Using a Delphi Process to Develop Measures of Success among Longstanding CBPR Partnerships

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Presenter Disclosure

• Co-Presenters: Shoou-Yih Daniel Lee & Angela G. Reyes

• The following personal financial relationships with commercial interests relevant to this presentation existed in the past twelve (12) months.

• NO RELATIONSHIPS TO DISCLOSE
The Measurement Approaches to Partnership Success (MAPS) is a project of the Detroit Community-Academic Urban Research Center (Detroit URC) and builds upon its work using a CBPR approach throughout all stages of the project.
Specific Aims for the MAPS Study

1. Clearly define CBPR partnership success and develop a tool (MAPS) to assess partnership success and its intermediate and long-term contributing factors in longstanding CBPR partnerships.

2. Test the psychometric qualities of the MAPS tool in a sample of longstanding CBPR partnerships existing 6 years and longer.

3. Develop mechanisms to feed back and apply partnership evaluation findings, and widely disseminate the MAPS tool and feedback mechanism in a readily accessible and usable format.
Methodology to Develop MAPS Questionnaire

MAPS Conceptual Framework

Key Informant Interviews
Conducted with MAPS Expert Panel and Pilot Respondents

Literature Review
• Scoping Review
• Knowledge of Experts
• Comparison with Existing Measures

Synthesis of interview findings and literature to develop the draft questionnaire

Seven Dimensions of Success

Delphi Process with Expert Panel
Identified Dimensions of Success

1. Equity in the Partnership
2. Partnership Synergy
3. Reciprocity
4. Competence Enhancement
5. Sustainability
6. Realization of Benefits Over Time
7. Achievement of Intermediate and Long-Term Partnership Goals/Outcomes
MAPS Delphi Process
What to achieve in the MAPS Delphi process?

**Face Validity**

“Looks good to me”

**Content Validity**

- Item Pool
- Success of longstanding CBPR partnerships
What is a standard Delphi process?

A structured, successive communication process to collate expert judgements on a complex problem, for which precise scientific laws have not been established.

The process ideally reduces the range of expert opinions and converges toward a "correct" answer.
MAPS Community Expert Panelists: Key Informants

Alex Allen
Executive Director
Chandler Park Conservancy
Detroit, Michigan

Linda Burhansstipanov
Founder/President & Grants Director
Native American Cancer Research Corporation
Denver, Colorado

Ella Greene-Moton
Administrator
CBOP Community Ethics Review Board
Flint, Michigan

Marita Jones
Executive Director
Healthy Native Communities Partnership, Inc.
Shiprock, New Mexico

Angela Reyes
Executive Director
Detroit Hispanic Development Corporation
Detroit, Michigan

Al Richmond
Executive Director
Community-Campus Partnerships for Health
Raleigh, North Carolina

Zachary Rowe
Executive Director
Friends of Parkside
Detroit, Michigan

Peggy Shepard
Executive Director
WEACT for Environmental Justice
New York, New York
MAPS Academic Expert Panelists: Key Informants

Elizabeth (Beth) Baker
Professor, College for Public Health & Social Justice
St. Louis University
St. Louis, Missouri

Cleopatra (Cleo) Caldwell
Professor, School of Public Health
University of Michigan
Ann Arbor, Michigan

Bonnie Duran
Associate Professor, School of Social Work
University of Washington
Seattle, Washington

Eugenia (Geni) Eng
Professor, School of Public Health
University of North Carolina at Chapel Hill
Chapel Hill, North Carolina

Meredith (Merry) Minkler
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University of California, Berkeley
Berkeley, California

Amy Schulz
Professor, School of Public Health
University of Michigan
Ann Arbor, Michigan

Melissa Valero
Associate Professor, UT Health Science Center
UT Health School of Public Health San Antonio Regional Campus
San Antonio, Texas

Nina Wallerstein
Professor of Public Health
University of New Mexico School of Medicine
Albuquerque, New Mexico
The MAPS Delphi Process (3 Rounds)

**Round 1**  
*Administered Online*  
1) Participants rated items on a Likert-type scale on importance of item.  
2) Provided qualitative comments.

**Round 2**  
*Administered Online*  
1) Participants rated items on Likert-type scale on how reflective the item was.  
2) Provided qualitative comments.

**Round 3**  
*Face-to-Face Meeting*  
1) Participants discussed variability in responses.  
2) Items had the option of being re-inserted or removed.

MAPS Expert Panel  
MAPS Expert Panel  
MAPS Expert Panel and MAPS Team
MAPS Delphi Process Results
Delphi Process Round 1 & Round 2 Results

**Round 1: 96 Items**  
*Administered Online*

- 79 Items Retained (75% or more of the Expert Panel ranked item as “very important” or “important”)
- 33 Items re-worded based on qualitative comments.
- Reduced Likert-type scale from 5 points to 3 points
- Changed anchors from “Important” to “Reflective”

**Round 2: 79 Items**  
*Administered Online*

- 59 Items Retained (75% or more of the Expert Panel ranked item as “Yes, Reflective.”)
- 20 Items flagged for variability in responses
- 10 items flagged for qualitative comments
- 4 Items re-worded/modified

MAPS Expert Panel  
April 2018

MAPS Expert Panel  
May 2018
Partners gain knowledge and skills that are transferrable outside the partnership (e.g., policy advocacy, program development and implementation, meeting facilitation, leadership.

-From section on Competence Enhancement

Example of AGREEMENT on Questionnaire Items Responses

<table>
<thead>
<tr>
<th>All Frequency(Percent)</th>
<th>Yes, Reflective</th>
<th>Somewhat Reflective</th>
<th>Not Reflective</th>
</tr>
</thead>
<tbody>
<tr>
<td>C: Frequency (Percent)</td>
<td>8 (100%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>A: Frequency (Percent)</td>
<td>8 (100%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
</tr>
</tbody>
</table>

"Good and important question!“ – Academic Panelist

"This is critically important and supports sustainability beyond the current funded work." – Community Panelist
Costs of being involved in the partnership decrease over time.

Example of VARIABILITY on Questionnaire Items Responses

- From section on Realization of Benefits Over Time

<table>
<thead>
<tr>
<th>All Frequency (Percent)</th>
<th>Yes, Reflective</th>
<th>Somewhat Reflective</th>
<th>Not Reflective</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4 (25%)</td>
<td>7 (43.75%)</td>
<td>5 (31.25%)</td>
</tr>
<tr>
<td>C: Frequency (Percent)</td>
<td>1 (12.5%)</td>
<td>3 (37.5%)</td>
<td>4 (50.0%)</td>
</tr>
<tr>
<td>A: Frequency (Percent)</td>
<td>3 (37.5%)</td>
<td>4 (50.0%)</td>
<td>1 (12.5%)</td>
</tr>
</tbody>
</table>

"...It strikes me that as partnerships continue if partners continue to invest and perhaps increase their commitment to, and engagement with, the partnership over time...costs might also increase accordingly...“ – Academic Panelist

"In some cases, it increases as tasks multiply over time.“ – Community Panelist
Example of **QUALITATIVE COMMENTS** flagged for discussion:

“New relationships are developed beyond the initial partnership”

-From Round 2 results in the section identified as “Sustainability”

<table>
<thead>
<tr>
<th>All Frequency(Percent)</th>
<th>Yes, Reflective</th>
<th>Somewhat Reflective</th>
<th>Not Reflective</th>
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<tr>
<td></td>
<td>12 (75%)</td>
<td>3 (18.75%)</td>
<td>1 (6.25%)</td>
</tr>
<tr>
<td>C: Frequency (Percent)</td>
<td>6 (75%)</td>
<td>2 (25%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>A: Frequency (Percent)</td>
<td>6 (75%)</td>
<td>1 (12.5%)</td>
<td>1 (12.5%)</td>
</tr>
</tbody>
</table>

“Not needed” – Academic Panelist

“Critically important and needed” – Community Panelist
Round 3: Delphi Process
Face-to-Face Meeting
Ann Arbor, MI
June 2018
Delphi Round #3: 79 Items:  
Face-to-Face Meeting  
June 19th-20th, 2018; Ann Arbor, Michigan

- Begin in-person Delphi with 79 items
- No items deleted from Round #2
- Research team modified/re-worded 4 items

Items flagged for discussion with Expert Panel:
- Due to variability in responses: 20 items
- Due to qualitative comments: 10 items
Issues of equity in longstanding CBPR partnerships:

“Equitable relationships are not possible between communities and academics – I would start there and say that I don’t think it makes sense to ask about equitable relationships.” – Community Expert

“I think partnerships can be equitable and it wouldn't necessarily refer to the institution....It’s not about academic 1000% and community 10%, it is about whatever you are distributing. It takes a lot of work and change since it is not where we started. Equity is a balance of whatever you are distributing.”

– Community Expert
Questionnaire changes included:

• Relocating items to different sections of the survey that were more suited to what those items were measuring.

• Re-wording based on Expert Panelist suggestions.

• Incorporating new items to enhance content validity.

83 items advanced to cognitive interviews.
MAPS Study Post Delphi Process
### MAPS - Psychometric Data Analysis Plan

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Deliverables</th>
<th>Validity/Reliability</th>
<th>Timeline</th>
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</thead>
<tbody>
<tr>
<td>Key informant interviews/Scoping analysis/Survey items</td>
<td>Initial draft of survey</td>
<td>Construct, face, &amp; content validity</td>
<td>Y1-Y2</td>
</tr>
<tr>
<td>Delphi panel</td>
<td>Refined survey</td>
<td>Construct, face, &amp; content validity</td>
<td>Y2-Y3</td>
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<tr>
<td>Cognitive interviews</td>
<td>Semi-final draft survey</td>
<td>Face validity</td>
<td>Y2-Y3</td>
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<td>Pilot survey</td>
<td>Procedures of survey &amp; content</td>
<td>Final draft</td>
<td>Y3-Y4</td>
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<tr>
<td>Fielding of Survey</td>
<td>Quantified data</td>
<td>Validity—Content factor analysis/Latent vocabulary</td>
<td>Y4</td>
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<tr>
<td></td>
<td></td>
<td>Reliability—Test/retest Final survey</td>
<td></td>
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</tbody>
</table>

**Timeline**
- **Y1-Y2**: Tasks
- **Y2-Y3**: Delphi panel
- **Y2-Y3**: Cognitive interviews
- **Y3-Y4**: Pilot survey
- **Y4**: Fielding of Survey

**MAPS - Psychometric Data Analysis Plan**

- **Validity/Reliability**
  - Content factor analysis/Latent vocabulary
  - Test/retest Final survey
MAPS Delphi Process Methodological Framework

**Strengths**
- CBPR approach using both community and academic experts
- Face-to-face meeting to culminate the Delphi rounds
- Qualitative and quantitative responses to items

**Challenges**
- Facilitation can be challenging
- Strong, differing opinions
- Necessity of including research team member who is a skilled facilitator
Additional Lessons

• Selection of Delphi panelists is critical.
• Online rankings was efficient in eliminating redundant and irrelevant items.
• Face-to-Face allows discussion of variability in responses among experts.
Acknowledgements

The research team wishes to gratefully acknowledge the MAPS Expert Panel for their contributions to the conceptualization and implementation of this project: Alex Allen, Elizabeth Baker, Linda Burhansstipanov, Cleopatra Caldwell, Bonnie Duran, Eugenia Eng, Ella Greene-Moton, Marita Jones, Meredith Minkler, Angela Reyes, Al Richmond, Zachary Rowe, Amy Schulz, Peggy Shepard, Melissa Valerio, and Nina Wallerstein.

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To learn more about the Measurement Approaches to Partnership Success (MAPS) project, please contact MAPS Project Manager, Megan Jensen.

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