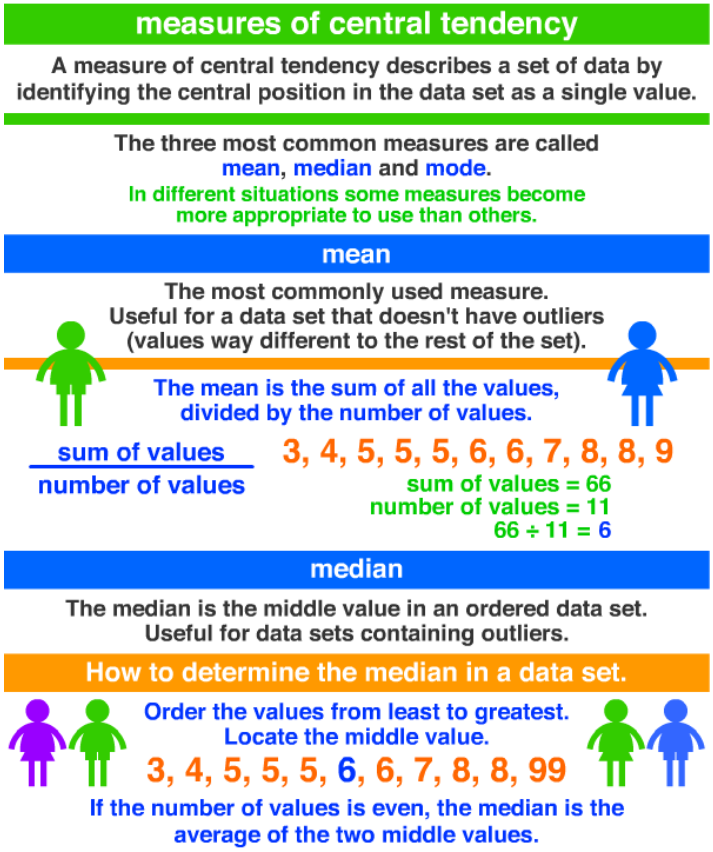
frequency distribution table

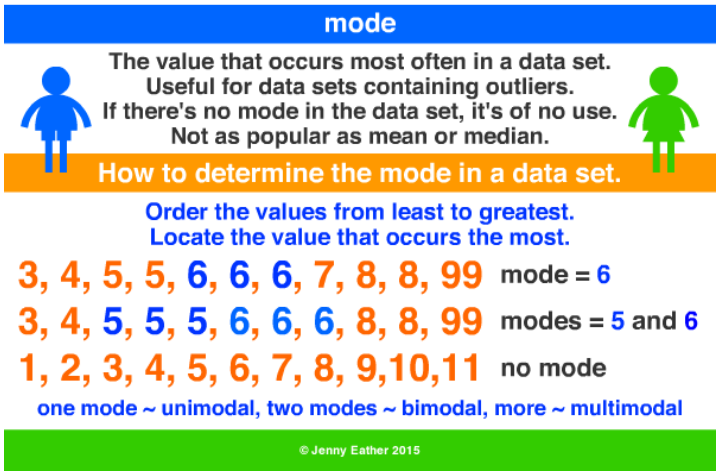
A data table that lists a set of scores and their frequency.

score	tally	frequency (f)
1	||||	4
2	𝍸 ||||	9
3	𝍸 |	6
4	𝍸 ||	7
5	|||	3
6	||	2

Measures of Central Tendency – average or most typical scores of a set of research data or distributions (**mode**, **median**, **mean**)

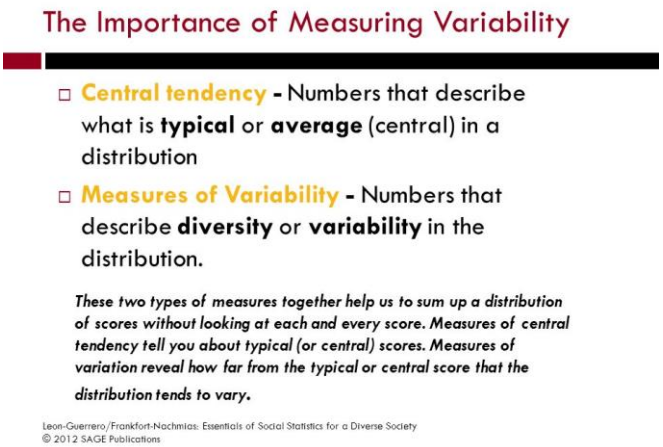
- **Mode** – most frequently occurring score in a set of research data ("quick and dirty")
- **Median** – the middle score when a set of data is organized by size
- **Mean** – the arithmetic average of a set of scores





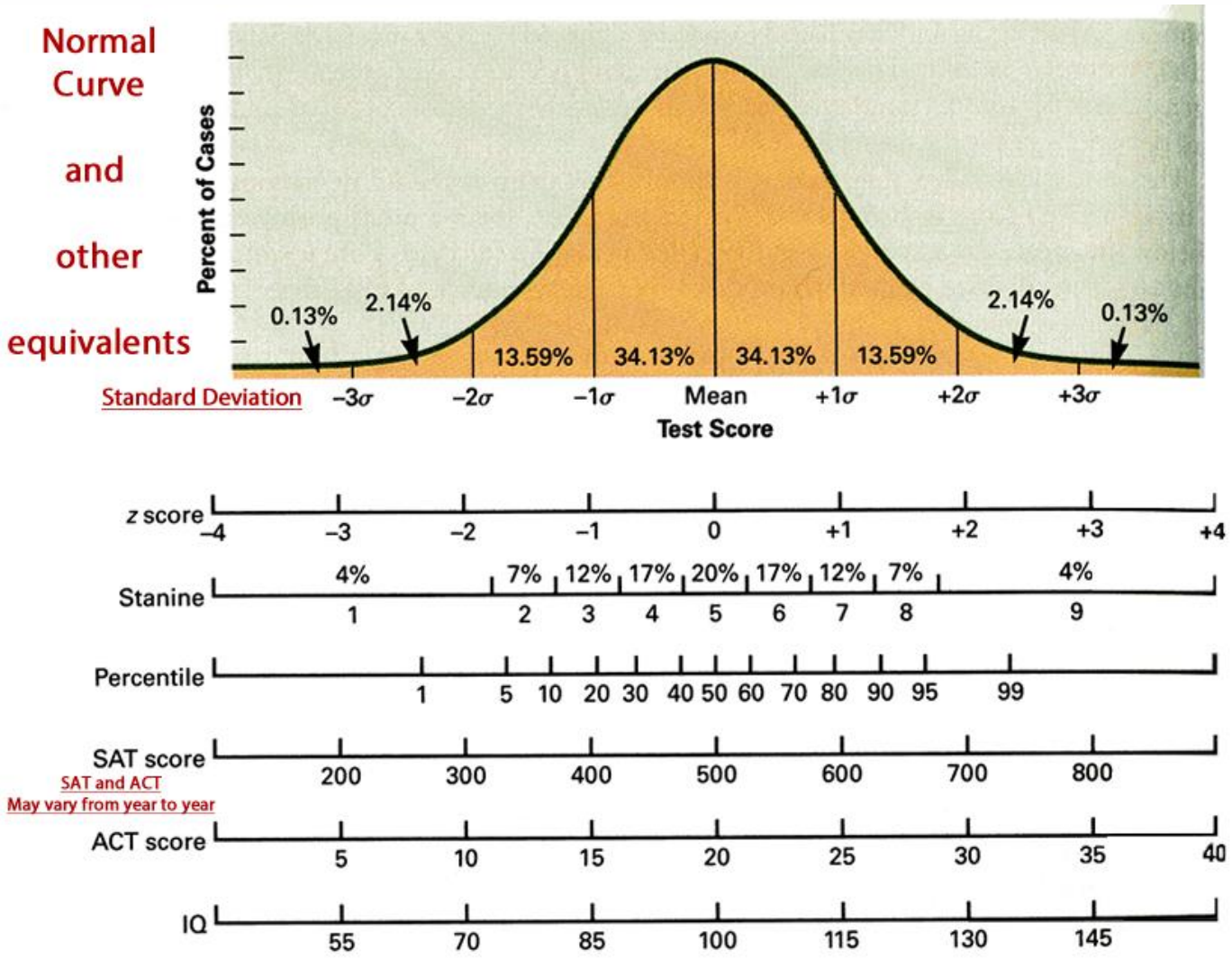
Measures of Variability – the spread or dispersion of a set of research data or distribution (**range**)

- **Range** – the difference between the largest score and the smallest score ("quick and dirty")
- **Standard Deviation (SD)** – measures the average difference between each score and the mean of the data set
- **Normal Distribution** – bell-shaped curve that represents data about how lots of human characteristics are dispersed in the population

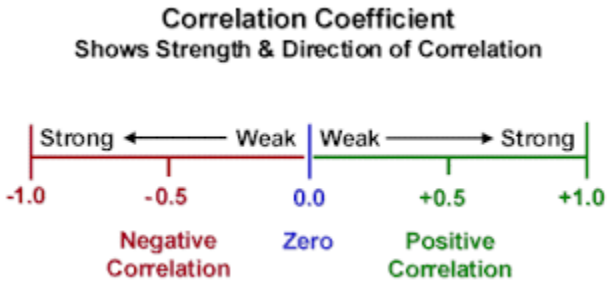


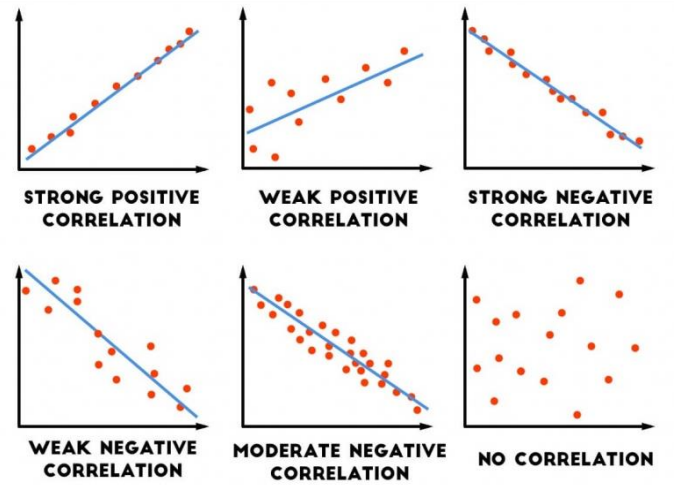
- **Percentile Score** – the percentage of scores at or below a particular score (from 1 to 99)

EXAMPLE of DESCRIPTIVE STATISTIC MEASUREMENTS with a NORMAL CURVE



Correlation Coefficient (r) – a statistical measure of the degree of relatedness or association between two sets of data that ranges from -1 to +1





See also: positive and negative skews, effect size

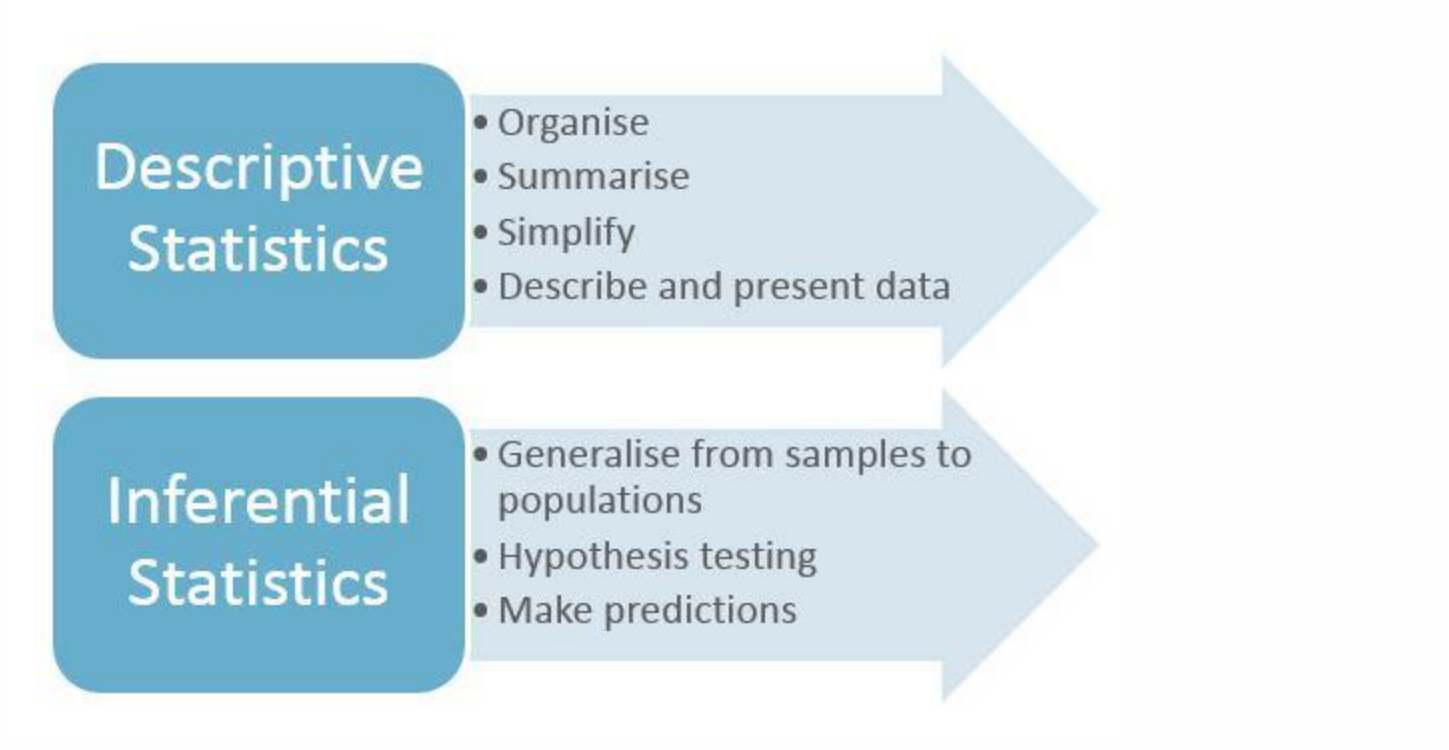
Inferential Statistics – statistics that are used to interpret data and draw conclusions

Statistical Significance (p) – how likely it is that an obtained result occurred by chance; statistical significance indicates a high probability that the independent variable caused the change in the dependent variable; it does NOT refer to how important the results are; *results are likely to be statistically significant when there is a large difference between the means of the two frequency distributions, when their standard deviations (SD) are small, and when the samples are large.*

- **Understanding the p-value:** Researchers can use a variety of inferential statistics to determine statistical significance (chi square tests, t-tests, ANOVAs);
    - The p-value must be ≤ .05 for statistical significance to exist
    - *The lower the p-value, the more significant the results and the less likely they are caused by chance*
    - A p-value of 0 will never happen because it is impossible to be 100% certain that the hypothesis is correct and that chance is not involved in any way.

Learning Target 1.M

Distinguish the purposes of descriptive statistics and inferential statistics.



Topic 1.6: Ethical Guidelines in Psychology

Learning Target 1.N

Identify how ethical issues inform and constrain research practices.

Ethical Guidelines – suggested rules for acting responsibly and morally when conducting research or in clinical practice

Whether involved in research or practice, psychologists need to act responsibly and morally. Studies conducted by Harry Harlow involving rhesus monkeys separated from their mothers and subjected to frightening conditions, studies by Phil Zimbardo involving students role-playing prisoners and guards, and studies conducted by Stanley Milgram in which participants believed they were delivering painful electric shocks to another person were highly publicized in the 1960s and 1970s.

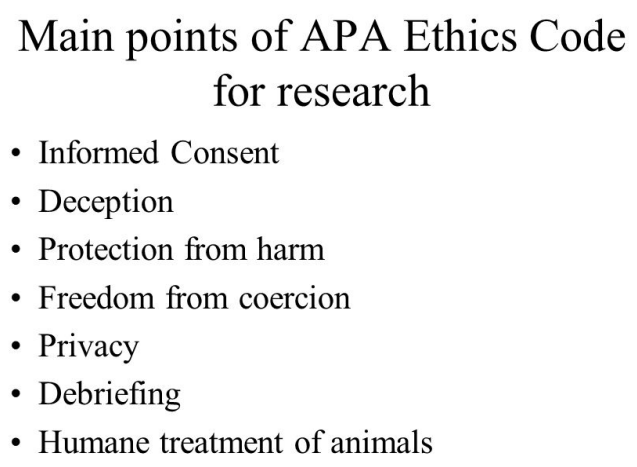
- Following Milgram's experiments, members of the American Psychological Association strengthened their ethical guidelines regarding research design, implementation, and practice; and other groups adopted similar guidelines.
- The guidelines prevent unnecessary deception and pain to humans and other animals, and they protect confidentiality.

Learning Target 1.0

Describe how ethical and legal guidelines protect research participants and promote sound ethical practice.

All public and private institutions have ***Institutional Review Boards (IRBs)*** that must approve all research conducted within their institutions.

- Require researchers to obtain signed **INFORMED CONSENT** agreements from all participants.
    - Describe procedures, risks, benefits, and the right of the participant **NOT TO PARTICIPATE** or to withdraw from the research study without penalty at any time.
- Research participants **CANNOT BE DECEIVED** about significant aspects that would affect their willingness to participate.
- After the participant finishes his or her part or research is completed, participants are **DEBRIEFED** about the research (i.e. the nature, results, and conclusions of the research are revealed)



Animal Research **(Institutional Animal Care and Use Committee - IACUC)**

- Must treat them humanely
- Acquire, care for, use, and dispose of animals properly
- Make efforts to minimize their discomfort, infection, illness, and pain

APA Ethical Principles of Psychologists and Code of Conduct

- **General Principles**
  - Beneficence and non-maleficence
    - *Constantly weigh costs & benefits; protect from harm; produce greatest good*
  - Fidelity and responsibility
    - *Be professional; constantly be aware of responsibility to society*
  - Integrity
    - *Be scrupulously honest*
  - Justice
    - *Always treat people fairly*
  - Respect for peoples' rights and dignity
    - *Safeguard individual rights; protect rights of privacy and confidentiality*