

Psychology Final Study Guide

Chapter 1: Psychology- The Study of Mental Processes and Behavior

- Psychology: the scientific investigation of mental processes and behavior
 - Localization of function: the extent to which different parts of the brain control different aspects of functioning
 - Damage to the prefrontal cortex impairs the ability to connect thoughts with feelings
 - Results in mood swings, loss of social inhibition, and changes in personality
 - Phineas Gage:
 - Tamping iron went straight through his head, crushing his jawbone and exiting at the top of his skull behind his eye
 - Damage to his brain was so severe
 - Wasnt same person
 - Rude, uncivil, incapable of resuming his work responsibilities, used profanity, irreverent
 - Culture and Psychology:
 - Culture: the influence of membership in a larger group (e.g., a nation)
 - Psychological anthropologists: people who study psychological phenomena in other cultures by observing the way the natives behave in their daily lives
 - Cross-cultural psychologists: test psychological hypotheses in different cultures
- Wilhelm Wundt:
 - "Father of Psychology"- founded first psychological laboratory
 - Hoped to use scientific methods to analyze consciousness
 - Introspection:
 - Method used by Wundt and other structuralists in which trained subjects verbally reported everything that went through their minds when presented with a stimulus or task
- Edward Titchener (Wundt's student):
 - Structuralism: an early school of thought developed by Titchener, which attempted to use introspection as a method for uncovering the basic elements of consciousness and the way they combine with each other into ideas
 - Hoped to devise periodic table of the elements of human consciousness
- William James:
 - Founder of functionalism:
 - Emphasized role of psychological processes in helping individuals adapt to their environment
 - Wrote first textbook in psychology
 - Believed consciousness exists because it serves a function, and the task of psychologists is to understand that function
- Thomas Kuhn:
 - Studied history of all different sciences and found similarities across disciplines
 - Normal science: research of a science based on a past achievements that scientists acknowledge as a base for future purposes
 - Paradigms: theory for how to explain normal science
 - Paradigm shifts: fundamental change in approach or underlying assumptions
 - Scientific revolution: transformative scientific developments
- 4 Perspectives in psychology:
 - Psychodynamic:
 - Metaphor: Awareness is like an **iceberg**
 - You can only see the tip, but most of the surface is under water
 - Method: case study
 - In depth observation of one person or a small group of individuals
 - Data: clinical observations of behaviors, thoughts, and feelings

- Behaviorist:
 - o Metaphor: humans and other animals are like **machines**
 - o Method: experimental method
 - Create a laboratory situation to test a hypothesis about how certain environmental events will affect behavior
 - o Data: quantitative empirical data
 - I.e., rats running in a maze for food
- Cognitive:
 - o Metaphor: the mind is like a **computer**
 - o Method: experimental method
 - o Data: quantitative empirical data (often memory and decision-making tasks)
 - I.e., recall of word lists
- Evolutionary:
 - o Metaphor: we are all **runners in a race**, competing for survival, sexual partners, and resources
 - o Method: mostly deductive
 - o Data: start with a known behavior in a species and attempt to explain it on a basis of evolutionary principles

Chapter 2: Research Methods in Psychology

- 4 Characteristics of good psychological research:
 - o (1) Theoretical framework:
 - Theory: a systematic way of organizing and explaining observations
 - Provides the framework for generating a hypothesis:
 - Proposed cause-&-effect relationship between two or more variables
 - Variable:
 - Continuous: theoretically can assume an infinite # of values
 - I.e., body weight
 - Categorical: can assume only a finite # of values
 - I.e., had a heart attack (yes/no)
 - o (2) Standardized procedures: procedure that is the same for all participants except where variation is introduced to test a hypothesis
 - Importance: minimizes unintended variation
 - o (3) Generalizability:
 - Sampling must be representative of the population as a whole
 - Internal validity: extent to which a study is methodologically sound
 - External validity: extent to which a study's findings can be generalized to situations outside the lab
 - Experimenter's dilemma: trade-off between internal and external validity
 - o (4) Objective measurement:
 - Construct: abstract variable we want to measure (i.e., health)
 - To study a construct, a researcher must first create a technique to measure it
 - Measure: objective way of assessing a variable
 - o Reliability: a measure's ability to produce consistent results
 - Techniques to determine reliability of a measure:
 - Test-retest: consistency across time
 - Internal consistency: consistency of participant's responses across items on a scale

- I.e., if several ways of asking a question yield similar results
 - Inter-rater: consistency across people
 - Two people rating the same behavior should assign similar scores
 - o Validity: a measure's ability to assess the variable of interest accurately
 - Techniques to determine validity of a measure:
 - Face validity: the degree to which a measure appears to measure what it purports to measure
 - Construct validity: the degree to which a measure actually assesses what it claims to measure (most important)
 - Determined in 2 ways:
 - Convergent: strong correlations with related measures
 - Discriminant: low correlations with unrelated measures
 - Criterion validity: the degree to which a measure allows a researcher to distinguish among groups on the basis of certain behaviors or responses
- 3 Types of descriptive research:
 - o (1) Case study: in-depth observation of the behaviors of one person (or a small group)
 - o (2) Naturalistic observation: in-depth study of a phenomenon in its natural setting
 - o (3) Survey research: asks questions of a large random sample of people about their attitudes/ behaviors using interviews/ questionnaires
- Descriptive Statistics: attempts to describe phenomena as they exist rather than to manipulate variables
 - o Central tendency: center around which the raw data tends to cluster
 - Mean: the statistical average of the scores of all participants on a measure
 - Median: the score that falls in the middle of the distribution of scores
 - Mode: the most common or most frequent score or value of a variable observed in a sample
 - Variability of scores: the extent to which participants tend to vary from each other in their scores on a measure
 - Range: represents the difference between the highest and the lowest value on a variable obtained in a sample
 - Standard deviation: the amount the average participant deviates from the mean of the sample on a measure
- Correlational research: determines the extent to which two or more variables are related and can be used to predict one another... **You cannot infer causation from correlation**
 - o Scatterplot: visually represents the relationship between 2 variables
 - X variable (predictor) is on the horizontal axis
 - Y variable (criterion) is on the vertical axis
 - o Correlation coefficient r: a statistic that summarizes the strength and direction of the relationship between 2 variables
 - Ranges from -1.0 to +1.0
 - The closer to +1 or -1, the stronger the relationship
 - The closer to 0, the weaker the relationship
 - Sign (+ or -) determines direction of relationship
 - + = positive correlation
 - The higher individuals measure on one variable, the higher they are likely to measure on the other
 - - = negative correlation
 - The higher participants measure on one variable, the lower they will measure on the other
 - o Effect of nonlinearity on r: if there's some degree of nonlinearity between x & y, then r will underestimate the degree of the relationship