General Psychology

Ch. 1 Outline: Thinking Critically with Psychological Science

I. The Need for Psychological Science
   A. The Limits of Intuition & Common Sense
      1. The Hindsight Bias (I-knew-it-all-along phenomenon)
      2. Overconfidence
   B. The Scientific Attitude
      1. Critical Thinking
   C. The Scientific Method
      1. Theory
      2. Hypothesis
      3. Operational Definition
      4. Replication

II. Description
   A. Case Study
   B. Survey (test/questionnaires/interviews)
      1. Sampling
         a. False consensus effect
         b. Random sample
         c. Representative sample
   C. Naturalistic Observation

III. Correlation
   A. Correlation coefficient (Pearson r)
      1. + correlation
      2. – correlation
         a. Third variable problem
         b. Illusory Correlations

IV. Experimentation
   A. Variables
      1. IV
      2. DV
   B. Groups
      1. Experimental
      2. Control
   C. Random/representative sampling
      1. Random assignment
   D. Extraneous variables
   E. Problems (Biases)
      1. Researcher
         a. Experimenter Bias
         b. Ethnocentrism
      2. Participant Bias
         a. Sample bias
         b. Social desirability
         c. Placebo effect
V. **Statistical Reasoning**
   A. Describing Data
   B. Measures of Central Tendency
      1. Mode
      2. Mean
      3. Median
   C. Measures of Variation
      i. Range
      ii. Standard deviation
   D. Making Inferences
      i. When is an observed difference reliable?
         1. Representative samples are better than biased samples
         2. Less variable observations are more reliable than those that are more variable
         3. More cases are better than fewer

VI. **Ethical Considerations**
   A. Informed Consent
   B. Protect from harm & discomfort
   C. Confidentiality
   D. Use of deception