

Community-Engaged Measure Development for Framing Questions about Culture in Interventions: *Culture and Intervention—Measuring Outcomes*

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Driven to DiscoverSM

Three Questions about Outcome Measures

- How can we create outcome measures that are locally relevant and culturally embedded?
- How can we “measure culture”?
 - Case examples
 - *What are important locally defined outcomes for intervention?*
- Why is this a critical issue for evaluation research and intervention science?



Why is this issue important for intervention science?

Successful intervention outcome assessment uses measures that possess two interrelated attributes:

- Culturally resonant
- Responsive to change associated with intervention



Framing a way to think about “measuring culture”

- Distinguish
 - Surface elements of culture
 - Cultural identification
 - Cultural immersion-engagement in cultural practices
 - *Critical and distinct elements of culture that are specific foci of your intervention: the behavior/attitudes in your local theory of change*



Examples of framing a question about culture

- 1) Local outcome measures
- 2) Methods to develop measures



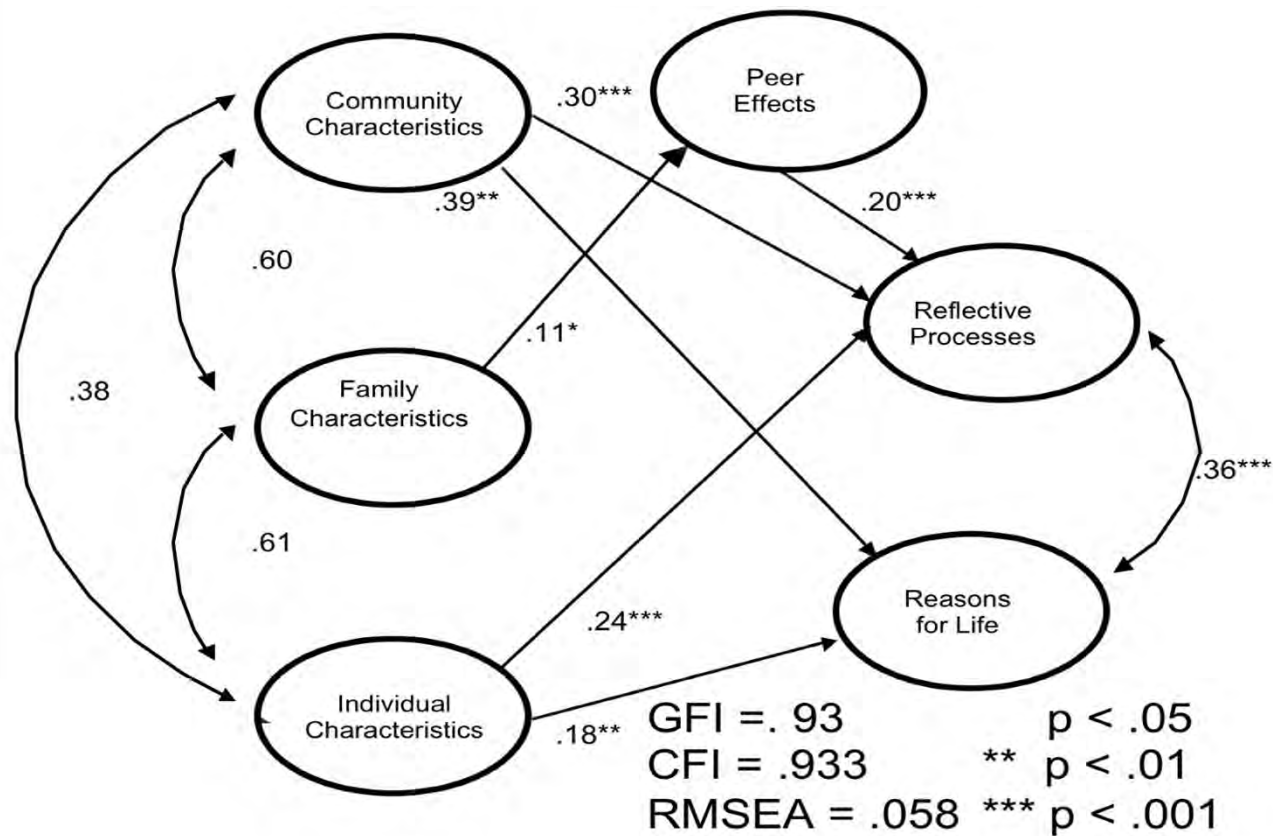
Case Examples from
Prevention Research:
Protective Factors
for Yup'ik Youth from
Suicide and Alcohol
Abuse

Are traditional cultural
activities for youth
effective as prevention?

Multilevel model of cultural factors in protection

Theory of Change—Identifies culture specific outcomes

Cuqyun Protective Factors Pathways Model





Example 1: Individual Protective Factors

Multicultural Mastery
Scale

Types of Mastery

Self-mastery refers to problem-focused coping facilitated through personal agency.

Communal mastery describes problem solving through an interwoven social network.

Mastery-Friends

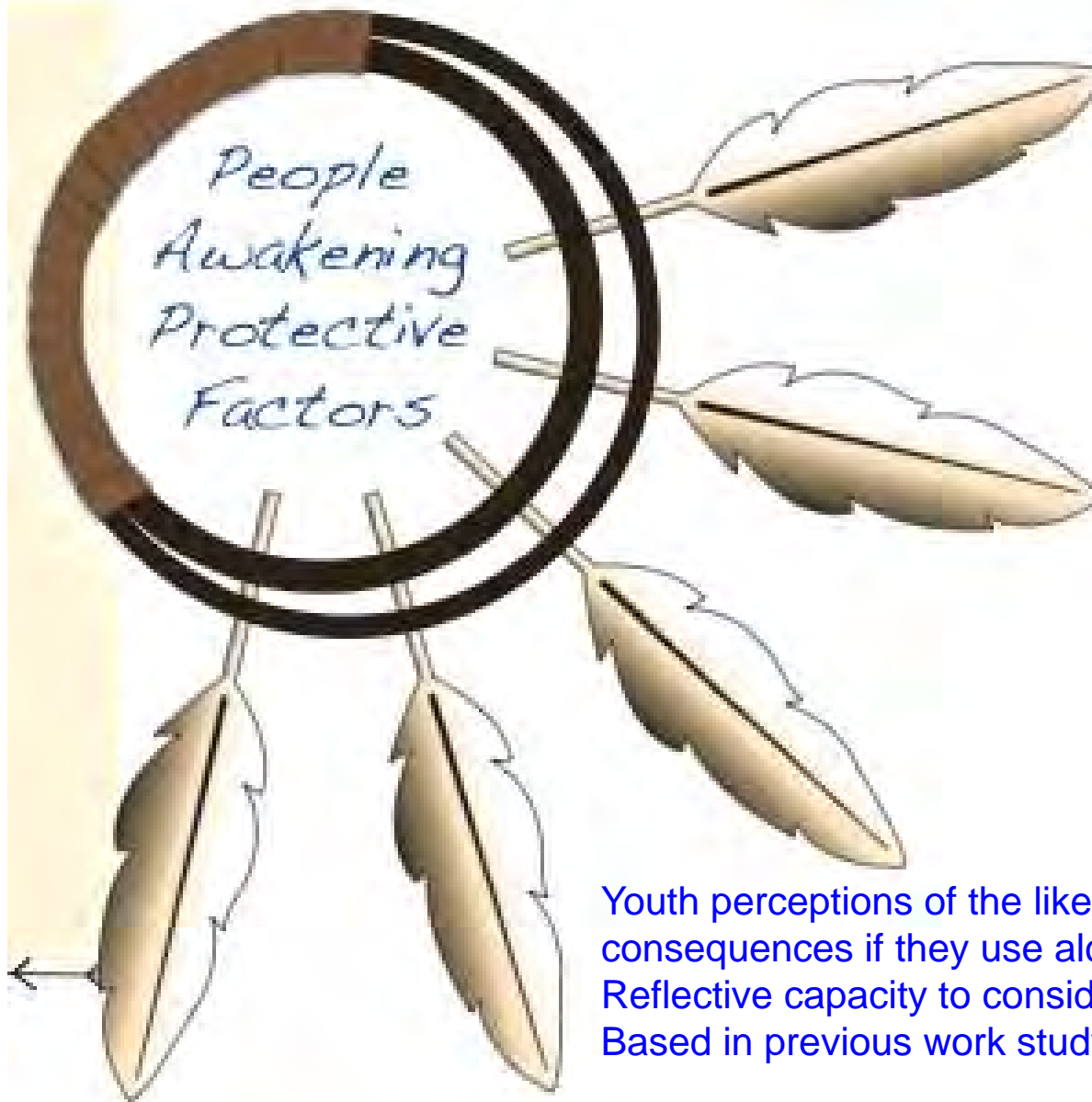
Mastery-Family



Example 2: Family Protective Factors

Brief Family Relationships
Scale (BFRS)

Refers to family strengths including *Cohesion* of the family, *emotional Expressiveness* of the family support for the young person, and family *Conflict* resolution capacities



Example 3: Alcohol Protective Factors

Umyuangcaryaraq=
'reflecting':

Reflective processes
about the
consequences of
alcohol use

Youth perceptions of the likelihood of experiencing specific
consequences if they use alcohol
Reflective capacity to consider potential consequences of actions
Based in previous work studying the concept of "ellangneq"

Ellangneq—Awareness of connection with others, the natural environment, and the spirit world, and reflection on the consequences of alcohol use on these connections.

Reflective processes refers to thinking over potential negative consequences of alcohol

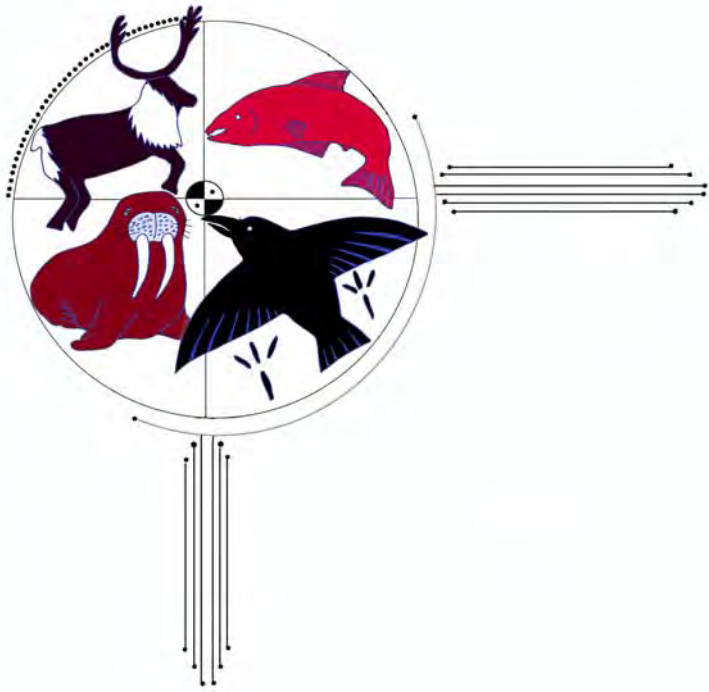


Example 4~ Connectedness

Awareness of
Connectedness Scale

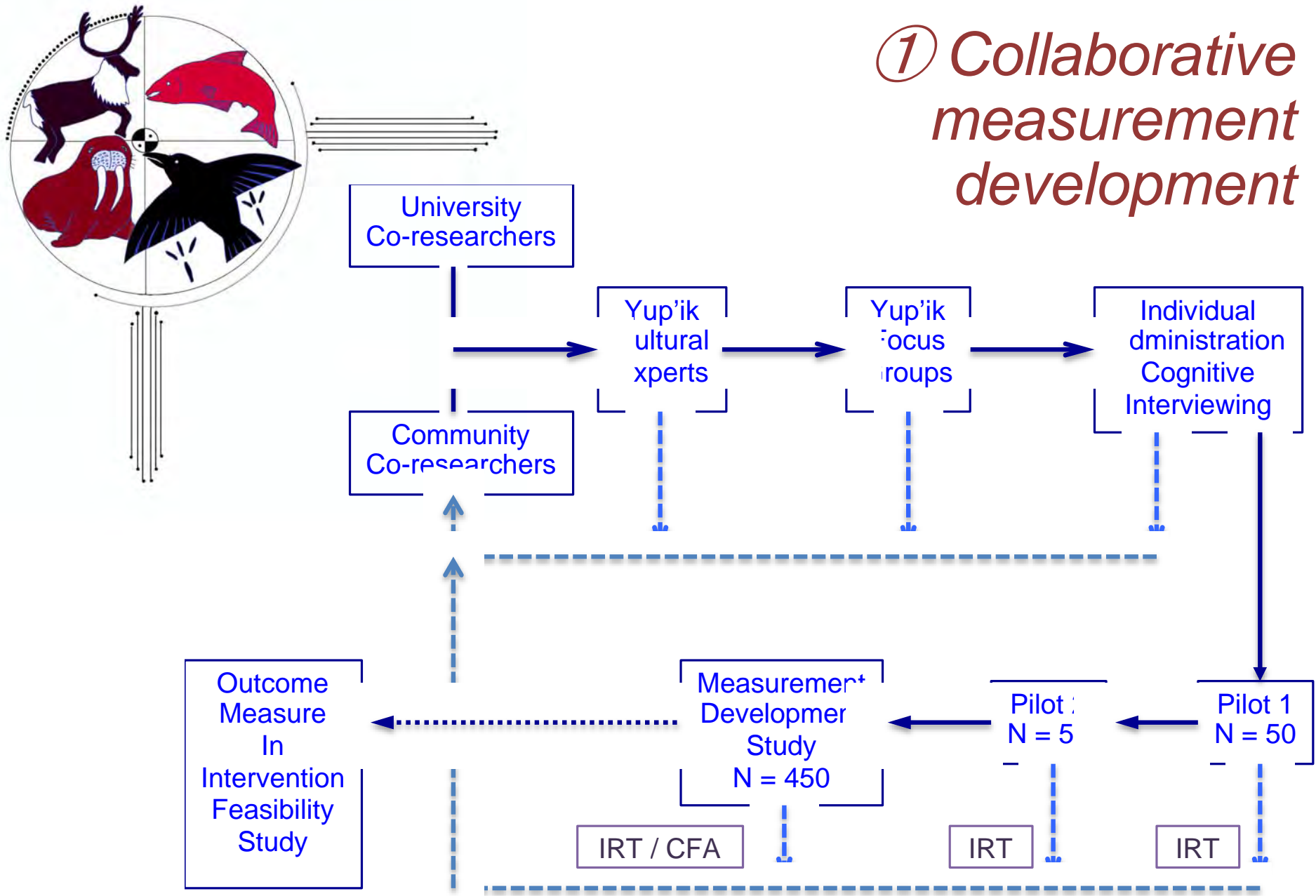
Connectedness refers to the interrelated welfare of the individual, one's family, one's community, and the natural environment.

Tools to Develop Measures



- ① Collaborative measurement development
- ② IRT modeling at the item level
- ③ SEQ modeling at the subscale level

① Collaborative measurement development



1) Collaborative
measurement
development

Family Environment Scale

(FES)

(Moos & Moos, 1981)

- Original goal was to adapt the FES for Yup'ik adolescents
 - We discovered almost none of the items worked with Yup'ik youth or families
 - Led us to develop a new measure of the family environment



Item Revision

- The use of English in many tribal communities constitutes a dialect: In Yup'ik communities English is embedded within complex rules of syntax, sociolinguistics, and alternative colloquialisms and usages. In addition, some items can be culturally inappropriate:
 - **Original:** Family members try to one up or outdo each other.
 - *Revision:* In our family there is a feeling of togetherness.

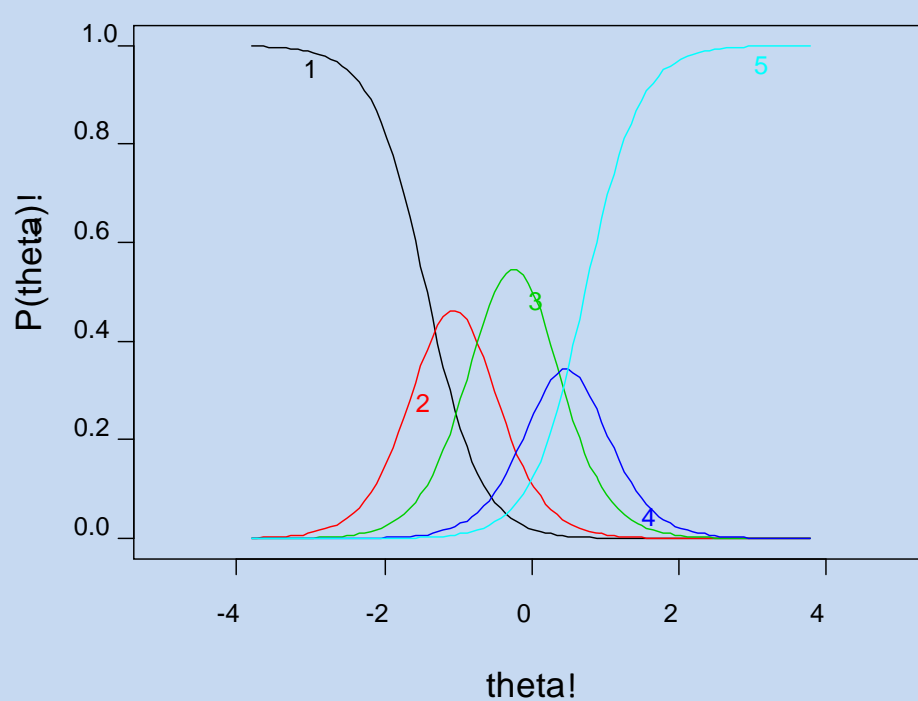


(2) IRT modeling at the item level

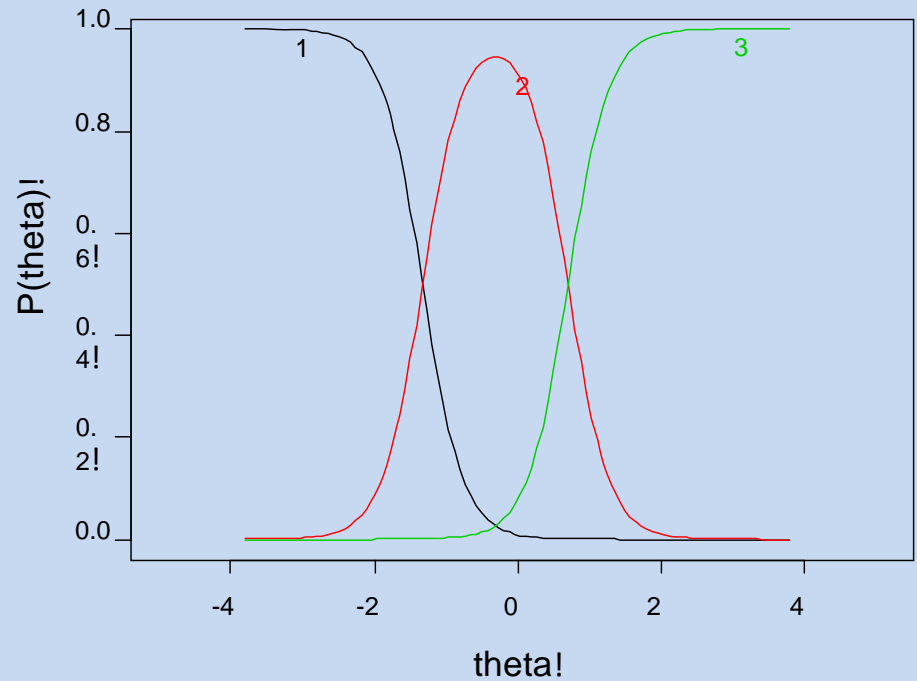
Response Format:

Yup'ik Elders in Focus Groups emphasized "Use 3's"—

anchors: "Not at all, Somewhat, A lot"



Five-category calibration



Three-category calibration

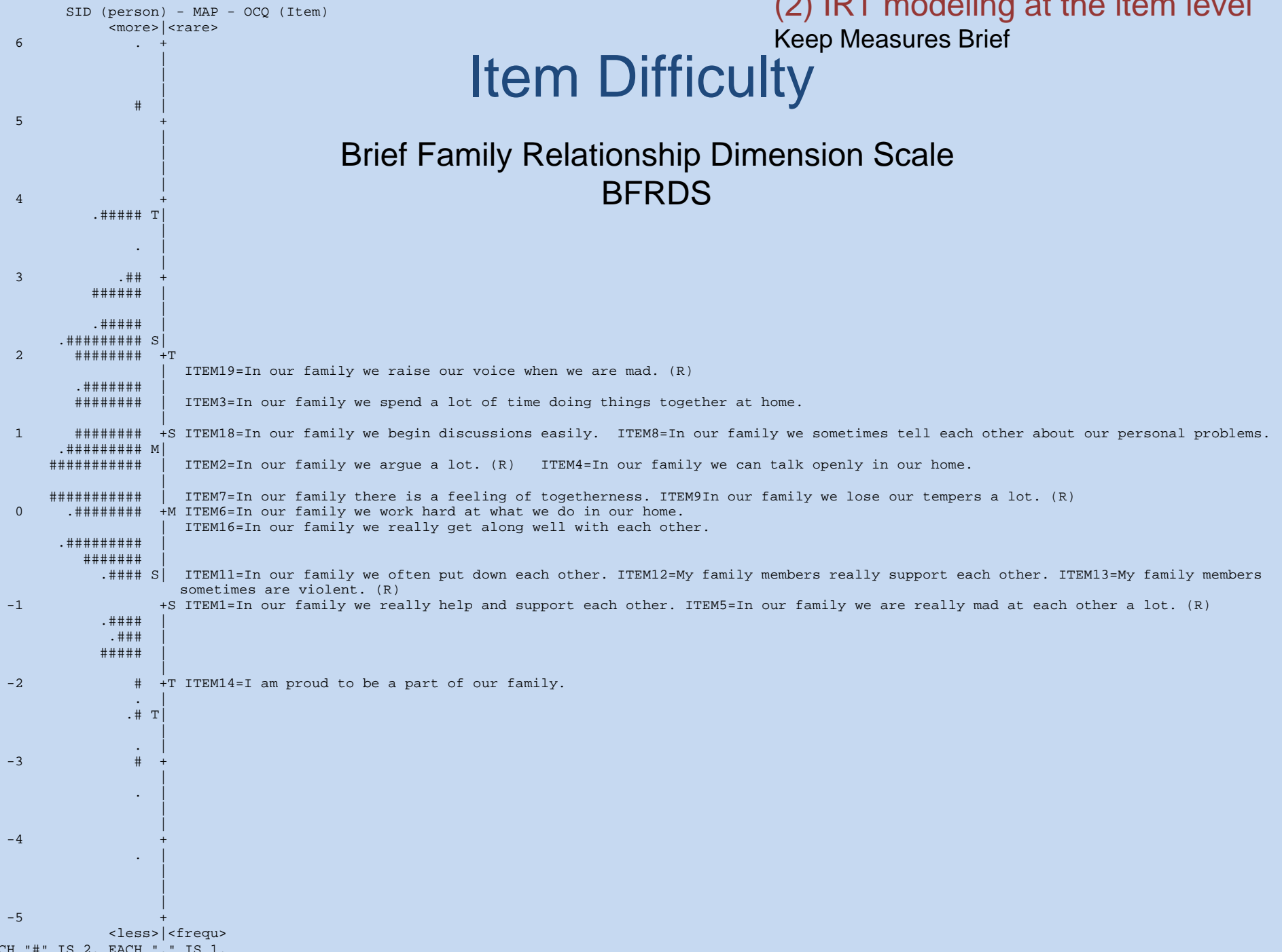
Figure 3. Comparison of trace lines for the five- and three-category calibrations for Item 9.



(2) IRT modeling at the item level
Keep Measures Brief

Item Difficulty

Brief Family Relationship Dimension Scale BFRDS



(2) IRT modeling at the item level

Reflective processes item functioning / optimal response level
calibration: Item functioning
Keep Measures Brief

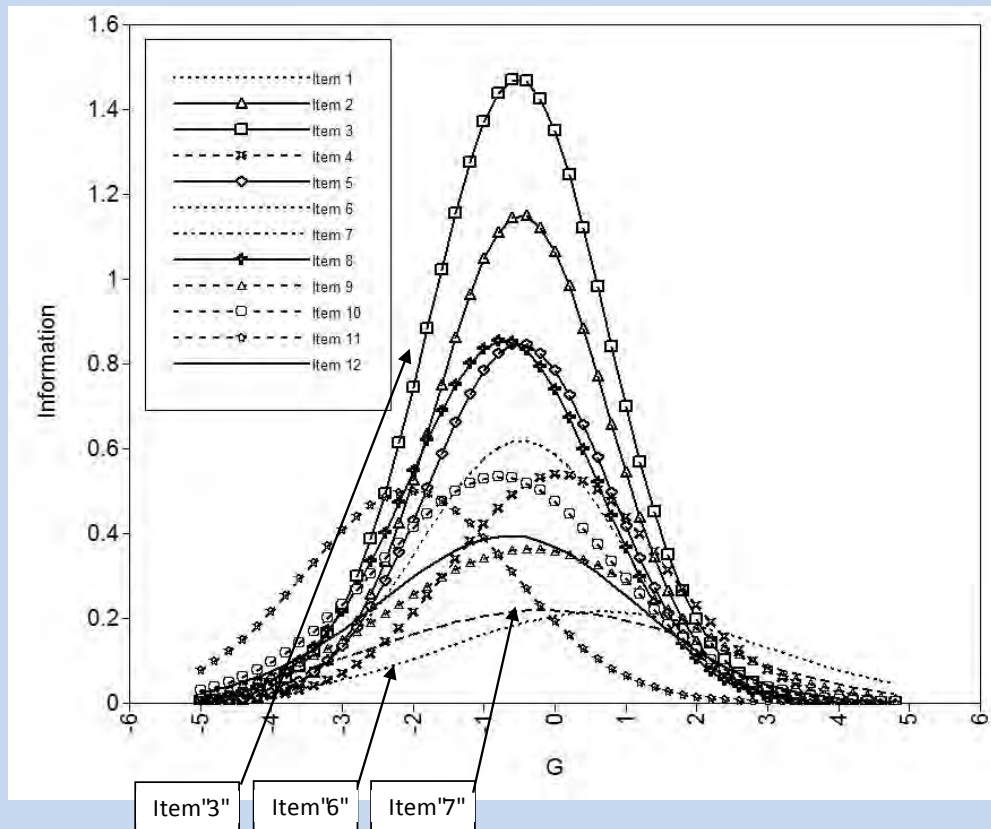
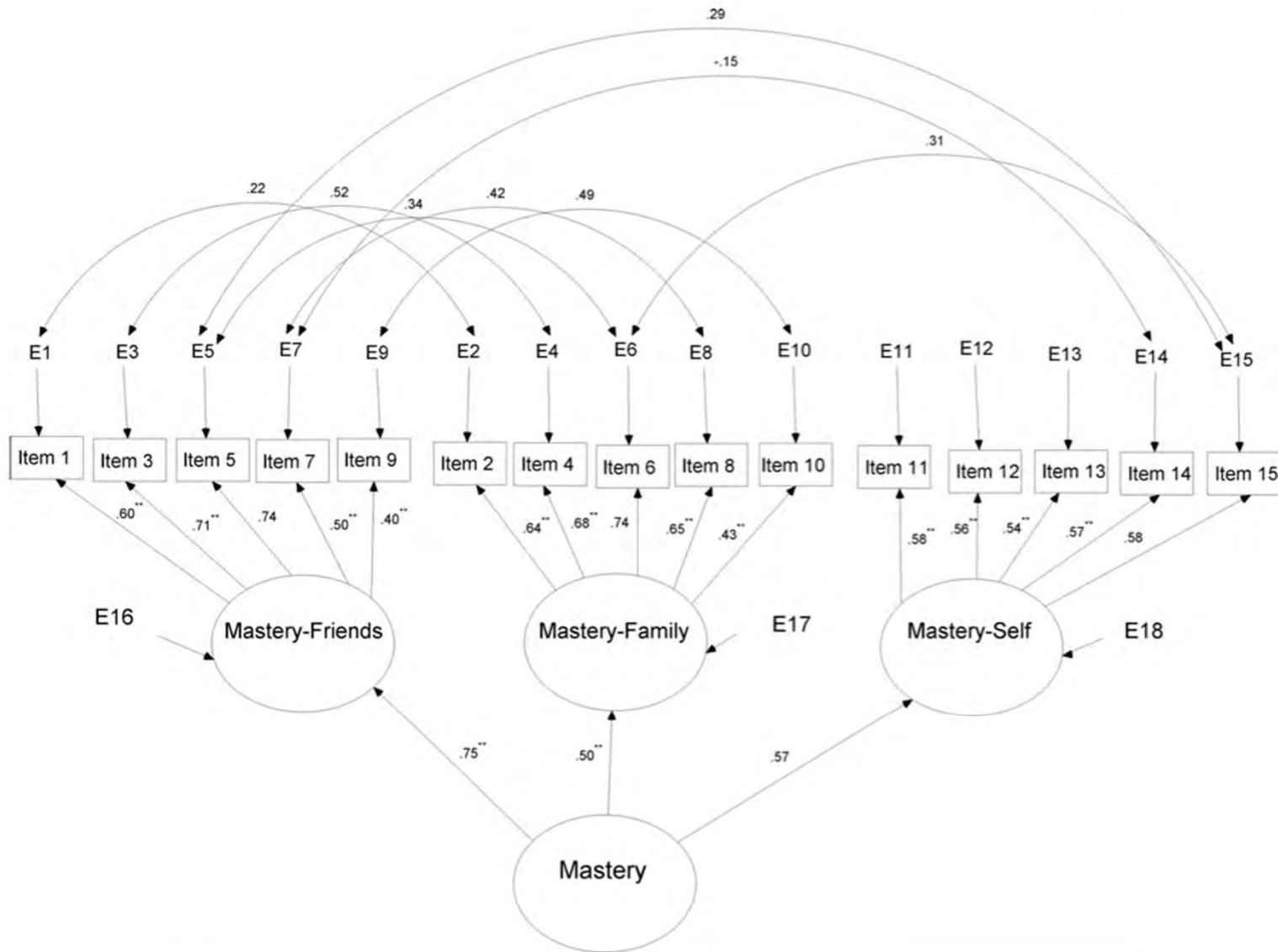


Figure 2. Item information functions from the five-category calibration for the general construct (G)."



(3) SEQ modeling at the subscale level

Internal Structure of the Multicultural Mastery Scale



$\chi^2 = 177.2(79)$, goodness-of-fit index = .924, comparative fit index = .918, root-mean-square error of approximation = .066. ** $p < .01$.

Culture and Intervention~Measuring Outcomes

- Culture matters in measuring outcomes
- Tools for developing measures of specific cultural processes
- Critical role of community engagement in measurement development



Quyana

- To the Ancestors, the ones who created the path
 - Joe Joseph, Catherine Agayar,
 - Edward Andrews, Bart Agathluk Sr., Gerald V. Mohatt,
- To the Elders
- To the Tribes
- To the Yukon Kuskokwim Health Corporation
- To the Regional Qasgiq
- To the Lower Yukon School District
- To the National Institutes of Health
 - National Institute of Alcohol Abuse and Alcoholism (NIAAA) and the National Center for Minority Health Disparities (NCMHD) 1R01 AA 11446-03, National Center for Research Resources (P20 RR016430, Gerald V. Mohatt, Bert Boyer PI), NIAAA Grants 1R21 AA015541 (Gerald V. Mohatt, PI and James Allen, Co-I) and 1 R21 AA016098-01 (James Allen, PI, Gerald Mohatt and John Gonzalez, Co-I), and NCMHD 1R24 MD001626 (Gerald V. Mohatt, PI, James Allen and John Gonzalez, Co-I), and NIMHD 5R24 MD001626 (James Allen, PI, Gerald V. Mohatt, Stacy Rasmus, Co-I)



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