Cognitive Interviewing as a Study of Validity

Kristen Miller
National Center for Health Statistics

Constructs Identified in Cognitive Interviewing Studies

Question: What race best describes you?

1) Social: race most often perceive by others

2) Cultural: race of the community most affiliated

3) Administrative: race indicated on administrative records, e.g., birth certificates, driver's licenses, employment and school applications

4) Ancestral: the largest percentage of their genealogy

Constructs Identified in Cognitive Interviewing Studies

Hearing:
Do you/Does [Name] have difficulty hearing?

Adult Self-Report: Auditory ability
Parent Proxy for Child: Auditory ability & Listening

Walking:
Do you have difficulty walking 100 yards?
Compared with other children of the same age, does [he/she] have difficulty walking?

Adult Self-Report: Mobility
Parent Proxy for Child: Mobility & Desire to Walk

Constructs Identified in Cognitive Interviewing Studies

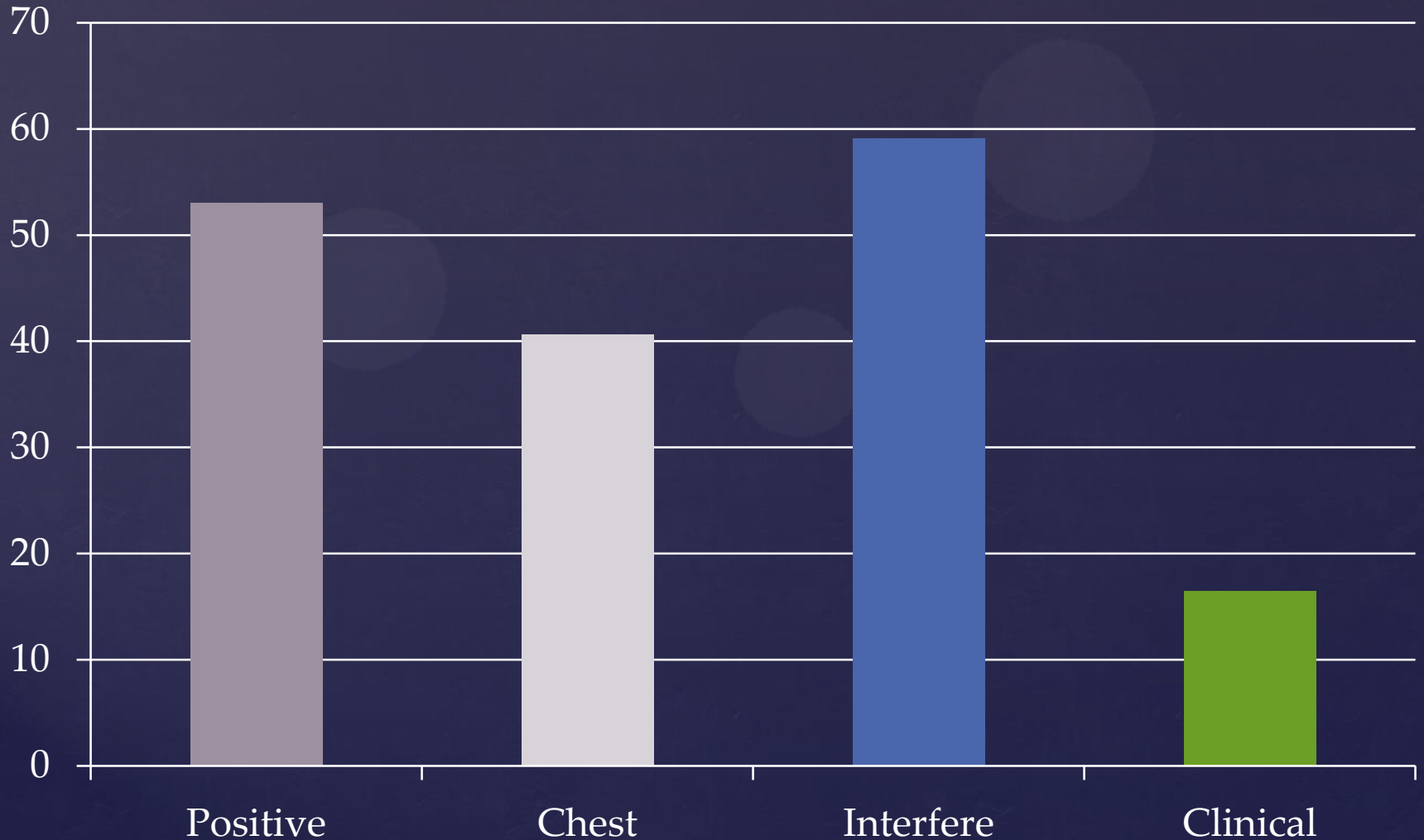Question: How often do you feel worried, nervous or anxious?

- Stress
  - Workload, deadlines, performances
  - Relationship/family problems
  - Dread/concern about future
    - Economic security
    - Health concerns

- Clinical/diagnosed anxiety

- Excitement/Positive energy

Field Test: Percentage of Reporting Anxiety Characteristics

Field Test: Characteristics Reported by Country

	Kazakhstan	Cambodia	Sri Lanka	Maldives	Mongolia	Philippines
Positive	50.3%	47.8%	12.6%	51.7%	82.5%	32.4%
Chest hurts	21.4	72.3	30.9	37.0	50.6	20.3
Interfere	52.2	65.0	85.4	54.8	72.8	33.5
Clinical	11.8	16.8	3.0	28.4	18.6	11.5

Note. Chi-square p <.05 for all rows in the table.

Purposes of CI Studies:

1. Reveal observable difficulties that respondents experience when attempting to answer a survey question

2. Identify the specific construct(s) captured by the survey question

3. Identify whether particular groups of respondents interpret and process a survey question consistently

4. Identify whether questions in various languages perform consistently

Findings:

1. Can lead to recommendations for improving a survey question

2. Are beneficial to post-survey analysis by informing data interpretation.

Best Practice

Perform cognitive testing with an eye toward what the question captures, not how many and what "problems" can be identified

Pre-survey Question Improvements

- "Question Problems" may not be problems, depending on context of question and the intended use
- Not all "problems" are identified without validity study

Post-survey Analysis

- Assist the data user in the interpretation of the data
- Evidence for surveys that the variables indeed represent what they purport to measure