

# Using Cognitive Testing to Evaluate Validity

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# How we usually cognitively test

- Ask how understood question
- Ask to explain answer
- Target issues, like meaning of specific words or what information they have that we think, in advance, might be problems.

# Our resulting reports

- Mainly they are a list of problems found
- Sometimes we state that we didn't find any problems
- However, those results do not convey evidence that the answers are valid

# How do we assess validity?

- Usually with psychometric analyses: correlations between answers to our test questions and other answers to which they should be related if they measure what we think they measure

# Could cognitive testing produce evidence of validity?

- We think so—and here is how we propose to change our procedures

# For each test question

- Interviewer probes until he/she can answer four questions:
- 1. Does R understand the question as intended? YES/ NOT SURE/NO
- 2. Does R have info needed to answer?
- 3. Did R transform info to form required for answer in accurate way?
- 4. Was choice of answer accurate?

# Test question

- How old was your mother when she died?
- UNDERSTAND? How many years old she was on birthday before she died: YES
- KNOW? I think she was born in about 1920 or 1921, and she died 3 or 4 years ago: NOT SURE
- TRANSFORM appropriately? If she was born in 1920 and died in 2007, she was 87: YES

# Testing cont'd

- ANSWER correctly? : She was 87. YES
- Result: YES, NOT SURE, YES, YES



# Analysis Report for 10 Interviews

	YES	NOT SURE	NO
UNDERSTAND	9	1	0
KNOWLEDGE	3	4	3
TRANSFORM ATION	8	0	2
ANSWER	9	0	1

# The key problem?

- Evaluating whether or not the information that say they can recall is accurate

# Another potential problem

- Comprehension
- There often are several elements of a question to be understood, and we will need a coding system that is a good summary when there are multiple issues

# We are starting a test in a few weeks

- In a month or two, we can report better how this will work out

# Conclusion

- We think a report like that will give us much more information than we have been getting before:
  - About whether or not answers are likely to be valid
  - -And what the strengths and problems are with questions

THANK YOU