

History, Approaches, Research Methods

Early theories: Introspection – Wilhelm Wundt – first lab – structuralism (combine subjective emotions/objective sensations)

Function of structures – William James – America – functionalism

Gestalt psychology – whole picture – especially with perception (Max Wertheimer)

Psychoanalysis – Freud – unconscious, repression, defense mechanisms

Behaviorism – John B. Watson (founder), then B. F. Skinner

Psychological perspectives

Humanistic – Maslow, Rogers – free will, choosing what's best for oneself

Psychoanalytic – Freud first

Biopsychology (or neuroscience) – brain and body keys to understanding behavior

Evolutionary (or Darwinian, or sociobiological) – natural selection

Behavioral – all is learned through conditioning principles

Cognitive – how the person thinks is the key

Sociocultural – looks at environment as key

Research

Hypothesis – expresses a possible relationship between variables

Dependent vs. independent variable

Operational definitions

Random sample

Random assignment to experimental & control groups

Population

Stratified sample – match sample to ethnic or other groups

Experimental method (laboratory vs. field research)

Establishes cause and effect relationship

Confounding variables

Experimenter bias

Eliminate with double-blind

Hawthorne effect

Placebos

Correlational method

Relationship between variables (-1.00 to +1.00)

Correlation does not mean causation

Can use surveys (must guard against sampling biases)

Naturalistic observation – unobtrusive, realistic

Observer bias, error

Case study – full and detailed, but only one subject or small group of subjects

Ex. Ramachandran's research in Man Who Mistook His Wife for a Hat

Difficult to generalize

Statistics

Descriptive statistics

Measures of central tendency – mean, median mode

Extreme scores – outliers – skewed distributions

Extreme high scores – positively skewed

Measures of variability

Range – distance between highest & lowest

Variance = standard deviation squared

Standard deviation – you know you love this 😊

Z-scores

Normal curve – 68-95-99.7

Percentiles

Correlation coefficient (scatterplot)

Inferential statistics

Can the data be applied to a larger population?

Are there sampling errors?

Calculate the p value (probability that the results occurred by chance)

$P < .05$, considered statistically significant

Ethical guidelines

Institutional Review Board (IRB)

Animal research

Have clear scientific purpose

Care for and house animals in humane way.

Acquire animals legally.

Minimize suffering.

Human research

Informed consent

No coercion

Confidentiality/anonymity

Minimum risk to subject (no way Milgram's research would be approved)

Debriefing of subjects