Empirical Evaluation of Non-English Cognitive Interview Techniques: Creation of a Coding Scheme to Evaluate Probe Wording Effectiveness

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Outline of Talk

- Cognitive interviewing (CI)
- Review of the literature
  - mono-cultural CI v. cross-cultural CI
- Research Questions
- Study methods and respondent characteristics
- Development of coding scheme
- Inter-coder reliability
- Sample findings and conclusions
Cognitive interview probes

Meaning oriented
- “What does the term ‘foster child’ mean to you in this question?”

Process oriented
- “How did you arrive at/choose that answer?”

Paraphrasing
- “Can you tell me in your own words what that question is asking?”

Recall
- “How do you remember that you (saw a dentist 3 times) in the last year?”
Empirical Research: Monolingual cognitive interview (CI) methods

Increasing amounts of empirical research

- Presser et. al. 2004; Willis 2005; Beatty and Willis 2007; Blair et al. 2006
Adaptation of CI Method for use across languages/cultures

Difficulties with pretesting techniques, English
- Willis, 2005; Miller, 2003; Bickert & Felcher, 1996; Wellens, 1994

Difficulties with pretesting: non-English
- Pan, 2004; Carrasco, 2003; Coronado and Earle, 2002; Blumberg & Goerman, 2000; Kissam, et al., 1993

More recent literature
- Dean et al. 2007; Willis and Zahnd 2007; Fitzgerald and Miller 2009; Pan et al., 2010; Harkness et al 2010
Research Questions

- Why have previous studies found that CI techniques cause discomfort among non-English respondents?
- What specific interview techniques and probes work best with Spanish-speaking CI respondents?
Methods

- 48 cognitive interviews with Spanish speakers using a segment of CATI/CAPI version of ACS
  - Demographic characteristics of respondents
  - Type of interviews conducted
  - Development of coding scheme
  - Inter-coder reliability
  - Sample findings
Demographic characteristics of Spanish speakers

- Mexican origin immigrants to U.S.
  - 44 of Mexican origin
  - 4 of some other origin
- Education level
  - 33 Less than High School
  - 12 More than High School
- Gender
  - 42 Female
  - 6 Male
- Age
  - 14 – Age 39 or less
  - 15 – Age 40 to 48
  - 14 – Age 49 or greater
Structured v. experimental interviews

- Variation of introduction and probe wording
- Structured interviews
  - Direct translation of typical U.S. English protocol (procedure and wording)
- Experimental interviews
  - Variation of introductory statements/conversation
  - Different sample probes to begin
  - Flexibility in probe wording
Development of coding scheme

- Interviews transcribed mostly in Spanish with some description in English
- 2 bilingual coders (also the interviewers)
- Coding scheme designed in advance but new categories and codes added during the coding process
Coding scheme

Yes/no codes:
1. Was probe administered?
2. Was probe administered as worded in protocol?
3. Did respondent understand when read as worded?
4. Was probe reworded?
5. Was probe understood when reworded?
6. Did probe cause discomfort?
7. Did respondent provide “useful” answer to probe?

Descriptive codes:
1. Type probe rewording done? (description)
2. What type of discomfort did it cause? (description)
Inter-coder reliability

- Application of Kappa statistic
- Kappa Scores
  - Total of 7 cases coded by both interviewer/coders
  - Overall: 0.68 (n=892)
    - Yes/No: 0.71 (n=784) (good)
    - Type probe rewording: 0.50 (n=69) (fair-good)
    - Discomfort: 0.38 (n=39) (poor)
Sample Findings: Rewording of Probes by type

Overall
Meaning Oriented
Paraphrasing
Process Oriented
Think Aloud
Recall

0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%

Overall
Experimental
Standard
Overall Usefulness of Probes

- Overall: 72% 74% 76% 77% 74% 73% 75% 80% 91% 72%
- Meaning Oriented: 74% 77% 74% 75% 70% 80% 72%
- Paraphrasing: 72% 74% 76% 77% 74% 73% 75% 80% 91% 72%
- Process Oriented: 42% 42% 43% 42% 42% 43% 91% 94% 100%
- Think Aloud: 42% 42% 43% 42% 42% 43% 91% 94% 100%
- Recall: 94% 100% 89%

Overall
Experiment
Standard
Usefulness of Probes when Read As Worded

Overall Meaning Oriented Paraphrasing Process Oriented Think Aloud Recall
Overall 75% 73% 76% 70% 73% 65% 70% 76% 70% 73% 76% 70% 73% 65% 70% 76%
Experimental 82% 80% 82% 89% 88% 85% 89% 88% 86% 89% 88% 86% 89% 88% 86%
Standard 75% 75% 75% 79% 75% 73% 73% 75% 73% 75% 79% 75% 73% 75% 73%
Usefulness of Probes when Reworded

Overall Meaning Oriented Paraphrasing Process Oriented Think Aloud Recall
Overall 69% 81% 81% 80% 65% 93% 81% 100%
Experimental 57% 72% 65% 46% 68% 43% 47% 100%
Standard 90% 81% 46% 68% 65% 40% 40% 100%

Overall
Experimental
Standard
Limitations

- Use of mostly Mexican-origin respondents in 1 geographic region
- Gender distribution of respondents
- Same 2 interviewers and coders
Next steps

- AAPOR presentation
- Examination of probe rewording
  - Major v. conversational rewording
- What seemed most “useful?” for a given probe type
- Examination of results by education level
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