



CONDUCTING  
MIXED-METHODS  
MIGRANT HEALTH  
RESEARCH

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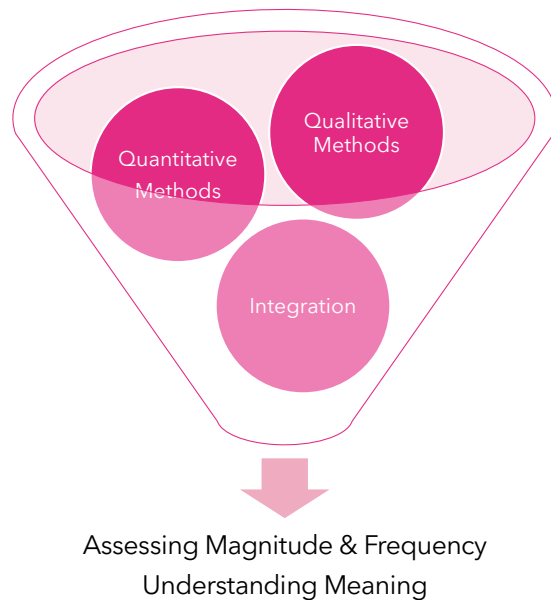
BIMI SIMRM 2023



# OUTLINE

- Greetings and introductions
- Introduction to mixed-methods research
- Examples of mixed-methods migrant health research designs
- Summary

# Mixed-methods Research



- Increasingly used approach
- Contextual understanding
- Multi-level perspectives
- Cultural influences
- Multiple methods
- Objective and subjective knowledge

(NIH, 2011)



# Drawing on Strengths of Each Approach

## **Qualitative Methods**

- Focus is on contexts, meaning, experiences
- Centers on voices of participants
- Offers deep knowledge
- Inductive: Generates theories

## **Quantitative Methods**

- Offers broad, generalizable knowledge
- Allows replication, comparison
- Deductive: Tests theories and associations
- Analyzed statistically

(NIH, 2011)

# Typical Methods

## **Qualitative**

- In-depth interviews
- Key informant interviews
- Focus groups
- Ethnographic observation
- Case studies



## **Quantitative**

- Surveys
- Case-control, cohort studies
- Randomized controlled trials
- Time-series
- Biometric assessments

(NIH, 2011)

# Designing A Mixed-Methods Study

- Start with research questions you want to answer
- Identify suitable quantitative and qualitative methods
  - What is most suitable for research questions
  - What is feasible with resources and expertise
- Determine purpose of each method
  - Formative, informing future steps
  - Triangulating, increasing confidence on findings
  - Complementing, illustrating findings

# Different Mixed-Methods Designs

- Convergent / parallel / concurrent
  - Intent is to merge data
- Sequential
  - Quantitative → qualitative: To expand understanding of results
  - Qualitative → quantitative: To inform quantitative questionnaire
- Embedded / nested
  - One method is secondary to the other
- Multiphase
  - Several studies sharing a common purpose

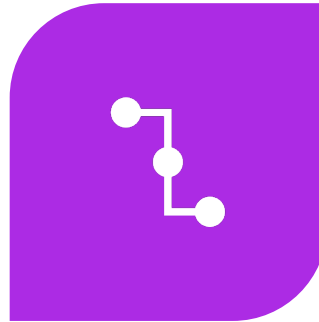
(NIH, 2011)

# Data Integration

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**MERGING** DATA: REPORTING  
AND CONTRASTING FINDINGS  
FROM BOTH METHODS



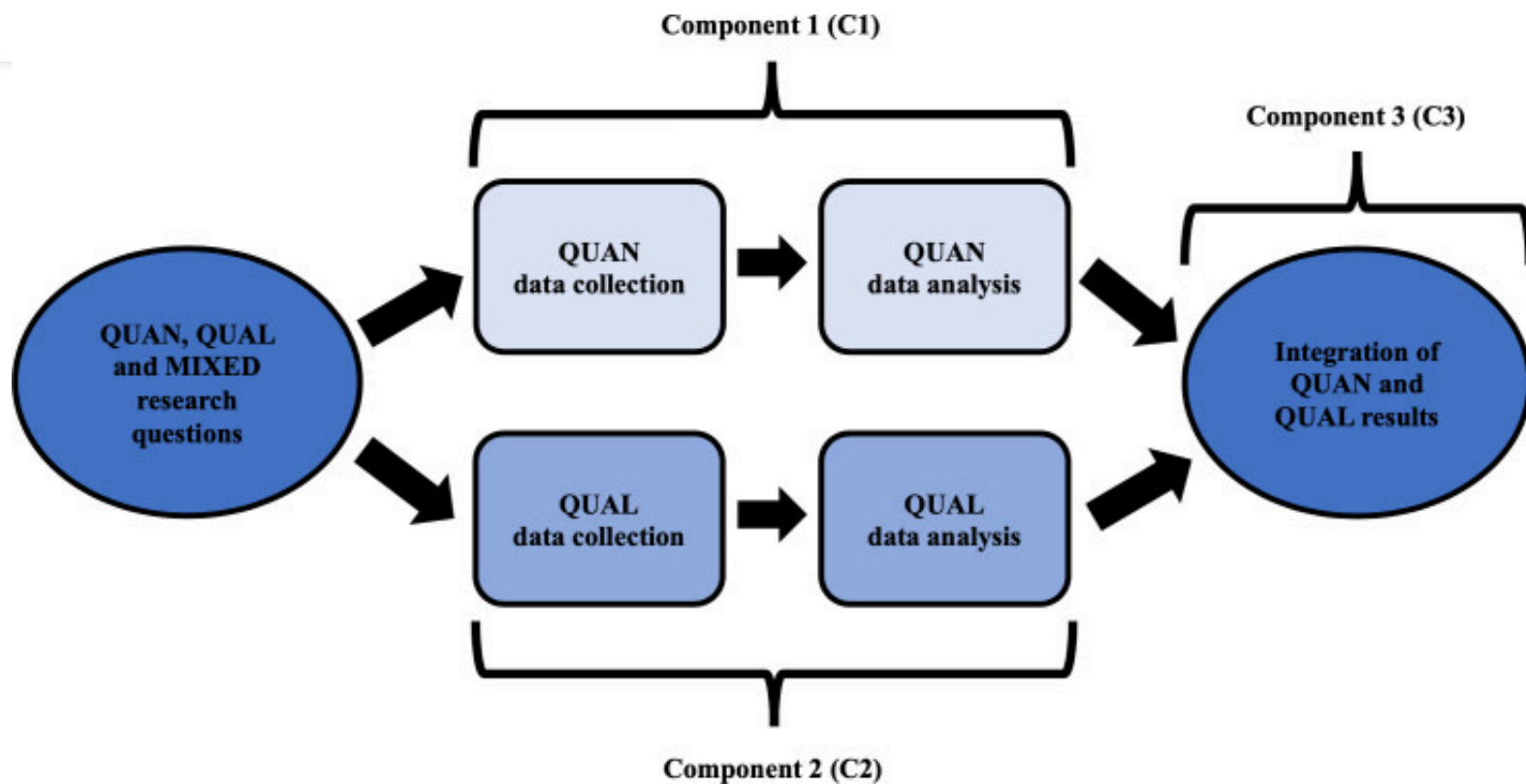
**CONNECTING** DATA: USING  
ONE METHOD TO INFORM  
SECOND PHASE



**EMBEDDING** DATA: ONE  
METHOD EMBEDDED WITHIN  
ANOTHER

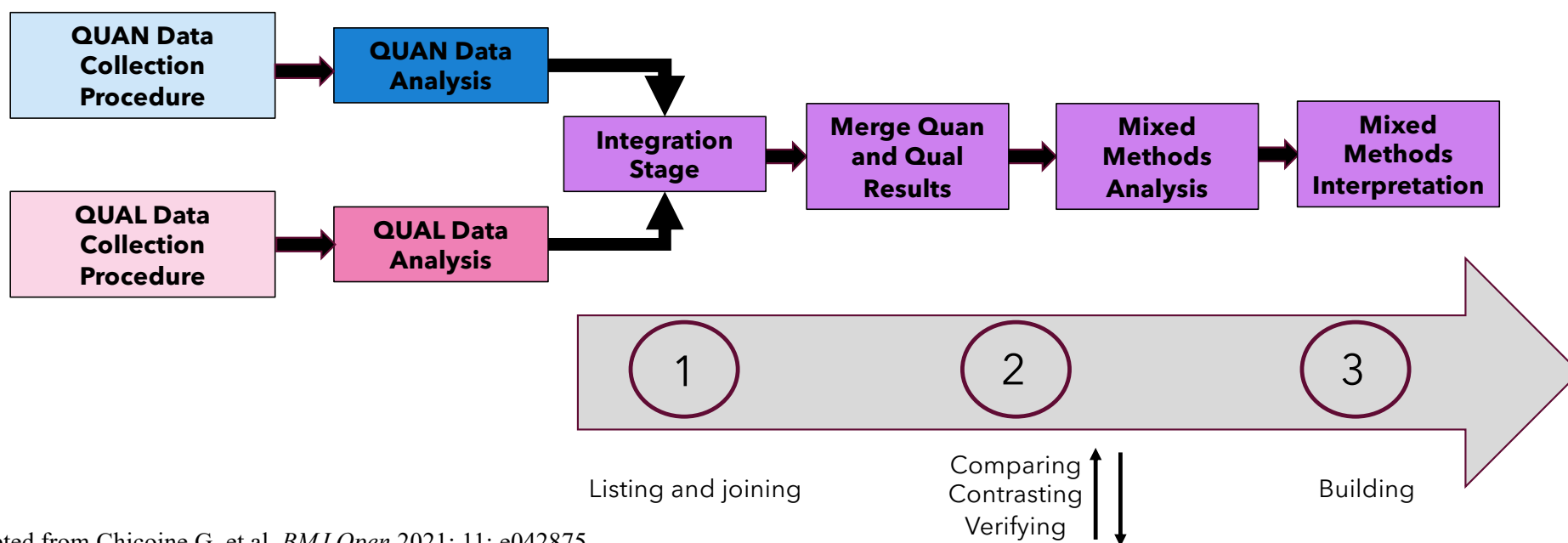
(NIH, 2011)

# Merging Data: Mixed Methods Convergent Parallel Design



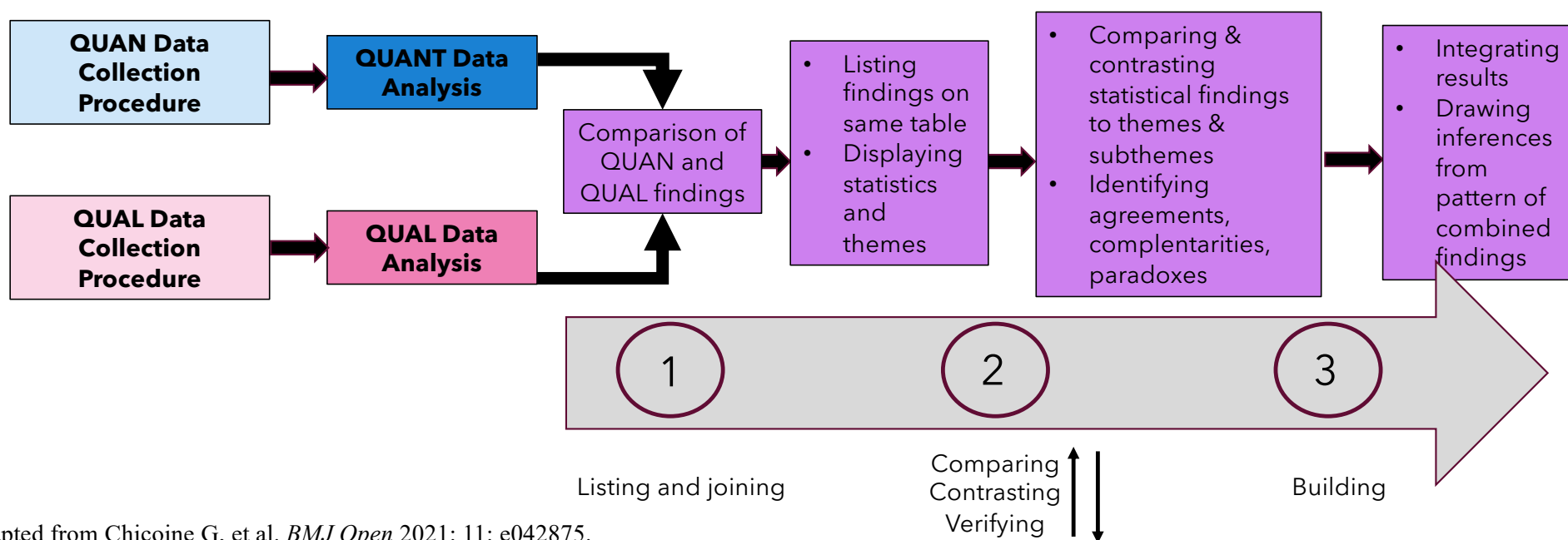
Source: Chicoine G, et al. *BMJ Open* 2021; 11: e042875.

# Integration Using Comparison of Results' Strategy



Adapted from Chicoine G, et al. *BMJ Open* 2021; 11: e042875.

# Integration Using Comparison of Results' Strategy (Cont.)

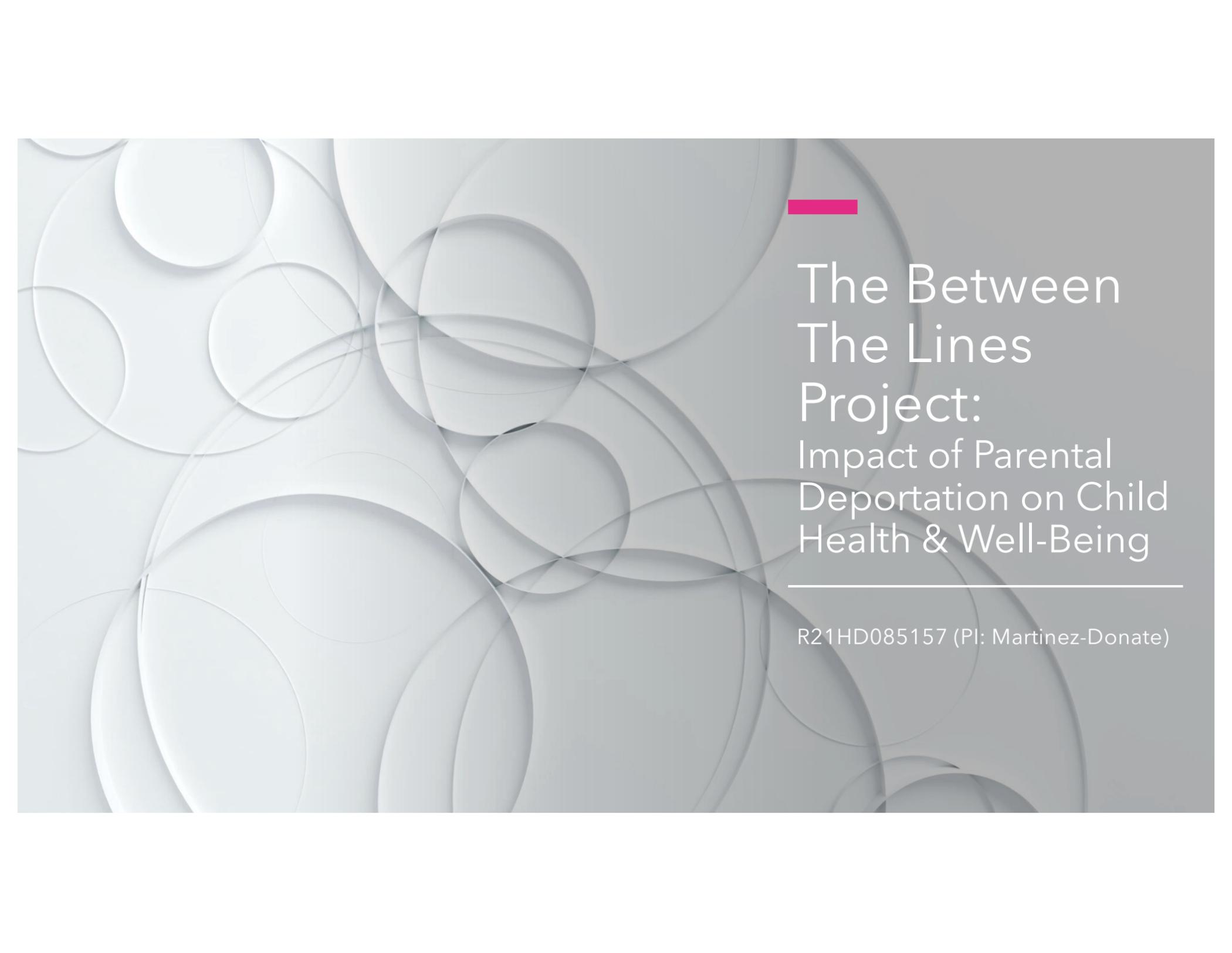


Adapted from Chicoine G, et al. *BMJ Open* 2021; 11: e042875.

# Using A Convergence Coding Matrix

- Triangulation of quantitative and qualitative findings
- Identifying and reporting:
  - Patterns of convergence or agreement
  - Patterns of dissonance or disagreement
- Main findings displayed on a table

Example of Convergence Coding Matrix			
Findings from Quantitative Methods			
Quant. method 1	Study design and sample	Measures & statistical analyses	Finding 1
			Finding 2
Findings from Qualitative Methods			
Qual. method 1	Sample and analytical approach	Theme 1	Subtheme 1
			Subtheme 2
Integration of Quantitative and Qualitative Results			
Agreement/convergence between both data		Agreement 1	Quant & qual finding
		Agreement 2	Quant & qual finding
Complementary information		Compl. info 1	Quant & qual finding
		Compl. info 2	Quant & qual finding
Dissonance/disagreement		Contradiction 1	Quant & qual finding
		Contradiction 2	Quant & qual finding
Mixed Methods Interpretation			
Inference 1		Discussion	
Inference 2		Discussion	

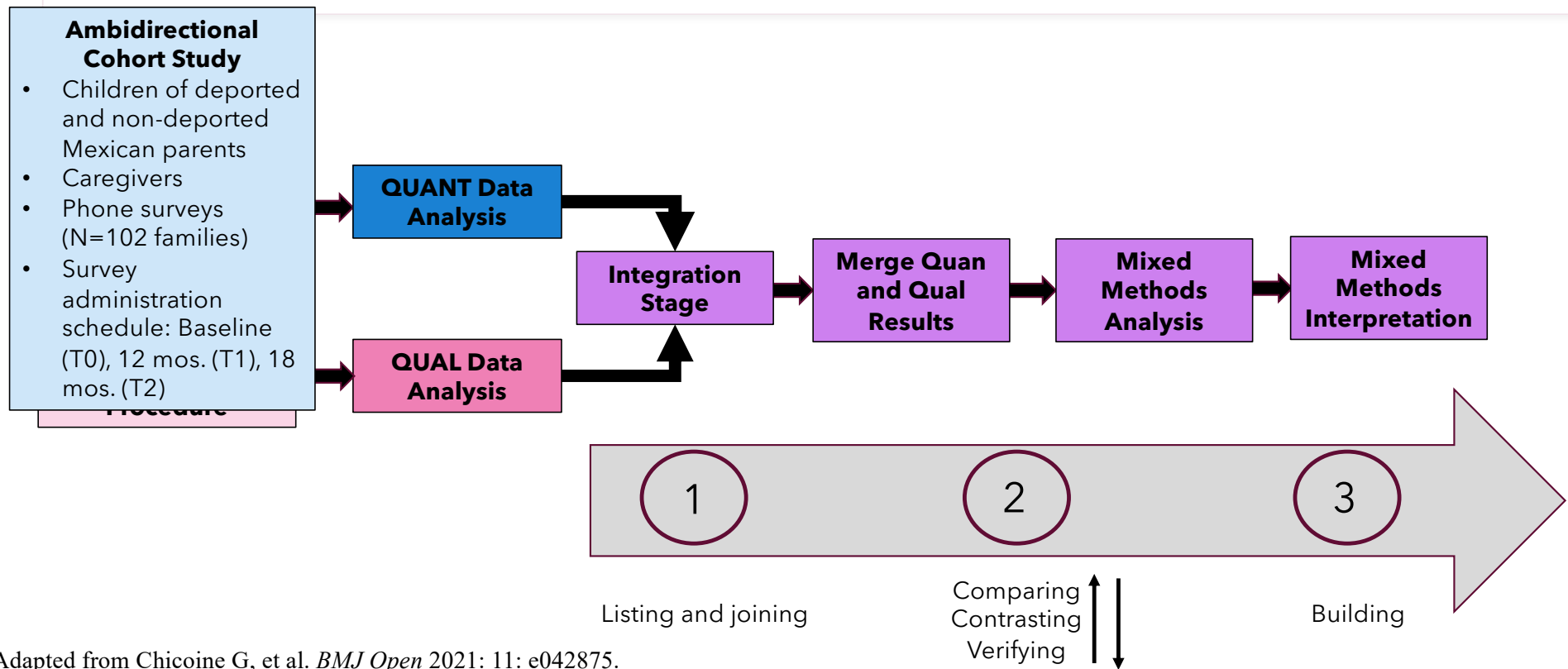


The Between  
The Lines  
Project:  
Impact of Parental  
Deportation on Child  
Health & Well-Being

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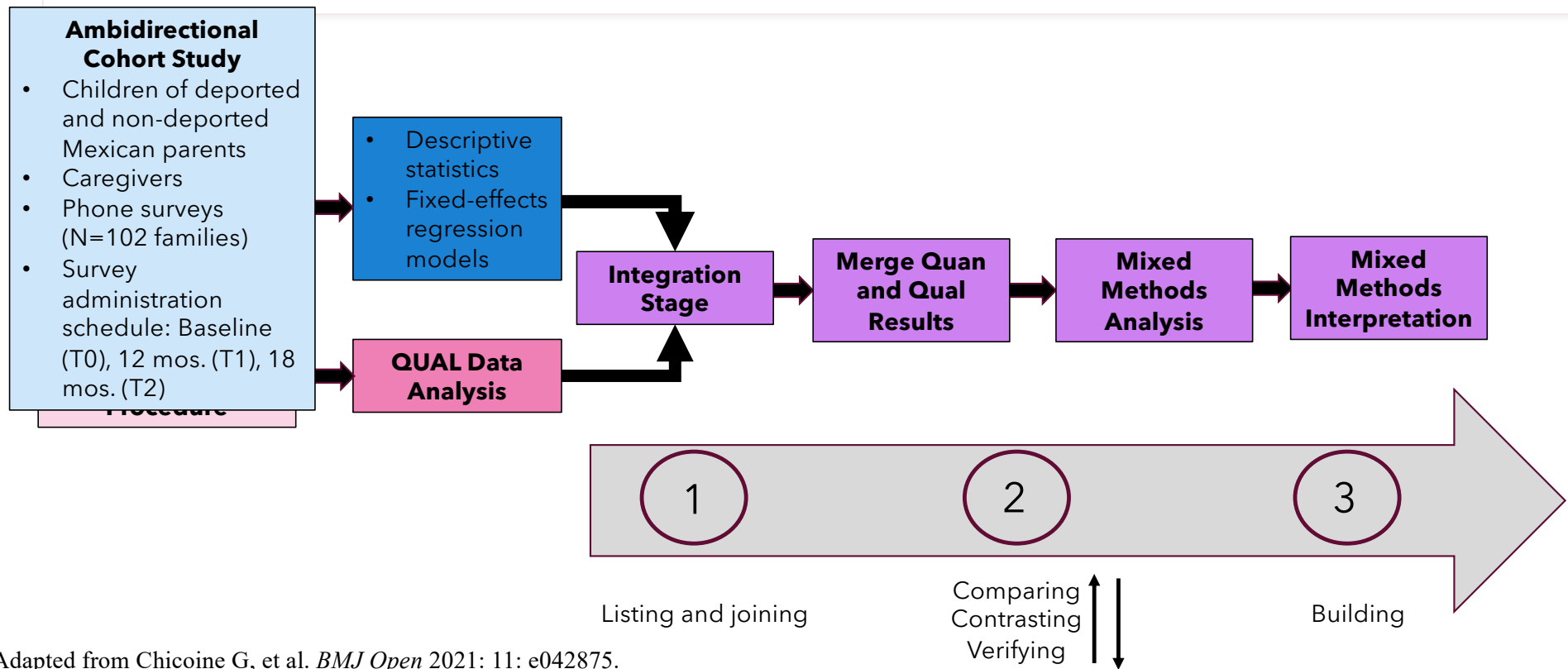
R21HD085157 (PI: Martinez-Donate)

# Study Design & Methods



Adapted from Chicoine G, et al. *BMJ Open* 2021; 11: e042875.

# Study Design & Methods (Cont.)



Adapted from Chicoine G, et al. *BMJ Open* 2021; 11: e042875.

## (Selected) Quantitative Findings

	Parental Deportation Effects at T1 B (p)	Parental Deportation Effects at T2 B (p)
Child health status	-.284*	-.314*
Anxiety	.116	.108
Depression	.188*	.094
Internalizing behavioral problems	.407****	.583****
Externalizing behavioral problems	.254***	.325****
Behavioral Difficulties	.328****	.449****
Food insecurity	.129	.186 <sup>+</sup>
Housing quality issues	.454****	.626****
Child effort at school	-.110	-.31**

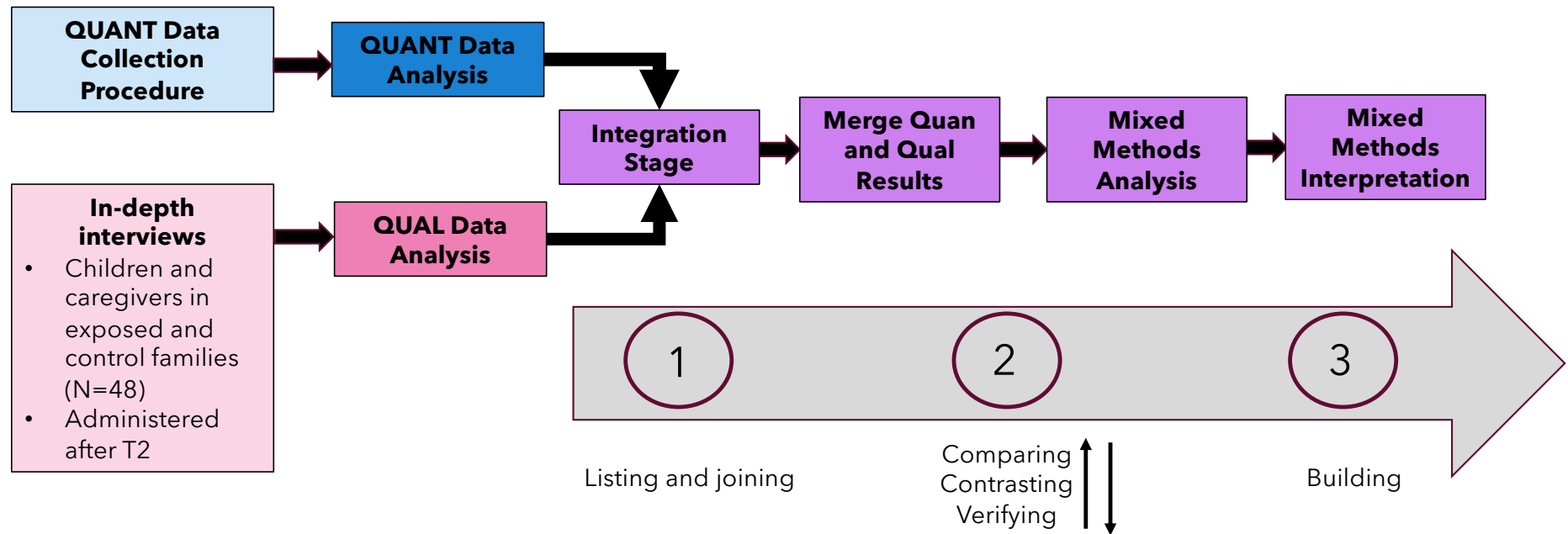
p values based on fixed-effects regression models

<sup>+</sup> p<=.10; \* p<=.05; \*\* p<=.01; \*\*\*p<=.005; \*\*\*\*p<=.001

Martinez-Donate et al. Under review

# Example: The Between The Lines Study

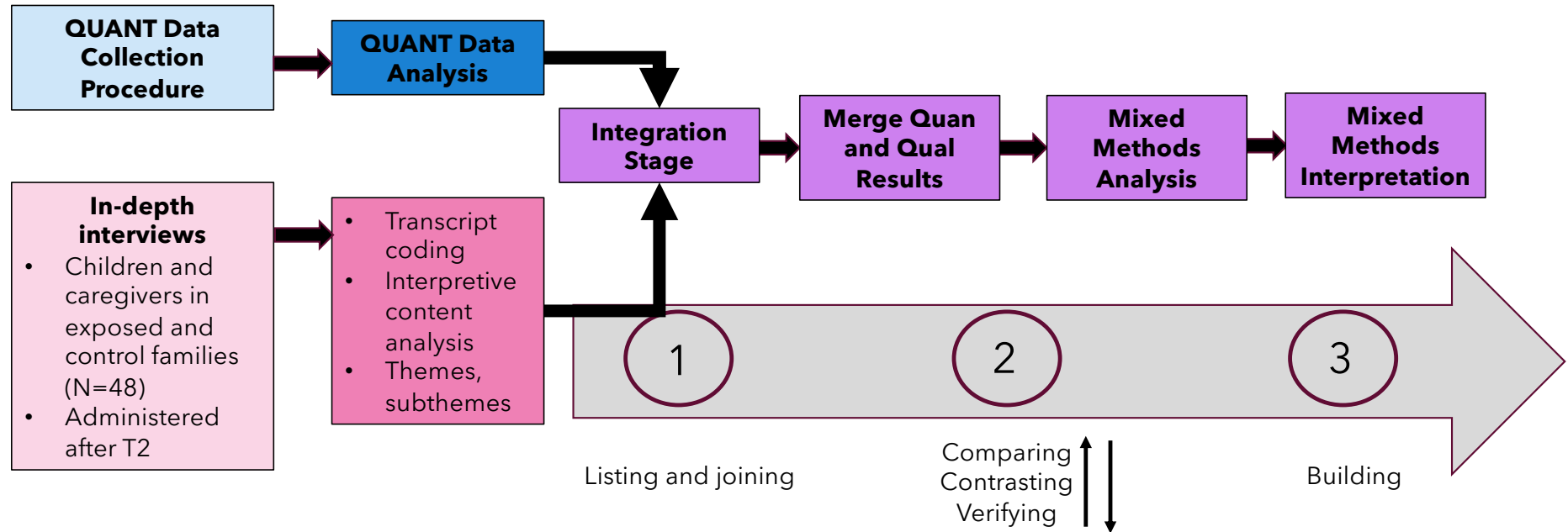
## Impact of Parental Deportation on Child Health & Well-Being (Cont.)



Adapted from Chicoine G, et al. *BMJ Open* 2021; 11: e042875.

# Example: The Between The Lines Study

## Impact of Parental Deportation on Child Health & Well-Being (Cont.)



Adapted from Chicoine G, et al. *BMJ Open* 2021; 11: e042875.

# (Selected) Qualitative Findings

**Table 4.** Qualitative findings on impact of parental deportation based on interviews with U.S.-based caregivers of children (N=14).

Themes	Quotes
Deterioration of physical health and health behaviors	<p>"She has asthma, so [after parent's deportation] we noticed, I was noticing like at school, they would call me all the time, like she has had an asthma attack, or she's having a hard time breathing." (Silvia, unknown age)</p> <p>"And now [after parent's deportation] she is sick all the time, her stomach hurts, her head hurts." (Rosa, 56 years)*</p> <p>"There are times that I make food then, then they remember their dad. 'Oh, my dad liked this a lot' and they start crying and then they don't eat." (Ernestina, 44 years)*</p>
Psychological impact, especially sadness and fear	<p>"They start crying, that is, and they know that their dad is not here, anyway, but they still have, they think that...they think that the people who took their dad can come one day for me. [Name of the child] says, 'Mom, why did all this happen, Mom, why did they take my dad? Or mom what if they come for you? And you are not here anymore?' (Reyna, 40 years)*</p> <p>"It is very sad. It is very sad seeing my kids sleep most of the time... They are no longer the same people from before. [Name of the child] used to play the piano... almost always, almost every day." (Rosa, 56 years)*</p>
Impact on behavior: withdrawal, anger, rebelliousness	<p>"So, the oldest girl spent weeks locked in her room. She didn't want to come out, only from home to school, school to home, so I took her to a doctor, and they gave her some pills like for like depression. Like that. She stays locked up. They gave her pills" (Ernestina, 44 years)*</p> <p>"[Name of the child] is also angry, defensive with me. Yes, he easily gets angry." (Lupita, 46 years)*</p> <p>"You know, she wants to go back and forth all the time and I don't know. It just seems like this this has really been going on a lot this last year. She was never like that with me before. Never bickering, never arguing, you know, she was not like that at all." (Tania, 43 years)</p>
Impact on academics: Loss in motivation, lack of concentration, and negative outlook.	<p>"After that [referring to deportation], from there, she didn't want to go to school. And before, she, even if she was sick and all of that, she liked to go to school. She didn't like missing it. And now [...] she only wants to be sleeping." (Rosa, 56 years)*</p> <p>"Right now, it's like, [Name of Child]'s not motivated. I don't know, like he's not motivated to study [...] Yes, he's having a hard time to get on classes right now... he lost his desire, I don't know his motivation maybe." (Daniela, 47 years)*</p> <p>"I notice that-those things have changed in the way of thinking and all of that because before she always said that she was going to be a doctor...That she was going to be a doctor so... since she knows that career is expensive for us and, as you know, that I don't have a stable job. No, not anymore. Now, she thinks in things like... I don't know. There were a lot of plans with her before..." (Rosa, 56 years)*</p>

## Portion of Convergence Coding Matrix from Between The Lines Study

### Findings from Quantitative Methods

Caregivers' survey	<ul style="list-style-type: none"> <li>112 caregivers from exposed and control families</li> <li>Conducted at T0, T1, T2</li> </ul>	<ul style="list-style-type: none"> <li>13 health, behavioral, economic, academic outcomes</li> <li>Fixed-effects regression models</li> </ul>	<p>Parental deportation is significantly associated with negative changes in child health</p> <p>Parental deportation is associated with worse academic indicators</p>
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### Findings from Qualitative Methods

In-depth interviews with caregivers	<ul style="list-style-type: none"> <li>14 caregivers from exposed families</li> <li>Interpretive content analysis</li> </ul>	Impact on academics	<p>Caregivers report children loss motivation to study</p> <p>They note child has a negative outlook</p>
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### Integration of Quantitative and Qualitative Results

Agreement/convergence between both data	Exposure to parental deportation has a detrimental impact on child's academic performance	<p>Significant regression coefficients for exposed group from T0 to T2</p> <p>Caregivers perceived that children are doing worse in school since parent deported</p>
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## Portion Convergence Coding Matrix from Between The Lines Study (Cont.)

### Integration of Quantitative and Qualitative Results (Cont.)

<i>Complementary information</i>	Negative impacts on housing quality	Significant decrease in housing quality score from regression models
	Increased child responsibilities	Caregivers report having to rely more on children to cope with financial stress
<i>Dissonance/disagreement</i>	None	N/A

### Mixed Methods Interpretation

Parental deportation hurts children in immigrant families in multiple ways

Compared to children who do not experience the deportation of their parents, adolescents in families separated by deportation experience a host of negative health, behavioral, academic, and economic impacts. Of 13 different outcomes examined, we observed negative effects immediately and/or 6 months after deportation in all of them. For 10 out of these 13 outcomes, the differences were statistically significant despite the small sample size and limited statistical power. The reports shared by the caregivers during qualitative interviews matched and graphically illustrated these trends.

# Safe-zone schools and the academic performance of children in mixed-status households: Evidence from the 'between the lines' study

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## Abstract

In response to the intensification of immigration enforcement in the interior of the USA, some school districts have implemented 'safe-zone' policies to protect students' academic progression and well-being. Using primary data from a sample of US-born children of unauthorized migrants, we document the detrimental effect of stricter immigration enforcement on children's educational outcomes and the benefits of safe-zone policies. Our analyses show that restricting immigration authorities' access to schools and providing counseling on immigration-related issues are crucial policy components in strengthening children's focus, effort, expectations, parental involvement, and relationships. These findings highlight the damaging impact of immigration enforcement on US-citizen children in mixed-

## Quotes to Illustrate Quantitative Findings

*"My school counselor was a really big help. She helped me figure out where my missing assignments were. And she was like 'Hey, if you get through college, if you get a good education, you can help your dad over there. You can get him a better house, you can get him a better job, you can send him money.' (...) I don't know what happened. How [school counselor] found out [about parental deportation]. But I'm actually really glad that they did because if they didn't, I don't know where I would be at right now."*

*Between the Lines* survey respondent



# Embedded Design: CRISOL Pilot Study

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Martinez-Donate et al. PLoS ONE, in  
press.



*Comunidades Resilientes, Sostenibles y Organizadas por Líderes*

## Specific Aims

To develop an integrated intervention to address the syndemics affecting Latino immigrants

To implement the pilot CRISOL intervention

To evaluate feasibility, acceptability, obtain pilot efficacy data

# Program Design

- Informed by:
  - Community-based participatory research
  - Popular Opinion Leader Model
  - Community resilience & empowerment
  - Previous Latino-focused, peer-driven programs
- Two levels, two phases:
  - Training of 8-10 immigrant community leaders (Sept-Dec, 2019)
    - 40 hours (10 sessions)
  - Community Outreach (Jan-Sept, 2020)
    - 8 months
    - Bi-monthly support meetings
    - 10 community contacts per month, per leader



Israel et al. 1988; Rogers, 1962; Wiggins, 2012; Dearing & Cox, 2018

MODULE	CONTENT
1	Introduction to CRISOL and the POL Model
2	Introduction to Resilience
3	HIV/AIDS & STIs
4	Domestic Violence
5	Mental Health
6	Substance Abuse
7	Skills Development: Resilient Communities
8	Resources and Connections With SAVAME Prevention and Treatment Services
9	Skills Development – POLs as Community Researchers
10	Putting It All Together – Review Session

## CRiSOL Training

### OBJECTIVES

- Increase leaders' syndemics-related knowledge and skills to:
  - Educate and inform
  - Model healthy norms
  - Link to services
  - Build self- and community resilience
- Link between professionals, organizations, and community members
- 10 community contacts per month, per leader

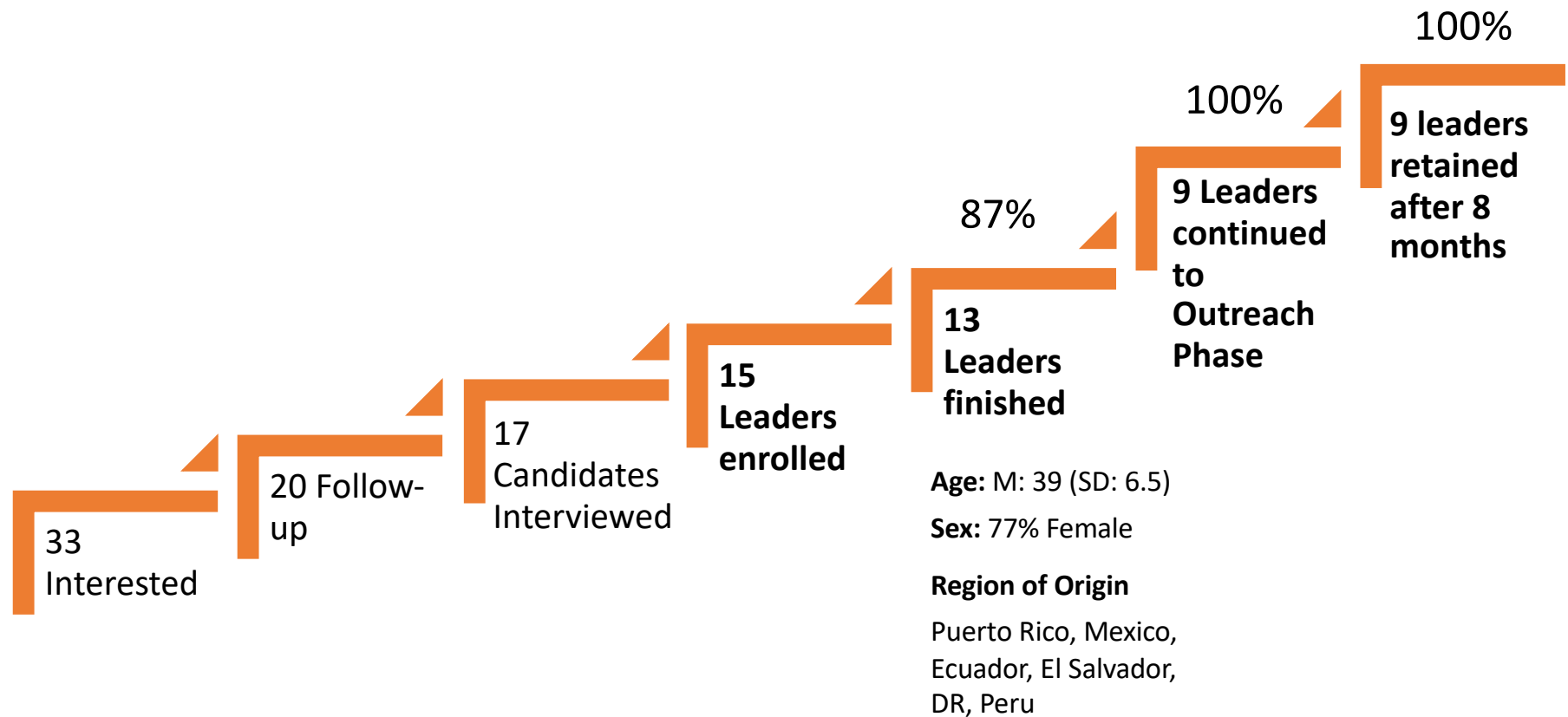
# Evaluation Guided by RE-AIM Framework

Dimension	Indicators
Reach	<ul style="list-style-type: none"><li>• Number of community leaders trained</li><li>• Number of community interactions</li></ul>
Effectiveness	<ul style="list-style-type: none"><li>• Changes in knowledge, skills, resilience</li></ul>
Adoption	<ul style="list-style-type: none"><li>• Number of leaders that started outreach phase</li></ul>
Implementation	<ul style="list-style-type: none"><li>• Fidelity, attendance, satisfaction</li></ul>
Maintenance	<ul style="list-style-type: none"><li>• Number of active leaders 8 months after graduation</li></ul>

# Evaluation Data Collection Methods



## Reach, Adoption, & Maintenance (Comm. Leaders)



Martinez-Donate et al. PLoS ONE, in press.

## Training Implementation



High Attendance  
(0-10 sessions)

M = 9.1 (SD=1.6)



Fidelity to Training Topics  
(0-100%)

M = 89.5% (SD=17.2)

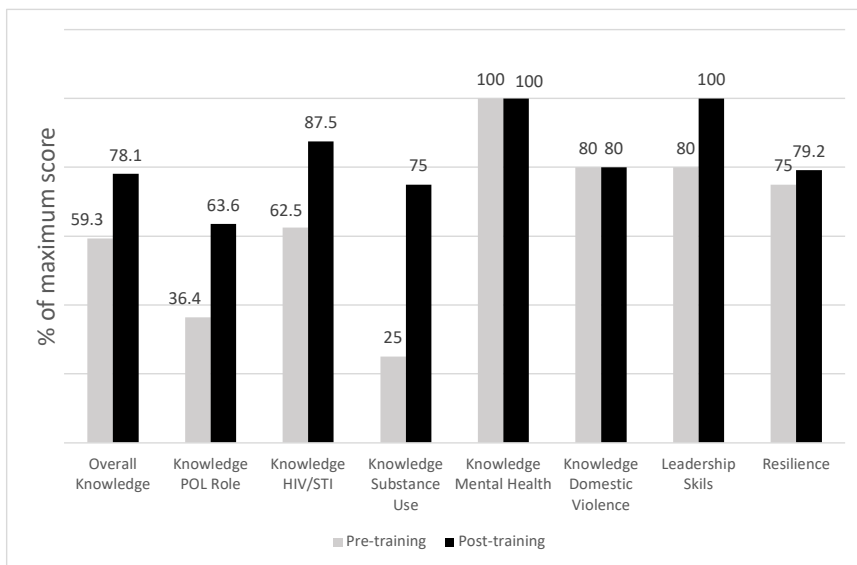


Participants'  
Satisfaction  
(1-5)

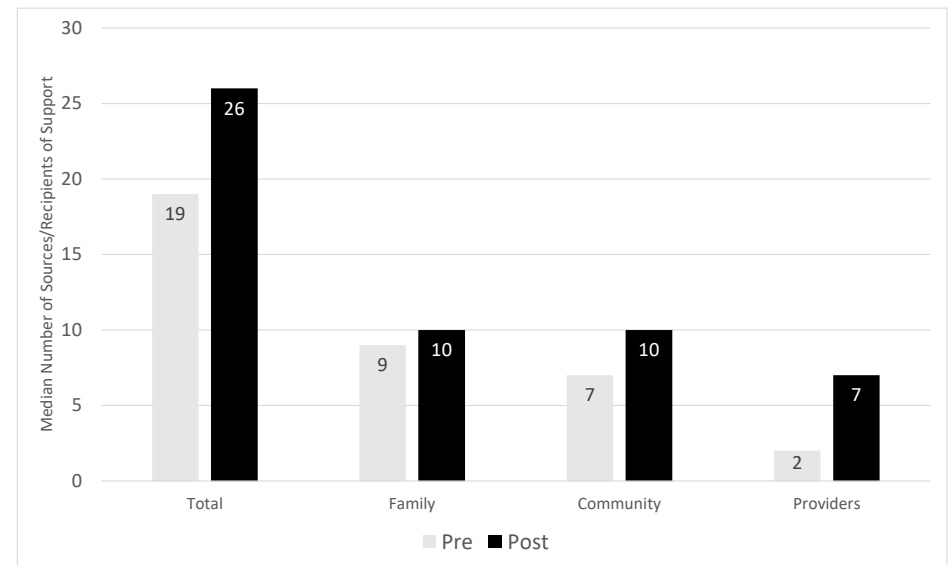
M = 3.9 (SD=0.23)

# Training Effectiveness

Change in Knowledge Scores

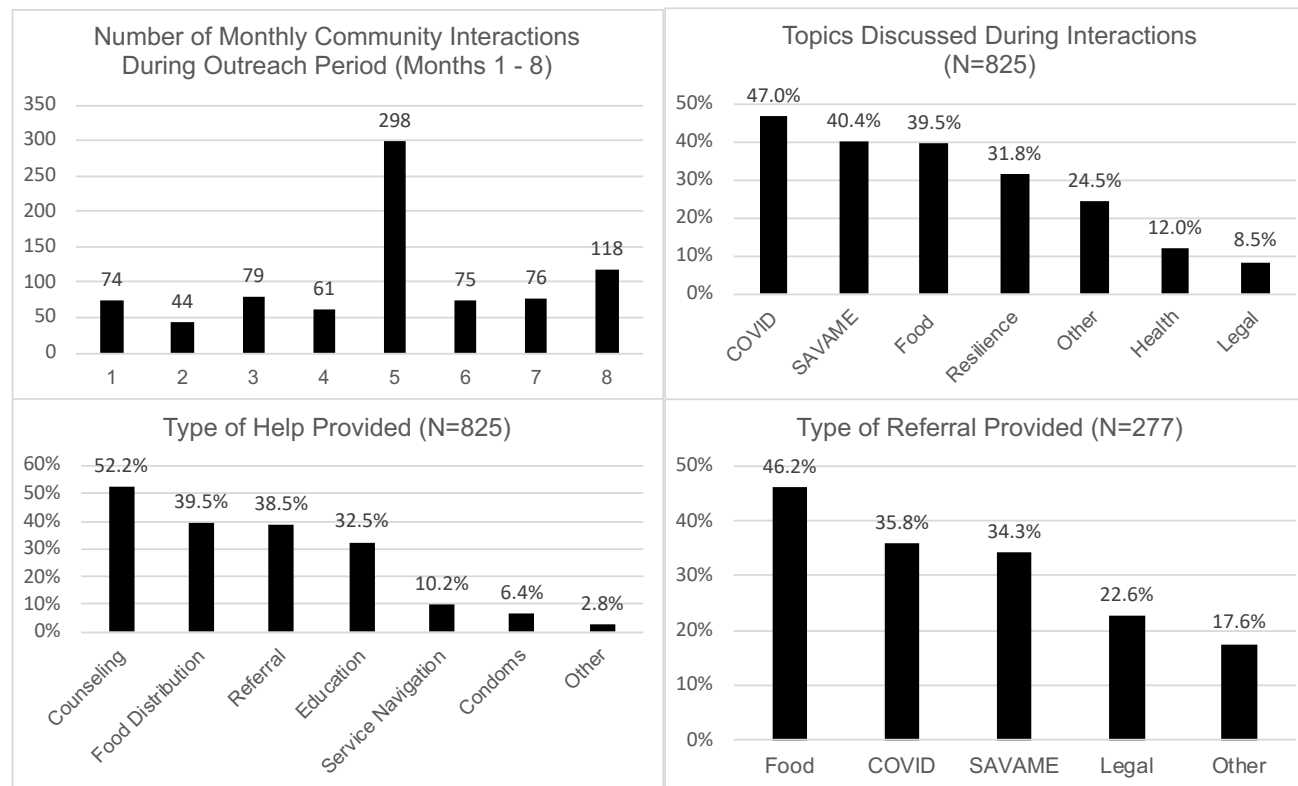


Change in Social Capital



Martinez-Donate et al. PLoS ONE, in press.

# Community Reach & Implementation



Martinez-Donate et al. PLoS ONE, in press.

# Experiences of Community Leaders



Themes	Quotes
Personal Growth & Congruency	<p>“This [training] helped us personally, helped us grow and learn.”</p> <p>“Sometimes we don’t have the opportunities to go to school or have a professional development; so, when we find groups like [CRISOL], we start growing.”</p>
Broaden Perspective	<p>“[The training] helped me to understand how the Latino undocumented community is... they suffer, they are afraid of being deported. I have never experienced that.”</p> <p>“[The training] has benefited me a lot; due to the diversity of my peers, now I have an idea of how to treat people from other nationalities.”</p>
Self-Confidence	<p>“People can take a helping path with me, I can teach and guide other, share my tools with them. I can guide them with confidence to adequate resources.”</p> <p>“[The training] has given me a route map to [know] how to guide people to help... It has given me the confidence to be a community leader.”</p>

Martinez-Donate et al. PLoS ONE, in press.

# Experiences (Cont.)

Themes	Quotes
Respect & Empathy	<p>“(I have gained) the ability to not pressure people... give them space, to not insist... now I know that I have to give them space to help them.”</p> <p>“[The training] helped me to be more mindful and respectful of people that had problems that I was not aware of.”</p>
Improved Communication Skills	<p>“I feel more prepared to talk with other people and my family.”</p> <p>“It is helping me in how I see things. For example, sexually; there are social norms that I believe in, but now I can talk with my friends naturally ... I’m not afraid to talk about alcohol problems. I have learned to be tactful and to not pressure people.”</p>
Increased Knowledge	<p>“Now I have more awareness of the syndemic. I know the community and these tools give me options.”</p> <p>“I have learned more about STIs and to deal with people that have alcohol related problems.”</p>

Martinez-Donate et al. PLoS ONE, in press.



# Understanding & Addressing Syndemics in Latino Immigrants: A Multiphase Mixed- Methods Study

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R21 MD012352, PI: Martinez-Donate

# Understanding Syndemics in Latino Immigrants

1

Characterizing the SAVAME syndemic among Latino immigrant communities in Philadelphia

2

Mapping community assets and inter-organizational collaborations

3

Laying the foundation for a future, communitywide intervention

# Hybrid Mixed-Methods Study Design

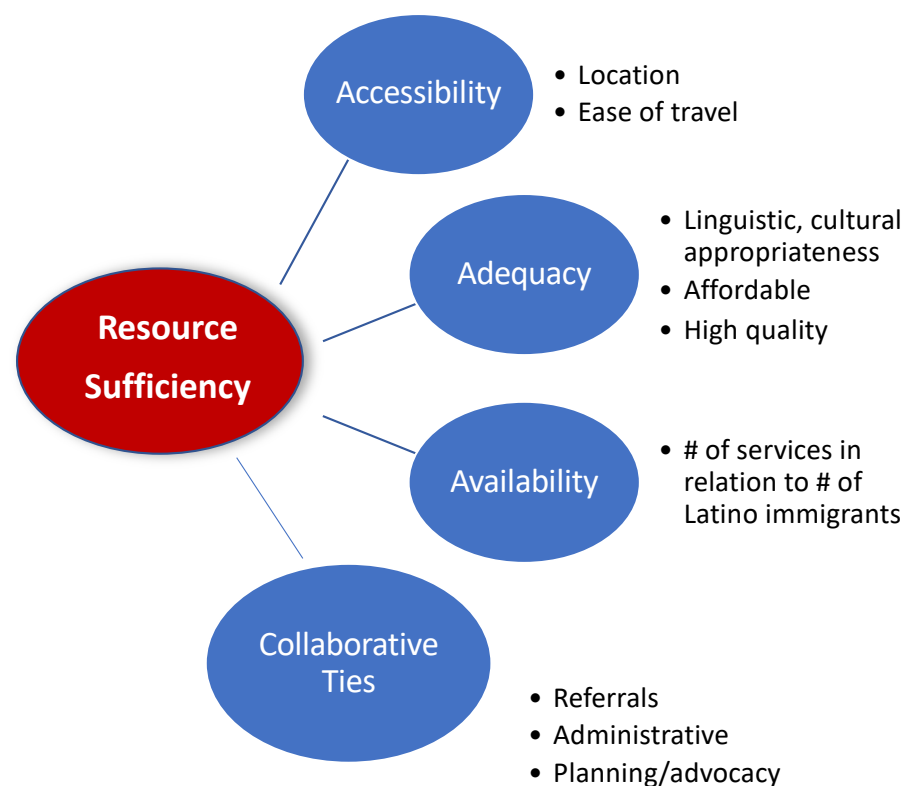


# Study Design & Methods

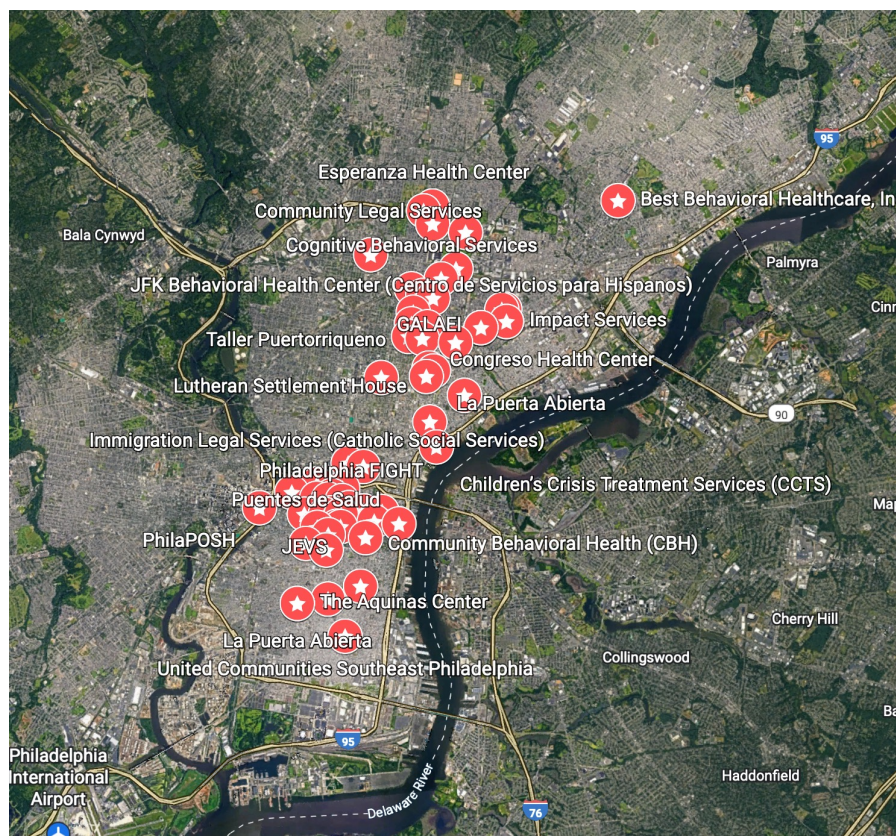


# Latino Immigrant Network of Services (LINKS) Survey

- To **map and characterize** Latino-serving organizations in Philadelphia
- A **roster** of main Latino-serving organizations providing SAVAME health and/or social services
  - **S**ubstance **A**buse
  - **V**iolence
  - **H**IV/**A**IDS
  - **M**ental health
- Online, self-administered survey sent to 43 organizations
- Response Rate=72.1%




(Giordano et al., 2021; Dsouza et al., 2021)



Qualitative/Quantitative/Mixed Methods

## Provider Perspectives on Latino Immigrants' Access to Resources for Syndemic Health Issues

Kristin R. Giordano, MPH<sup>1</sup>, Nishita Dsouza, MPH, PhD(c)<sup>1</sup>, Elizabeth McGhee-Hassrick, PhD<sup>2</sup>, Omar Martinez, JD, MPH, MS<sup>3</sup>, and Ana P. Martinez-Donate, PhD<sup>1</sup> 


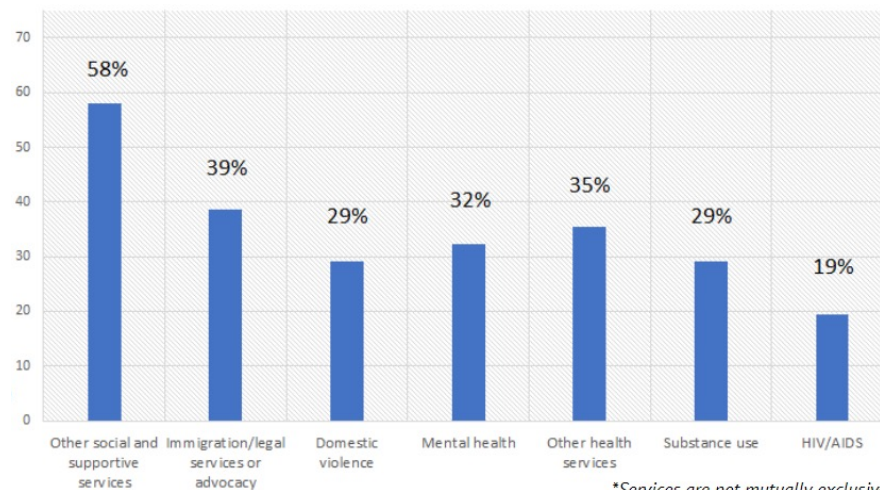
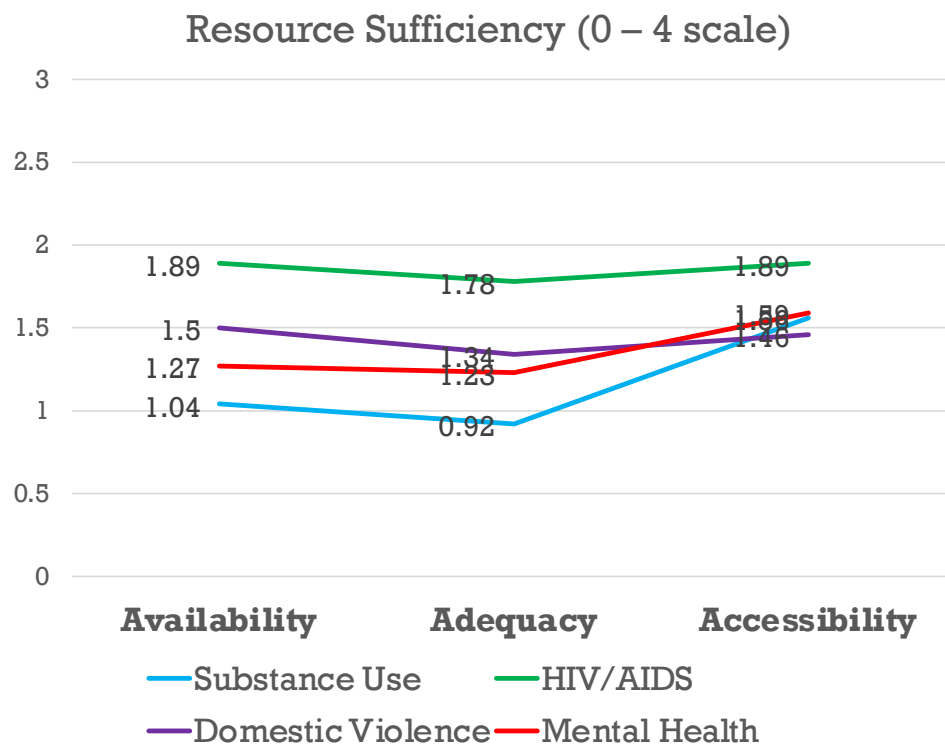
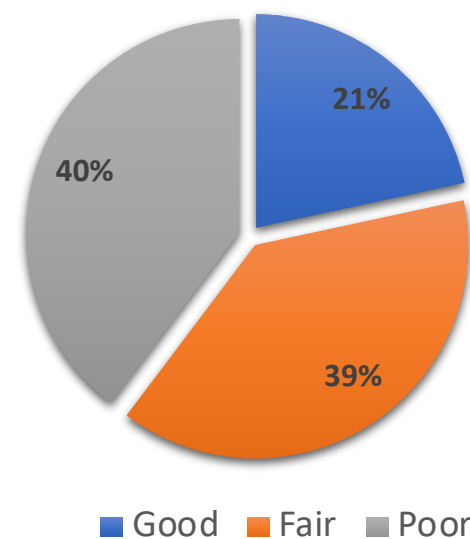
Hispanic Health Care International  
2021, Vol. 19(3) 163–173  
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Figure 1. Types of Services Provided by Network of 31 Latino-serving Organizations\*






**Perceived Level of Integration of Services Across SAVAME Services**



(Giordano et al., 2021)

## Analysis of Network Characteristics to Assess Community Capacity of Latino-Serving Organizations in Philadelphia

Nishita Dsouza · Elizabeth McGhee-Hassrick · Kristin Giordano · Chris Friedman · Yoshiaki Yamasaki · Cristina Perez · Omar Martinez · Amy Carroll-Scott · Ana P. Martinez-Donate 

Accepted: 22 February 2021  
© The New York Academy of Medicine 2021

**Abstract** Latino immigrants are disproportionately impacted by substance use, HIV/AIDS, domestic violence, and mental health (SAVAME). The burden of these syndemic conditions is influenced by limited access to health and social services to prevent and treat these conditions. The syndemic nature of these factors necessitates an integrated, coordinated approach to address them simultaneously. We analyzed characteristics of Latino-serving organizations in Philadelphia, PA, that provide SAVAME-related health and/or social services, and their interorganizational collaborations to meet the

needs of Philadelphia's Latino communities. We surveyed Latino-serving organizations ( $N=43$ ) identified through existing resource directories and key informants. Network analyses identified patterns and density of collaborative ties (i.e., referrals, administrative, or planning/advocacy) across organizations and characterized these ties by type of service. Density (expressed as percent of all possible ties) revealed a higher referral rate (40%) than administrative (29%) or planning (26%) coordination. Network sociograms display clusters of providers by geography. Examination of bonding (within-group) ties revealed comparable perceptions of high value among both South/Center Philadelphia (57%) and in North Philadelphia providers (56%), but bridging (between-group) ties suggest lower levels of high-value perceptions (24%). No evident clustering by type of service based on syndemic factor was observed. Density of bridging across types of providers was

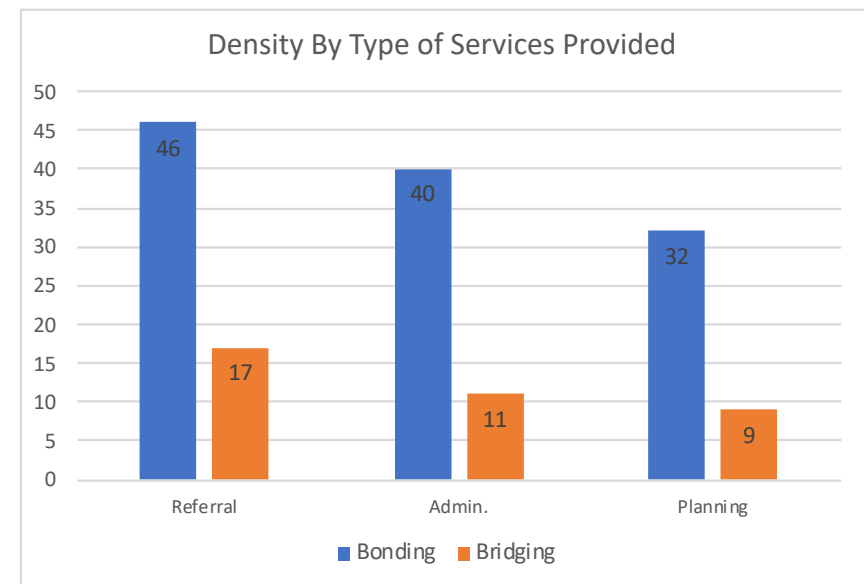
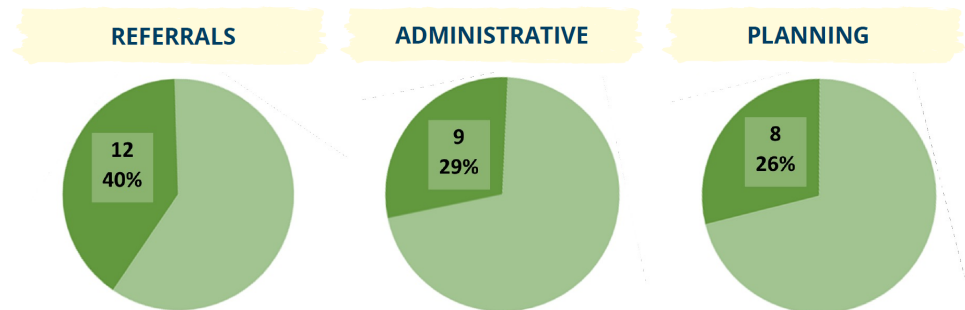
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K. Giordano

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### TYPES OF COLLABORATIVE TIES



# Study Design & Methods



# Key Informant Interviews

- Interviews with staff from Latino-serving organizations (N=30)
- Qualitative interviews recorded, transcribed, anonymized
- Analyzed using thematic coding and grounded theory
  - A priori codes plus new, emerging codes
- Double coding and discrepancies reconciled by consensus
- High inter-rater reliability (IRR=91.4-94.7)

(Martinez-Donate et al., 2022)



# Interview Guide

## Impact of SAVAME on Philadelphia Latino community

- Impact of social, contextual, structural factors
- Patterns based on gender, origin, migration status

## Availability of SAVAME services in Philadelphia

- Reasons for limited availability
- Responses to lack of availability, referral processes

## Accessibility of SAVAME services

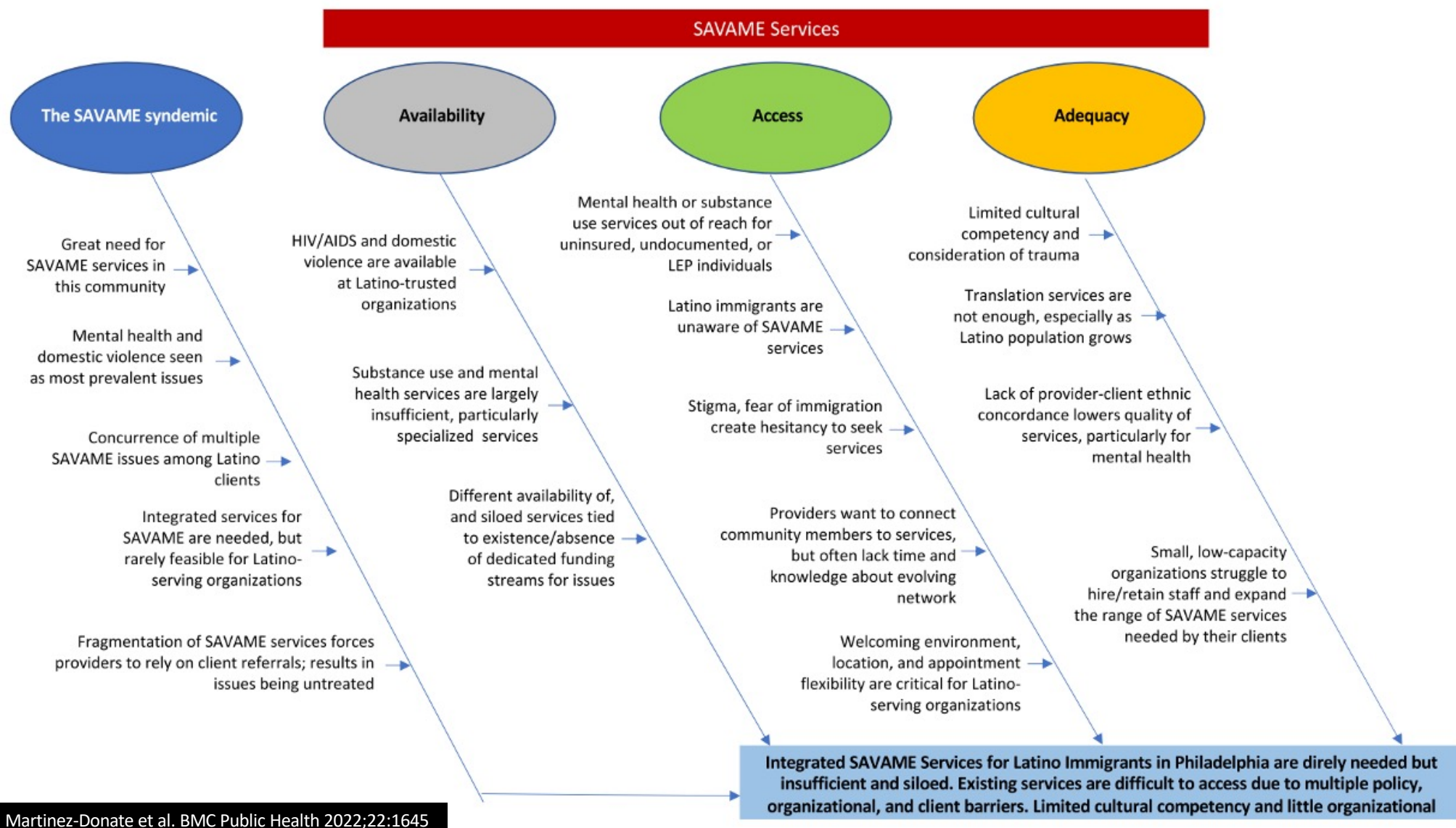
- Factors involved in limited accessibility
- Suggestions to make services more accessible

## Adequacy of SAVAME services

- Factors contributing to different levels of adequacy
- Strategies to make services more adequate

## Collaborations with other Latino-serving organizations

- Interest in coalition building



# Study Design & Methods



## In-Depth Interviews

- Interviews with Latino immigrant and Puerto Rico born community members (N=30)
- Direct or indirect experience with SAVAME issues
- Purposive sampling
- 63% females, 70% from Mexico, 80% undocumented
- Interviews recorded, coded, analyzed using thematic analysis
- Double coding of 33% of transcripts (IRR=0.95)



# Interview Guide

Migration history

Experience with SAVAME issues

- Direct (personal)
- Indirect (proxy)

Factors that contributed to SAVAME issue onset

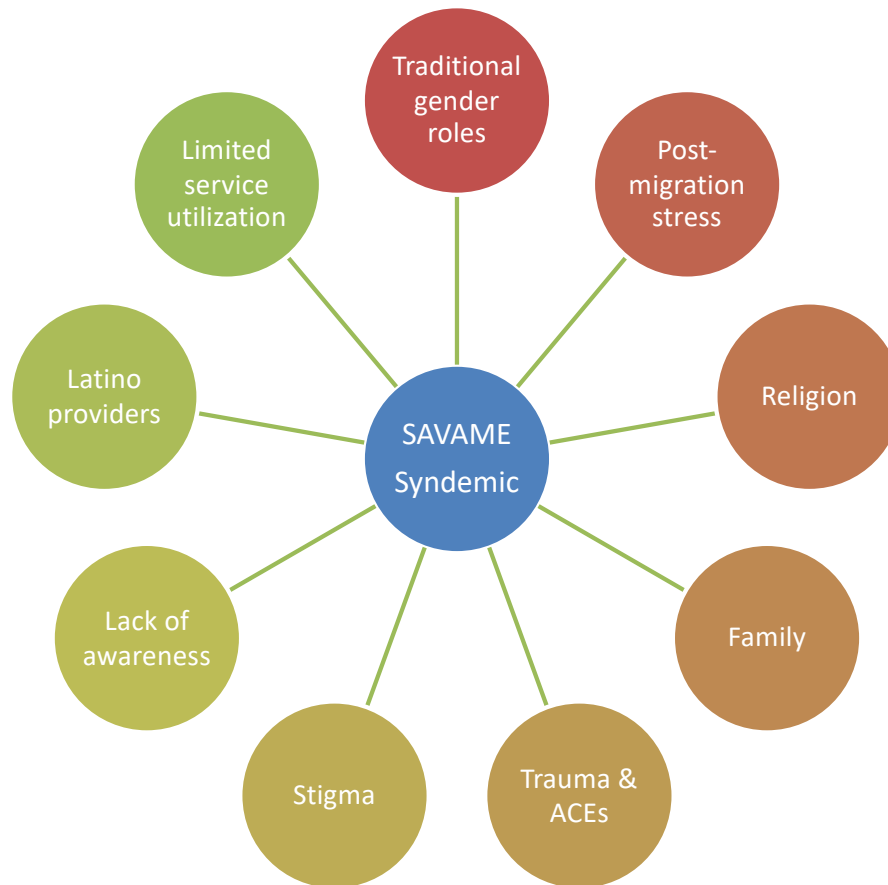
Factors that contributed to continuation/relapse/recovery

Coping strategies

Experiences seeking help for SAVAME in Philadelphia

- Type of help sought
- Reasons for not seeking help
- Availability, accessibility and adequacy of services
- Challenges experienced seeking help

# Themes from Qualitative Interviews



## Respondent-driven Sampling Survey (N=420)

- Foreign- and Puerto Rico-born Latinos
  - 18-55 years old
  - Philadelphia residents
- Interviewer-administered by phone
- 56 seeds
  - Up to 3 referrals each
- Testing for HIV/STI
- Measures informed by IDIs

Survey Measures
SAVAME issues
SAVAME service utilization and barriers
COVID infection, testing, vaccine
Migration
Acculturative stress
Discrimination
Social support
Traditional gender norms
Religion
Stigma
ACEs
Familism
Resilience

# Challenges of Mixed-Methods Research

- More complex, requires more resources: time, funds, expertise
  - Personnel
  - Software
  - Training
  - Participant recruitment
  - Incentives
- Interpretation of findings
- Publishing:
  - Strict word limitations
  - Reviewers' expertise
- Relatively new approach, training opportunities and best practices still emerging



# Summary

- Combining quantitative and qualitative methods:
  - To obtain a better, more granular picture
  - To illustrate quantitative findings
  - To inform instrument design or adaptation
  - To inform future study phases
  - To compensate for design limitations
- Different study designs depending on needs, resources, opportunities
- Not without challenges



Questions