



MAPS

Measurement Approaches to Partnership Success



Measurement Approaches to Partnership Success: A Community-Based Participatory Research (CBPR) Validation Study

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MAPS Expert Panel, and our colleagues in the Detroit Urban Research Center.

MAPS RESEARCH TEAM

Multiple Principal Investigators

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- Laurie Lachance, PhD, MPH

Core Research Team

- Chris Coombe, PhD, MPH: Co-Investigator
- Ricardo de Majo, MS: Database Analyst
- Carol Gray, MPH: Detroit URC Center Manager
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- Anurima Kumar, BA '20
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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.



Measurement Approaches to Partnership Success (MAPS) Study: *Specific Aims*

Specific Aim 1

Clearly define CBPR partnership success and develop a tool (MAPS) to assess partnership success.

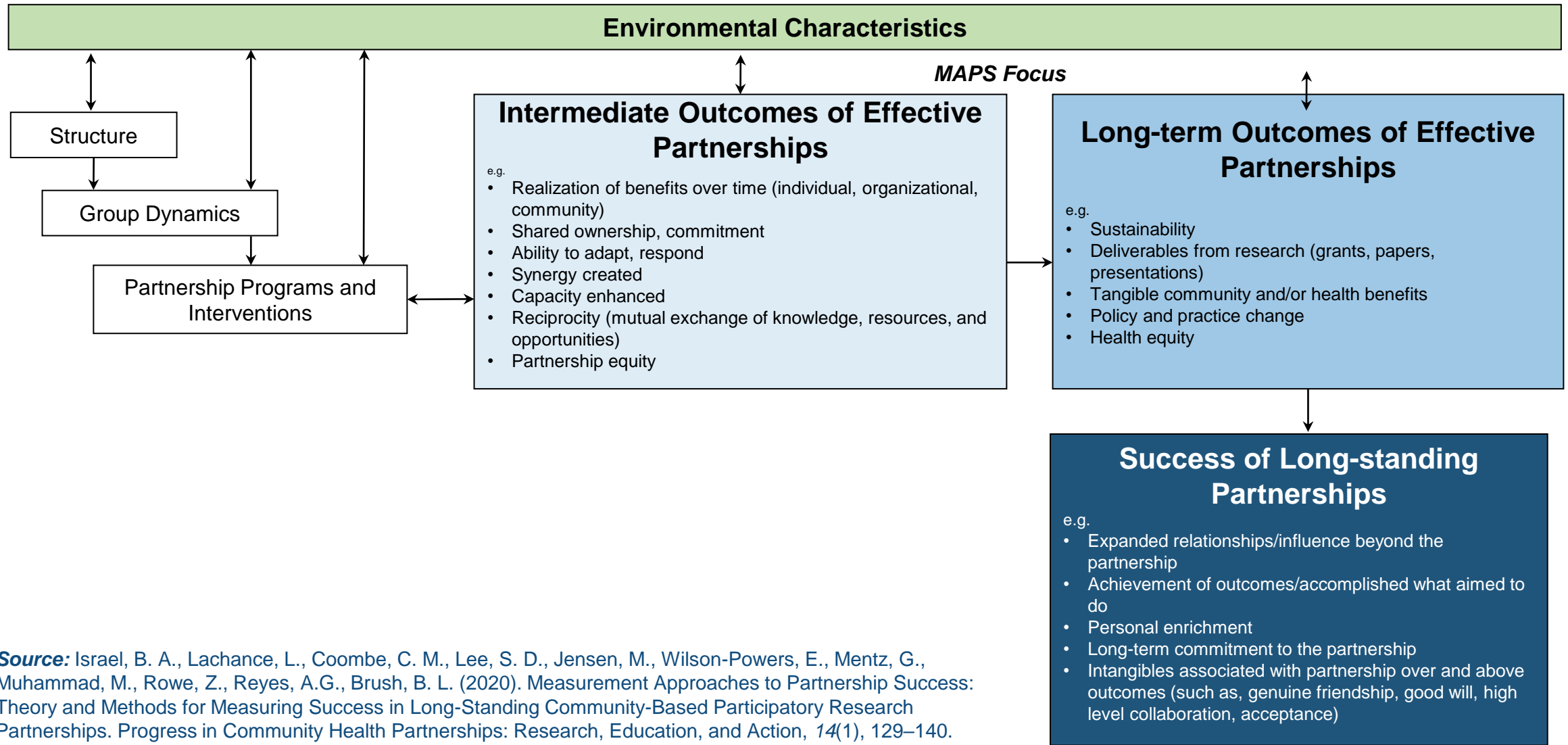
Specific Aim 2

Test the psychometric qualities of the MAPS tool.

Specific Aim 3

Develop mechanisms to feedback and apply partnership evaluation findings and widely disseminate.

Conceptual Framework for Understanding and Assessing Success in Long-standing Community-Based Participatory Research Partnerships



Source: Israel, B. A., Lachance, L., Coombe, C. M., Lee, S. D., Jensen, M., Wilson-Powers, E., Mentz, G., Muhammad, M., Rowe, Z., Reyes, A.G., Brush, B. L. (2020). Measurement Approaches to Partnership Success: Theory and Methods for Measuring Success in Long-Standing Community-Based Participatory Research Partnerships. *Progress in Community Health Partnerships: Research, Education, and Action*, 14(1), 129–140.

MAPS Expert Panelists – Community Partners



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Executive Director
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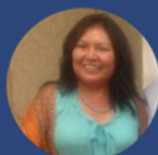
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QUESTIONNAIRE DEVELOPMENT: A MIXED METHODS APPROACH

WHY USE MIXED METHODS IN CBPR?

- Values both OBJECTIVE and SUBJECTIVE knowing
- Strengths of each single method combined to give fuller understanding
- Integration and comparison

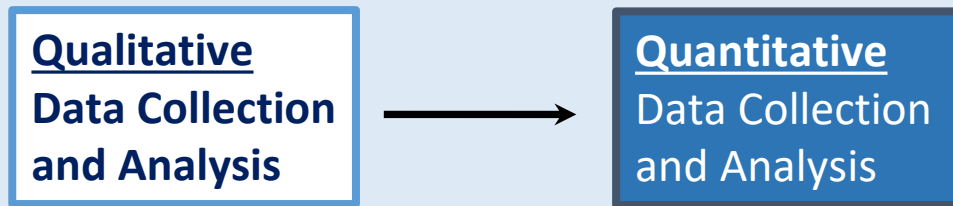


*Members of the MAPS Expert Panel at the face-to-face round of the Delphi process in June 2018:
From L-R: Zachary Rowe, Nina Wallerstein, Peggy Shepard, Angela Reyes*

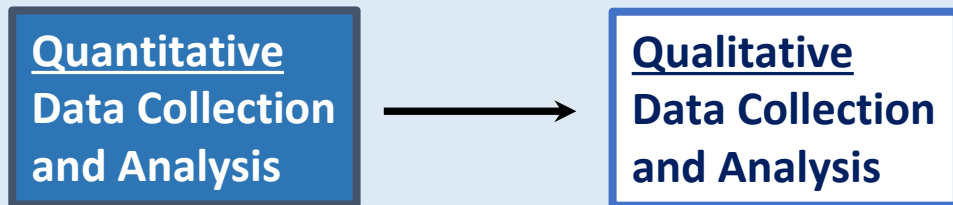
DESIGNING A MIXED METHODS STUDY

BASED ON THEORETICAL FRAMEWORK & RESEARCH QUESTION

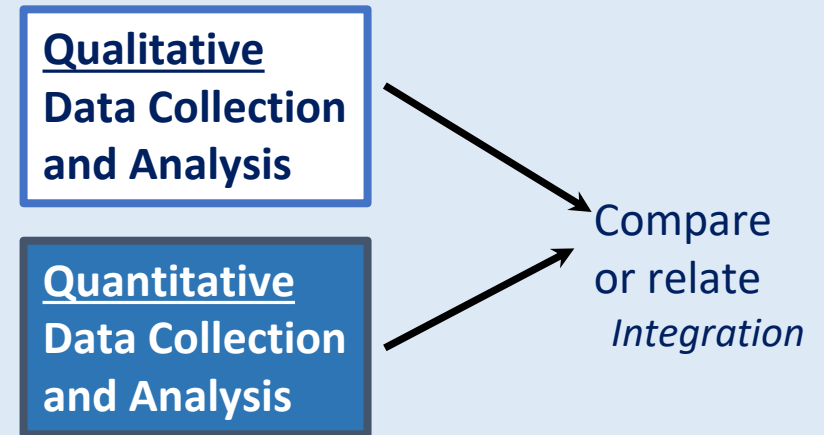
Exploratory Sequential Design



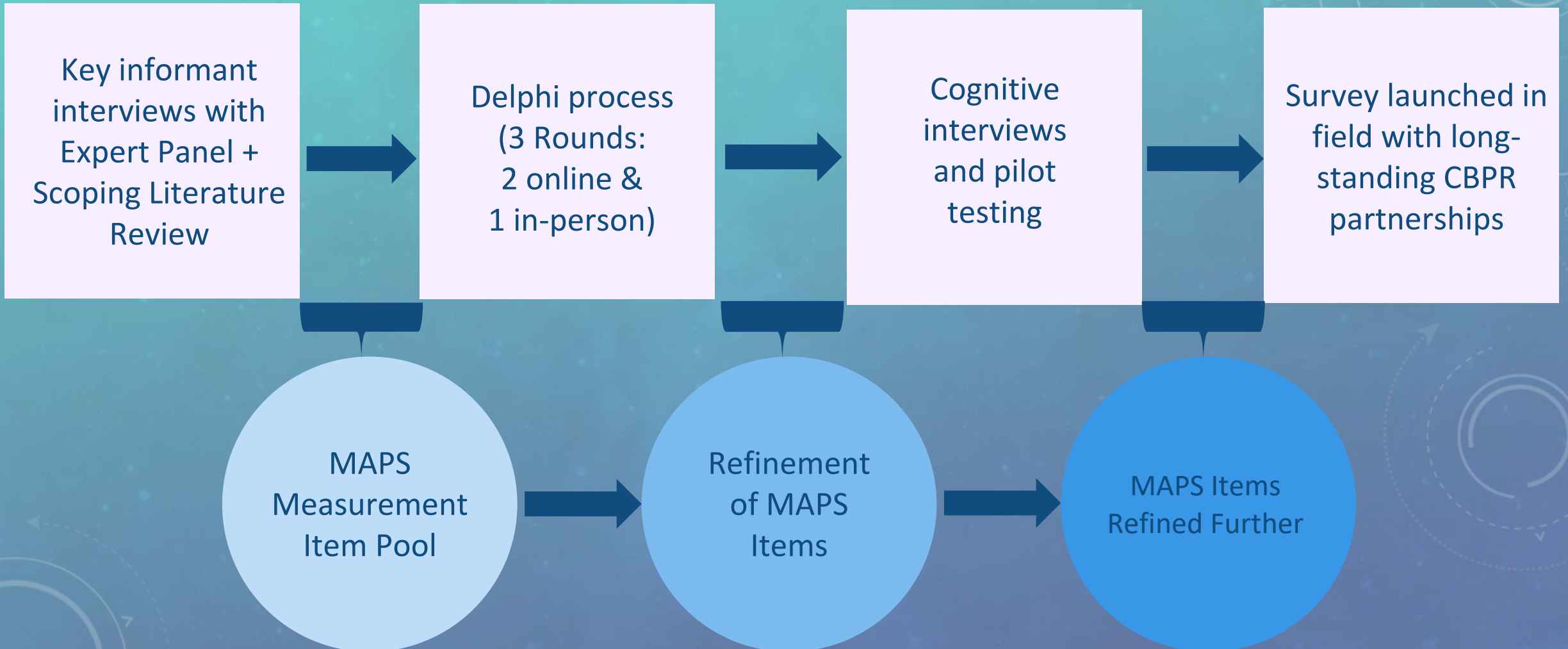
Explanatory Sequential Design



Convergent Design



MAPS QUESTIONNAIRE DEVELOPMENT



EXAMPLE OF SELECTED MEASURES INFORMED BY MIXED METHODS

MEASURE OF INTEREST: PARTNERSHIP SYNERGY

In Vivo Codes from Key Informant Interviews

Where you get to is better than either would've gotten to alone. Having diverse partners together can accomplish more than could separately. Collaboration among diverse partners helps the partnership accomplish its objectives.

Draft Questionnaire Item for Delphi Process

B-2. Having diverse community and academic partners together accomplishes more than could be accomplished separately.

Delphi (Rounds 1-3),* Cognitive Interviews (CI), Pilot Testing (PT)

D-R1: Item Deleted

D-R2: Item Reworded, re-added

Final Item in the MAPS Questionnaire

76. Working together, the partnership accomplishes more than partners could accomplish separately.

TABLE 1: THE MAPS QUESTIONNAIRE DOMAINS AND ITEMS

MAPS Questionnaire Domains (n=7)	No. of Items (n=81)
Equity in the partnership	23 items
Reciprocity	6 items
Competence enhancement	11 items
Partnership synergy	7 items
Sustainability	16 items
Realization of benefits over time	8 items
Achievement of intermediate and long-term partnership goals/outcomes (e.g., equity)	10 items

ADVANTAGES OF USING MIXED METHODS IN CBPR



Members of the MAPS Expert Panel at the face-to-face round of the Delphi process in June 2018

- Creates mechanisms for multiple forms of participation from diverse entities
- Builds capacity across multiple methods and designs
- Demonstrates that diverse contributions are valued
- Increases confidence in the results



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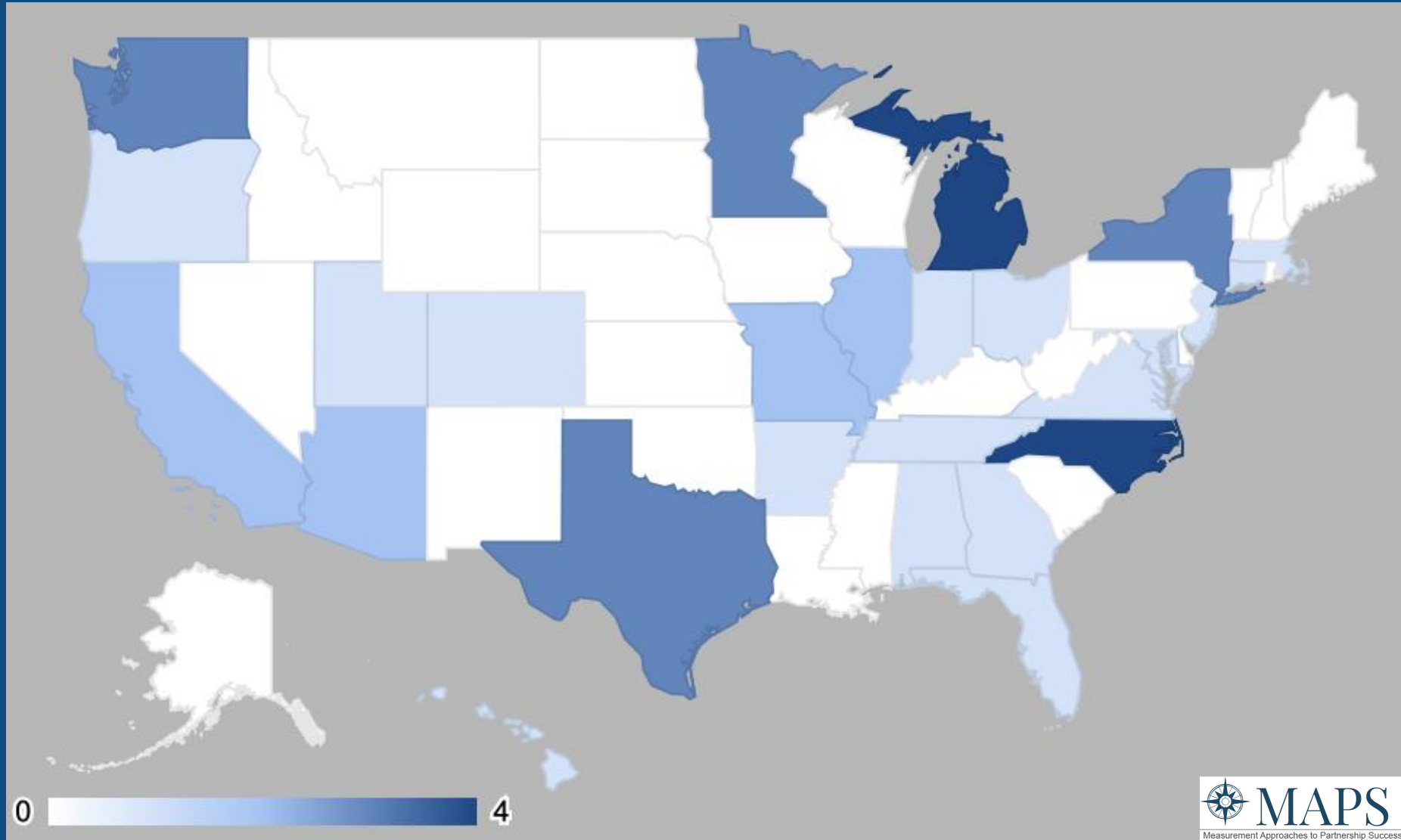
PARTICIPANT RECRUITMENT

MAPS PARTICIPANT RECRUITMENT

Partnership Eligibility Criteria Include:

1. Have been in existence for at least six years and continue to operate
2. Show evidence of following CBPR principles and norms
3. Conduct ongoing partnership evaluation
4. Show evidence of dissemination
5. Consent to participate

GEOGRAPHIC DISTRIBUTION OF COMPLETED PARTNERSHIPS



Of the 44 partnerships that have completed the MAPS study

TABLE 2: CHARACTERISTICS OF PARTNERSHIPS
(n=44)

Size of Partnership n (%)		Years of Existence n (%)		Community Type n (%)	
Small: 3-8 partners	15 (34%)	6-9 Years	20 (46%)	Urban	19 (43%)
Medium: 9-15 partners	17 (39%)	10-14 Years	15 (34%)	Rural	7 (16%)
Large: 16+ partners	12 (27%)	15+ Years	9 (20%)	Suburban	1 (2%)
				Tribal	1 (2%)
				More than one	16 (37%)



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PRELIMINARY RESULTS

TABLE 3: CRONBACH'S ALPHA & INTERNAL CONSISTENCY

MAPS Questionnaire Domain	Cronbach's Alpha	95% CI
Equity in the partnership	0.947	(0.940,0.953)
Reciprocity	0.856	(0.836,0.875)
Competence enhancement	0.916	(0.904,0.927)
Partnership synergy	0.891	(0.876,0.905)
Sustainability	0.905	(0.892,0.917)
Realization of benefits over time	0.846	(0.824,0.866)
Achievement of intermediate and long-term goals/outcomes	0.913	(0.901,0.924)

TABLE 4: CONVERGENT AND DIVERGENT VALIDITY:

Using MAPS “Reciprocity” Domain Compared with all other Domains

Items from MAPS <u>RECIPROCITY</u> Domain	Equity	<u>RECIPROCITY</u>	Competence	Synergy	Sustainability	Realization of benefits over time	Achievement of intermediate or long-term goals/ outcomes
	Cronbach’s Alpha						
53. Partners incorporate the ideas, skills, and abilities of one another.	0.665	0.829	0.648	0.676	0.557	0.561	0.583
52. Partners are a resource for each other.	0.599	0.813	0.602	0.623	0.541	0.549	0.526
56. Over time, all partners exchange their expertise within the partnership.	0.643	0.805	0.634	0.635	0.563	0.530	0.606
54. Partners recognize each other's expertise.	0.603	0.795	0.558	0.632	0.465	0.465	0.493
57. Partners support each other outside of partnership activities (for example, attend events, celebrate partner's achievements, provide letters of support).	0.574	0.753	0.558	0.597	0.481	0.493	0.516
55. The exchange of expertise among partners may vary at different points in time in the partnership.	0.488	0.645	0.483	0.457	0.447	0.475	0.440

TABLE 5: TEST-RETEST RELIABILITY

MAPS Questionnaire Domain	Percentage of Agreement
<i>Equity in the partnership</i>	93.21
<i>Reciprocity</i>	97.40
<i>Competence Enhancement</i>	90.91
<i>Partnership Synergy</i>	96.88
<i>Sustainability</i>	88.67
<i>Realization of Benefits over time</i>	88.67
<i>Achievement of intermediate and long-term outcomes</i>	86.88
Overall	91.28

SUMMARY OF PRELIMINARY ANALYSIS – THE MAPS QUESTIONNAIRE DEMONSTRATES:

- INTERNAL CONSISTENCY

- Cronbach's Alpha show that all measured domains having high levels of internal consistency and reliability.

- CONVERGENCE/DIVERGENCE VALIDITY

- Correlations demonstrate items converge to the appropriate domain and diverge from other domains.

- RELIABILITY OVER TIME

- Test-Retest analysis demonstrates that when applied over time, item responses show consistent measurement of the domain.

Next Steps

Finalize partnership recruitment

Analyze data using classical and modern approaches

Provide feedback to partnerships

Develop and disseminate feedback and evaluation guide

Revise and disseminate MAPS questionnaire

MAPS PUBLICATIONS TO-DATE

- Brush, B. L., Mentz, G., Jensen, M., Jacobs, B., Saylor, K. M., Israel, B., Rowe, Z., & Lachance, L. (2019). Success in long-standing community-based participatory research (CBPR) partnerships: A scoping literature review. *Health Education & Behavior, 47*(4), 556-568. <https://doi.org/10.1177/1090198119882989>. [PMC7160011]
- Coombe, C. M., Chandanabhumma, P. P., Bhardwaj, P., Brush, B. L., Greene-Moton, E., Jensen, M., Lachance, L., Lee, S-Y.D., Meisenheimer, M., Minkler, M., Muhammad, M., Reyes, A.G., Rowe, Z. & Israel, B.A. (2020). A participatory, mixed methods approach to define and measure partnership synergy in long-standing equity-focused CBPR partnerships. *American Journal of Community Psychology*. Advance online publication. <https://doi.org/10.1002/ajcp.12447> [NIHMS 1639991]
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- Lachance, L., Coombe, C., Brush, B.L., Lee, S-Y, D., Jensen, M., Taffe, B., Bhardwaj, P., Muhammad, M., Wilson-Powers, E., Rowe, Z., Caldwell, C., Israel, B.A. (2020). Understanding the benefit-cost relationship in long-standing community-based participatory research (CBPR) partnerships: Findings from the Measurement Approaches to Partnership Success (MAPS) study. *Journal of Applied Behavioral Science*. Advance online publication. <https://doi.org/10.1177/0021886320972193>

THANK YOU!

The Measurement Approaches to Partnership Success (MAPS) Team



The MAPS Research Team and Expert Panelists at the June 2018 Face-to-Face meeting of the Delphi Process in Ann Arbor, Michigan.



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