The Science of Psychology

Why Study Psychology?
What is Psychology?
What are the Goals of Psychology?
What is the History of Psychology?
Why Study Psychology?

1) It helps you to understand yourself – why do you do the things that you do; why are you attracted to the type of people that seems to attract you?

2) To understand your relationship with and reaction to other people;

3) To understand the connection between your brain and your body, for example, what is the name of the cerebral system that has a major role in the production our emotions?

To better understand the world in which we live.
What is Psychology?

- The authors define Psychology as the scientific study of ____________ and ________________ processes.
- ________________ includes all of our overt actions.
- ________________ involves all internal, covert activity of the brain.
What are the four Primary Goals of Psychology?

- Description – Involves making an observation of a ___________ and taking note of everything that ___________ is and is not doing. Asking: What? Where? To whom? And under what conditions/circumstances does it happen?
- Explanation – Tries to answer the question of ‘Why’ it is happening?
The Remaining Goals of Psychology

- Prediction – Is attempting to forecast what will happen in the future.
- Control – Is asking what changes in the behavior or in the environment that can be made that will alter the behavior that is the focus of our attention.
Psychology being perceived as a scientific discipline began in 1879 when a physiologist in Leipzig, Germany named, Wilhelm Wundt, attempted to apply scientific principles to the study of the ___________ _____________.

Wundt argued that the mind was made up of thoughts, experiences, emotions, and other mental activities. In order to inspect these nonphysical elements, students had to learn to think objectively about their own thoughts (objectively examining and measuring) - Wundt called this “objective introspection”.

Wundt is known as the “father of psychology.”
• Edward Titchener – A student of Wundt, expanded on his idea of introspection called this new approach, structuralism. Structuralism focused on the structure or basic elements of the mind; every experience can be broken down into its individual emotions and sensations.

• Margaret F. Washburn – In 1894, she became the first woman to receive a Ph.D. in psychology. In 1908, she published a book on animal behavior titled, “The Animal Mind.”
William James – was interested in the importance of consciousness to everyday life; how the mind allows people to function, to live, to adapt, work, play in their environment. James called his viewpoint, functionalism. Influenced by Charles Darwin’s ideas about _________ ______________, James argued that if physical traits could aid in survival, why couldn’t behavioral traits? Intellectual traits?
Mary Whiton Calkins – In 1905, became the first female __________ of the American Psychological Society. And in spite of completing every course and requirement for earning a Ph.D. in psychology was denied that degree by Harvard U. because she was a ________________.

Francis Cecil Sumner – In 1920, he became the first African American to earn a Ph.D. in psychology at Clark University.

Kenneth and Mamie Clark showed the negative effects of __________ __________ on African American children.

Jorge Sanchez – A Hispanic psychologist who conducted research on the cultural biases of some intelligence tests.
Gestalt Psychology

- Gestalt is a German word meaning “an organized whole” or “configuration”.
- Max Wertheimer argued that psychological events such as perceiving and sensing could not be broken down into any smaller elements and still be properly understood; i.e., a melody.
Sigmund Freud’s Theory of Psychoanalysis

- People of several different viewpoints were trying to promote their own perspective on the study of the human mind and behavior. What is your theory of human behavior?
- Sigmund Freud was a medical doctor, a neurologist, specializing in the disorder of the nervous system. For many of his patients, they presented problems with no physical cause. Therefore, Freud concluded that the origin of these problems must be in the mind, the unconscious mind.
The Unconscious Mind

- For Freud, the unconscious mind is where we push or repress all of our threatening urges and desires. It is our ____________urges that are trying to surface that gives rise to our nervous/anxiety disorders.
- Freud believed that our ____________ was formed by age six.
- Freud’s form of therapy is called__________________.
Ivan Pavlov, a Russian physiologist, had shown that through conditioning, a ___________(an involuntary reaction-salivation) could occur before the food was presented. Salivation was then a learned (conditioned) reflexive response. What is it that you have a learned reflexive/conditioned response to?
In the early 1900s, psychologist John Watson felt that psychology should have a scientific focus. And the only way to do that was to ignore the “consciousness” issue and focus only on observable behavior— that which can be directly seen and measured.

Freud believed that all behaviors stem from ______________ motivations. And that all maladaptive behaviors are from repressed conflicts that need to be uncovered and understood because healing/healthiness can occur.
Watson believed that all behaviors are ____________e.g., phobias. What intense fear do you have that you were conditioned to fear it? That you have stimulus-response relationship?

Watson argued that all behavior was result of a **stimulus-response relationship**.
There are seven Modern Perspectives:

1) Psychodynamic Perspective
2) Behavioral
3) Humanistic
4) Cognitive
5) Sociocultural
6) Biopsychological
7) Evolutionary Perspective
Psychodynamic Perspective

The core of Freud’s beliefs have not changed. Practitioners today (Neo-Freudians) still hold to the belief that the ____________ mind has a major influence over conscious behavior and of the importance of ____________ childhood experiences. There is less of an emphasis on sex and sexual motivations and more emphasis on the development of a sense of self and the discovery of other motivations behind a person’s behavior.
Behavioral Perspective

- Behaviorism assumes that the learner is passive, responding to environmental stimuli. Important contributors are John B. Watson, Ivan Pavlov, B.F. Skinner, E.L. Thorndike (Chap. 5) etc. The learner starts off as a *clean slate* and behavior (i.e., tabula rasa – individuals are born without built-in mental content and that their knowledge comes from experience and perception.) is shaped through positive reinforcement or negative reinforcement.
In contrast, punishment (both positive and negative) decreases the likelihood that the antecedent behavior will happen again. Positive indicates the application of a stimulus; Negative indicates the withholding of a stimulus. Learning is therefore defined as a ____________ in behavior in the learner.
Humanistic Perspective

- Humanistic Psychology is a reaction to both psychodynamic theory and behaviorism, and is sometimes referred to as the “third force” in psychology. Within Behaviorism, the environment determines behavior and the individual has little input into his or her development. With Psychoanalysis, behavior is determined by sexual and aggressive instincts, and once again, the individual has little to do with his or her own destiny.

- Humanistic Psychology gets its name from its belief in the basic goodness and respect of humankind. Its roots are based in existential psychology or the understanding and acceptance of one’s own existence and responsibility.
Humanistic Psychologist, subscribes to four basis beliefs: 1) The present is the most important aspect of the person and therefore humanists focus on the here and now rather than looking at the past or trying to predict the future. 2) Humanistic theory is reality based and to be psychologically healthy people must take responsibility for themselves, whether the person’s actions are positive or negative. 3) The individual, merely by being human, posses an inherent worth. Actions may not be positive but this does not negate the value of the person, e.g. Michael Vick?????
4) The goal of life should always be to achieve personal growth and understanding. Only through self-improvement and self-knowledge can one truly be happy.

Humans have free will, the freedom to choose their own destiny. The choice to study or go out partying; to strive for excellence or settle for mediocrity; to smoke or not smoke etc. Do you have FREE WILL?
Cognitive Perspective

- Cognitive psychology focuses on the individual’s thoughts as the determinate of his or her emotions and behaviors. They would argue that thoughts always come before any feeling and before any action.

- With its focus on memory, intelligence, perception, thought processes, problem solving, language, and learning, a relatively new field has emerged named **cognitive neuroscience** which includes the study of the physical workings of the brain and nervous system.
Sociocultural Perspective

- This perspective focuses on the relationship between social behavior and __________. It combines two areas of study: social psychology, which is the study of groups, ________________, and rules of social actions and its’ impact on the individual; and cultural psychology, which is the study of cultural norms, values, and expectations.

- The sociocultural perspective reminds us that how we behave, dress, think etc. is influenced by social norms, fads, class differences, and ethnic identity concerns of the particular culture in which we live in, make a living in, or that which we give importance to.
Biopsychological Perspective

- Experts in the field of psychology and biology agree that the mind and the body are connected in more complex ways than we can even comprehend. The way we think, affects the way we behave, the way we feel, and the way our body’s respond to its environment. Hormones, heredity, brain chemicals, tumors, and diseases are some of the biological causes of behavior and mental events.
The focus of Evolutionary psychology is to discover and understand the design of the human mind, (Cosmides, & Tooby). They focus on the biological bases for universal mental characteristics that all humans share, e.g., why we lie, how attractiveness influences mate selection, why the fear of snakes, spiders is so universal, etc.

There are five principles that guide Evolutionary Psychologists: 1) The brain is a physical system. It functions as a computer. Its circuits are designed to generate behavior that is appropriate to your environmental circumstances. 2) The brains neural circuits were designed by natural selection to solve problems that our ancestors faced during our species’ evolutionary history, or the environment of evolutionary adaptedness.
3) Consciousness is just the tip of the iceberg; most of what goes on in your mind is hidden from you. As a result, your conscious experience can mislead you into thinking that your circuitry is simpler than it really is. Most problems that you experience as easy to solve are very difficult to solve— they require very complicated neural circuitry. 4) Different neural circuits are specialized for solving different adaptive problems. And 5) Our modern skulls house a stone age mind – Natural selection, the process that designed our brain, takes a long time to design a circuit of any complexity. The environment that humans evolved in was very different from our modern environment. Our ancestors spent over 99% of our species’ evolutionary history living in hunter-gatherer societies. They lived in small, nomadic bands of a few dozen individuals who got all of their food each day by either gathering plants or by hunting animals (Cosmides & Tooby).
Explain Psychological Professionals and Areas of Specialization

- What’s the difference between Psychiatrist and Psychologist?
- What is a Psychoanalyst?
- What occupational area is a Psychiatric Social Worker trained in?
- What is a Developmental psychologist?
- What is a Psychologist? Is a person highly trained in the methods, factual knowledge, and theories of psychology. All psychologists study behavior and mental processes, but they pursue this knowledge in different ways, in different settings, and from different perspectives.
- What’s the difference between a clinical psychologist and a counseling psychologist? A Clinical Psychologist treats psychological problems or do research on therapies and mental disorders. A Counseling Psychologist tends to address milder problems, such as poor adjustment at work or school.
Areas of Specialization

- Know what is a:
- 1) Industrial/Organizational Psychologist
- 2) Neuropsychologist
- 3) Geropsychologist
- 4) Sports psychologist
Psychology: Why is psychology considered a science?

- Psychologists are trained to be skeptical of claims and arguments that are not grounded in evidence; they use the empirical approach. Meaning, their information is based on evidence gathered from experiments and careful observation. The objectives of science is to describe, explain, predict, and control.
The Steps in using the Scientific Method

- The scientific method is based on careful collection of evidence, accurate description and measurement, precise definition, controlled observation, and repeatable results.
- The first step in any investigation is to have a question to investigate. Therefore:
  1) Perceiving the Question/Defining the problem; 2) Forming/Proposing a hypothesis; 3) Gather evidence to test your hypothesis; 4) Draw conclusions; and 5) Report your Results.

In psychology, researchers try to find the answers to empirical questions.
The Five Steps in using the Scientific Method

- Perceiving the Question
- Forming a Hypothesis
- Testing the Hypothesis
- Drawing Conclusions
- Report your Results
• Naturalistic Observation – allows researchers to study behavior that hasn’t been tampered with by outside influences. A major problem is the observer effect, which refers to changes in a ______________ behavior caused by an awareness of being __________. Therefore, the observer should be hidden from view. Another technique used to limit/reduce observer effect is to use “participant observation.” This when the __________ becomes a participant in the group being observed.
Disadvantages to Naturalistic Observations

1) Observer bias – We see only those events that support our expectations and we ignores the events that don’t fit our paradigm.

2) Each naturalistic setting is unique unto itself. Therefore, we cannot infer/predict that the behavior observed in one setting can be generalized to another setting.
Laboratory Observation – The primary advantage of this method is the degree of control that it gives to the observer.

Case Studies – Is when a researcher is investigating one subject in great detail i.e. O.C.D. vs. O.C.P.D.

Surveys – Provides a way for researchers to ask a series of questions about a given topic.

Representative sample – randomly selected sample of subjects from a larger population of subjects.

Population – Refers to the entire group of people in which the researcher is interested.
Finding Relationships between/among Variables

- Correlation – Is a measure of the __________ between two or more variables.
- Correlation coefficient – Is a number that represents the direction of the relationship as well as its strength. The number will range between +1.00 and -1.00.
- Correlation does not prove _________________.


The only research method that will allow researchers to determine the cause of a behavior is the ________________. In an experiment, researchers deliberately manipulate one variable (V-1) to see if it causes corresponding changes in the second variable (V-2). This allows the determination of cause-and-effect relationship.

Operational definition – refers to a definition that specifically names the operations/procedures that the experimenter must use in order to measure/identify the variables in question.
The Experiment

- Independent variable (IV) – This is the variable that is manipulated in the experiment.
- Dependent variable (DV) – Is the variable that is affected by the changes in the IV.
- Experimental group – Is the group that is exposed to the IV.
- Control group – Is the group that is not exposed to the IV; it is used to control for the possibility that other factors might be causing the effect that is being examined.
The Experiment

- Random assignment – Process of assigning subjects to the experimental or control groups randomly, so that each subject has an equal chance of being in either group.
- Placebo effect – The phenomenon in which the expectations of the participants in a study can influence their __________ thereby influencing the outcome of the experiment.
- Experimenter effect – Tendency of the experimenter’s expectations for a study to unintentionally influence the results of the study.
- Single-blind study – The subjects do not know if they are in the experimental or the control group.
- Double-blind study – Neither the experimenter nor the participants know which group the participants are in.
Guidelines For Doing Research With People

1) Rights and well-being of participants must be weighed against the study’s value to science. Rights and well-being of participants are priority #1.

2) Participants must be allowed to make an informed decision about their participation (informed consent).

3) Deception must be justified.

4) Participants may withdraw from the study at any time.

5) Participants must be protected from risks or told explicitly of the risks involved.

6) Investigators must debrief participants, telling the true nature of the study and expectations of results.

7) Data must remain confidential.
Pseudo-psychologies-Palms, Planets, and Personality

- Pseudo-psychology
- Palmistry
- Phrenology
- Graphology
- Astrology
- Uncritical Acceptance
- The Barnum Effect

THE END - - STUDY, STUDY, STUDY