




Pretesting the Systems of Care Implementation Survey Instrument: Cognitive Interviewing as an Innovative Technique for Instrument Development

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## Introduction

- RTC interested in understanding what is the state of systems of care (SOC) nationally
- Multiple factors have been identified that contribute to development and implementation of systems of care




## Theorized Implementation Factors

1. **Transformational leadership**
2. Theory of change
3. Implementation plan
4. Family choice and voice
5. Local population of concern
6. Interagency and cross-sector collaboration
7. Individualized, comprehensive, and culturally competent treatment
8. Values and principles
9. Financing plans and strategies
10. Outreach and pathways to care
11. Skilled provider network
12. Performance measurement system
13. Provider accountability
14. Management and governance



## Study Rationale

- No data available that describe the distribution and implementation of either particular factors or, more broadly, the overall level of integrated systems of care for children and adolescents in the United States.
- To address these issues, RTC has been developing a population-based survey of system-of-care implementation factors in US counties




## Study Goals

- Assess the level of SOC implementation nationwide
- Understand the relationships between the various implementation factors
- Understand how various contextual factors (e.g., population size, level of poverty) are related to overall SOC implementation and the individual factors



## Study Design

- Multilevel survey of implementation factors
- Randomly sample US counties using disproportionate stratified probability sampling
- Within each county, sample multiple informants from different children's service sectors and family organizations



## Overview of the Survey Questionnaire Construction Process

- Identify purpose(s)
- Define construct and content domain
- Generate initial definitions and item pool
- Expert panel—expert and layperson review of items (revise)
- Cognitive interviewing--pretest items (revise)
- Pilot with representative sample (revise)
- Conduct survey




### Transformational Leadership

**Definition:** Transformational leaders are individuals who are charismatic, articulate a long-term vision that inspires their followers, challenge assumptions and take risks, and listen to their followers' concerns and needs.  
Transformational leaders are individuals who are able to change the course of a system, and to carry partnerships and collaborations to a higher level of practice.


To what extent does your leadership (e.g., Director):

	1 Not At All	2 Slight Extent	3 Moderate Extent	4 Great Extent	5 Very Great Extent	DK Don't Know
A Work effectively with other professionals from the different child-serving sectors (e.g. child welfare, mental health, education)?	1 Not At All	2 Slight Extent	3 Moderate Extent	4 Great Extent	5 Very Great Extent	DK Don't Know
B Work effectively with both families and youth?	1 Not At All	2 Slight Extent	3 Moderate Extent	4 Great Extent	5 Very Great Extent	DK Don't Know
C Work effectively with individuals and communities from diverse backgrounds (e.g., cultural/racial/linguistic)?	1 Not At All	2 Slight Extent	3 Moderate Extent	4 Great Extent	5 Very Great Extent	DK Don't Know
D Have success in persuading different partners (e.g., family members, service sectors, providers) to be active in building effective services?	1 Not At All	2 Slight Extent	3 Moderate Extent	4 Great Extent	5 Very Great Extent	DK Don't Know




## Current Study Activities

- Pretesting using cognitive interviewing
  - Do respondents understand the questions and can they answer them?
- Pilot testing with randomly selected counties
  - Can the interviewer administer the questionnaire with a minimum of error?



## What is Cognitive Interviewing?


- Cognitive interviewing attempts to examine the cognitive process--what is going on inside a person's "head," when they answer the survey questions.
- Differs from more traditional pretesting which asks people to answer the survey questions, (which people are used to doing) vs. providing feedback about how the questions are worded.
- Interested in whether the targeted respondents understand the question in the same way that the investigator intended.



## How does cognitive interviewing work?


### Two Techniques

- Think-aloud
- Verbal probing



## Think-Aloud

- Initial approach, introduced in the 1980's
- Respondents asked to think-aloud as they answer survey questions, say whatever they are thinking as they are read the survey questions



## Think-Aloud Example

**Q. How many times have you talked to a therapist in the last 12 months?**

Respondent:

I guess that depends on what you mean when you say "talked." I talk to my neighbor who is a therapist, but you probably don't mean that. I guess I'm not sure what number to give you, mostly because I don't know what you want"

(adapted from Willis, G. B., 1999)



## Think-Aloud Issues

- "Think-aloud" places a heavy burden on the respondent
- Alternative technique, "verbal probing" developed and now widely used



## Verbal Probing: Structured Three-Step Procedure

- Interviewer asks respondent a survey question
- Respondent answers the question
- Interviewer asks the respondent for more information about the respondent's answer using a structured probe
  - ◆ Process continues for each of the survey questions



## Verbal Probes

- Probes are designed to assess various aspects of the respondent's thinking
  - ◆ *Comprehension*
  - ◆ *Memory Retrieval*
  - ◆ *Decision Processes*



## Verbal Probe Examples

**Q. To what extent does your leadership work effectively with both families and youth?**

- *Comprehension probe*
  - ◆ "What does the phrase "your leadership" mean to you?"
- *Decision process probe*
  - ◆ "How did you arrive at your answer for this question?"
- *Memory retrieval probe*
  - ◆ "How hard was this question to answer?"



## Verbal Probe

- Answers to these probes help spot trends or singular responses that reveal problems
- Revisions can then be made to eliminate these problems



## Cognitive Interviews:

- Focus on Transformational Leadership
- Cognitive Interviews conducted with 12 individuals




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### In the item stem, what does the phrase “your leadership” mean to you?

- “At first, I was thinking my personal leadership, but now I’m thinking the leadership of my agency.”
- “My first thought was agency head or executive director, not my supervisor. Could mean board of directors.”




### In the item stem, what does the phrase “your leadership” mean to you?

- “Your leadership” [when thinking of the entire system of care] is J. R. (direct supervisor) as well as all members of the Agency.
- “Your leadership” means your personal leadership, the person I report to. You may want to ask about the leadership of local SOC.
- The question is clear, it means ME, even if I am not a director, I am still a leader. And since I am in a Leadership position, I assume you are talking about me.




### How sure are you of your answer for item A?

- “Depends on what you mean by leadership, moderately sure.”



### How hard was item B to answer?

- “Difficult to answer because there are two sets of leaders.”



### How did you arrive at your answer for item E?

- Logic
  - ◆ To be a good leader, you must consider the views and opinions of others
  - ◆ I don't think I could be effective at all as a leader if I didn't value the opinions of others. It makes sense to work collaboratively and cooperatively with others



### How did you arrive at your answer for item E?

- Experience
  - ◆ Observation. Working with her—seeing how she interacts with others
  - ◆ Based on how he behaves and his negative response to feedback
  - ◆ I just know her well.



### How did you arrive at the answer for item I?

- "Collective Sense" is fuzzy. Beliefs of the community or beliefs of the individuals who are actively working.
- Difficult to figure out what "collective sense" is.
- Unsure of meaning of question



### How do these results compare to traditional psychometric analyses?

- Cronbach's alpha = .94
- Item-total correlations ranged from .48 to .89



### Summary

- Cognitive Interviewing can be a useful way to pretest a survey instrument
- Examines whether respondents understand the question in the same way that the investigator intended
- Information typically does not surface in traditional pretesting, even when the psychometrics are good

