Items, Scores and Reliability

_____ vs. _____ Definitions

- _____ = Abstract definition; psychological construct
  - e.g., aggression
- _____ = Concrete definition; how you will measure the construct
  - e.g., blasting another person with loud noises
- Measurement issues = Operational

Types of Variables

- _____
  - Yes or No
- _____
  - Ranges from High to Low
  - Set increments (e.g., 1, 2, 3, 4, 5)
- _____
  - Ranges from High to Low
  - Infinite increments
- All analyses involve defining variables as either categorical or continuous

_____ Scale

- Number assigned to characteristics
  - aka. categorical
- Gender, race

_____ Scale

- Rank-ordering
- Best performance, second best, etc.

_____ Scale

- Continuous scale with no zero point
- Ex. Stress

_____ Scale

- Continuous scale with a zero point
- Ex. Weight, temperature, exam score

_____

- Questionnaires
- Interviews
- Rate statements or answer questions about oneself

_____

- Specific
- Simple
- Relevant to sample
- Proper and consistent response format
- Need some reverse-coded items
- Example = Rosenberg Self-Esteem Scale

_____

- Friendly atmosphere
- Conceal personal reactions
- Ask questions EXACTLY as worded
- Do NOT lead the interviewee

Problems in

_____

- Social desirability
- Leading questions
- Double-barreled questions
- Response sets
- Length

Things to consider

- Don't "reinvent the wheel"
- Pretest your measure before you use it

_____ Score

- Typically used to summarize within individuals
- Used to summarize categorical variables
  - Nominal scale items
  - Number correct on a test
  - Risk factors
- Used to summarize discrete variables
  - Ratio scale
  - Number of electronics: TVs + Computers
  - Drug use: amt. of alcohol + amt. of marijuana

_____ Score

- Used to summarize across individuals or groups
  - Ratio or interval scales
  - Average number of kids in a household
  - Average productivity in U.S. versus Japan
- Used to summarize across survey items
  - Ratio or interval scales
  - Mean rating across 20 depression items

_____

- Mode used to summarize most frequent occurrence
  - Most useful to identify clustering of groups
- Median used to designate middle cut-off
  - Cut-off for Highs and Lows on a measure (***median split***)
  - Most representative score when outliers are present

Percents and

- Percents used to compare cases to total amount
  - Percent of EKU students who smoke
- Percentiles used to compare cases within the sample
  - 80th percentile = 80% of the sample scored at that point or below

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- Used to compare across different methodologies and samples
  - Verbal score = 90
  - Math score = 43
  - Verbal mean = 85, SD = 5
  - Math mean = 40, SD = 1
  - Z = (X – Mean) ÷ SD
    - Zverbal = +1.00, Zmath = +3.00
  - Better at math than verbal

The consistency or dependability of a measuring technique

Ways to test

- ***Test-retest reliability***: consistency over time
- ***Interitem reliability***: consistency of items to each other
- ***Interrater reliability***: agreement of observations between raters

_____ reliability

- Cronbach's alpha > .80
- Item-total correlations > .30
- T1-T2 correlation > .70
- Intraclass correlation for raters

_____ the reliability of a measure

- Standard administration
- Reword or discard bad items
- Add items
- Train your coders