Introduction

- Writing questions for survey instruments
- Learn to ask questions effectively
- Write a valid and reliable survey instrument
- Resist the temptation to ask questions that might be of interest
Valid and Reliable instrument

- Well written instrument
  - Purposeful questions
  - Questions determined by objectives
  - Concrete questions
  - Complete sentences
- Review by experts
- Pilot with potential respondents

Good Questions

- Address the survey’s objectives
- Are concrete and specific
- Clearly address only one issue per question
- Use appropriate language and reading level for the respondents
- Do not contain words that promote bias
- Do not contain double negatives
Purposeful Questions

- The respondent can identify the relationship between the question and the objective of the survey
- The connection between demographic questions and survey objectives may be missing
- Prefix the demographic question with a statement clarifying the connection

Concrete questions

- Precise and unambiguous
- Less concrete: How much do you exercise?
- More concrete: In the past week how many days did you participate in an activity that made you breath hard for at least 30 minutes? More concrete
Conventional Language

- Use complete sentences and proper grammar.
  - Race?
  - Which of the following categories best describes your ethnicity?
    - Caucasian
    - Native American/American Indian
    - ...

Conventional language

- Avoid abbreviations
- Avoid slang and colloquial expressions
- Only use jargon and technical expressions with appropriate audiences
Open vs. Closed Questions

Open Questions

– Use when:
  • You don’t know what types of answers to expect
  • Want the respondents view of the world rather than yours
– Answers must be cataloged and interpreted
– Difficulties
  • Responses difficult to compare and interpret
  • Not practical for large sample sizes

Closed questions

– Advantages
  • Easier to interpret
  • Better for statistical analysis
  • Good for large samples
  • Surveyor’s expectations are more clear
  • Answers tend to be more reliable and consistent
– Disadvantages
  • Researcher must have understanding of most likely responses
  • Does not always allow respondent to express their interpretations/feelings
Response Choices

- **Type of data:**
  - **Nominal:** purely categorical, mutually exclusive, collectively exhaustive
  - **Ordinal:** has an inherent order
    - Strongly agree, agree, neither agree nor disagree, disagree, strongly disagree
    - Excellent, very good, good, fair, poor
    - Always, very often, fairly often, sometimes, almost never, never
  - **Numerical**

Ordinal Measures

- Include a “do not know” if appropriate
- Include a neutral response if appropriate
- Balance all responses
- Use a 5- to 7-point numbered scale
- For socially undesirable behaviors put the negative end first.
Measuring Attitudes

- Psychometrics
- Very complex entities, difficult to define and measure
- Consider using a published measure
  - Is it suitable for your respondents?
  - Does it truly ask what you need to know?
  - Get the owner’s permission.

Demographics

- Age, race/ethnicity, education, job, gender, marital status, geographic place of residence, size of family, and so on.
- Learn the characteristics of your target population.
- Important for describing sample.
- Important to help explore your findings.
Demographics

- Base your response categories on the characteristics of your target population.
- Decide on an appropriate level of specificity.
- Ask for exact information in an open-ended format.
- Use current words and terms.
- If you want to compare to other studies, use the same categories.

Validity

- Face Validity
  - Does the survey seem to ask the needed questions?
- Content Validity
  - Does the survey thoroughly and appropriately assess what it intends to?
- Criterion-Related Validity
  - Does your survey correlate with other criteria known to measure what you are measuring?
- Construct Validity
  - Does your survey behave consistent with other theoretically derived constructs
Reliability

- Consistency across time
- Consistency within the survey
- Test-retest: stability
- Alternate-form: equivalence
- Internal consistency: homogeneity
- Inter- and Intra-rater reliability

Context

- Know your respondents
  - Reading level
  - Language comprehension
  - Ask only questions they could be expected to know answers to!
  - Facing unanswerable questions is frustrating!
- Consider the time constraint
  - How much time will the survey take?
- Standardize the response format
- Consider the social, cultural and economic context.
Lastly

- Always allow plenty of time upfront for survey development!
- Always pilot test.
- Always have others review what you have written.
- Always base your survey on your survey objectives.
- Always work with the Human Subjects Committee!

Thank You for Coming!

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Qualitative Surveys

- “Collect information on the meanings that people attach to their experiences and on the ways they express themselves.”
- Necessitate small samples, often not generalizable.
- Provide depth and uniqueness rather than breadth and representation.
- Often requires content analysis.