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Towards an Inclusive Vision of Health:
A Mixed Methods Study of the Influences of Group Diversity
on the Processes and Achievements of
Community-based Participatory Research Partnerships

A dissertation submitted in partial satisfaction of the
requirements for the degree of Doctor of Philosophy
in Community Health Sciences

by

Pornsak Chandanabhumma

2018

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ABSTRACT OF THE DISSERTATION

Towards an Inclusive Vision of Health:
A Mixed Methods Study of the Influences of Group Diversity
on the Processes and Achievements of
Community-based Participatory Research Partnerships

by

Pornsak Chandanabhumma

Doctor of Philosophy in Community Health Sciences

University of California, Los Angeles, 2018

Professor Chandra L. Ford, Chair

INTRODUCTION:

Engaging multicultural perspectives in community-based participatory research (CBPR) can inform the functioning of culturally diverse collaborations. This study examines the extent to which group diversity influences the practices and collective functioning of CBPR partnerships.

METHODS:

Population and Setting: This study used data from *Research for Improved Health: A National Study of Community-Academic Partnerships* (RIH), which examined the promoters and barriers to CBPR partnerships. The eligible sample included N=294 partnerships that were federally funded in 2009.

Sample and Sampling: The qualitative sample consisted of stakeholder interviews (N=55) of seven case study partnerships from the RIH dataset (N=81) using purposive sampling. The quantitative sample comprised partnership-level surveys (N=200) and partner-level surveys

(N=448) from the RIH partnership-level (N=200) and partner-level (N=450) datasets using criterion sampling.

Analysis: This study used a nested mixed methods design involving two stages: 1) qualitative, inductive, thematic analysis of the interviews to identify perceived characteristics of group diversity, benefits and challenges of group diversity, and diversity engagement practices (DEP) 2) quantitative, deductive, logistic survey analysis to test whether demographic entropy is associated with structural elements and with collective functioning of the partnerships.

RESULTS:

Inductive, Qualitative Findings: Partnerships benefited from functional differences and from sociocultural similarities among members. Partnership faced challenges primarily from sociocultural differences among members. DEP included practices of promoting partnership functional capacities and esteem, and transcultural and interpersonal bridging practices.

Deductive, Quantitative Findings: Analysis detected few associations between partnership demographic entropy and approval structures. Location entropy was associated with increased odds of having a community governance structure (OR=11.3, 95% C.I.: 3.1, 41.1). However, demographic entropy was not associated participatory decision-making after adjusting for control factors.

DISCUSSION: DEP could enhance the benefits of members' functional differences and mitigate the challenges of members' sociocultural differences. Major limitations include the sample selection process of RIH, which limited generalizability of the findings, and the inadequacy of several measures, which limited measurement of the focal association.

CONCLUSION: CBPR partnerships can benefit from practices that promote functional capacities and practices that promote cultural and interpersonal bridging among members. Further research is needed to examine the long-term implications of group diversity and DEP.

The dissertation of Pornsak Chandanabhumma is approved.

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DEDICATION

I dedicate my dissertation and public health work to my mother, Chaveevan Chandanabhumma, whose tireless sacrifices and unrelenting devotion to providing the best opportunities for her children have inspired me to give back my all in the service of humankind.

TABLE OF CONTENTS

Section	Page
Chapter I: Overview of the Dissertation Study	1
Chapter II: Literature Review	4
A. Understanding the Science of CBPR	4
Definitions and Characteristics Of CBPR	4
Historical Roots and Contemporary Roles of CBPR in Public Health	6
State of Evidence linking CBPR to Improvements in Community Health	8
State of Evidence on the Roles of Contexts and Processes in CBPR	10
B. Perspectives on Collaboration, Demographic Diversity, and Diversity Engagement Practices	13
Theories, Determinants, and Outcomes of Collaboration	13
Impacts of Demographic Diversity on Group Functioning	15
Diversity Engagement Practices	20
C. Summarizing the State of Literature and Situating the Study	24
Chapter III: Aims, Theory, and Conceptual Model	28
A. Overall Research Aim	28
B. Specific Aims and Research Questions	29
Epistemological Orientation	33
C. Conceptual Model and Hypothesized Explanations	35
Chapter IV: Study Methods	37
A. Parent Study	38
Data and Data Collection	38
B. Dissertation Study: Overview	42
Study Design	43
Data Permission and Human Participant Protection	44
C. Stage 1: Qualitative Methods (Aims I-II)	45
Approach	45
Data source	46
Sampling and Sample	46
Stage 1 analysis	47
D. Stage 2: Quantitative Methods (Aims III-IV)	50
Approach	50
Data source	51
Sampling and Sample	51
Measures	52
Stage 2 analysis	58
Sensitivity analysis	62
Power analysis	62
Chapter V: Qualitative Results	63
A. Relevant Characteristics of Group Diversity in CBPR	64
Functional Characteristics of Group Diversity	65
Sociocultural Characteristics of Group Diversity	68
B. Perceived benefits and Challenges of Group Diversity within CBPR	76
Benefits of Membership Differences of Group Diversity	76
Benefits of Membership Similarities of Group Diversity	82
Challenges of Membership Differences in Group Diversity	84
C. Diversity Engagement Practices in CBPR	102

Section	Page
Practices of Promoting Partnership Esteem and Functional Capacities	102
Transcultural and Interpersonal Bridging Practices	119
D. Summary and Synthesis of Research Findings	144
Chapter VI: Quantitative Results	148
A. Descriptive Analysis	149
Univariate Analysis	149
Correlation Analysis	152
B. Partnership Demographic Entropy and Structural Elements	157
Association between Partnership Demographic Entropy and Approval Structure	157
Association between Partnership Demographic Entropy and Type of Partnership Project	159
Association between Partnership Demographic Entropy and Control of Partnership Resources	160
C. Partnership Demographic Entropy and Collective Functioning	162
Sensitivity analysis	166
Chapter VII: Discussion and Conclusion	167
A. Summary of the Aims	167
B. Major Findings	168
Qualitative Findings	168
Quantitative Findings	172
Triangulation of the Qualitative and Quantitative Findings	173
C. Study Strengths	177
D. Study Limitations	179
E. Conclusion	186
Appendix	189
Tables	189
Figures	266
Study Instruments	271
References	303

LIST OF TABLES

Number	Table Title
2.1	<i>Typology of participatory research</i>
4.1	<i>Constructs, operational definition, and potential variables or themes for the study</i>
4.2	<i>Number of transcripts coded by case study partnership and type of interview</i>
4.3	<i>Illustration of qualitative coding approach</i>
4.4	<i>Organizational structure of the study codebook</i>
5.1	<i>Characteristics of case study partnerships</i>
5.2	<i>Illustrative examples of themes under functional traits</i>
5.3	<i>Illustrative examples of themes under sociocultural traits</i>
5.4	<i>Illustrative examples of themes under benefits of group diversity</i>
5.5	<i>Illustrative examples of themes under challenges of group diversity</i>
5.6	<i>Illustrative examples of themes under functional capacity and esteem promoting practices</i>
5.7	<i>Illustrative examples of themes under transcultural and interpersonal bridging practices</i>
6.1	<i>Characteristics of partner-level survey respondents</i>
6.2	<i>Summary statistics for structural element variables</i>
6.3	<i>Univariate statistics for analytical variables</i>
6.4	<i>Correlation analysis of partnership approval structure and control of partnership resources</i>
6.5	<i>Correlation analysis among control of partnership resources, type of partnership project, and partnership duration</i>
6.6	<i>Correlation analysis among partnership approval structure, type of partnership project, and partnership duration</i>
6.7	<i>Correlation analysis among partnership demographic entropy indices</i>
6.8	<i>Correlation analysis among partnership demographic entropy indices, cultural similarity, and membership diversity</i>
6.9	<i>Correlation analysis among control of partnership resources and partnership demographic entropy</i>
6.10	<i>Correlation analysis among partnership approval structure and partnership demographic entropy</i>
6.11	<i>Correlation analysis among type of partnership project and partnership demographic entropy</i>
6.12	<i>Correlation analysis among partnership duration and partnership demographic entropy</i>
6.13	<i>Correlation analysis among participatory decision-making, partnership demographic entropy, and perceived membership diversity</i>
6.14	<i>Correlation analysis among participatory decision-making, partnership demographic variables, and partnership control factors</i>
6.15	<i>Effect estimates of binary logistic regression of community governance approval structure on demographic entropy</i>
6.16	<i>Effect estimates of binary logistic regression of agency/advisory board approval structure on demographic entropy</i>
6.17	<i>Effect estimates of binary logistic regression of individual/no community approval structure on demographic entropy</i>

Number	Table Title
6.18	<i>Summary effect estimates of multinomial logistic regression of type of partnership project on demographic entropy</i>
6.19	<i>Effect estimates of multinomial logistic regression of partnership demographic entropy on control of personnel hiring</i>
6.20	<i>Effect estimates of multinomial logistic regression of partnership demographic entropy on control of financial resource sharing</i>
6.21	<i>Effect estimates of multinomial logistic regression of partnership demographic entropy on control of in-kind resource sharing</i>
6.22	<i>Effect estimates of unadjusted binary logistic regression of participatory decision-making on demographic entropy characteristics</i>
6.23	<i>Effect estimates of binary logistic regression of participatory decision-making on demographic entropy characteristics adjusted for partnership control factors</i>
6.24	<i>Effect estimates of OLS regression of participatory decision-making on demographic entropy characteristics for sensitivity analysis</i>
7.1	<i>Qualitative themes and quantitative measures under the revised conceptual model</i>

LIST OF FIGURES

Number	Figure Title
2.1	<i>CBPR Conceptual Logic Model</i>
3.1	<i>Main conceptual model for the dissertation study</i>
4.1	<i>Sample selection process of the parent study</i>
4.2	<i>Mixed methods design of the dissertation study and the parent study</i>
5.1	<i>Relationships among qualitative themes</i>
6.1	<i>Histogram of gender entropy</i>
6.2	<i>Histogram of race entropy</i>
6.3	<i>Histogram of location entropy</i>
6.4	<i>Histogram of disability entropy</i>
6.5	<i>Histogram of LGBT entropy</i>
6.6	<i>Histogram of International entropy</i>
6.7	<i>Histogram of youth entropy</i>
6.8	<i>Histogram of participatory decision-making</i>
7.1	<i>Refined study conceptual model</i>

LIST OF STUDY INSTRUMENTS

- RIH Key Informant Survey Instrument
- RIH Community Engagement Survey Instrument
- RIH Qualitative Stakeholder Interview Guide
- Dissertation Study Qualitative Codebook
- Memorandum of Understanding between University of California, Los Angeles; University of New Mexico; and University of Washington on the Dissertation Research of Pornsak (Paul) Chandanabhumma

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Mincer S, Adeogba S, Bransford R, Chandanabhumma P, Lam M, Lee M, Posner K, Robins L, Domino K (2013). Shared Decision-Making (SDM) Toolkit: Train-the-Trainer Tools for Teaching SDM in the Classroom and Clinic. *MedEdPORTAL*.

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Chandanabhumma PP, Ford CL, Oetzel JG, Duran BM, Wallerstein NB (2018). Examining the Influences of Group Diversity on the Processes and Achievements of Community-based Participatory Research Partnerships: A Mixed Methods Study. Oral session presented at the American Public Health Association's 2018 Annual Meeting, San Diego, CA.

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CHAPTER I: OVERVIEW OF THE DISSERTATION STUDY

This dissertation study examines what characteristic of group diversity (i.e. the extent to which members within a partnership vary with respect to identified sociodemographic, functional, and cultural characteristics) and the degree (or proportion) of group diversity may influence the practices and collective functioning of community-based participatory research (CBPR) partnerships. The study employs a cross-sectional, nested mixed methods approach using qualitative interviews of partnership stakeholders (i.e. partnership members and involved individuals identified by the Principal Investigators and study coordinators of the partnerships) and surveys administered at the level of partnership and of partnership members from a national study of federally funded CBPR projects. The inductive, qualitative stage of analysis explored stakeholder-perceived contributions of group diversity within partnerships and the practices by which partnerships attend to the implications of group diversity (diversity engagement practices, or DEP). The deductive, quantitative stage of analysis evaluated the association between partnership demographic entropy (i.e. the degree to which partnership members are distributed among categories of a demographic characteristic) and structural elements of the partnerships and the association between partnership demographic entropy and collective functioning of the partnerships.

This document has seven chapters. Chapter II, *Literature Review*, presents the current state of the evidence on pertinent research areas for this study. It highlights the origins and characteristics of CBPR, and how the contexts in which CBPR partnerships occur and social dynamics operating within them can influence power-sharing and capacity-building outcomes of the partnerships. Then, I discuss what higher-level outcomes can professional collaborations (e.g. work groups) achieve as a collective unit, how a partnership's demographic diversity affects the performance of work groups, and the potential impacts of DEP on group relations. I

conclude by summarizing the state of the evidence and highlighting the gaps in the literature that this study addresses.

Chapter III, *Aims, Theory, and Conceptual Model*, presents the study's overall aim, the four specific aims, and research questions and hypotheses associated with each specific aim. Consistent with the critical interpretivist orientation, I disclose the epistemological position I took in framing the analysis. The chapter then describes the study's conceptual model, including the key constructs, hypothesized relationships, and assumptions on which the study is based.

Chapter IV, *Study Methods*, outlines the approaches used to complete the research. It begins with a description of the parent study, *Research for Improved Health: A National Study of Community-Academic Partnerships* (RIH). It describes the approaches used to collect RIH data. Focusing on this study, I describe the rationale for the study design. I describe the inductive, qualitative portion (Stage 1) of the study, including the source of data, the approaches used to obtain the sample, and the procedures used to conduct thematic analysis of partnership stakeholder interviews. I then describe the deductive, quantitative portion (Stage 2), including the source of data, the approaches used to obtain the sample, the measures used to assess the constructs of interests, and the statistical procedures used to conduct logistic analysis of partnership-level and partner-level surveys.

Chapter V, *Qualitative Results* presents findings on the inductive, qualitative portion of the study (Stage 1), which sought to understand how stakeholders involved in CBPR partnerships perceived the various characteristics of group diversity to shape the practices and collective functioning of the partnerships. The first section of the chapter identifies what characteristics of group diversity are perceived to influence partnership functioning. The second section describes what the perceived benefits and impediments of group diversity are within the partnerships. The third section identifies different types of DEP occurring at multiple socio-ecological levels surrounding the partnerships. I conclude with an overall summary of findings.

Chapter VI, *Quantitative Results* presents findings on the deductive, quantitative evaluation (Stage 2) of whether demographic entropy is associated with structural elements of the partnerships and with participatory-decision making within the partnerships. The first section of the chapter describes the results of the descriptive analysis. The second section presents the results of the logistic analysis examining the associations between partnership demographic entropy with partnership approval structure, type of partnership project, and control of partnership resources. The third section presents the results of the logistic analysis examining the association between demographic entropy and participatory decision-making within the partnerships.

Chapter VII, *Discussion and Conclusion* synthesizes the study's major findings relative to the prior literature and discusses its limitations. It ends with a set of reasonable conclusions that can be drawn based on the findings. The first section summarizes the overarching aims accomplished by this study. The second section places the main findings from the inductive, quantitative stage of analysis with the deductive, quantitative stage of analysis in relation to one another, thereby triangulating the findings from the two phases. The third section describes the strengths of the study, the fourth its limitations. The final section concludes with the overall contributions of the study and the recommendations for CBPR practice and research.

CHAPTER II: LITERATURE REVIEW

This chapter presents the current state of the evidence on relevant research areas for this study. The first section discusses the origins, characteristics, and evidence on the mechanisms of CBPR. The evidence in this area supports notion that the contexts in which CBPR partnerships occur and social dynamics operating within them can influence power-sharing and capacity-building outcomes of the partnerships. The second section discusses what higher-level outcomes can professional collaborations (i.e. work groups) achieve as a collective unit, how a partnership's demographic diversity affects the performance of small work groups, and the potential impacts of DEP on group relations. The evidence in these areas support the notion that group diversity and the strategies by which group diversity is managed could shape the quality of interaction and the productivity of professional collaborations. Finally, I summarize the state of evidence and highlight the gaps in the literature that this study addresses.

A. UNDERSTANDING THE SCIENCE OF CBPR

Definitions and Characteristics of CBPR

In recent years, public health has increasingly embraced the use of community engagement approaches, including community-based participatory research (CBPR), as endorsed solutions for addressing health disparities by engaging with impacted communities, i.e. individuals and stakeholders who are perceived to be affected by the health issue of foci and who typically share common identity and interests (Israel et al., 2018; Wallerstein & Duran, 2008; Laverack & Wallerstein, 2001; McCloskey, Aguilar-Gaxiola, & Michener, 2011). This movement responded to growing calls for democratization of scientific research from external constituents who have been socially marginalized from public health research and practice (Little 2009; Mercer and Green 2008; Wallerstein & Duran 2006). These marginalized communities typically involve People of Color, or racial and ethnic groups who do not perceive

themselves to be non-Hispanic Whites. Evidence has shown that, relative to non-Hispanic Whites, People of Color suffer from an inequitable burden of exposure, progression, and adverse consequences of major health concerns, including cardiovascular diseases, cancer, and chronic health conditions(Xu et al., 2010; Williams, 2012; Yonas et al., 2006)

The past three decades have witnessed a remarkable expansion in the promotion of participatory approaches in public health and allied social sciences (Israel, Eng, Schulz, & Parker, 2013; Mercer, S.L. & Green L.W., 2008). Within these disciplines, a myriad of participatory traditions have emerged, such as participatory action research, community-based participatory research, community-partnered participatory research, and empowerment evaluation (Israel et al, 2013; Jones & Wells, 2007). Table 2.1 summarizes variations in the processes of four participatory traditions (New York City Alliance Against Sexual Assault, 2012). The co-production of knowledge and social action involving, at minimum, research and community partners, distinguishes CBPR from other participatory approaches. The variants of this participatory umbrella have potential implications for the multiplicity of paradigms, methodologies, and methods (Jagosh et al., 2012;).

[- Insert Table 2.1 Here -]

This study focuses on defining, conceptualizing, and examining the mechanisms of community-based participatory research (CBPR). The National Advisory Committee of the Kellogg Community Health Scholar Program (2001), which was one of the only CBPR-focused faculty training programs at the time, defined CBPR as:

[A] collaborative approach to research that equitably involves all partners in the research process and recognizes the unique strengths that each brings. CBPR begins with a research topic of importance to the community and has the aim of combining knowledge with action and achieving social change to improve health outcomes and eliminate health disparities.

Israel et al. (2013, 2018) drew upon reviewed literature and their experiences to develop the ten principles of CBPR. These principles encapsulate the key characteristics of CBPR, with the recognition that they may be differentially adapted to the context, purpose, and constituents of individual partnerships. The authors state that CBPR integrates the following ten principles:

1. recognition of community as a unit of identity
2. building on strengths and resources within the community
3. facilitation of collaborative and equitable partnership in all phases of research and power-sharing process that address social inequalities
4. promotion of co-learning and capacity building among all partners
5. balancing knowledge and action for the mutual benefit of all partners
6. emphasis on locally relevant public health problems and ecological perspective
7. cyclical and iterative process of systems development
8. participatory dissemination of findings and knowledge to all partners
9. long-term process and commitment to sustainability.
10. addressing issues of race, ethnicity, racism, and social class, and embracing cultural humility

This study supports Israel et al.'s assertion that these ten principles are ideal characteristics of CBPR with which one could empirically evaluate across partnerships. This premise is important in explaining how the principles and practices of CBPR are employed to address group diversity and optimize the functioning of multiculturally diverse partnerships.

Historical roots and contemporary roles of CBPR in public health

Wallerstein and Duran (2018) traced the evolution of CBPR approach spanning the last 70 years. The authors maintain that CBPR was molded by intellectual developments occurring in the Global North (i.e. the Northern traditions within North America and Europe) and the Global

South (i.e. the Southern traditions within Latin America, Asia, and Africa). The Northern Tradition, influenced by Talcott Parson's sociological theory and Kurt Lewin's concept of action research, underscores the translation of theory into action and engagement of real-world practitioners in organizational change through problem-solving research (Lewin 1997; Wallerstein & Duran 2018). For CBPR, the research-to-action Northern tradition contributes to the empowerment of community members as decision-making partners in research. The Southern tradition, as epitomized in Freire's (1970) *Pedagogy of the Oppressed*, emphasizes the liberation of knowledge by engaging in mutual dialogue with communities experiencing social oppression. For CBPR, the emancipatory Southern tradition offers the practice of co-learning with community members who presume the role of empirical experts in the experience of health and social disadvantages. Moreover, feminist, post-structural and post-colonial theories offer additional considerations of the relationship between the structure and subjects under subordination, honoring resilience and self-determination, and questioning positivist objectivity (Wallerstein & Duran, 2018). These interdisciplinary forces help to distinguish CBPR as an inclusive, equitable, decentralized approach of scientific research that aims to achieve social justice compared to other approaches of community health research.

For the past thirty years, federal agencies, including the National Institute of Health (NIH) and the Centers for Disease Control and Prevention (CDC), have increasingly devoted their research funding and resources towards the use of CBPR in health research and practice (Mercer and Green, 2008). Since the 1980s, health authorities have experienced greater demands for civic participation in research, practice, and policy making from non-profit organizations, advocacy groups, and communities exposed to environmental hazards (Little, 2009). Mercer and Green (2008) recalled that NIH and CDC began establishing funding initiatives that required participatory research or the integration of participatory research elements from the mid-1980s through the 1990s. For the CDC, the commitment to participatory

approaches centered primarily around the creation and growth of university-affiliated Prevention Research Centers (PRC). The National Institute of Environmental Health Sciences became the first division to formally support CBPR, followed by the National Institute of Nursing Research, the National Center on Minority Health and Health Disparities, among other divisions of the NIH. As one of the few empirical studies of resource sharing in CBPR, Cain, Thuerer, and Seghal (2014) conducted a financial analysis of sixty-two R01 (research) CBPR grants that received NIH funding from 2005 to 2012. The study revealed that community partners received less than half of the budget of these grants compared to academic partners. This finding is a reminder that, even as institutional support for CBPR is growing, addressing inherent inequities between research and non-research counterparts of the partnerships remain essential.

CBPR has also become an integral component of public health training, education, and assistance. The Institute of Medicine cites CBPR as one of eight content areas for graduate-level public health training in the 21st century (Gebbie, Rosenstock, & Hernandez, 2003). Non-profit organizations and special interest groups, including Community-Campus Partnerships for Health and Community-based Public Health Caucus, play active roles in offering resources, field advocacy and technical support for CBPR (Community-based Public Health Caucus, 2011; Community-Campus Partnerships for Health, 2013). These developments reflect field-wide efforts to incorporate participatory models of community development and social action into major arenas of public health (Little, 2009).

State of the Evidence linking CBPR to Improvements in Community Health

One of the evolving questions for the field of CBPR is whether there is an “added value” of CBPR to scientific research (Hicks et al., 2012). Systematic efforts were conducted in recent years to document empirical evidence of the contributions of *participatory* elements in CBPR on health outcomes. Visawathan *et al.* (2004) performed one of the earliest systematic reviews of

health-related CBPR interventions but failed to find consistent support for significant effect of CBPR on health outcomes. The authors found that a positive or stronger effect on health outcomes was more likely if interventions had more rigorous research designs. Yet, this effort was criticized for its focus on the quality of research design, which tends to serve the interests of academia rather those of communities (Viswanathan et al., 2004; Cook, 2008).

More recent systematic reviews and meta-analyses offer a more favorable view of the potential for health-related benefits of community engagement approaches, under which CBPR is included. A meta-analysis of community engagement interventions conducted by O'Mara-Eves *et al.* (2015) found positive effects of community engagement on health behavior (e.g. health-promoting habits) and health outcomes (e.g. illness occurrence), self-efficacy, and social support among participants. A systematic review by Cyril *et al.* (2015) found that the community engagement interventions resulted in improvements in health behavior, public healthcare decisions, access to health services, and health literacy, among other health outcomes. The positive effect was particularly noted when the interventions incorporated community voice, power sharing, co-learning and needs assessment. These studies support the beneficial impacts of community participation on health outcomes.

Other systematic reviews, some of which focus on specific areas of health, including environmental health (Cook, 2008) and children's health (Vaughn, Jacquez, Zhao, & Lang, 2011), illuminate the promoting effects of specific CBPR characteristics on capacity-building outcomes. The initiation of the CBPR intervention by community partners was found to enhance leadership skills among community partners and promote the translation of findings into community action (Cook, 2008; Salimi et al., 2012). Qualitative, observational studies increased the likelihood of incorporating research findings into community-oriented action (Cook, 2008). Community engagement approaches enhanced participation and retention in public health programs among groups that had disproportionate access to such efforts, including racial and

ethnic minorities and youths (De Las Nueces, Hacker, DiGirolamo, & Hicks, 2012; Vaughn et al. 2011; Cyril et al. 2015). Although these studies illuminated potential promoting characteristics of the partnerships, they did not examine the ways in which these elements contribute to the outcomes of the partnerships. They offer at best a partial glimpse onto why, and in what contexts, community participation in CBPR can benefit health and capacity-building outcomes.

State of Evidence on the Roles of Contexts and Processes in CBPR Partnerships

CBPR practitioners have attempted to build the *science* of CBPR that provides systematic understanding of the determinants and pathways of the approach (Wallerstein et al., 2008). As part of this dissertation's parent study, Research for Improved Health: A National Study of Community-Academic Partnerships (RIH), Wallerstein *et al.* (2008) performed an extensive literature review and consulted with a national advisory committee of academic and community experts¹ to develop a socio-ecological CBPR Conceptual Logic Model. An assessment of face validity and model acceptability with six partnerships offered additional field-based constructs to the original model (Belone et al., 2016). *Figure 2.1* depicts the 2016 version of the CBPR Conceptual Logic Model as shown in Lucero et al. (2016); this is the most recent version available for illustration in this study.

[- Insert Figure 2.1 Here -]

The socio-ecological CBPR Logic model aims to describe the relationships among the key dimensions of the partnerships: contexts, partnership processes, intervention and research, and outcomes (Wallerstein et al., 2018). Contexts are social-structural and organizational influences that shapes the partnership environment, such as policies and funding trends,

¹ The national advisory committee members include Margarita Alegria, Magdalena Avila, Elizabeth Baker, Beverly Becenti-Pigman, Eugenia Eng, Shelley Frazier, Ella Greene-Morton, Lyndon Haviland, Jeffrey Henderson, Sarah Hicks, Barbara Israel, Michele Kelley, Loretta Jones, Laurie Lachance, Paul Koegel, Marjorie Mau, Meredith Minkler, Lynn Palmanteer-Holder, Tassy Parker, Cynthia Pearson, Victoria Sanchez, Lauro Silva, Amy Schulz, Edison Trickett, Jesus Valles, Kenneth Wells, Earnestine Willis, and Calvin White.

institutional roles, history of trust and collaboration, and the readiness of academic and community partners. Partnership processes include elements of group-level practice of CBPR, encompassing structural dynamics (e.g. partnership diversity, and power and resource sharing agreements), individual dynamics (e.g. cultural identity and motivations) and relational dynamics (e.g. participatory decision-making, integration of community beliefs to group processes, and voice or influence). Interventions encompass the design and implementation of research, including intervention centered in local culture (or culture centeredness) and partnership synergy (to be discussed). Outcomes include system-level, capacity building, and health outcomes, including change in practice and policies, and achievement of health equity. The model proposes that the partnership contexts shape the nature of group dynamics, which if effective, could impact the design of the intervention, and subsequently affect the outcomes of the intervention. Characteristic of a positive feedback loop, improved capacities of partners could inform the contextual development of subsequent partnerships. The model allows for systematic examination and hypotheses testing of the relationships among the key dimensions and constructs of CBPR (Wallerstein et al., 2018). As a conceptual anchor for this study, the model is a larger socio-ecological framework of CBPR within which I examine relationships among specific elements of contexts, dynamics, and collective outcomes of the partnerships.

Several empirical studies have illuminated the contributions of the contexts and dynamics of the partnerships on their power-sharing and capacity-building outcomes. Oetzel *et al.* (2015) examined the relationship between approval structure and characteristics of CBPR partnerships in RIH. Partnerships that have tribal governance, health board, or public health approval structures were found to have greater community control of resources, data ownership, financial resources, and influence in shaping IRB policies. Conducting assessment of structural variations among partnerships in the RIH, Pearson et al. (2015) found that partnerships that served American Indian/Alaskan Natives (AI/AN) were less likely to be intervention-based

projects and to receive less funding compared to those that served other People of Color. However, relative to their counterparts, partnerships involving AI/AN were more likely to include written agreements, research integrity training, approval of publications and data ownership. These findings suggest that decision-making and resource-sharing characteristics within the partnerships vary depending on their organizational makeup and population served.

With respect to other studies on the determinants of CBPR outcomes, a number of research efforts have highlighted the influences of partnership readiness, divergence of interests, and trust. Andrews *et al.* (2012) conducted qualitative interviews with 36 CBPR partners to understand what shaped the notion of partnership readiness for CBPR. Three elements of partnership readiness – goodness of fit (i.e. compatibility of the partnership for the proposed project), partnership capacity (i.e. capability of the partners to conduct CBPR and sustain its outcomes), and operations (i.e. operating structures and processes of the partnerships) – were identified as promoters of sustainable partnerships and outcomes, policy change, and mutual growth. A mixed methods study of a CBPR-guided HIV intervention in El Salvador found that the variability of community partners' backgrounds influenced the range of community priorities and the ability to gain intervention support from the focal communities (Dickson-Gomez *et al.*, 2014). Lucero *et al.* (2018) explored the evolution of trust in CBPR partnerships in the RIH. They found support for the conceptualization of trust as a process rather than a binary outcome; partners moved through different typological stages of trust over the course of the partnerships.

These research efforts addressing the contextual determinants of CBPR partnerships support the notion that the demographic focus and the governing structure of the partnerships influence their power-sharing and capacity-building outcomes. These structural investigations of partnership contexts expanded upon earlier efforts that narrowly considered group processes as “contexts” (Belone *et al.*, 2016). To my knowledge, no empirical study has offered contrary

evidence of the potential association between multi-level partnership contexts and outcomes (i.e. partnership context does *not* influence its outcomes). Thus, this line of evidence promotes the consideration of structural makeup and environmental contexts of the partnerships as determinants of partnership outcomes.

B. PERSPECTIVES ON COLLABORATION, DEMOGRAPHIC DIVERSITY, AND DIVERSITY ENGAGEMENT PRACTICES

Theories, Determinants, and Outcomes of Collaboration

The promotion of CBPR to address complex health issues is founded on the premise that collaborative partnerships achieve *more* than its individual or organizational constituents could on their own (Weiss, Anderson, & Lasker, 2002). This premise is based in the concept of synergy. Here, synergy is defined as the extent to which a partnership incorporates the perspectives, assets, and resources of its members to work effectively and realize collective achievements that could not be accomplished by individuals alone or segments of the group together (Hackman, 1987; Gray 1989; Jones & Barry, 2011; Weiss et al., 2002). The implicit assumption is that group-level achievements are more beneficial and of higher order than individual-level achievements. Synergy is considered to be a performance indicator of effective collaboration; a partnership that has attained the highest level of collaboration is thought to have achieved partnership synergy (Hackman, 1987; Jones & Barry, 2011; Lasker, Weiss, & Miller, 2001; Weiss et al., 2002). Thus, synergy is regarded as a theoretical ideal state of CBPR; it serves as an indicator of higher-order level functioning that the partnerships can achieve as a collective unit (Kastelic et al., 2018).

Lasker et al. (2001) operationalized synergy as the extent to which a collaborative group enhances its capacities for a) creative, holistic, practical thinking of its work b) developing comprehensible and widely supported solutions c) evaluating the impacts of its solutions d)

implementing comprehensive, multi-sectoral interventions e) integrating the perspectives and priorities of community stakeholders f) communicating the ways in which its actions will address community problems g) championing community support. The operationalization of synergy permits functional assessments of the partnerships using such indicators of collective functional outcomes as the ones above.

Several studies have examined the predictors of synergy in health collaborations. In a survey analysis of U.S. health partnerships, Weiss et al. (2002) showed that partnership synergy was associated with effective leadership and partnership efficiency. In a study of International health promotion partnerships, Jones and Barry (2011) identified trust, leadership, and efficiency as predictors of partnership synergy. A study of International disease-management partnerships also found synergy to mediate the association among elements of partnership functioning - leadership and resources – and partnership effectiveness. The surveyed collaborations in these studies, however, were between relatively homogeneous organizations in the health sector, which may have explained the lack of observed effect of organization culture on synergy (Jones & Barry, 2011). Within-partnership differences of social and cultural importance, such as differences in professional backgrounds, may have had more observable impacts on collective functioning in CBPR partnerships involving members of distinct organizational and professional backgrounds.

In the context of CBPR, Jagosh et al. (2012) performed a realist review (i.e. evaluating specific context-mechanism-outcome configuration of a phenomenon) of collaborative partnerships to understand the benefits of participatory approaches. Synergy was found to influence both outcomes of the partnerships *and* context for the iterative development of subsequent partnership efforts. Mutually beneficial outcomes of a project (e.g. improved academic-community interactions) could set the stage for new avenues of mutual collaboration (e.g. novel recruitment protocol). A follow-up realist evaluation of these partnerships

demonstrated that trust could be a context, mechanism, and an outcome of the partnerships (Jagosh et al., 2015). However, these studies did not focus on how the social makeup of the partnership's organization impact the extent to which partnerships attains the state of synergy.

With regards to the outcomes of synergistic partnerships, Jagosh et al. (2012), found that partnership synergy could lead to the creation of culturally appropriate interventions, enhanced recruitment capacity, improved capacities of constituent partners, and productive and harmful disagreements among partners. Identified outcomes of synergy include productive conflict resolution, addressing funding gaps among partners, promotion of sustainability, generation of unanticipated initiatives, and building the context for subsequent partnerships. Moreover, when trust was in place, synergy could lead to long-term sustainability, spin-off projects, and system-level transformations (Jagosh et al., 2015).

A number of studies have identified transformative outcomes (i.e. sustained, practice-changing, mutually beneficial outcomes that could not be achieved without partnership collaboration) that could result when CBPR partnerships function as a collective unit. Focusing on two CBPR partnerships in environmental health, Balazas and Morello-Frosch (2013) found that CBPR improved scientific research by strengthening the rigor of science (e.g. data collection method or study design), increasing the relevance of the research topic, and broadening the reach of findings dissemination. Focusing on CBPR projects in the U.S. South, Diaz et al. (2015) identified active community participation as a key factor that maintained scientific integrity in CBPR. These findings help inform the potential range of transformative achievements that result from collective functioning of the partnerships.

Impacts of Demographic Diversity on Group Functioning

The United States is experiencing a demographic shift that is expected to alter the composition of the workplace. The U.S. Bureau of Labor projects that, by 2020, People of Color

will make up 37.2% of the workforce; one in four of the workers will be 55 years old or older (Toossi, 2012). These demographic trends have stimulated research interests in understanding the impacts of demographic diversity within professional organizations and teams on their collective achievements. Research efforts originating in diversity psychology and management studies seek to understand the impacts of demographic variation within professional work groups (or demographic diversity) on interpersonal processes and outcomes. In the context of health services, conceptual frameworks were developed to propose that increased racial and ethnic diversity of the healthcare workforce could lead to improved access to care, quality of care, and the attainment of health equity (Williams et. al., 2014)

These multidisciplinary research efforts generally address a broader question, “Why does group diversity matter here?” There is no uniform nor comprehensive definition of diversity across disciplines. I focus on the conceptualization of diversity in social psychology and in sociology because studies on the psychological impacts of diversity and on the dynamics of social differentiation in these respective fields may be relevant to this study. Illustrating a social psychological consideration of the concept, Williams and O’Reilly (1998) defined diversity as an attribute that individuals use to distinguish themselves from one another, and such attribute could be made perceptible by social construction or situation. This definition drew upon the observed psychological tendency of humans to categorize their living world in order to simplify it (Allport, 1978). Based on this perspective, diversity could be conceptualized as variety, or categorical differences among group members in represented categories; separation, or differences among group members in a hierarchical continuum of a category; and disparity, or differences with respect to control of resources (Harrison & Klein, 2007).

Exemplifying a sociological view of the concept, Uslaner (2011) characterized diversity as the contact of people with different backgrounds in a different setting that may shape perceived judgments of and trust in others. In the context of sociological research in education,

David et al. (2007) characterized diversity as a changing construct that variably involves race, ethnicity, social class, or gender of individuals or institutions over time. While sociologists employ similar quantitative measures of diversity, such as entropy index (to be discussed), the authors contend that these measures do not capture residential segregation, or distribution of populations within a geographical area. In contrast to the social psychological definition of diversity that emphasizes categorization among individuals within a group, the sociological definition focuses on the distribution and contact of individuals of differing social and cultural characteristics within an area.

Based on their review and synthesis of the literature on organizational diversity, Williams and O'Reilly (1998) proposed three potential mechanisms through which demographic diversity affects collective functioning in workgroups and organizations. The attributes of demographic diversity under review include age, sex, race/ethnicity, job tenure, and functional background. It is noted that these attributes or characteristics of diversity encompass observable characteristics of group-level importance (e.g. work background) beyond traditional demographic measures (e.g. gender or race). The inclusion of these characteristics in their framework offers the potential to uncover other functional or cultural characteristics of group diversity in addition to demographic characteristics.

The authors theorized three pathways that explain the relationship between demographic diversity and collective achievement of work groups or professional collaborations:

First, the social categorization theory asserts that individuals define their social identities by categorizing themselves and others according to salient, recognized categories including race, age, gender, and organizational status (Tajfel, 1981; Turner, 1987). To maintain their positive group identity, individuals maximize a sense of distinctiveness between themselves and others, leading to perceptions of favoritism towards in-group members and negativity towards out-group members (Kramer, 1991). In the context of work groups, a higher level of

demographic diversity increases the propensity for members of a group to hold in-group/out-group biases (Williams & O'Reilly, 1998). For example, in a study of business work groups, O'Reilly et al. (1989) found that diversity in group tenure was associated with decreased social integration, or the degree of connection of individuals to the group. These externalizing tendencies enhance the group's internal conflict and communication issues and compromise the group's ability to solve problem. Through these processes, group demographic diversity is predicted to be negatively associated with group functioning.

Second, the similarity/attraction theory proposes that individuals who are similar in demographic background may benefit from the perception of shared life experiences and values, which reinforce positive group interactions (Pfeffer, 1983). Greater demographic diversity within a work group is thought to decrease interpersonal attraction among group members who otherwise share a common background (Williams & O'Reilly, 1998). A lower level of attraction among group members is directly linked to decreased group cohesion and communication effectiveness. These group limitations diminish the group's commitment to problem-solving, depending on the influence of collective identity fostered within that group. To illustrate, Riordan & Shore (1997) found that Whites in work groups of greater minority (i.e. non-White) composition reported lower group commitment and group productivity than Whites in workgroups that are mostly Whites. The similarity/attraction perspective holds that group-level demographic diversity is negatively associated with group functioning.

Third, the information-sharing theory argues that the individuals in organizationally diverse groups may benefit from greater access to the skills, information, knowledge and external social networks of their group members regardless of the actual dynamics of group processes (Tziner & Eden, 1985). The underlying assumption is that people from diverse backgrounds have distinct and non-overlapping skills, resources and perspectives that have the potential to solve group-level problems. The sum of multiple perspectives may promote the

likelihood of finding the correct solution and enhance the problem-solving capacity of the group (Williams & O'Reilly, 1998). For example, an analysis of product teams showed that work teams with greater variation in functional background was associated with greater communication frequency and improved long-term performance (Ancona & Caldwell, 1992). The effect of information sharing on problem solving is thought to be enhanced when tasks are interdependent and when collectivism is promoted. This perspective hypothesizes a net positive relationship between group-level demographic diversity and group functioning.

The body of literature in this area demonstrates that the demographic diversity of professional collaborations can promote or impede group functioning through the pathways of social categorization, similarity/attraction, and information sharing. The group-level processes that occur when individuals of distinct social and cultural background meet with one another suggest that characteristics of group diversity may predict the collective achievements of CBPR. This evidence promotes further attention to the functional consequences of group diversity that occur among diverse constituents of CBPR partnerships.

Social identity and CBPR

The literature on organizational diversity share the assumption that a demographic characteristic that is socially recognizable and are underrepresented in a group tend to become a salient marker for categorization (Kanter, 1977; Williams & O'Reilly, 1998). Accordingly, group interactions in these settings are driven by perceptions of one's identity by others group members. However, these studies have not focused on individuals' own enactment of their salient markers of identity such that their intentional expressions are recognized by other group members. This leads to additional questions regarding the ways in which the enactment of one's social identity shapes individual and collective experiences in CBPR partnerships.

Participatory approaches may alleviate the impacts of structural racism and other forms of social oppression by reducing differentials in power and privilege among partners, while cultivating reflexivity and cultural humility in research (Chavez, Duran, Baker, Avila, & Walerstein, 2008; Wallerstein & Duran, 2006a; Yonas et al., 2006) However, few studies have addressed the ways in which the social identity of CBPR participants shapes the experience of CBPR partnerships. In one of the auto-ethnographic studies of the RIH, Muhammad et al. (2014) examined how the social identity and positionality of CBPR partners shaped group-level dynamics. Social identity of partnership constituents was found to promote the success of the partnerships because it shifted insider-outsider perspective in research; increased the awareness of confidential information; enhanced findings interpretation and safe partnership environment; and expanded contextual reflexivity. Although this type of study reveals the importance of social identity on group-level processes, it does not explicitly address the ways in which the aggregate mixture of social identities impact CBPR functioning. Moreover, it does not fully articulate the strategies to engage in group diversity that may arise in culturally diverse partnerships.

Diversity Engagement Practices

In response to demographic shifts in the workplace, many organizations are pursuing active, though not necessarily evidence-based, approaches to promote group-level demographic diversity in their mission, values, and training (Kaiser et al., 2013). These approaches are manifested at multiple levels of an institution from the organization's mission statement, policies that address issues of discrimination, to management training related to issues of diversity (Kaiser et al., 2013). Empirical studies have shown inconsistent evidence on the effectiveness of such approaches in fostering an inclusive organizational environment (Kalev et al., 2006). The state of evidence in this area merits further examination of the

functional implications of DEP, or practices, policies, ideological stances, and institutional structures that attend to the implications of group diversity.

Two emergent ideological strategies used to manage group differences have predominated American society: multiculturalism and colorblindness (Plaut, 2010; Rattan & Ambady, 2013). Here, ideology refers to naturalized assumptions, aspirational framework, and ideal self-image that the society constructs and through which members of the society interpret and make sense of their well-being (Cormack 1992, Hall 1995). Culture is defined as a human schema, which consists of dynamic and interconnected ecological elements, that ensures the survival and wellbeing of its members (Kagawa Singer et al., 2014). Although individuals may accept, negotiate, or reject the predominant ideology, ideology is a long-term binding force that serves to maintain the unstable equilibrium of total social control, or hegemony (Hall 1995, Omi & Winant, 1994).

With origins in Civil Rights as well as ethnicity and immigration movements, multicultural ideology or multiculturalism emerges as an ideological perspective that seeks to promote acknowledgement and promotion of different social identities and associated experiences as worthy of their own (Plaut, 2010). Conversely, colorblindness encourages avoidance of inherent group difference to promote the equality of groups; different groups should be assimilated into the superordinate goal of “separate but equal” expressed in *Plessy vs. Ferguson* court decisions (Plaut, 2010). I focus on demonstrative evidence of the impacts of multiculturalism on intergroup relations because multiculturalism is arguably a relevant ideological strategy used to address group diversity in CBPR; it is typically reflected in the key principles and core values that honor the unique strengths of community worldviews in research partnership (Israel et al., 2008).

Rattan and Ambady (2013) reviewed psychological literature to examine the impacts of multiculturalism on aspects of intergroup relations, including prejudice, stereotyping, and group behavior. Applied to CBPR, multiculturalism exerts specific interpersonal benefits and

impairments among minority and majority group members. Here, majority members refer to people of social advantage within and outside the group, such as White Americans. Minority members denote people of relative social or power disadvantage, such as People of Color, undocumented immigrants, or LGBT-identified individuals.

Compared to majority members of a group, minorities are more likely to endorse multiculturalism (Ryan, Cass, & Thompson 2010; Schofield, 1986, 2007). Blacks were found to be more likely than Whites to believe that multiculturalism would lead to favorable intergroup relations (Ryan, 2007). Moreover, multiculturalism may promote feelings of in-group affiliation among minority members. In the context of CBPR, these findings suggest that minority members of the partnerships may benefit from partnership support of multiculturalism.

However, support for multiculturalism may also lead to unfavorable views against members of other social groups. Multicultural endorsement was found to be associated with greater preference of minorities for members of their in-group (Wolsko, Park & Judd, 2006). Multiculturalism may also enhance in-group bias and perception of out-group uniformity among minority members (Ryan *et al.* 2007; Ryan, Cass, & Thompson, 2010; Wolsko, Park, & Judd, 2006). For example, surveyed residents of a city with growing Latino population found that support for multiculturalism was positively associated with greater perception of intra-group stereotypes among Latino residents (Ryan, Cass, & Thompson, 2010). These findings suggest that multiculturalism could elevate perception of bias against out-group members within a socially diverse group, which could magnify the overall negative impacts of demographic diversity on group functioning.

Focusing on majority group members, multiculturalism is associated with positive perceptions of majority members towards the out-group. Among majority group members with low perception of prejudice towards the out-group, multiculturalism encourages positive behavior in planned intergroup interactions with conditions of low external threat (Verkuyten,

2005; Rattan & Amady, 2013). Plaut et al. (2011) found that White undergraduates were more likely to associate multiculturalism with endorsement of inclusion efforts (relative to support for exclusion). Furthermore, in anticipated intergroup situations, multiculturalism was found to promote positive out-group evaluations and greater acceptance of out-group members (Vorauer, Gagnon, & Sasaki, 2009). One should predict a net positive effect of multicultural endorsement on intergroup behavior.

On the other hand, experimental evidence demonstrates the adverse consequences of multiculturalism among specific sub-groups of majority group members. Among Whites with strong racial affiliations, multicultural may result in greater support for group inequality (Rattan & Ambady, 2013). Gutierrez and Unzueta (2010) reported that majority participants who were conditioned to multiculturalism exhibited preference for minority members that fit their perceived stereotypes (Gutierrez & Unzueta, 2010). Exposing majority members with high levels of prejudice to multiculturalism could also lead to damaging group behavior (Vorauer *et al.*, 2009). These findings highlight the importance of examining the beliefs and positions of individuals with respect to DEP as a determinant of intergroup relations, particularly in multicultural settings.

Culture centeredness and CBPR

To my knowledge, empirical research has not been conducted to examine the influences of multiculturalism and other underlying ideologies of DEP on the practice of CBPR interventions. Nevertheless, a growing area of disciplinary critique is the consideration of culture in the discursive construction of health, with research efforts addressing the use of culture centered approaches in health interventions (Dutta, 2007; Dutta, 2008). The cultural-centered approach examines embedded structural forces within a culture (e.g. its political system and historical oppression) and challenges the dominant model of health by engaging in mutual dialogue with marginalized individuals to construct alternative meanings of health (Dutta; 2007).

In contrast, the cultural sensitivity approach incorporates the surface elements of a culture into predominant health practices without engaging in structural determinants of health (Dutta, 2007; Resnicow, Baranowski, et al., 1999).

A few studies highlight the implications of pursuing culture-centered approaches in conducting CBPR. Peterson (2010) conducted an ethnographic investigation of two CBPR partnerships involving Native American communities. He found that a major implementation challenge emerged from a tension between the treatment of community members as “legitimate knowers” reflective of culture centeredness, or as “collaborators” in the expert-driven model of culturally sensitive research. Examining NIH-funded CBPR grant proposals, Peterson and Gubrium (2011) found that the NIH is more likely to fund projects reflective of the culture sensitive approach over those indicative of the culture centered approach.

These findings raise questions about whether there may be inconsistencies between the underlying ideological perspectives that govern CBPR and the manifestation of CBPR practices reflective of DEP. This points to a potential opportunity to evaluate DEP from the lens of culture centeredness. However, as culture centeredness is one process-based dimension of DEP, the broader questions of interest are: what are the existing strategies and structures that attend to group diversity in CBPR partnerships, and what are the implications of these practices?

C. SUMMARIZING THE STATE OF LITERATURE AND SITUATING THE STUDY

Contemporary meta-analyses and systematic reviews of CBPR partnerships support the benefits of CBPR on health and capacity-building outcomes among partnership communities. However, critics argue that these studies focus on conventional metrics of program evaluation (e.g. quality of designs and participant enrollment) and do not adequately examine community-centered outcomes (Cook 2008; Trickett, 2011). This study addresses this gap in the literature

by providing a balanced evaluation of how the structures and processes of group diversity contribute to the transformative outcomes of academic and community practices.

Empirical studies focusing on the contexts and dynamics of partnerships support the notion that organizational structures and capacities of the partnerships influence the long-term effectiveness and sustainability of CBPR interventions. Although fostering group diversity is used as a rationale for using CBPR to promote health equity, the field has not yet assessed the unique effects of group diversity on the dynamics and outcomes of the partnerships (Wallerstein et al., 2008). This study extends the research in this area by assessing whether, and under what context, does group diversity within partnerships promote or impede the collective functioning of the partnerships.

The literature on synergy offers evidence to support the notion that synergistic partnerships attain higher levels of collective functional outcome. Studies that examine predictors and outcomes of synergy point to the possibility that synergistic partnerships that are founded upon trust, leadership, and efficacy could achieve organizational and system-level transformations. However, few studies have evaluated other measures of collective functional outcome (and determinants of such metrics) to assess whether CBPR achieves its goal as a transformative practice. This study contributes to the literature by using the collective functional outcome of participatory decision-making to assess the extent to which group processes within a partnership effectively fosters equity among its members.

The literature examining the impacts of organizational diversity on group performance illuminate the potential mechanisms through which diversity (as the literature broadly defines) within a group impact its achievements. This area of literature also identifies group-level factors that could moderate the beneficial or adverse effects of group diversity on group functioning, such as the degree of task interdependence and collective group identity. However, the psychosocial characteristics of diversity in these studies are explicit characteristics that external

researchers, managers, or evaluators are able to discern as a diversity attribute (i.e. one in which individuals can use to categorize one another). Few studies focus on the implicit characteristics of group differences that external observers do not readily recognize as a diversity attribute in a workplace setting, such as differences in personalities, or problem-solving perspectives (Hong & Page, 2000). This study addresses the research gap by identifying the explicit and implicit characteristics of group diversity and by documenting the functional implications of these characteristics within CBPR partnerships.

Furthermore, the literature on group diversity do not fully account for the strategies that are used to address group diversity. For instance, the extent to which demographically diverse partnerships benefit from greater variation in problem-solving perspectives may depend on whether the group supports a multicultural appreciation of different perspectives among its members. Attending to this research gap, this study examines diversity engagement practices (DEP) and their consequences on CBPR partnerships that exhibit variable degrees of demographic, social, and cultural diversity among members.

The literature on DEP and intergroup relations inform the specific ways in which such practices as multiculturalism shapes intergroup attitudes, opinions, and behavior among minority and majority members. However, many of these studies examine one level of DEP at a time and few consider the influences of DEP at multiple socio-ecologic levels of the organization (Kaiser et al., 2013). The structure and intensity at which the ideology is practiced in the real world could have different, and at times adverse, implications on individual and interpersonal behavior. Moreover, research evidence from studies of single institutions do not account for the context of interorganizational collaborations in which individuals may be less constrained by the missions, regulations, and interests of one institution alone (Ahmed, 2012). This study attends to these research gaps by investigating the implementation of DEP at multiple levels of CBPR partnerships and involving stakeholders from distinct cultural backgrounds. Accordingly, this

study uncovered the embeddedness of DEP in multiple intersecting cultural domains, including the culture of focal community, the culture of the (research or community) partner's organization, the "culture of science" (e.g. university structures and policies, funding policies, and publishing policies), among others (Trickett et al., 2011).

CBPR is a collaborative setting in which one could examine the collective achievements of power sharing and equitable participation. The union of academic researchers, community members, and other stakeholders (e.g. funders, policy makers, and community leaders) of diverse professional, social, cultural, and other backgrounds for the collective goals of the partnership may have specific implications for its dynamic and outcomes. The research questions that arise include: a) what are the effects of group diversity on the collective functioning of the partnerships? b) what are the strategies and structures that engage in group diversity within the partnerships, or DEP? c) what are the implications of DEP on partnership functioning? These questions merit a systematic investigation of the interplay among group diversity within the partnerships, the practices by which group diversity is engaged, and the collective functioning of the partnerships.

CHAPTER III: AIMS, THEORY, AND CONCEPTUAL MODEL

This chapter presents the study's overall aim, the four specific aims, and research questions and hypotheses associated with each specific aim. Consistent with the critical interpretivist orientation, I disclose the epistemological position I take in framing the analysis. I then describe the study's conceptual model, including the key constructs, hypothesized relationships, and assumptions on which the study is based.

A. OVERALL RESEARCH AIM

The overall aim of this study is to determine the extent to which group diversity within CBPR partnerships influences the partnership dynamics and the collective functioning of the partnerships.

Group diversity refers to the extent to which members within a partnership vary with respect to identified sociodemographic, functional, cultural and other stakeholder-identified characteristics of within-group differences measured at the level of the partnership (Cox, 1994; Oetzel 2001). Dimensions of group diversity include variations among partnership members in sociodemographic characteristics (quantitatively expressed as demographic entropy, which measures the distribution of group members with different demographic characteristics among all existing categories) as well as variation among members in characteristics that inform functional contributions and cultural perspectives to the partnerships. *Partnership dynamics* refer to potentially observable group-level interactions, practices, and communications related to partnership tasks, identities, and connections that occur within the partnerships (Wallerstein et al. 2008). *Collective functioning* refers to collective achievements and actions that members gain from engaging in the partnerships with the potential to alter their respective practices and worldviews. Although this study includes both inductive and deductive stages of analysis, I took a primarily inductive, or theory-building approach in articulating this overall question because

contextual and process-grounded understanding of the implications of group diversity and of diversity engagement practices (DEP) are necessary for examining the effects of group diversity on the collective functioning of the partnerships (Creswell, 2010; Kagawa-Singer *et al.* 2014).

This study expands the CBPR Conceptual Logic Model (*Figure 2.1*) created by the RIH (discussed in Chapter II) by elaborating on potential pathways that connect the domains of group contexts, processes, and intervention and research characteristics to one another. Specifically, I assessed the extent to which group diversity (*structural dynamics*) influences the degree of participatory decision-making (*relational dynamics*) within the partnerships. I hypothesize that group diversity could affect the collective performance of the partnerships by shaping the characteristics and quality of partnership interactions and experiences among partners who align with or differ from one another in characteristics of group diversity. Based on the power-sharing principles of CBPR, I hypothesize that participatory decision-making reflects the extent to which a partnership achieves its inherent goal of fostering equity among its partners in the conduct of community-based research (Israel *et al.*, 2018). Furthermore, the identification of DEP uncovered strategies, underlying ideological positions, institutional structures, and other stakeholder-identified elements of partnership dynamics that attend to the implications of group diversity within the partnerships.

B. SPECIFIC AIMS AND RESEARCH QUESTIONS

The mixed methods study has four specific aims, each of which has a corresponding set of research questions and hypotheses. The first two aims support the inductive, qualitative exploration of how group diversity and DEP influenced the collective functioning of the partnerships (Stage 1). The last two aims support the deductive, quantitative evaluation of whether demographic entropy is associated with structural elements of partnership control and resource sharing, and whether demographic entropy is associated with collective functioning of

the partnerships (Stage 2). For the two deductive aims, I also state the hypothesis for each of the research questions. The hypotheses are elaborated further in Section C. The definitions of the constructs and corresponding survey measures or potential themes are listed in *Table 4.1*.

Inductive, Qualitative Aims

Aim I: *To identify and describe how group diversity is perceived to influence the collective functioning of the partnerships*

Research Questions (RQ):

RQ.1.1: *What characteristics of group diversity are perceived to be relevant to the collective functioning of the partnerships?*

RQ.1.2: *In what ways do stakeholders perceive these characteristics of group diversity to benefit or impede the collective functioning of the partnerships?*

To answer these research questions, I performed thematic analysis of individual interviews, panel interviews, and focus group interviews of the case study partnerships. I identified each of the characteristics of group diversity that is perceived to be relevant to collective functioning of the partnerships. I identified common themes in stakeholder-perceived benefits and challenges of the identified characteristics of group diversity on partnership collective functioning. Because CBPR is intended to unite researchers and community members of distinct social backgrounds to achieve the goals of the partnerships, it is assumed that variation in some relevant aspects of group diversity could be found within the partnerships.

Aim II: *To understand partnership strategies, underlying ideological positions and institutional structures that attend to group diversity within the partnerships*

Research Question:

RQ.2.: *What partnership strategies, underlying ideological positions, and surrounding institutional structures do stakeholders perceive to attend to group diversity within the partnerships?*

To answer this research question, I performed thematic analysis using the same set of interviews to identify different types of stakeholder-perceived partnership strategies, ideological stances, institutional structures, and other stakeholder-identified (i.e. but previously unknown) elements of DEP through which the partnerships attend to the implications of group diversity on partnership dynamics. I explored common themes in how the partnerships implement DEP at multiple socio-ecologic levels: a) individual-level opinions, attitudes, and behavior b) partnership (or group-level) principles and guiding values, power sharing, decision-making, negotiation, interpersonal interactions and communication c) structural-level organizational and funding policies, resource sharing mechanisms, professional development, and embedded institutional values (Wallerstein *et al.*, 2008; Kaiser *et al.*, 2013).

Deductive, Quantitative Aims

Aim III: *To determine whether demographic entropy is associated with partnership approval structure, type of partnership project, and control of partnership resources within the partnerships*

Research Questions:

RQ.3.1: *Is partnership demographic entropy associated with partnership approval structure?*

Hypothesis 3.1: *Partnership demographic entropy is associated with the type of partnership approval structure.*

RQ.3.2: *Is partnership demographic entropy associated with type of partnership project?*

Hypothesis 3.2: *Partnership demographic entropy is associated with the type of partnership project.*

RQ.3.3: *Is partnership demographic entropy associated with control of partnership resources?*

Hypothesis 3.3: *Partnership demographic entropy is associated with entity in control of partnership resources.*

To determine whether associations exist between partnership demographic entropy (assessed via seven indices of demographic entropy) and structural characteristics of the partnerships, I performed logistic analysis of partnership-level surveys to evaluate statistical associations between each of the seven indices of demographic heterogeneity and each of the following structural elements of the partnership: a) partnership approval structure b) type of partnership project, and c) control of partnership resources. I predicted that partnership demographic heterogeneity would be independently associated with partnership approval structure, with type of partnership project, and with control of partnership resources.

Aim IV: *To learn whether demographic entropy influences the collective functioning of the partnerships*

Research Question:

RQ.4: *Adjusting for academic and community interaction capacities, legitimacy and credibility, and connection to stakeholders, is partnership demographic entropy associated with participatory decision-making?*

Hypothesis 4: *Adjusting for academic and community interaction capacities, legitimacy and credibility, and connection to stakeholders, partnership demographic entropy is associated with participatory decision-making.*

To determine whether associations exist between demographic entropy and collective functioning of the partnerships, I performed logistic analysis of the merged survey dataset (i.e.

merging partnership-level surveys with partnership-level surveys) to evaluate the statistical associations between each of the seven indices of demographic entropy and participatory decision-making, the focal outcome of collective functioning. I examined whether each index of partnership demographic entropy was associated with the odds of achieving high (i.e. above median) level of participatory decision-making relative to low (i.e. below median) level of participatory decision-making. Analysis controlled for a set of control factors: academic and community interaction capacities, legitimacy and credibility, and connection to stakeholders. After accounting for control factors, I predicted that partnership demographic entropy would be associated with participatory decision-making.

Epistemological Orientation

Although the majority of dissertations do not include this section, I disclose my epistemological orientation based on the critical interpretivist orientation that guides this study. I believe that being explicit about my frame of analysis enhances the credibility of the findings because doing so acknowledges the notion that the researcher's perspective shapes how the object of inquiry is interpreted (Lincoln & Guba, 1985). Consistent with the critical interpretivist orientation, I support Schwandt's (1998) notion that reality is constructed by individuals based on their perception of their embedded social setting. The act of interpreting these meanings enables the researcher to uncover the social setting in which individuals inhabit.

In addition, I am conscientiously aware of my perspectives shaped by an expatriate upbringing, an applied anthropological training, and my identity as an LGBT person of color. My experiences of witnessing the social world along its margins fueled my intellectual desire to understand the social processes that take place when diverse cultural worlds converge in CBPR. As an interpretivist who could not divorce himself from the object of study (Miles & Huberman, 1994), I am cognizant that my current research interests are influenced and inspired

by the potential of CBPR to realize equitable public health practice. As a Master of Public Health student, I had the privilege of conducting a Master's thesis exploring the articulation of community voice in the scientific abstracts of CBPR projects that made up the RIH samples, and have since remained involved in the RIH during my doctoral studies. My findings of variable articulations of community voice in CBPR motivated my understanding of the partnership contexts and processes that optimize the promotion of community worldviews in CBPR.

Moreover, my formative exposure to the scholarly work of subaltern studies theories, postcolonial theories, and critical race theories support my attention to the question: *to what extent, and under what context, is CBPR an instrumental strategy for research or a social transformation for community self-determination?* (Trickett et al., 2011). In other words, my research direction intends to contribute disciplinary self-critique in order to elevate CBPR “towards a more equitable realization” of the goals of health equity and social justice (Ford & Airhihenbuwa, 2010). Thus, the use of mixed methods design from a critical interpretivist orientation aimed to develop promising practices to honor the worldviews of culturally diverse partnership constituents in the joint production of public health research and social change.

Key Study Assumptions

One of the key study assumptions is that members of socially marginalized communities have been historically excluded from traditional scientific production of public health knowledge and practice (i.e. full research control with minimal community participation) (Airhihenbuwa, 1994; Arnstein, 1969; Wallerstein & Duran, 2006). In theory, CBPR represents a power sharing approach between researchers and community partners that integrates research and social action to reduce health disparities and improve health (Wallerstein & Duran, 2006). However, disparities in power, resources, voice, and capacities for knowledge production between academic and community partners may persist over the course of the partnership, even when

the principles of CBPR are being followed. This study aims to interrogate the extent to which group diversity within the partnerships promotes sharing of power, participation, and voice in CBPR that could lead to transformative achievements among academic and community members. Findings inform the extent to which CBPR leverages the cultural diversity of its partners to achieve social transformations among partnership constituents (Trickett et al, 2011).

C. CONCEPTUAL MODEL AND HYPOTHESIZED EXPLANATIONS

The dissertation study's conceptual model is shown in *Figure 3.1*. Its foundation is the CBPR Conceptual Logic Model (*Figure 2.1*). The dissertation's conceptual model elaborates on the CBPR Conceptual Logic Model by hypothesizing the relationships among group diversity within the partnerships, DEP, and the collective functioning of the partnerships. In so doing, it guides the conceptualization and analysis of the study by a) recognizing individual, group, and structural antecedents and consequences of group diversity, collective functioning, and DEP b) illuminating the ways in which DEP could influence the effects of group diversity on collective functioning. The model specifies the constructs and variables being examined in this study and permits inductive examination of the emergent concepts or themes that inform these constructs (e.g. unmeasured characteristics of group diversity).

[- Insert Figure 3.1 Here -]

According to the conceptual model, the focal relationship is between group diversity within partnerships and partnership collective functioning, and it is embedded within individual-level and group-level (partnership-level) DEP as well as structural determinants of these practices. Partnership control factors (interaction capacities, legitimacy, and stakeholder connections) influence with both partnership group diversity and partnership collective functioning. Partnership structural elements (approval structure, type of partnership project, and

control of resources) indicative of partnership governance and resource sharing are hypothesized to be associated with group diversity.

Stated Hypotheses

The relationships among the constructs can be hypothesized as follows. Observable characteristics of group diversity (i.e. identified through stakeholder perceptions or measured using demographic entropy) within a partnership may influence its state of collective functioning (i.e. measured using participatory decision-making) through three hypothesized mechanisms (not shown in this figure): i) positive effect through beneficial information sharing and multiple perspectives ii) negative effect through induced in-group/out-group bias, which promotes conflict and communication issues iii) negative effect through decreased attraction among partnership members, which compromises cohesion and communication effectiveness. Academic and community interaction capacities, legitimacy, and connection with stakeholders are controlling factors (or confounders) of this focal association; high levels of these partnership capacities may variably influence the compositional structure of the partnerships and promote high levels of collective functioning. After accounting for these partnership control factors, group diversity may be positively or negatively associated with on partnership collective functioning, depending on the characteristics of group diversity examined. DEP at individual, group, and structural levels of the partnerships could influence the association between group diversity and partnership functioning depending on the implementation of DEP. In addition, group diversity is predicted to be associated with partnership structural elements, including partnership approval structure, type of partnership project, and resource sharing among partners.

CHAPTER IV: STUDY METHODS

This chapter outlines the approaches used to complete the research. It begins with a description of the parent study, Research for Improved Health: A National Study of Community-Academic Partnerships (RIH). It describes the approaches used to collect the parent study's qualitative and quantitative data. Focusing on the dissertation study, I describe the rationale for the study design. I describe the inductive, qualitative portion (Stage 1), including the source of data, the approaches used to obtain the sample, and the procedures used to conduct thematic analysis. I then describe the deductive, quantitative portion (Stage 2), including the source of data, the approaches used to obtain the sample, the measures used to assess the constructs of interests, and the procedures used to conduct the logistic analysis.

As will be described, RIH is the parent study that combined semi-structured individual, panel, and focus group interviews conducted of partnership stakeholders with administered partnership-level and partner-level surveys to examine the promoters and barriers of effective CBPR partnerships. This dissertation study relates to the RIH in three distinct ways. First, it is a secondary analysis of how group diversity contributes to the practices and collective functioning of the partnerships. Second, the study derived a qualitative sample of interview transcripts from the RIH qualitative dataset using purposive sampling and a quantitative sample of partnership-level and partner-level surveys from the RIH quantitative dataset using criterion sampling. Third, the study used a nested mixed methods design consisting of two stages: 1) qualitative thematic analysis of stakeholder interviews to identify the characteristics of group diversity, the benefits and challenges of group diversity, and DEP 2) quantitative logistic analysis of the surveys to test association between demographic entropy and structural elements of the partnerships; and the association between demographic entropy and collective functioning of the partnerships.

A. PARENT STUDY

RIH was a cross-sectional, national study of federally funded CBPR partnerships conducted in 2009-2013 through a collaboration between the National Congress of American Indians Policy Research Center, the University of New Mexico, and University of Washington (Hicks et al., 2012; Lucero et al., 2016). Its overall goal was to understand the promoters and barriers to effective CBPR partnerships in American Indian/Alaska Native (AI/AN) communities and other communities of People of Color with the aim of improving health status and health equity. An implication of RIH's goals for the dissertation study is that the parent study's focus on AI/AN communities resulted in an oversampling of AI/AN partnerships (for both its qualitative and quantitative portions), and, as will be discussed, informed the identification of AI/AN-related findings in this dissertation study.

RIH employed an iterative integration mixed methods approach, in which knowledge gained from initial qualitative case study partnerships informed the finalization of quantitative survey instruments and qualitative interview guides (Lucero et al, 2016). With respect to the purpose of mixing qualitative and quantitative data, the RIH study employed a parallel design, in which investigators collected data for the inductive, qualitative portion separately from the deductive, quantitative portion in order to compare and validate both strands of findings (Creswell & Plano Clark, 2011; Johnson et al., 2007; Lucero et al, 2016). An implication of this design for the dissertation study is that qualitative interviews of a case study partnership could not be compared directly to survey responses of partnership members because qualitative and quantitative data were collected separately (i.e. with no feasible linkage between them).

Data and Data Collection

The overall sample for RIH (from which RIH investigators drew independent qualitative and quantitative samples) were eligible CBPR projects funded by NIH and CDC during the year

of 2009. The following procedures summarized the non-probability criterion sampling method used to derive the eligible sample of CBPR projects, which is also depicted in *Figure 4.1* (Hicks et al., 2012; Oetzel et al., 2015; Pearson et al., 2015). A total of 103,250 extramural projects that were funded by the NIH and the CDC during the year of 2009 were downloaded using the NIH Research Portfolio Online Reporting Tools. After computerized screening procedures and staff review of project abstracts were performed, 334 U.S.-based projects were retained with these characteristics: a) classified as CBPR or similar participatory research approaches; b) funded through “R” research grants or “U” research project cooperative agreements of the NIH, CDC Prevention Research Center projects (PRC), or tribal NARCH grants (Office of Extramural Research, 2015); and c) had at least two years of grant funding remaining. Projects that were excluded were projects: i) with an unrelated funding mechanism; ii) whose funding recipients were outside the U.S.; iii) included false-positive terms (i.e. terms that would misclassify projects) for CBPR or community engagement approaches (e.g. community-based refers to a type of population sample); and/or iv) were duplicate supplements of another eligible project (Pearson et al., 2015). RIH staff verified this information with the principal investigators or project directors (PI/PD) of the retrieved studies and determined that 294 projects met the criteria as eligible CBPR partnerships. As reported in Pearson et al. (2015) and Oetzel et al. (2015), most of these projects were funded under “R” research grants (58.8%), followed by NARCH and PRC mechanisms (22.8%), and “U” research project cooperative agreements. These projects were most frequently funded by the National Institute of Minority Health and Health Disparities (19.1%), the National Cancer Institute (13.3%), and the CDC (12.6%).

[-Insert Figure 4.1 here-]

Qualitative Data Collection

During 2011-2012, the qualitative research investigators of RIH (or the RIH qualitative team) conducted semi-structured individual, panel, and focus groups of stakeholders from seven case study partnerships to understand the perceived contexts, actions, and experiences of the partnerships. From the eligible sample of CBPR projects, the RIH qualitative team used purposive sampling to select (and successfully solicit participation from) seven case study partnerships that had a minimum history of 3 years, included community advisory structures, and demonstrated ongoing intervention or policy research. The sample selection intended to include case study partnerships with diverse project characteristics, including the racial/ethnic composition of the focal population, urban/rural location, geographic area, and health outcome (Lucero et al., 2016; Muhammad et al., 2014).

For each case study partnership, the RIH qualitative team conducted 13-18 semi-structured individual interviews, 1-2 semi-structured focus groups, brief questionnaire, on-site observations of partnership meetings, and creation of a historical timeline (Muhammad et al., 2014; N. Wallerstein, personal communication, April 12, 2016). The PI/PD and study coordinator (as project-nominated contact person for the RIH) of each case study partnership nominated partnership stakeholders, including project investigators, faculty members, research staff members, students, and community members, to participate in individual, panel, and focus group interviews. The interviews, which lasted 60-90 minutes on average, elicited information on the influences of partnership contexts, motivations of stakeholders, and partnership related actions on the experience of CBPR projects (Hicks et al., 2012; see Appendix for *Stakeholder Interview Guide*). By the end of the study, the RIH qualitative team completed 69 individual interviews, 3 panel interviews (i.e. the interviewers interviewed multiple individuals in the same format as the individual interview) and six focus groups (focus group was not conducted of one partnership) across seven case study partnerships (Lucero et al., 2016). The transcripts of 81

total interviews among 138 non-unique² participants comprised the RIH qualitative dataset for Stage 1 of this dissertation study.

Quantitative Data Collection

In 2012, the quantitative investigators of RIH (or the RIH quantitative team) administered two web-based surveys 1) partnership-level Key Informant Survey (KIS) on structural characteristics of the partnerships to all participating Project Director/Principal Investigators (PI/PD) of the partnerships; 2) partner-level Community Engagement Survey (CES) on partner-perceived processes and outcomes to PI/PD-nominated academic and community members of the partnerships. The survey measures for both instruments were developed based on a comprehensive review of CBPR literature and the RIH investigators' assessment of 22 CES measures generally supported evidence of factorial, convergent and discriminant validity and internal consistency (Oetzel et al., 2015). Both KIS and CES comprised the RIH quantitative dataset for Stage 2 of this dissertation study.

In the first stage of data collection, the RIH quantitative team administered the web-based KIS instrument to obtain information on the partnership's demographic characteristics, formal agreements, and grant administrative features from the PI/PD of the partnerships. The RIH quantitative team invited all PI/PDs (n=294) of 294 eligible partnerships to complete the KIS. Of 294 PI/PDs invited, 200 PI/PDs (98.5% academic members, 1.5% community or other members) completed the KIS, yielding 68.0% response rate at this stage. The total sample for partnership-level analysis is 200 projects (N=200).

In the second stage of data collection, the RIH quantitative team administered the web-based CES instrument to obtain information from PI/PD-nominated academic and community

² Due to the lack of identifier information in the de-identified RIH Qualitative dataset, I was unable to verify whether specific individuals who participated in individual and panel interviews also participated in focus group interviews.

partners on their perceptions of the processes and outcomes of the partnerships, including contexts, group dynamics, intervention outcomes, and long-term outcomes of the partnerships. The RIH quantitative team used purposive sampling to ask participating PIs/PDs to name up to four individuals, one academic partner and three community partners, to complete the CES. PI/PDs were also invited to complete the CES individually. At this stage, 138 out of 200 PI/PDs and 312 out of 404 PI/PD-nominated academic and community partners completed the CES. The response rate at this stage is 74.5% and the cumulative response rate is 50.7%. The total sample available for partner-level analysis is 450 partners (N=450).

B. DISSERTATION METHODS: OVERVIEW

The overall goal of this dissertation study is to understand how group diversity, as participants in the CBPR partnerships perceived it and assessed based on demographic indicators, influences the practices and the collective functioning of CBPR partnerships. To this end, the study employed a mixed methods approach for the complementarity purpose of using qualitative and quantitative results to elaborate, expand, or enrich the interpretation of a complex social phenomena (Greene, 2007). The core premise of mixed methods approach is that integrating qualitative and quantitative data optimizes the strengths and minimizes the weaknesses of each source of data (Creswell *et al.* 2010). I take a dialectic stance on mixing both methods, which contends that qualitative and quantitative data are compatible with one another and the decision to mix them is guided by the theory, assumptions, and context of the study (Greene, 2007).

The mixed methods approach is appropriate for investigating the complex social organization and dynamics of CBPR partnerships. Mixed methods designs have been used in many studies to understand the development of participatory research, suggesting their usefulness in identifying heretofore unidentified characteristics to both community and academic

partners (Creswell & Plano Clark, 2011; Israel et al., 2013; Kastelic et al. 2018; Lucero et al. 2016; Trickett & Espino, 2004). This is particularly relevant for investigating relatively unexamined relationships among group diversity, DEP, and collective functioning of the partnerships. Combining the inductive, qualitative approach with the deductive, quantitative approach permits understanding of the processes, contexts, and voiced perspectives from empirically grounded observations of partnership experiences and evaluation of the focal relationships to confirm, reject, or modify assertions derived from these observations. (Bernard, 2006; Creswell et al., 2010).

Study Design

This dissertation study is a cross-sectional, observational study. It used a nested, mixed methods design that drew separate samples from RIH for inductive, qualitative analysis and deductive, quantitative analysis. The inductive, qualitative analysis explored the contributions of group diversity and DEP to collective functioning of the partnerships while the deductive, quantitative analysis evaluated whether demographic entropy was associated with structural elements of the partnerships and with participatory decision-making within the partnerships. The inductive, qualitative portion of the study sought to uncover the constructs, processes, and determinants that informed the relationship between group diversity and collective functioning of the partnerships. The deductive, quantitative portion tested specified associations between measured characteristics of demographic diversity and collective functioning of the partnerships to examine the extent to which my qualitative findings were quantitatively supported.

The analysis consisted of two major stages: 1) cross-sectional, inductive, qualitative thematic analysis of partnership stakeholder interviews to identify the characteristics of group diversity, the perceived benefits and challenges of group diversity, and the practices by which the partnerships attend to the implications of group diversity (or DEP) and, 2) cross-sectional,

deductive, quantitative logistic analysis of partnership-level and partner-level surveys the associations between demographic entropy and structural elements of the partnerships, and between demographic entropy and participatory decision-making within the partnerships (Aims III-IV). I triangulated the findings from the two phases by comparing and contrasting the statistical conclusions of quantitative analysis with contextual and process-based explanations of qualitative analysis to arrive at the overall conclusion for the study. *Figure 4.2* depicts the nested design of this study and its relationship to the parallel design of the RIH. The operational definitions of the constructs and corresponding measures or themes are shown in *Table 4.1*.

[Insert Figure 4.2, and Table 4.1 Here-]

Data permission and human participant protection

In 2016, Principal Investigators of RIH, Nina Wallerstein and Bonnie Duran, submitted requests to the University of New Mexico (IRB) and the University of Washington (UW) IRB to add myself as a co-investigator of the study. To access the RIH qualitative dataset, I completed the CITI training certificate and completed UNM Screening Form to receive authorization to conduct research as an unpaid collaborator. Access to data was approved by UNM IRB in June 2016. To access the RIH quantitative dataset at the Indigenous Wellness Research Institute – National Center of Excellence (IWRI-NCE), UW, I completed *IWRI-NCE Data Analysis Plan Form, Human Subjects Approval Process, Data Use Agreement, Alteration to Scales or Measurements, and Alterations to Scales or Measurement, and Confidentiality Agreement*. Access to quantitative data was approved by IWRI-NCE in October 2017. I submitted an application to UCLA South Campus IRB to request approval for this study. In March 2017, the UCLA South Campus IRB determined that my secondary analysis of de-identified data did not constitute human subjects research.

In accordance with RIH guidelines, I signed the following documents: *Publications Guidelines; Data Use, Confidentiality, and Honor Statement; Confidentiality Policy and Agreement, Protocol for Student Involvement, and Codes of Ethics and Integrity* (CBPR Research for Improved Health Study Team, 2011). I also developed the Memorandum of Understanding (MOU) between UCLA, UW, and UNM concerning this study (see Appendix). The MOU was signed by all key parties in September 2016. To protect the identity of RIH participants, all versions of qualitative interview and quantitative survey datasets that I received were de-identified. To ensure that I protect the identity of study participants, I removed partial names of individuals, institution, tribe, location, and other potential identifiers from the findings. In the discussion of findings, only the alphabetic designation of the partnership and the role of the interviewee in the partnership are indicated.

C. STAGE 1: QUALITATIVE METHODS (AIMS I-II)

Approach

Grounded theory is the guiding methodological approach for Stage 1 of this study. Grounded-theory research is based on grounding analysis in the data to permit inductive understanding of findings that emerge from close examination of texts (Bernard, 2006). The base assumption of grounded theory is that, through the process of in-depth exploration and theoretical sensitivity, the researcher develops theoretical explanations that are grounded in data (Richard & Morse, 2007). Grounded theory analysis uses an iterative, inductive coding process that identifies emergent themes from the texts and connects these concepts in formulating a substantive theory (Bernard, 2006). The act of memoing, or ongoing documentation of notes and hypothesized assertions, is a key aspect of this process.

Grounded theory is appropriate for this study because it permits theoretical understanding of the contributions of group diversity on partnership functioning and on the use

of DEP as articulated from the lived experiences and perspectives of stakeholders in the partnerships. My underlying assumption is that these individuals share the experience and understanding of engaging in CBPR. Furthermore, I assume that, to the extent possible, maximizing the perspectives of individuals in different roles of the partnerships enables me to grasp the collective experience of the partnerships. However, the trustworthiness of the findings may also be limited by the lack of opportunity for trust building with the informants, and the inability, from the existing data, to know what the cultural interpretations were of the concepts measured in the interview guides (Lincoln & Guba, 1985).

Data source

The data for Stage 1 came from the RIH qualitative dataset. The dataset contains transcripts of semi-structured interviews with stakeholders of seven case study partnerships (n=81 interviews). The dataset consisted of 69 individual interviews (n=67 participants; two participants interviewed twice), three panel interviews (n=7 participants), and nine focus group interviews (n=65 participants). Upon a review of preliminary transcripts, I decided to use the entire transcript (i.e. rather than focusing on responses to specific questions) because I found that the partnership implications of group diversity could potentially emerge in any part of the interview. Furthermore, I did not wish to limit the thematic analysis to participant's responses to interview questions related to group diversity, which included pre-specified categories (e.g. similarity in gender or race).

Sampling and Sample

I used purposive sampling to select the interviews from the RIH Qualitative Dataset for Stage 1 of analysis. Over the course of the analysis, I selected the interviews of stakeholders that represented various roles within the partnerships (that I identified in the interviews) to

maximize the perspectives of those assuming different partnership positions. In the later stage of the analysis, I focused the selection of interviews on partners who worked at the frontline of the partnerships, such as research or community coordinators. This is because I learned that these stakeholders offered in-depth perceptions and experiences of engaging across partnership organizational differences. Furthermore, I selected additional interviews from partnerships with complex dynamics (e.g. ones that faced membership turnover) to ensure that I grasped these dynamics from multiple stakeholder perspectives. By the time thematic saturation (to be explained) was reached, I coded a total of 55 partnership stakeholder interviews (67.9% of total interviews). These interviews include 44 individual interviews, three panel interviews, and eight focus groups of non-unique stakeholders. The total number of transcripts coded by partnership and type of conducted interview are shown in *Table 4.2*.

[-Insert Table 4.2 Here-]

Stage 1 Analysis

The analytical procedures of Stage 1 follows an inductive, thematic coding approach in which I ground myself in the data to grasp the meaning of CBPR experiences from the perspectives of interviewees (Bernard, 2006). Although the final codes, themes, and patterns emerged from the data, my review of relevant literature and discussions with dissertation committee members helped me conceptualize a potential set of anticipated themes for Aims I and II. The potential themes for Stage 1 are detailed in *Table 4.1*.

Both the aims and research questions were concurrently analyzed by examining interviewee's responses to all interview questions. Illustrative examples of the coding approach for each of the research question is shown in *Table 4.3*. For Q.1.1, I used an open coding approach to explore the characteristics or characteristics of group diversity that were linked to partnership collective functioning. Although interviewees may not have been identified these

characteristics as characteristics of group diversity, I delineated these the characteristics I identified in the interviews as such because they reflected an aspect of internal group differences that shaped the dynamics and functioning of the partnerships. I classified whether these characteristics occurred in relation to overall members of the partnership, within research partners (i.e. self-identified academic or research members who conducted research activities), or within community partners (i.e. partners or members who represent community interests or engaged in community activities). For Q.1.2, I examined the ways in which stakeholders perceived group diversity to benefit, or to impede collective functioning of the partnerships. I used open coding to identify perceived positive or adverse partnership interactions, actions, and experiences that could be potentially linked to characteristics of group differences. As appropriate, I also applied codes of the characteristics of group diversity associated with these partnership benefits and challenges. For Q.2 I identified partnership actions and strategies, guiding principles and values, ideological stances, institutional structures, and other stakeholder-identified partnership elements through which partnerships address group diversity. As applicable, I applied codes for the characteristics of group diversity linked to identified DEP.

[-Insert Table 4.3 Here-]

I treated each interview transcript of partnership stakeholder(s) as one single unit of analysis (resulting in a total of 55 interviews). This delineation allows for comparisons of themes among partners of distinct roles within the partnerships (but not to evaluate one partnership against another). For each transcript, I first read the document in its entirety to grasp the narratives and experience of the stakeholder(s). I documented the overall impression of the stakeholder's experience and highlighted potential passages for my analytical interests. At the second stage, I used open coding to apply new topic codes or list coding to apply previously created codes to the transcript. This process was repeated for all partnership interviews until

thematic saturation was reached, or when no new themes or relationships among themes were discovered (Bernard, 2006).

The analysis of partnership interviews involved an iterative process of transcript coding and codebook refinements. First, I reviewed and coded a set of 12 interviews across seven case study partnerships to develop a preliminary coding scheme. I used hand coding method to apply descriptive codes (with multiple, overlapping codes allowed) and, where possible, suggested a parent domain for each focal passage. In the later part of this preliminary coding stage (i.e. after 6 interviews), I referred to earlier scripts to create similarly worded descriptive codes. I noted hypothesized explanations of the partnership dynamic, connections to other interviews, and personal impressions or concerns about the coding procedure that may be useful for an overall interpretation. The resulting preliminary coding scheme was shared with my Chair of the dissertation committee, a committee member with expertise in qualitative methods, and the PIs of the RIH to discuss subsequent coding approach.

Next, I developed the main coding scheme of analytical codes to be applied to the remaining interviews. I created a coding framework, shown in *Table 4.4*, which provides a working codebook structure and conventions used for the coding approach. Based on this framework, I consolidated and organized preliminary descriptive codes under common parent codes. The codebook (see Appendix) includes the abbreviated and full name of the code, and description or explanation of the code.

[-Insert Table 4.4 Here-]

Following the preliminary round of coding, I performed iterative analysis of the remaining interviews using similar coding procedures on ATLAS.ti 8 software until thematic saturation was reached. After coding approximately every ten interviews, I made systemic revisions to the entire codebook to incorporate new codes, delete or merge unnecessary codes, revise the organization of the codebook, and refine the overall coding process. These revisions were made

on ATLAS.ti, which automatically updated previously coded transcripts. A central document of extended codebook was constantly updated to reflect these decisions. I performed five rounds of systemic coding revisions over the course of the analysis. The final version of the codebook contains a total of 190 codes, including 162 analytical codes that address the focal research questions and 28 auxiliary codes that describe characteristics of participants.

To synthesize the qualitative findings, I organized my observation notes around associated codes and coded interview segments. This process allowed me to group relevant codes together and determine the larger overarching domain (e.g. benefits of functional differences or challenges of sociocultural differences). I organized the annotated quotations under these overarching domains to develop narrative explanations for these domains. I also generated a table of co-occurring codes to examine patterns among different groups of codes, such as co-occurrence between partnership benefits or challenges and characteristic of group diversity. I discussed these findings with dissertation committee members and RIH investigators to validate my interpretation based on their expertise in this area.

In the presentation of Stage 1 findings, I re-examined the codebook and prioritized the presentation of emergent themes around those that address the research questions. For each of the themes, I chose no less than two illustrative interview excerpts from two distinct partnerships to enrich my explanations of these concepts. To the extent possible, I reported co-occurrence of the themes, particularly to link partnership implications or practices of group diversity with the co-occurring characteristic of group diversity.

D. STAGE 2: QUANTITATIVE METHODS (AIMS III-IV)

Approach

Analysis for Stage 2 of this study was guided by the elaboration model advanced by Aneshensel (2013), which aims to establish an empirical association by testing the addition of

third variables. I evaluated the focal association between partnership demographic entropy and partnership collective functioning using exclusionary strategies of the elaboration model. The evidence of the focal association was supported by ruling out the confounding influences of control factors. I performed all statistical procedures using Stata Version 15.0.

Data Source

The data for Stage 2 came from two sources of data, the Key Informant Survey (KIS) measured at the partnership level and Community Engagement Survey (CES) measured at the partner level. Analysis for Aim III used KIS dataset exclusively. For Aim IV, I merged data from CES with KIS datasets using the unique identification of the partnership, or project ID. Data collected from each PI/PD of the 200 partnerships were available for analysis in the KIS dataset. Data from 450 PI/PD-nominated partners were available for analysis in the CES dataset.

Listwise deletion was used to account for missing values in the datasets. In the CES dataset (N=450), no individual item of interest was reported to have more than 16 missing values (3.6%) of the 450 observations (B. Boursaw, personal communication, April 16, 2016). For example, only 6-10 items (1.3-2.2%) were missing across the constituent participatory decision-making items in the merged dataset. Because of the relatively modest amount (i.e. <10%) of missing values across the analytical variables, listwise substitution could be employed with minimal concerns for variability of the estimates (IDRE Statistical Consulting Group, 2016).

Sampling and Sample

For Aim III, I used all 200 partnerships that completed the KIS as the analytical sample because they contained data on partnership demographic distributions and structural characteristics to complete the analysis. For Aim IV, I used criterion sampling to select a sample of CES respondents that did not have missing KIS data on demographic distributions of the

partnership (to which the partner belonged) to complete the analysis. Upon merging both datasets, data from 448 respondents (n=448) from 163 partnerships were available for analysis. Data from two partners in the CES and 37 partnerships in the KIS were excluded from Aim IV analysis.

Measures

This section describes the procedures main variables used in Stage 2 of the study. There are four outcome variables (three structural elements and one collective functional outcome), seven focal exposure variables and two proxy exposure variables, and five control variables. As applicable, I provided statistics on reliability assessment of these variables. Please refer to *Table 4.2* for construct definitions and corresponding survey items.

Outcome Variables

Collective Functional Outcome

Participatory decision-making was the focal collective functional outcome because it reflects the perception of equitable contribution to group decision-making (as agreed upon by its members) and the extent to which CBPR as an approach achieves its ideal goal of fostering partnership equity among its partners (Israel et al., 2018). Conceptually, participatory decision-making items indicates a partner's rating of the degree to which one contributes to the decision-making process and the extent to which the overall partnership decision resonates with that partner's contribution. Participatory decision-making was measured using five Likert items asking participants to rate the frequency to which they felt that they made equitable contributions to the decision-making process (e.g. "felt comfortable with the way decisions were made," and "felt that their opinion was taken into consideration by other project members"). The ordinal responses for all five synergy items include: 1 for "never," 2 for "rarely," 3 for

“sometimes,” 4 for “often,” and 5 for “always.” The first three items are coded in a positive direction while the remaining two items are coded in a negative direction. The two last items were reverse coded so that a higher rating on an item suggests a greater level of participatory decision making. When coded in the same direction, the correlations among participatory decision-making items are moderate and positive ($r=0.45-0.71$, $p<0.0001$).

I dichotomized the full participatory decision-making index around the median to compare the partnerships that have high (i.e. above-median) levels of participatory decision-making with those have low (i.e. below-median) levels of the outcome. A 25-point index of participatory decision-making was created by adding non-missing responses of the five constituent items. In the preliminary analysis, nearly all partners (except for three individuals) who responded to questions on participatory decision-making completed all five constituent items. Reliability assessment of the five items yields a Cronbach’s alpha of 0.86, indicating good scale reliability. Univariate analysis indicated that participatory decision-making index has a mean of 21.2 and two modes at approximately 20 and 25. Using a median cutoff of 22, I recoded the bi-modal outcome such that low participatory decision-making denotes a total score of less than 21 and high participatory decision-making refers a total score of 22 or higher.

Partnership Structural Elements

Partnership approval structure, type of partnership project, and control of resources comprise the structural elements of partnership control and resource sharing. These measures indicate the characteristic of the partnership approval structure, the type of project that the partnership engaged in, and the entity in control of partnership resources.

The partnership approval structure items ask PI/PDs to indicate which individual or organization approved participation in their project on behalf of the community. Participants could respond “yes” or “no” to whether each of these parties approved research participation:

“agency leader, representative, board, or staff;” “tribal/local government or health board/public health office;” “individual community member(s);” “project advisory board;” “no community decision; individual research participants give consent;” or “other.” Consistent with Oetzel *et al.* (2015), responses were recoded into three binary variables: i) tribal/local government or health board (with or without other types of approvals) ii) agency/ advisory board or other forms of governance with no tribal/local government nor health board iii) individual or no community decision with no tribal/local government nor agency/advisory board.

The survey item concerning the type of partnership project asks PI/PDs to classify whether the project is a descriptive study (e.g. needs assessment or epidemiological study), intervention study, or policy study (e.g. policy analysis or policy change efforts). I performed analysis of the categorical variable as originally provided using the category of intervention project, the category with highest frequency, as the reference group.

The survey items regarding control of resources ask PI/PDs to indicate which partner is responsible for the following areas: i) hiring personnel on the project ii) deciding how financial resources are shared iii) deciding how in-kind resources are shared. The categorical responses to the three items include “community partner,” “academic partner,” “both,” or “don’t know.” I used the categorical variable as originally provided with academic partners as referent category to reflect the baseline state of minimal community control. Upon exploring the distributions of the categories, the minority of “don’t know” or missing responses (0.5%-5.6%) were excluded from these items such that only valid responses remained.

Exposure Variables

Demographic Entropy

I constructed measures of partnership demographic entropy for seven demographic characteristics: gender, race, rural/urban location, disability status, LGBT orientation,

International status, and youth status. This measure of group diversity reflects the conceptualization of diversity as variety, or categorical differences among individuals with respect to qualities of a characteristic (Harrison & Klein, 2007). The index of entropy is commonly used to capture the degree of heterogeneity (or mixing) among members of a group (Ancona & Caldwell, 1992, Cady & Valentine, 1999, Pelled *et al.*, 1999, Oetzel, 2001,). Developed by Teachman (1980), the index measures the extent of distribution of group members into different categories among all potential categories of a demographic characteristic (Pelled *et al.*, 1999; Oetzel, 2001). The index is calculated using the formula: $H = - \sum P_i (\ln P_i)$, where P_i is the proportion of members in category i (e.g. proportion of females in a group). The hypothetical minimum of zero represents total homogeneity within a group, although a perfect zero is not derivable from this formula. The higher the value of the index implies greater diversity across categories within a demographic characteristic. A calculated value of partnership demographic entropy index reflects the degree to which members of the groups are proportionately mixed in the reported categories of a focal demographic characteristic. It should be cautioned, however, while the index value indicates the degree of partnership mixing within a characteristic, it does not indicate which fraction of the categories within that characteristic (e.g. proportion of males or females) gave rise to the numerical value of the index. The implications of this limitation are explained in Chapter VII.

For studies that assess multiple characteristics (e.g. Cady & Valentine, 1999), separate indices are developed for each demographic characteristic. For this study, I created seven distinct entropy-based indices using each of the seven characteristics and tested them individually as predictors. The KIS asked the PI of each partnership to estimate the number of academic members and number of community members with specified demographic characteristics. For each of the seven demographic characteristics (e.g. gender), I used the reported numbers of academic and community members in each demographic category (e.g.

male, female, transgender) to derive an entropy index for that category. Partnerships that did not provide count estimates across all categories (i.e. left all responses blank) were excluded from these calculations. For partnerships that provided valid responses in some categories but left others blank, I replaced such missing values with zero. In addition, the natural log of zero was replaced with 0 (i.e. $\ln(0) = 0$) to satisfy logarithmic rules when the formula was applied. Based on this substitution, partnerships that left response blank in non-reported categories were imputed with zero or with the minimal value of entropy. This substitution kept the estimates conservative without removing other existing information altogether.

For the characteristics of gender, race, and location, I used the totals calculated by summing the number of available categories within that characteristic. However, for the characteristics of disability, LGBT status, International status, and age, there was only a single category for each characteristic (i.e. PIs were asked to provide count of LGBT members only; no count of non-LGBT members were solicited). To calculate the count of partners that were *not* in a category of these characteristics, I subtracted the estimated total of partnership members from count of partners in that category. Request was made to the RIH investigators to obtain the reported total of academic partners and community partners to determine the estimated total of partnership members. To verify for accuracy, this estimated total of partnership members was compared with gender-based (and race-based) partnership totals. For six partnerships, discrepancies were detected in which estimated member total were likely inaccurate (i.e. values were overinflated). For these cases, the partnership total was replaced with lower value of gender-based total if the decision appeared to be reasonable (i.e. substituted partnership total was in line with total based on gender or race).

It is possible to create three variations of entropy-based indices to capture group diversity of: overall partnership; self-identified academic partners; and self-identified community partners. For the main purpose of examining the potential impacts of partnership demographic

entropy on overall partnership functioning, I created an entropy-based index for the *overall* partnership to capture the maximum amount of possible heterogeneity within a partnership that includes both academic and community members.

Subjective Diversity

Two variables in CES were identified as proxy variables for demographic entropy, perceived membership diversity and perceived cultural similarity. Perceived membership diversity was used as a subjective predictor in logistic analysis while perceived cultural similarity was used for comparisons with focal predictors in descriptive analysis. Perceived membership diversity measures partners' rating of the degree to which their partnership is diverse in membership. Perceived cultural similarity measures partners' rating of the degree to which the academic research team had members of similar cultural background as the community research team. Both items were measured using a 5-point Likert rating item with ordinal responses ranging from 1 for "not at all" to 5 for "to a great extent."

Control Factors

Five variables in CES were included as control factors because they are hypothesized to influence group diversity and the collective functioning of the partnerships: academic interaction capacities; community interaction capacities; legitimacy; connection to political decision-makers and other organizations; and connections to relevant stakeholders. These control factors indicate partners' ratings of partnership capacities for effective interactions among partners and social connections with external stakeholders of the partnerships. The duration of the partnership (in years and month) was explored as a potential control variable but later dropped from the main analysis as it was not associated with neither the exposure nor the outcome.

Academic interaction capacity refers to the extent to which academic partners have the knowledge, skills, and confidence to interact effectively with community partners. It was

measured using a similar 5-point Likert rating item on the degree to which academic partners interact effectively with community partners. Similarly, community interaction capacity refers to the extent to which community partners have the knowledge, skills, and confidence to interact effectively with academic partners. It was assessed using a similar Likert rating of effective interaction with academic partners. Partnership legitimacy was measured using a Likert rating on the extent to which respondents believe that the partnership had legitimacy and credibility to work effectively towards its aims. Connection to political decision-makers and other organizations was measured using a Likert rating statement on the extent to which the partnership had connections to political decision-makers, government agencies, and other organizations to effectively achieve its aims. Connection to relevant stakeholders was assessed using a similar rating statement regarding connections to other relevant stakeholders. The ordinal responses for all these items range from 1 for “not at all” to 5 for “to a great extent.”

Stage 2 Analysis

Descriptive Analysis

Univariate analysis was conducted to examine the central tendencies and distribution, pattern of missing values, and correlations among analytical variables. Pearson’s correlation analysis was conducted among analytical variables to explore bivariate associations and to detect potential multicollinearity among these variables. For categorical variables, such as partnership approval structure, I created dummy binary variables for each of the variable categories to allow for correlation analysis.

Inferential Analysis

The main inferential procedures are divided into two major parts: 1) logistic regression to evaluate the association between demographic entropy and structural elements of the

partnerships (Aim III) 2) logistic regression to evaluate the association between partnership demographic entropy and participatory decision-making (Aim IV). For Aim III, I performed analytical procedures using partnerships as the unit of analysis. For Aim IV, I performed analysis with individual partners as the unit of analysis and used robust standard errors to account for clustering of responses by the partnerships. This is because partnership processes and outcomes were measured at the level of partners while partnership demographic characteristics were measured at the level of the partnership. Bonferroni correction was used in all models to account for multiple testing of the seven characteristics of demographic entropy.

Logistic Regression Analysis (Aim III)

For RQ.3.1, I tested the association between partnership demographic entropy and partnership approval structure. Binary logistic regression was used to generate parameter estimates (i.e. in log scale) and odds ratio (i.e. exponentiated log) of having a partnership approval structure (i.e. tribal/local government or health board; agency or advisory board; individual or no community decision) compared to not having that type of structure for each of the seven characteristics of demographic entropy. The model can be expressed as:

- Model 1A_i: $\ln(p_i/1 - p_i) = B_0 + B_1D_j$

where p denotes probability of having a type of community approval structure relative to not having that type of community approval structure (j = tribal/local government or health board; agency or advisory board, individual or no community decision) and D denotes partnership demographic entropy (j = gender, race, rural/urban location, disability status, LGBT orientation, International status, or youth status)

For RQ.3.2, multinomial logistic regression was used to test the association between partnership demographic entropy and type of partnership project by estimating the relative risk ratios of having policy or descriptive study relative to intervention study for each of the seven characteristics of demographic entropy. The model can be expressed as:

- Model 1B_i: $\ln(p_i/1-p_i) = B_0 + B_1D_j$

where p denotes probability of being a type of partnership project (i = descriptive, intervention, or policy) and D denotes partnership demographic entropy (j = gender, race, rural/urban location, disability status, LGBT orientation, International status, or youth status)

For RQ.3.3, multinomial logistic regression was performed to test the association between partnership demographic entropy and control of resources for each of the three areas: personnel hiring, sharing of financial resources, and sharing of in-kind resources. I estimated the relative risk ratios of having community oversight or having joint oversight relative to academic oversight. For each area of resource control, the model can be expressed as:

- Model 1C_i: $\ln(P(Y=m_1|X)/P(Y=0|X)) = B_0 + B_1D_j$

$$\ln(P(Y=m_2|X)/P(Y=0|X)) = B_{00} + B_{11}D_j$$

where p denotes probability of having specific partner oversight (Y=m₁ for community oversight; Y=m₂ for joint oversight) relative to academic oversight (Y=0) and D denotes partnership demographic entropy (j = gender, race, rural/urban location, disability status, LGBT orientation, International status, or youth status)

Logistic Regression Analysis (Aim IV)

For RQ.4, I tested the association between partnership demographic entropy and participatory decision-making. Logistic regression was conducted of binary-transformed participatory decision-making variable on each of the seven characteristics of demographic entropy. For comparisons with subjective indicators of group diversity, I repeated the same models with perceived membership diversity as the focal predictor. The odds of having a high level of participatory-decision making relative to low participatory-decision making was estimated for each of the seven characteristics of demographic entropy. The unadjusted model can be expressed as:

- Model 2A_i: $\ln(p/1-p) = B_0 + B_1D_i$

where p denotes probability of having high participatory decision-making relative to low participatory decision-making, and D denotes individual index of partnership demographic entropy (where i = gender, race, rural/urban location, disability status, LGBT orientation, International status, or youth status)

Next, five control variables were added to Model B_i to test the significance of the association after accounting for these control factors. The adjusted odds of having a high level of participatory-decision making relative to low participatory-decision making was calculated for each of the seven characteristics of partnership demographic entropy. Wald's test was used to assess the contributions of the coefficients (i.e. control variables and the focal predictor) to the full model. The full model can be expressed as:

- Model 2B_i: $\ln(p/1-p) = B_0 + B_1D_i + B_2A + B_3C + B_4L + B_5P + B_6R$

where P denotes probability of having high participatory decision-making relative to low low participatory decision-making, D denotes individual index of partnership demographic entropy, A denotes academic interaction capacities, C denotes community interaction capacities, L denotes legitimacy, P denotes connections to political decision-makers and other organizations, and R denotes connections to relevant stakeholders

For all these logistic models, I generated post-estimation statistics to assess the fit of the model and assess for potential multicollinearity among control factors. I used results of likelihood ratio (LR) tests, Akaike Information Criteria (AIC) and Bayesian Information Criteria (BIC) to compare the fit of the model between each unadjusted and fully adjusted model. Lower AIC and BIC values in the adjusted model compared to the unadjusted models indicate that the adjusted models are a better fit. For the fully adjusted model, I also used variance inflation factor (VIF) to assess for potential concerns of multicollinearity among correlated control factors, which could inflate standard errors and potentially distort significance levels of these coefficients.

Sensitivity Analysis

To verify the appropriateness of logistic regression and variable transformation procedures, I used OLS and logistic regressions to conduct three types of sensitivity analyses. First, unadjusted and adjusted OLS regression models were performed of continuous participatory decision-making index on each of the seven characteristics of partnership demographic entropy to address potential loss of information from dichotomization of the outcomes in the logistic models. Second, to compare the results with the modification of participatory decision-making scale that dropped the last item of the scale in Oetzel et al. (2015), unadjusted and adjusted logistic regression models were also repeated with modified 20-point participatory decision-making index as the outcome. Finally, logistic regression models were repeated with participatory decision-making dichotomized at the value right below the median and closer to the mean (i.e. 21 out of 25) to compare results with the original models (i.e. median cutoff of 22 out of 25) if a different cutoff value was used.

Power Analysis

To determine the minimum sample size needed to conduct the logistic analysis in Stage 2, I conducted power analyses using my estimates of R^2 , Bonferroni-corrected alpha of 0.01, and the maximum number of variables used in each sequential model in the analysis. I derived estimates of R^2 based on a previous analysis of the associations among diverse membership, cultural fit of the intervention, and partnership synergy using the 2015 CES dataset. The estimates of R^2 were 0.05 for Model 1A_i – 1C_i (1 predictor at a time), 0.05 for Model 2A_i (1 predictor), 0.40 for Model C_i (6 predictors), and no higher than 0.50 for the full model with potential mediators (9 predictors). Results indicated that a minimum sample of 39-83 individuals was needed to achieve 80% power to conduct all the analytical steps of Stage 2. Thus, the sample of 448 respondents from 163 partnerships was sufficient for the analysis.

CHAPTER V: QUALITATIVE RESULTS

This chapter presents the findings of the inductive, qualitative portion of the study (Stage 1), which sought to understand how the stakeholders of CBPR partnerships perceived various characteristics of group diversity to shape the practices and collective functioning of the partnerships. It begins by describing key characteristics of this sample. The main sections present the findings for Aim I and Aim II, respectively. Each section identifies the key themes that emerged from the analysis and includes representative excerpts from the stakeholder (i.e. partnership members (or members) and individuals identified by the study contact person) interviews across all seven case study partnerships that illustrate the themes.

In the first of these sections, I describe the characteristics of group diversity that stakeholders perceived as influencing how well a partnership functioned. I have organized the emergent characteristics of group diversity under these dimensions: functional characteristics indicative of members' execution of tasks and responsibilities, and sociocultural characteristics indicative of members' expression of personal, social, and cultural identities. In the second section, I describe the perceived benefits or impediments of group diversity to partnership collective functioning, illuminating the notion that partnerships benefited primarily from membership differences in functional characteristics and faced challenges primarily from membership differences in sociocultural characteristics. In the third section, I elaborate on diversity engagement practices (DEP) at multiple levels surrounding the partnerships. Identified DEP consist of practices that promote partnership esteem and functional capacities which serve to promote the range of functional contributions among partnership members, and transcultural and interpersonal bridging practices which serve to bridge transcultural and interpersonal differences among partners. The chapter concludes with a brief, overall summary of findings.

For each section, I discuss emergent themes that address each research question and provide excerpts from stakeholder interviews that illustrate the themes. The full versions of the

excerpts, organized by themes, are provided in *Tables 5.2-5.7*. These passages were selected from the interviews of stakeholders with various roles in the case study partnerships, including research principal investigators, community or county principal or co-investigators, research coordinators, community or tribal board members and religious officials.

Sample Characteristics

Table 5.1 summarizes the focal health area of the partnership intervention, characteristics of population served, and geographic location of the seven case study partnerships as reported by the RIH (Lucero et al., 2016). Demographic characteristics of focal populations served by the partnerships include Blacks, Latinos, Native Americans, Asians, and Deaf populations. Notably, two of these partnerships served AI/AN populations, which resulted in the identification of group diversity characteristics (e.g. tribal affiliations) and of DEP (e.g. tribal board) relevant to the contexts of AI/AN communities. In addition, two of the partnerships reported employing faith-based interventions, which informed the identification of group diversity characteristics and DEP related to religious beliefs. One partnership collaborated with Deaf populations, which resulted in emergent characteristics of group diversity related to hearing abilities. Overall, the seven case study partnerships varied considerably in focal health area, demographic characteristics of focal population, and geographical location.

[Insert Table 5.1 here-]

A. RELEVANT CHARACTERISTICS OF GROUP DIVERSITY IN CBPR

Aim 1: To identify and describe how group diversity is perceived to influence the collective functioning of the partnerships

RQ.1.1: *What aspects of group diversity are perceived to be relevant to the collective functioning of the partnerships?*

The analysis identified plural characteristics of group diversity that emerged in stakeholder discussions of partnership practices and dynamics. I describe each of these characteristics separately but recognize that a partnership may be characterized by a combination of these characteristics, such as the intersection of variations in race and gender. Variations in these characteristics was identified among overall members, among community members, and less commonly so, among research members of the partnership. I organized these characteristics of group diversity into two major categories or dimensions: functional characteristics or sociocultural characteristics. Functional characteristics indicate within-group variation in the execution of partnership tasks or functions while sociocultural characteristics indicate within-group variations in the expressions of personal and sociocultural identities. Examples of these characteristics as described in stakeholder interviews are provided in *Table 5.2*. For each characteristic, I provide one applicable excerpt as it was identified among overall partnership members, within research members, or within community members.

[-Insert Table 5.2 here-]

Functional Characteristics of Group Diversity

Functional characteristics of group diversity are characteristics of differences among members associated with the execution of partnership tasks, activities, and goal achievement. The six identified functional characteristics are professional background, organizational affiliation, skillset, research approach or viewpoint, community engagement and activism, and partnership maturation. Illustrative examples of these characteristics are shown in *Table 5.2*.

[-Insert Table 5.2 here-]

Professional background

Variation in professional background (or professional variation) refers to the extent to which individuals vary in professional occupation, training, or experiences. It was identified

among overall members as well as within research and within community members of the partnerships. Within the context of healthcare, these characteristics are indicative of differences in the roles of partners within the healthcare system. To illustrate, the research investigator of Partnership F indicated that the founding of the partnership involved the convening of its “multi-disciplinary” research partners from distinct academic disciplines (Example 5.2.A.3). Similarly, a tribal board manager of Partnership A characterized the community tribal board in terms of the “multidisciplinary” roles that board members played within the overall tribe (Example 5.2.A.2). Among overall members, the academic principal investigator in Partnership D stated that the partnership brought together “around the table for the first time ever” constituents from distinct backgrounds from lay health work to environmental health (Example 5.2.A.1). These examples suggest that partners regarded this characteristic as a group attribute of functional value to the partnerships.

Organizational affiliation

Variation in organizational affiliation refers to the extent to which individuals vary in their primary affiliation with professional organizations (e.g. institutions, non-profit organizations, or community board) involved in the partnerships. It was identified among overall partnership members and within community members. For example, the PI and director of research collaboration in Partnership E explained that the funders’ requirement to work with a “research-intensive” partner motivated him to find potential collaborators with a university affiliation (Example 5.2.B.1). The resulting partnership was unique because it was led by a tribal-affiliated nonprofit organization rather than a research institution. Within community partners, an evaluator of Partnership F referred to a network of community partners and community-based organizations that evolved over time (Example 5.2.B.2). Such networks included community members, representatives of a housing-focused organization and members of an organization devoted to women’s housing and economic development. These examples demonstrate that

this characteristic was perceived to be an intrinsic characteristic of the partnership's organizational structure.

Skillset of partners

Variation in the skillset of partners refers to the extent to which individuals vary in specified skills that they brought to the partnership. It was identified among overall partnership members and within community members. A focus group participant in Partnership B stated that the partnership brought together members with different capacities such as grant writing and immersion within the focal communities. (Example 5.2.C.1). In some cases, interviewees recognized the range of skillset that community members distinctively offered to the partnerships. For example, a community member in Partnership G admitted that the functional differences between native sign language users and non-native sign language users made it more difficult to work together cohesively (Example 5.2.C.2). However, the individual asserted that non-native sign language users could offer the ability to caption (despite lacking interpretation skills). As shown, partners were attuned to variations in skills-based contributions that individuals offered to the partnerships.

Research approach or viewpoint

Variation in research approach or viewpoint refers to the extent to which individuals vary in the viewpoint of or approach to the conceptualization or implementation of community-based research. It was identified specifically among research members. To illustrate, the academic PI of Partnership B perceived that his distinct role as a healthcare provider serving Chinese patients enabled him to acquire clinical experiences that he would not have if he were a non-clinical researcher (Example 5.2.D.3). In contrast to other partners, his clinical viewpoint provided a unique perspective on the participants being served. This example demonstrates that partners considered variations in research viewpoint to be a group-level asset in terms of diversifying research perspectives within the partnerships.

Community engagement

Variation in community engagement denotes the extent to which individuals vary in individual perspective or worldview regarding how to best engage in (or build relationships within) the partnerships. It was identified among overall partnership members and within community members. An academic member of Partnership A recalled a former staff member who exhibited a sense of “Indian rightism” that did not fit well with the “mainstream” viewpoint of other partners (Example 5.2.E.1). Alternatively, the community PI of Partnership C expressed that the participating mayors held competing concerns for their community constituents, such as interests in farmers or interests in businesses (Example 5.2.E.2). The interviewee believed that such variation in community engagement perspectives informed different levels of partnership engagement among these mayors. These examples highlight the role that variation in community engagement played in shaping group dynamics among partners.

Partnership maturation

Variation in partnership maturation refers to the extent to which individuals vary in the length of time (or duration) that individuals participate in the partnerships. It was identified specifically among overall partnership members. A community consultant in Partnership B explained how the limited experience of a new project coordinator made it a challenge (though one to which she could relate) for the more experienced consultant to have to take on a supervisory role (Example 5.2.F.1). This example points to the way in which this characteristic shaped the nature of interpersonal interaction and relationship building among partners, particularly in an effort to overcome maturation-related partnership challenges.

Sociocultural Characteristics of Group Diversity

Sociocultural characteristics of group diversity are characteristics of membership differences within partnerships associated with the individual, social, and cultural identities that

partnership members hold. The analysis identified thirteen salient characteristics: gender, race, ethnicity, tribal affiliation, religious or faith affiliation, age, personality, leadership approach, language use, physical disabilities, educational attainment, income, and geographic origin. Illustrative examples of these characteristics are shown in *Table 5.3*

[-Insert Table 5.3 here-]

Gender

Variation in gender, which emerged among overall partners and within community members, refers to the extent to which individuals vary in self-identified gender. Identified categories of gender consisted of males and females but did not include transgender or other non-binary gender categories. Interviewees used this characteristic to delineate social differences among partnership members. A research coordinator in Partnership C characterized the partnership social organization as involving four White academic women working with African American community with a focus on African American men (Example 5.3.A.1). Here, the intersecting characteristics of gender as well as race, and professional background of academic partners are juxtaposed with those of community partners. Alternatively, a focus group participant of Partnership E described how the tribal board made decisions to invite male community members to add male perspectives to the female-dominated board (Example 5.3.A.2). These examples demonstrate that partners paid attention to this characteristic and the way in which it shaped gender-related perspectives and overall group dynamics.

Race

Variation in race refers to the extent to which individuals vary in identified categories of race. It was identified among overall partnership members and within community members. Distinctions in racial categories (e.g. White or Black) were made in combination with ethnic categories (e.g. Latino) or associated language use (e.g. Spanish speaking). A community pastor in Partnership F admitted that, the contrast between his African American congregation

and the White PI made him question why the PI wanted to engage with him in the partnership (Example 5.3.B.1). An academic PI described the evolution of the focal community's political capacity as involving non-White Spanish speakers, who despite holding demographic majority, were being "overrun" (Example 5.3.B.2). These examples reflect the ways in which this characteristic shaped the mode of interactions, power relations, and intra-group perceptions among partners of distinct racial backgrounds.

Ethnicity

Variation in ethnicity, which was identified among overall partners and within community members, refers to the extent to which individuals vary in identifiable categories of ethnicity. This characteristic could also be expressed as linguistic variation that is tied to ethnicity of language users (e.g. Spanish-speaking Hispanics). As shown in the examples, interviewees regarded this characteristic as a marker of social differences among partners. A research program director in Partnership F stated that the "uneven" integration of Black and Latino communities into their faith-based initiative combined with their limited capacity to mobilize Latino churches led them to hire a Latino research partner who aligned with the culture of Latino churches (Example 5.3.C.1). Alternatively, a focus group participant in Partnership D pointed out that the predomination of Latinos in the focal community (relative to counterparts) was not only reflected the Census but also the marketing strategies of local businesses (Example 5.3.C.2). As illustrated, this characteristic offers contextual insights for understanding the sociocultural aspect of partnership organization and development of its outreach activities.

Tribal affiliation

Variation in tribal affiliation, which was identified among partnerships that served AI/AN communities, refers to the extent to which individuals vary in their affiliation with the tribes of Indigenous Peoples. It is also used to distinguish between tribal and non-tribal members of the partnership. The characteristic was identified among overall partnership members and within

community members. It reflects the heterogeneity of cultural identities, particularly in partnerships that collaborated with multiple tribes. An academic research coordinator in Partnership A asserted that inviting a second tribal community to the partnership resulted in “new partnership dynamics”, and despite the close distance between the both communities, brought “challenges at times and successes with each” community (Example 5.3.D.1). A research investigator in Partnership E described the community as encompassing “different tribes in the area” with which the interviewee’s organization had fostered working relationships prior to the grant submission (Example 5.3.D.2). As such, this characteristic has implications for culturally nuanced interactions and interests among partners of different tribal backgrounds.

Religious or faith affiliation

Variation in religious or faith affiliation refers to the extent to which individuals vary in their affiliation with religion, faith, or spiritual beliefs (including identification with religious congregations). It is also used to distinguish between individuals who do not identify as members of any faith and those who do. It was identified among overall partners and within community members. This characteristic informs the mode of group interactions particularly within partnerships that used faith-based interventions. A focus group participant in Partnership F explained that despite faith differences between a non-religious research coordinator and his religious community counterparts, partners were able to “let go of their religious dogmas and ideas” and connect with one another under a collective partnership vision (Example 5.3.E.1). Alternatively, an academic research coordinator in Partnership C described the organization of the community partners as involving “tiers” of advisory staff among at least two different churches (Example 5.3.E.2). As shown in the examples, this characteristic reflects variations in structures of community-based organization with distinctive institutional and cultural identities.

Age

Variation in age refers to the extent to which individuals vary in age, age cohort, or generation. It was identified among overall partners and within community members. As illustrated in the examples, partners or community members who differ in age offer distinct perspectives to the partnerships. A community co-PI in Partnership A recounted that a tribal partner, despite being much younger in age compared to the rest of the group, was able to willingly contribute the unique perspectives of youths to the partnership (Example 5.3.F.1). An academic PI of the same partnership asserted that hosting the tribal canoe journey allowed the community to unite “elders and...middle aged folks and the youth” in the interest of pursuing substance use prevention (Example 5.3.F.2). These examples highlight the relevance of this characteristic to the promotion of intergenerational perspectives and engagement of partners across the lifespan.

Personality

Variation in personality, which emerged specifically among overall partnership members, refers to the extent to which individuals differ in their outward personalities (i.e. as perceived by other members). It informs variations among partners in communication styles or personal approach to interpersonal interactions. A research co-investigator of Partnership B commended the ability of the partnership PI to “corral a good crew” by contrasting a soft-spoken partner who (presumably) “[recruited] a lot of bodies” with another assertive partner who excelled at “getting things done” (Example 5.3.G.1). As illustrated, variation in personality is tied to diversified mode of interactions and the quality of relationship building among partners.

Leadership approach

Variation in leadership approach, which was identified among overall partnership members, refers to the extent to which individuals vary in leadership approaches or styles. Interviewees made distinctions in leadership approaches among partners who assumed

leadership positions. A community PI of Partnership D recounted that the new academic PI could not “compete with” another community leader’s purported dominant style and that his dominant leadership position “just doesn’t work in my money” (Example 5.3.H.1). As such, this characteristic influenced members’ navigation of power relations within the partnerships.

Language use

Variation in language use refers to the extent to which individuals vary in their linguistic abilities, including the use of sign language (e.g. American Sign Language or ASL), as perceived by other members who are proficient in that language (e.g. native ASL users). It was reported among overall partners or within community members. A focus group participant in Partnership B explained that the partnership’s conscientious translation of intervention material benefited from having a team of “Mandarin speaking and Cantonese speaking background” (Example 2.1.1). Such linguistic heterogeneity of this team reflects the inclusion of “people from different parts of China basically ... [and] different Chinese culture.” Interviewees also made social distinctions between individuals who use a language from birth and those who learn to use the language over their life course. A community partner in Partnership G described that the community included people who are native users of sign language, including “deaf people, hearing children of deaf adults, and...sign language interpreters” as well as professionals “who use sign language who are not included in the community” (Example 5.3.I.2). Based on this distinction, defining who is a community insider depends on the extent to which an individual uses sign language as his first language. These examples suggest that this characteristic is indicative of differences in social and cultural identities of the language users involved.

Physical abilities

Variation in physical abilities refers to the extent to which individuals vary in their physical abilities and disabilities. Based on the partnerships reviewed, it was used to denote differences between partners who are of hearing and partners who are deaf. Distinctions were

also made between community partners who were born deaf and those who lost their hearing over the life course. The examples illustrate the influence of this characteristic on partnership dynamics. A community partner in Partnership G noted that engaged partners, including “deaf and hearing people” and individuals with a range of experiences in deaf education, reviewed the curriculum “with an eye for language information, accessibility, whether or not something would be easily teachable” (Example 5.3.J.1). It could be inferred that such variation offers diversified perspectives that could be beneficial to curriculum development. This characteristic is not only indicative of social differentiations among partners but also of the unique range of capacities offered by partners of distinct physical abilities and disabilities.

Educational attainment

Variation in educational attainment refers to the extent to which individuals vary in educational training or credential. It was identified among overall partnership members and within community members. Differences in educational attainment at a particular time was perceived to shape the experience of partnership interactions. An academic research coordinator of Partnership B recalled the sense of intimidation she experienced as a PhD student relating to the academic PI who completed a medical degree and residency from prestigious universities (Example 5.3.K.1). Despite such intimidation, she acknowledged that the PI was open to everyone’s viewpoint. Alternatively, a focus group participant in Partnership G conveyed how “hit or miss” they were in achieving adequate representation of diverse community experiences by distinguishing between those who attained higher education and those who did not, and between those who understood research processes from those who were new to them (Example 5.3.K.2). As illustrated, partners considered this characteristic to be a marker of intragroup differences in social status and social capital.

Income

Variation in income refers to the extent to which individuals vary in income or in socioeconomic indicators tied to income, such as differences in standard of living. It was identified among overall partnership members and within community members. For example, A health department PI in partnership D referred to a “power differential” attributed to differences in salaries among partners which led the partnership to increase community oversight as a form of resource sharing (Example 5.3.L.1). Alternatively, this characteristic reflects the income-based social gradient among community members. A community partner in Partnership B explained that, a demographic shift within the partnership community led to a shift in the scope of the partnership to accommodate the needs of low-income Mandarin speakers in addition to those of high-income Cantonese speakers (Example 5.3.L.2). These examples illustrate the ways in which this characteristic shapes the direction of partnership dynamics and actions that address socioeconomic differences among partners.

Geographic location

Variation in geographic location refers to the extent to which individuals vary in regional or place-based affiliation (e.g. rural vs. urban), and place of immigration origin. It was identified among overall partnership members and within community members. The examples illustrate how this characteristic shapes the experience of partnership interactions. A community staff member of Partnership C highlighted the existence of “power differential” between primarily academic partners who are in the city and primarily community members who live in the focal rural area (Example 5.3.M.1). This inequity was mitigated when partners engaged in partnership activities and by “taking it to the university.” Alternatively, a tribal board staff member of Partnership E distinguished between a tribal community center and the surrounding areas in terms of access to tribal services, which was complicated in part by driving distance and road

conditions (Example 5.3.M.2). As such, this characteristic is indicative of differential access to resources and capacities of relevance to partnership functioning.

B. PERCEIVED BENEFITS AND CHALLENGES OF DIVERSITY WITHIN CBPR

RQ.1.2: *In what ways do stakeholders perceive characteristics of group diversity to benefit or impede the collective functioning of the partnerships?*

In this section, I describe the ways in which partnerships acquire distinctive benefits from differences and similarities among partnership members in characteristics of group diversity. I also describe multiple challenges faced by partnerships from differences among members in characteristics of group diversity. I did not find notable challenges of similarities among members in characteristics of group diversity. For each benefit or challenge, I provide two illustrative excerpts from the interviews.

Benefits of Membership Differences in Group diversity

I identified six partnership benefits of having members who differed from one another in characteristics of group diversity. These benefits consist of drawing upon unique partnership expertise, leveraging partnership expertise for research implementation, novel partnership perspectives, outsider position or stance on partnership, promoting group cohesion, and relating across partnership differences. Illustrative examples of these benefits are shown in *Table 5.4*.

[-Insert Table 5.4 here-]

Drawing upon Unique Partner Expertise

One of the key benefits of having an organizationally diverse partnership is the ability to draw upon the unique expertise offered by its members. Partnerships benefited from sharing or exchanging skills, actions, input, or social connections offered by distinct functional capacities of

their members. The characteristics of group diversity that were identified to co-occur with this benefit include variations in organizational affiliation, professional backgrounds, and skillset. The examples showcase the ways in which partnerships realized collective achievements by leveraging the range of professional and organizational variations of their members. A focus group participant in Partnership F characterized this partnership as a “real marriage between research, a legal component, and...community voice” (Example 5.4.A.1). The interviewee also stated that, at the different periods in its history, the partnership was able to profit from the legal, research, or community expertise of its partners. The engagement of multiple perspectives in this professionally diverse partnership facilitated its transformation of research findings into legal action.

Alternatively, a community co-PI in Partnership A highlighted the unique functional expertise of its partners to support the argument that being native was not as crucial to partnership collective functioning (Example 5.4.A.2). The interviewee recalled that an “outsider” non-Native community partner effectively trained native and non-native counselors for the intervention’s wellness, which the interviewee attributed to a “[willingness] to hold back and wait your turn.” The partner’s contribution of unique skillsets, when combined with the practice of cultural humility, was able to empower both Native and non-Native partners for the intervention activities. Hence, membership differences in functional characteristics of group diversity made it possible for the partnerships to draw upon their distinctive areas of expertise to achieve collective action.

Leveraging Partnership Expertise for Research Implementation

I distinguished the benefit of unique expertise for implementation of research activities (i.e. from the above benefit) because interviewees distinguished partners’ contributions in this area from those of other domains of partnership activities (e.g. conceptualizing the intervention). Partnerships with diverse membership, particularly in terms of functional characteristics,

benefited from members' facilitation of research implementation within the partnership communities. The range of implementation activities included cross-cultural adaptation of research activities, translation of research question to a novel community context, and other activities of community outreach within the focal communities. To illustrate, a focus group participant in Partnership B expressed an appreciation for the culturally relevant expertise of the community-based partnership organization, who leveraged their "hands-on experience with the community" to adapt the intervention to the "cultural differences" within the focal Chinese population (Example 5.4.A.I.1). In this case, the professional expertise of partners from different organizations helped incorporate effective outreach strategies to make the intervention "understandable and applicable to the real people who really want to outreach".

On the other hand, a director of the research collaborative in Partnership E appraised the ways in which the tribal-based advisors helped "inform us...about what the situation is like on the ground at each of our three tribal communities really exceptionally well" (Example 5.4.A.I.2). To qualify his perception, the interviewee explained that the tribal council "can provide some really valuable feedback on feasibility, or to tweak tentative design and methods to a much better fit [to] the local surroundings..." The range of professional and institutional perspectives of tribal council members promoted this partnership's ability to make the interventions applicable to distinct contexts of tribal communities. As such, membership differences in functional characteristics enhanced the implementation successes of partnership research activities within the focal communities.

Novel Partnership Perspectives

Partnerships gained novel insights or perspectives from their members that were diverse with respect to such characteristics as organizational and professional variations. The emphasis of this partnership benefit is on information exchange or sharing: partners profited from novel perspectives that they would not have otherwise acquired in organizationally homogeneous

partnerships. Interviewees perceived that access to novel perspectives could optimize the collective functioning of the partnerships. For example, a community PI of Partnership D recognized that individuals who share similar cultural background with the focal community could offer “free disposition” that others did not possess (Example 5.4.B.1). However, having partners of different cultural backgrounds provided the ideal “richness” because “if it’s on one side or the other side, then that doesn’t work.”

A story shared by a partnership tribal health administrator in Partnership E showed that exchange of novel information promoted long-term collaboration (Example 5.4.B.2). The interviewee was approached by an academic researcher (of distinct professional background) for assistance with research review. Her ability to offer “feedback and input that [the researcher] would not have ever gotten [by other tribal leaders]” fostered a positive relationship between the researcher and her community counterparts. These examples highlight the contributions of novel partnership perspectives to the long-term functioning of these partnerships.

Outsider Position/Stance on Partnership

Partnerships benefited from the availability of outsider positions from members of distinct functional and sociocultural backgrounds that could be useful to completing the tasks at hand, such as project evaluation. The emphasis of this benefit is on the reported value of having a partner capable of maintaining a more neutral stance towards partnership dynamics. For instance, a research PI of Partnership F appraised the participant-observer role of a university-affiliated researcher: “she was enough of an observer that she could give us feedback on...how things were going, but enough of a participant that she was really invested in the success of what we were doing” (Example 5.4.C.1). The unique professional and organizational background of this partner provided this partnership with access to the partner’s informative evaluation of partnership processes and embedded commitment towards partnership goals.

Alternatively, a tribal board staff member of Partnership E found remarked non-Native outsider researchers or students were more cooperative because “[they] want to go by what the tribe wants to do, and they’re willing to follow our procedures and everything” (Example 5.4.C.2). In contrast, she considered some native researchers to be “problem children” because she found herself reminding them to follow research protocol put in place by the tribal leadership. In this example, individual researchers who share a similar tribal background may overlook culturally appropriate practices for tribal research partnership compared to non-tribal researchers who may be committed to complying with these processes. As such, membership differences in functional and sociocultural characteristics provided informative outsider perspectives and commitment to conducting contextually appropriate partnership activities.

Promoting Group Cohesion

Partnerships benefited from enhanced group cohesion attributed to inherent aspects of group differences. The co-occurring characteristics of group diversity include both functional characteristics (e.g. variation in professional backgrounds or skillsets) and sociocultural characteristics (e.g. variation in tribal affiliations). To qualify this benefit, interviewees referred to the values of inherent group differences, such as the notions of “not one size fits all” and “similarity does not always work.” For example, the community PI of Partnership B partly credited his perception of positive partnership experience to the partnership recognition that “each person holds a very different knowledge and experience that a lot of times no other person will hold” (Example 5.4.D.1). He elaborated:

It’s actually pretty amazing how so many people hold different pieces of the puzzle, from the person who is a good relationship builder with community to the person who has knowledge of health promotion to someone who has specific knowledge around a specific research method to a good leader/facilitator.

The ideal mix of professional background and skills, along with the practice of respecting partner's contributions, promoted this partnership's overall experience because it benefited from multiple problem-solving capacities of its members.

Alternatively, the collaborative setting of the partnership fostered group cohesion among partners who had previously not collaborated with one other to this degree. An academic PI of Partnership C characterized the partnership as a "venue" that "enable people to [exchange] some of the skills and other kinds of things" (Example 5.4.D.2). This partnership offered a collaborative network for community partners of distinct organizational backgrounds and, in effect, improved relationships within the focal communities. These examples support the notion that membership differences in functional and sociocultural characteristics promoted group cohesion, particularly when the partnership profited from the range of functional assets of its members.

Relating across Partnership Differences

Partnerships benefited from the ability to relate across cultures, values, personalities, or other characteristics of group differences among members. The examples showcase the positive connections fostered among partners of distinct backgrounds in functional (e.g. variation in professional backgrounds) as well as sociocultural characteristics (e.g. variation in faith-based affiliations). An academic PI of Partnership C remarked that her partnership fostered a working relationship between two pastors from different churches who had never worked together previously (Example 5.4.E.1). She considered this connection to be "a step forward" because "[i]f we can help them to figure out ways to work together, then even after our grant is over, they will have that." This example suggests that this partnership helped members of distinct religious affiliations connect with one another in a way that would not have been possible without this collaborative effort.

In addition, a promotora (community health worker) in Partnership D stated that one of the strengths of the partnership was that it afforded community partners with access to representatives of the public health department (Example 5.4.E.2). Such “access” allowed the department to “hear the community’s concerns at their jobs...[and] more than anything, they were able to go and say, “Here’s what’s going on in the community,” and they can advocate for us with policy makers.” The collaborative effort of the partnership helped the public health department understand the concerns of focal communities first hand and motivated them to advocate on their behalf to policy makers. As such, the union of members who were functionally and socioculturally diverse in partnerships helped bridge novel social connections among partners as well as promote the partnership’s appreciation for and advocacy of the interests of the focal communities.

Benefits of Membership Similarities in Group diversity

I identified two specific benefits of having partners who are similar from one another in characteristics of group diversity. These benefits are discussed separately from previously discussed benefits because they arise from having multiple members who share or align in characteristics of group diversity. The benefits consist of acquired cultural insider contexts of partners and embeddedness within the partnership communities. Illustrative examples of these benefits are shown in *Table 5.4*.

Acquired Cultural Insider Contexts of Partners

Partnerships benefited from acquired emic or cultural insider perspectives of partnership communities as a result of having partners who shared similarities mainly in sociocultural characteristics (e.g. variations in race, tribal affiliation, or preferred language). This cultural insider context involves in-depth understanding of the social, cultural, historical and larger political-economic contexts of the communities. Access to cultural insider contexts helped

partnerships foster interpersonal connections in a manner that is consonant with partnership communities, leading to trust and buy-in among partners. The examples demonstrate that such acquired insider context fostered positive relationship building among partners. A research program director in Partnership F cites a cultural saying “He who feels it, know it,” to convey her perception that People of Color serve as the best advocates for communities of colors (Example 5.4.G.1). Her assertion supports the notion that partners’ alignment in racial minority backgrounds offered a shared understanding of racialized experiences among partners and promoted the partnership’s advocacy for communities of color.

Similarly, a community tribal coordinator in Partnership A explained that having a Native-identified research partner afforded the partnership with “her experiences with the communities beforehand” that promoted “initial buy-in” and “willingness to listen” from the partnership community (Example 5.4.G.2). Moreover, the partner also demonstrated “genuine concern and appreciation...[to] get her as far.” This example supports the notion that alignment in tribal affiliation between the research partner and community members led to her initial acceptance by community partners due to her insights of tribal experiences. Thus, the acquisition of cultural insider contexts from sociocultural alignment of partners provided the partnerships with foundations for successful partnership experiences.

Embeddedness within Partnership Communities

Partnerships benefited from shared embeddedness within partnership communities among members who shared similarities in place-based characteristics of group diversity (e.g. variations in tribal affiliation or geographical location). Individual embeddedness within partnership communities resulted from long-term experience of living or participating in the focal communities, regardless of the individual’s sociocultural background. Such embeddedness helped promote relationship building and collective achievement. To illustrate, an academic PI of Partnership A recalled the fact that the community partner grew up in and took a leadership

position within the tribal community afforded her with personal connections with tribal leaders (Example 5.4.H.1). The interviewee also remarked that the presence of another research partner created an intimate connection with the tribe “to the point where people have mistaken her as a tribal member or a tribal employee.” The community embeddedness of these two partners served to enrich the positive relationship between research and tribal partners.

In another example, a community pastor in Partnership F was impressed with the passion of a community-based partner who lived in the partnership community for over two decades and who expressed a “passion” for community recovery after the events subsequent to the civil rights movement (Example 5.4.H.2). According to the pastor, the research partner “made me believe that I should be involved in [the partnership] as well, even if she was not part of his congregation.” This partner’s long-term residence and investment in the community supported her vision for community revitalization and persuaded the pastor to engage in partnership activities. Hence, the shared community embeddedness of partners helps promote the success of relationship building and enhance the perceived commitment of partners to the wellbeing of the focal communities served.

Challenges of Membership Differences in Group diversity

I identified seventeen partnership challenges that were attributed to differences among members in characteristics of group diversity. Analysis identified the following challenges: internal tension within partnerships, including personality-rooted partnership tension and membership turnover; social distance, including distrust of scientific approaches, community vigilance of partnership activities, racial bias, and gender bias; balancing interests among partners; lack of awareness of community context; ambiguity in partnership role, including ambiguity in representing partnership community; communication barriers; lag in partnership processes; discomfort with partnership tasks; and variable participation among partners,

including variable input solicitation from partners. Examples of these perceived challenges are shown in *Table 5.5*.

[-Insert Table 5.5 here-]

Internal tension within partnership

Partnerships experienced internal tension among members, including overt or hidden conflicts; acts of resistance against partnership activities; and frustration or anger among partners associated with these tensions. These tensions were rooted in membership differences in functional (e.g. variation in organizational affiliation) or sociocultural (e.g. variations in race or gender) characteristics of group diversity. As shown in the examples, these tensions could lead to disengagement of members from partnership activities and promote mistrust among them. A focus group participant in Partnership D remarked that, in the aftermaths of a race-related conflict (elaborated in example 5.5.2.I.II), the promotoras “closed down” to partnership engagement (Example 5.5.1). They did not “access the community” and limited their partnership involvement to “just coming to meetings.” The interviewee also felt that the community partners “didn’t work together enough [with academic and county partners] in the same place” to rebuild trust from these conflicts.

Interpersonal tensions prior to the partnership existence was perceived to complicate collaboration efforts between research and community partners. A research investigator in Partnership F recounted the challenge of partnering with a specific church because of perceived misunderstanding regarding one partner’s involvement in “stealing money from the coffers” leading to her being “thrown out of her job” (Example 5.5.1.B). However, the church “had finally made peace” and agreed to engage in the partnership. As such, internal tensions among partners of distinct functional or sociocultural backgrounds, when left unresolved, could limit the collaborative achievements of the partnerships.

Personality-rooted partnership tension

I distinguished personality-rooted partnership tensions as a special case of partnership tensions because they emerged as a prominent partnership challenge in the interviews. Partners reported instances in which internal conflict or disagreements arose due to differences in personalities, leadership styles, or interpersonal approaches to the partnership. These conflicts hindered the equity of partnership decision-making and collective action. A community PI of Partnership D maintained that the partnership “wasn’t as much a collaborative effort” when a community partner assumed the leadership role (Example 5.5.1.1.A). She asserted, “he kind of shut off everybody, ‘cause he wanted [promotoras] to take the lead. But his own leadership style disrupted their being able to take the lead; so he stayed the leader.” The community partner’s incongruent leadership approach not only made him an ineffective representative of the promotoras, but also deprived the partnership of opportunities for successful collaboration.

Alternatively, a research partnership coordinator of Partnership F described a partner who “cannot take constructive criticism” leading to “a strain on it to the point where we had to be called by our director” (Example 5.5.1.1.B). However, the interpersonal tension had reportedly been resolved. These examples highlight the notion that partnership conflicts rooted in personality differences among members adversely compromised the cohesion and participatory environment of the partnerships.

Membership turnover

Membership turnover was identified as the most severe consequence of internal tensions within the partnerships. Partners disclosed that certain individuals resigned from the partnership due to differences in personalities or in leadership approaches among its members. A community PI of Partnership D explained that a combination of incongruent leadership style of the new partner (as detailed in 5.5.1.A) and inadequate input from the university partner influenced the decision of a partner to drop out over the course of the

partnership “Cause she felt, “This is not going anywhere” (Example 5.5.1.II.A). The loss of this individual over personality conflicts reaffirmed the interviewee’s assertion, “personalities cannot be taken out of the dynamic.”

Membership turnover also arose from issues of balancing expectations of the partnership with competing priorities of the individual. An academic researcher of Partnership C recalled that one of the former partners “had a lot going on in her personal life,” which led to conflicts in fulfilling partnership expectations and an ensuing conversation in which “lot of words shared, some of them angry, and all sorts of things” (Example 5.5.1.II.B). Ultimately, the interviewee believed that the individual left in part because of her inability to navigate “all of the things that we’re dealing with in the community and her personal life.” As illustrated, membership turnover resulted from the partnership’s inability to resolve interpersonal conflicts within the partnership and from divergence in individual approaches to partnership engagement.

Social distance

Social distance was experienced among partners of different organizations, professions, place of educational training, among other affiliated social structures. Perceived social distance was partly conveyed through the notions of “us vs. them” or lack of sense of belonging in the partnership. To illustrate, the community PI of Partnership B recounted the changing nature of community perception of the partnership university (Example 5.5.2.A). In the past, the institution was perceived as “an organization that will come, do the research, and then leave.” However, this perceived distance diminished over time and that the university had been increasingly regarded “as a partner in the research.”

Social distance was also conveyed through a sense of social separation, including those between community members and community-based partnership organizations. A community program development staff in Partnership A elaborated on the “stigma” against the tribal wellness program, in which the intervention is housed, “that’s where you go if you’re in trouble

with drugs...some people don't want to be seen walking into it, or out of it" (Example 5.5.2.B).

The stigma against the wellness program led community partners to clarify that the focal intervention is "sort of about drug and alcohol abuse prevention ...But your kids are not wellness clients." These examples reflect the ways in which the reputation of or collective experience with an organization (to which individuals are affiliated) gave rise to the perception of social distance among partners.

Distrust of scientific approaches

Perceived distrust of scientific approaches was identified as a key challenge of group diversity particularly as it occurred between community members and researchers of distinct sociocultural backgrounds. This theme encompasses skepticism of the research design (e.g. merit of randomization) or of the salience of partnership research to the communities. A focus group participant in Partnership G explained that the experience with a researcher among deaf community members had been "You want to fix me" (Example 5.5.2.1.A). This assessment arose because medical advances had historically focused on addressing the "problem" of inability to hear. However, the interviewee stated,

The community we work with doesn't care about fixing their ears. They are fully competent, actualized human beings. They have a full and rich communication in American Sign Language... there's always this sense of...What do you want to research about me? Are you going to try to tell me that there's something wrong with me?

Here, the direction of scientific research that reinforced the deficiency-based regard of deaf people shaped the resistance of deaf community members against partnering with researchers of hearing majority.

On the other hand, the director of a research collaborative in Partnership E recalled the perception of mistrust between tribal communities and university researchers, "people still bring out examples of helicopter research and [were] never heard again. "And drew our blood for whatever reason...And we never heard about it. And we don't know where our samples are"

(Example 5.5.2.I.B). Such conjured mistrust urged the research partner “to show that we are different, that our approach, our values are different from those of our academic partners.” In this case, perception of scientific mistrust motivated the research partners to demonstrate that their research approach was different from the tribal experience of “helicopter research.” Nevertheless, perceived distrust of scientific approaches could hinder community partners from engaging in the partnerships, particularly when individuals viewed that the scientific activities of the partnerships reflected research exploitation by the social majority.

Community vigilance of partnership activities

Partners made references to community vigilance of partnership activities among partners (typically those of distinct organizational, professional or educational backgrounds), or among community members with different levels of partnership engagement. This theme focuses on the sentiment of watchfulness, reservations, and caution against partnership activities. Resistance of the potential of partnerships to support community empowerment could challenge the engagement of specific community partners in partnership activities. An academic researcher in Partnership C described such perception:

when African American men or women start doing something that really looks like it's going to make a change, other African American people sometimes look at that and either want to put a stop to it or don't trust exactly what they're doing (Example 5.5.2.II.A).

Here, the vigilance of African American community members against the participation of other members (with distinct community engagement approaches) in partnership activities dampened trust and cooperation among overall community members.

On the other hand, initial perception of community vigilance against partners of distinct sociocultural backgrounds could lead to favorable long-term partnership relations. A tribal coordinator in Partnership E asserted that the tribal partners were not concerned about the “alphabet soup” of educational credential that research partners may bring. She insisted on the

importance of positive interactions with tribal community partners members in that “If I hear that you’re really rude out in the community ... and it will get back to us...and it’s like, “Well, who do you think you are?”...” (Example 5.5.2.II.B). In this example, the interviewee’s reservation against the partner’s distinct educational credentials served to redirect the focus of her assessment from the merits of educational attainment to the quality of partnership interactions. While community vigilance against partners of distinct sociocultural backgrounds placed initial burden on the task of relationship building, overcoming such perception could lead to sustained collaboration in the long run.

Racial bias

Racial bias emerged as one of the most common forms of perceived biases among partners of distinct sociocultural backgrounds. Partners articulated perceived actions, events, or statements indicative of bias emanating from racial differences among partners or among community members. Pre-existing racial bias could impede the ability to foster productive relationships among partners of distinct racial backgrounds. A tribal research board member in Partnership E recounted his concerns regarding a request from a White researcher for information related to his community (example 5.5.2.III.A). He explained his decision to decline,

T]he [tribal term for] white man... [tribal term] means “fat.”...It means “greedy.” And that’s the only word that we have for white man... it’s very judgmental. But it’s said ... in that perspective it’s done because of the past that we’ve had. So that’s really where there is a lack of trust, even for that word.

Here, the White researcher’s assertive nature of his request was not culturally respectful to the tribal partners, which served to reinforce the partner’s distrust against White outsiders.

In extreme cases, tensions rooted in racial bias severed interpersonal interactions and trust among partners. A focus group participant (representing promotoras) of Partnership D described a conference poster presentation experience which the academic partners “they took

us, the Mexicans...to show them as their subject” (Example 5.5.2.III.B). The interviewee recounted this catalytical event,

One person forgot the chips and salsa, and he got really, really mad because ... he wasn't part of the pony show for the funders... after that it was just fighting, fighting, fighting.” While the partnership engaged in training to address racism, the interviewee asserted, “two or three people walked out because they said they were not ... they didn't have a racist bone in their body; so they used their privilege and walked out.

In this case, the perception of racial bias against the promotoras stimulated interpersonal conflict, mistrust, and division among overall members. Although a racism training was attempted to repair these tensions, such effort made little difference to the proliferating intragroup hostility. Moreover, certain partners even avoided addressing their racial biases, which further strengthened the perception of “their privilege.” Hence, racial bias could undermine efforts to establish trust, and when unresolved, damage collaborative relationship and equity among partners of distinct racial backgrounds.

Gender bias

Gender bias among partners was identified as one of the main challenges in partnerships with inherent variation in gender. Partners described actions and statements indicative of bias due to gender differences among partners. Gender bias may intersect with racial or other sociocultural biases to produce intersectional division among different constituents of the partnership. An academic PI of Partnership D partly attributed the “friction” between the community PI and other partners to gender disparities within the partnership,

[E]ven asking for an MOU, as I say, where you don't trust me ... “Well, no, we don't trust you.”... the lead PI was not from the community (Example 5.5.2.IV.A). They would sabotage the community PI because he was male and the network was with the women.

These incidents led the PI to use her position “being female” to neutralize gender-based tensions. Here, the distrust of specific members against the community PI was framed as an issue of power imbalances between the sole male PI and majority female partners.

Gender bias also informed engagement barriers within the partnership communities. A county PI of Partnership C characterized the historical context of community engagement, “[A] lot of the organizations that worked in the [community] were male dominant; and I think that there is some bias from ... Of, “You females, you ... trying to change us and our power ...” (Example 5.5.2.IV.B). The growing representation of females within the community leadership was met with the perception of undermining male-dominated control of power. These examples highlight the contributions of gender bias to perceived power imbalances within the partnerships and the partnership communities.

Balancing interests among partners

The challenge of balancing different priorities, interests, or approaches to research partnership was identified among members of distinct functional and sociocultural backgrounds. These concerns include questions about balancing between the priorities of research partners and those of community partners, addressing the variable worldviews of different partners, and negotiating the most suitable scientific approach (e.g. best-fit theory, framework, or methodology) for the partnerships. This challenge co-occurred with both functional (e.g. organizational or professional variations) and sociocultural characteristics (e.g. ethnic, hearing, or faith-based variations). The challenge of balancing interests among partners raised concerns about the usefulness of the partnership in improving inequitable conditions experienced by the focal communities. An academic research coordinator of Partnership C admitted that the partnership intervention addressed the need of partnership communities for “food access and the gardens” and the need of researchers to “improv[e] health and nutrition of African Americans [with one of the state’s] highest rates of cardiovascular disease” (Example 5.5.3.A). However, she questioned whether the community needs being addressed reflected structural needs including “jobs,” “institutional racism,” and “hopelessness.” While the intervention served as “a

catalyst to begin those conversations,” it also engendered expressed frustrations, “Well, we really just need jobs ... “So why are we doing gardens... ?””

Alternatively, perceptions of prioritizing the agenda of researchers over that of community partners complicated efforts to foster partnership equity. A promotora in Partnership D described the shift in partnership control from the university and county partners to community partners (Example 5.5.3.B). He felt that the university and community partners were uncomfortable with addressing

these [professors’] need to have tenure ... and the [county’s] needs to show that they’re doing something for the community” and resulted in a “paternalistic relationship that is like, “We’re taking care of you guys. We’ll take care of this.” And we’re like, “No, we can put our names on the papers to we’re doing the research or whatever else.

Although the community partner’s appointment to the PI role served to transfer leadership to community partners, it reportedly generated tensions around the ownership of research or publications. As illustrated, the inability of partnerships to balance interests among partners, particularly socially marginalized members, complicated partnership attempts to create equity in participation and in resource sharing.

Lacking awareness of community context

Lacking awareness of or appreciation for the cultural, historical, and social structural contexts of the partnership communities was identified among partners of distinct sociocultural and professional backgrounds. Partners expressed concerns that individuals of distinct backgrounds lacked contextual “savviness” for appropriate cultural practices and conventions. In addition, they did not effectively adapt interpersonal actions to the dynamic cultural context of the focal communities. This theme co-occurred with mainly sociocultural characteristics (e.g. variations in tribal or racial identities) as well as certain functional characteristics (e.g. variations in professional backgrounds). Partners explained that this challenge undermined effective relationship building. A tribal board member of Partnership E recalled a meeting he had with a

non-tribal researcher of distinct racial background to discuss cultural considerations for her research, “So she walks in, and she walks in with a sack of flour...And she sits down, and she’s just looking at the floor, and she starts talking” (Example 5.5.4.A).

After an amicable exchange, he shared the following advice with her,

You need to understand something.” I said, “We have a high rate of diabetes here on the reservation. White flour is very dangerous for us, and it’s a lot of carbohydrates in it.”

And I said, “You want to bring flour next time?” I said, “Bring some maybe wheat flour, and that might be more healthier.” I said, “Better yet, bring some fresh vegetable[s] or fruit. If you want to bring a gift and talk to people, that’s the protocol you want to use.

This example highlights the complexity of mastering community contextual awareness in that, even if gifting flour intended to satisfy the researcher’s act of tribal gift-giving, the individual lacked the savviness to consider the contemporary prevalence of diabetes and tailored her choice of gifts accordingly.

Alternatively, specific partners or stakeholders of distinct organizational or professional background exhibited inadequate awareness of community governance structure, including tribal government structure. An academic co-PI of Partnership A described an initial disagreement she had with members of the university IRB,

What the [organization] IRB is requesting or requiring is not going to happen.” ...And I said, “Well, you know that this is a sovereign nation that we’re talking about... And she said, “Well, what does that mean? What does that mean, ‘sovereign nation’? (Example 5.5.4.B).

The IRB member’s lack of awareness of tribal governance threatened to limit the ability of research partners to conduct research in a way that respects tribal sovereignty. As such, lacking awareness of partnership community contexts challenged the quality of partnership collaboration, and in certain cases, hampered the effectiveness of partnership research in advancing community well-being goals.

Ambiguity in partnership roles

Partners conveyed their sense of ambiguity in taking on their partnership roles and responsibilities. This challenge encompasses questions regarding whether individuals should prioritize the needs of academic or community member. It also describes perceived limitations, constraints, or general lack of clarity in assuming one's role. This theme mainly co-occurred with functional characteristics, such as variations in professional or organizational backgrounds. Articulations of this challenge reflects the programmatic ambiguity of the intervention that at the time. A community consultant in Partnership B described her struggle with defining her partnership role,

It wasn't clear ...whether it was my role or the [organization's] role to come up with a curriculum for the nutrition aim... and plus, because I'm a consultant, so I'm also bound by the time [and] the amount of hours that they give me (Example 5.5.5.A).

Her experience is indicative of an ambiguity in navigating the tasks of the partnership at its formative stages of development compounded by the constraints of her consultancy role.

Alternatively, role ambiguity brought to light issues of ensuring shared ownership of activities among partners. For Partnership C, an academic PI described concerns that arose when the community partners did not have needed information to start the intervention's garden,

Is it OK to say, "Here's what we need to plant," if we all decide together, "Here are the kinds of things we want to plant." Can somebody here, an academic partner, actually craft some of that for them? Or should they be responsible for doing everything? (Example 5.5.5.B).

These questions reflect the researcher's reservation about overstepping their role in the participatory setup of this partnership. Hence, ambiguity in partnership roles illuminates underlying concerns about the extent to which the partnerships were structured to foster equitable contributions among partners.

Ambiguity in representing partnership community

Partners expressed ambiguity regarding the representation of culturally diverse communities being served by the partnerships. This challenge encompasses questions about the definition of the focal community, or whether community partners truly represent the focal communities. These questions were particularly relevant when the focal community was heterogeneous in backgrounds of sociocultural relevance. A member of the deaf community partner panel elaborated on the different needs between individuals with late or other hearing loss and individuals who self-identified as deaf and that the former groups “don’t even accept who they are or know who they are” (Example 5.5.5.I.A). Another interviewee explained,

[Members with hearing loss] still function as people who are culturally hearing in the majority culture... the people who are on this group didn’t sign, didn’t have any interest in sign, and then they showed up at our meeting.

These communication and representation issues reportedly caused delays in the proceedings of partnership meetings. As such, the cultural incongruence of partners who had acquired hearing loss with deaf partners engendered “cultural conflict” among community partners.

Ambiguity in community representation arose when partners who represented more than one organizational entity faced with the challenge of determining which entity they should prioritize. The Community PI in Partnership C conveyed this concern, “I have had to ask myself that question a lot, being a part of the national community committee and its leadership. I [also] work for the university.... How is that you can serve two?” (Example 5.5.5.I.B). Nevertheless, she affirmed that the university partner “needed somebody in the community to help them know what the pulse of the community was,” and that attaining a graduate degree would empower her “to help my university partners know what the needs of the community are, and be able to address those needs.” Ambiguity in community representation placed an additional burden in terms of balancing the scope of community advocacy or of responsibilities among partners.

Communication barriers

Partners experienced difficulties in conducting interpersonal dialogue, expressing personal voices or concerns, or in challenging other individuals. This theme includes the challenges around language translation or interpretation. The theme co-occurred with both functional characteristics (e.g. variations in professional background) and sociocultural characteristics (e.g. variations in personalities or in language use). The examples demonstrate partners' perceived difficulty in "speaking up" to partners of distinct professional or educational backgrounds. A community consultant of Partnership B related to the intimidation and unease another community partner felt in communicating, "[it] sometimes is actually very intimidating as in for a community group to be sitting with six or seven PhDs in the group. I felt uncomfortable speaking up" (Example 5.5.6.A). She also hypothesized a cultural rationale for such discomfort, "Maybe the Chinese is: we don't want to rock the boat. I don't want to bring up [the] ... controversy." Her challenge of "speaking up" was shaped by differences in educational credentials among research partners and the Chinese cultural notion of "not rocking the boat."

Partners also faced difficulties navigating between the academic language of research partners and the language of community or other non-academic partners. A member of the deaf community panel in Partnership G explained the challenge of processing research materials that used the language of research and written in English despite having attained a graduate degree in English,

Sometimes I knew that I was missing information in some of those instances...there's a lot of reading expected, and I get overwhelmed with that....And it's very hard on the deaf community (Example 5.5.6.B).

These communication challenges rooted in barriers in interpersonal communication or in lack of comfort in the language of research being used threatened to limit the equitable contribution of members to the partnerships.

Lag in partnership processes

Partners conveyed a notion of time delay in the engagement of partners in partnership processes. Interviewees reported lengthiness in implementing specific partnership activities due to different modes of engagement among partners. This theme co-occurred with functional (e.g. variation in maturation) and sociocultural (e.g. variation in hearing abilities and personality) characteristics. A community partner co-PI of Partnership A stated that she needed to clarify a misconception of a partner from another tribal community, “I hear all the stuff you’re doing, and you’re so far from where we are” (Example 5.5.7.A). In fact, she recalled a similar experience of “slow process” of intervention development, “our meetings used to be, “OK. We’ve got our timeline. And, OK, how are we going to do this?” Although both communities experienced process delays, the progress made by one community that started earlier in time could create a perception that one community is “falling behind” the other in terms of project development.

Partnership lag could also be experienced as barriers in orienting new partners to partnership activities. A community PI of Partnership C stated, “they don’t know the history or the way that we’ve been operating that kind of thing, and they try to come with something new, it causes us to have to step back” (Example 5.5.7.B). She justified the accumulation of knowledge held by experienced partners, “They have a good sense of what works best, what has worked best in past years, or whatever that looked like, versus another level of experience coming from outside of the community.” For this partnership, differences in partnership maturation hindered the progress of the partnership because newer partners threatened to overtake the existing community wisdom that the partnership had fostered. Perceived lag in partnership processes thus reflect deviations in partners’ viewpoints about the benchmarks and means to achieve partnership goals.

Discomfort with partnership tasks

Partners commonly articulated insufficient experience, discomfort, or unfamiliarity with the tasks and responsibilities of the partnerships. This challenge describes perceived discomfort with understanding or applying partnership theories and methods, lack of familiarity with the conduct and processes of community-based research, or unease with the expertise of community partners. The challenge co-occurred with both variations in sociocultural characteristics (e.g. variation in faith affiliation or education attainment) and in functional characteristics (e.g. variation in professional or organizational background). Perceived discomfort with partnership tasks could lead to a sense of disempowerment with respect to the contributions of partners. A community coordinator of Partnership B wished that researchers were aware that,

we or I, coming from the community, we're not sure what the researchers are really looking for; or we feel like ... or they want certain things, and they think that it should be easy to obtain...Like certain kinds of information from the community...But when we are the ones who implement it, sometimes it's challenging (Example 5.5.8.A)

The community partner attributed the challenge in implementing partnership research activities to the complexity of research tasks that she considered "intuitive" to researchers.

Alternatively, partners experienced unease in structuring productive dialogue about social issues within the partnership. The county PI of Partnership D admitted that the partnership had initially proposed "to address economic democracy and racism right off the bat" but that "we didn't name them, and we also I don't think had the skills or the tools to address them that we do now. I think we've grown a bit" (Example 5.5.8.B). The perceived inadequacy of partners' capacities to engage in these discussions cost the partnership an opportunity to address underlying inequities experienced by community members. Discomfort with partnership tasks impeded partners from optimal engagement in resolving issues that underlie inequitable partnership dynamics.

Variable participation among partners

Partners articulated the ways in which members of the partnership or focal communities variably engaged in the tasks, actions, or meetings required of these partnerships. Interviewees conveyed the emergence of logistical barriers (e.g. distance or time) that impeded consistent engagement in partnership activities. Variable participation mainly co-occurred with functional characteristics of group diversity, such as organizational and professional variation, and specific sociocultural characteristics, such as variation in faith affiliation and in engagement approach. Interviewees emphasized that inconsistent participation among community partners of distinct organizational backgrounds challenged the implementation of partnership intervention. A focus group participant in Partnership F described the challenge of engaging all church partners in the intervention,

Although the church is part of the coalition, just getting them to make time to make the change. That's where the coordinator's supposed to come in. Because each church has a coordinator. And that coordinator's supposed to be able to have access to the pastor to say, 'OK...This is what we need to do...' And a lot of time that doesn't happen...[perhaps] because of the chain of command. (Example 5.5.9.A).

Variation of organizational cultures within these churches impeded the ability of the designated church coordinator to coordinate with the church pastor as intended.

Furthermore, the scientific design of the partnership intervention activities engendered different perceptions of intervention engagement among those involved. A community PI of Partnership B conveyed this notion in characterizing perceived differences in “ownership to the project” between lay health workers of the intervention group and the control group,

the lay health workers, the intervention group, seems to have ... might feel a greater locus of control, as opposed to the control group, which is just recruiting participants...[and] serving as a liaison for another person to do the actual education work (Example 5.5.9.B).

The research design of randomized control trial led to divergent perceptions of project ownership among community health workers of the two intervention arms. Therefore, variable participation among partners, whether attributed to project design or heterogeneity of community organizational structures, threatened to compromise the partnership's intent of fostering equity and achieving as a collective unit.

Variable input solicitation from partners

Partners conveyed the inconsistency with which their input was solicited in the development of the partnership intervention. This theme mainly co-occurred between organizational affiliations. Inconsistent input solicitation reportedly dampened the perceived equity of partnership contributions. An academic co-PI and practitioner of Chinese medicine in Partnership B characterized the initial phase of his organization's involvement as being "second class citizen...that was invited to the big table...and [being told] "This is your piece, and we'll help you do it the right way" (Example 5.5.9.I.A) However, he insisted, "You just keep contributing until people get the value of what you bring to the table." In this case, the initial perception of exclusion by this partner was overcome by his commitment to sharing his input to the intervention development.

Alternatively, A member of the deaf community panel in Partnership G asserted that their contribution to the partnership only took place after the intervention had been conceptualized (Example 5.5.9.I.B). They stated that the research partners "[a]re asking us and we're answering questions, but we might be there after the horse is out of the gate...they never proceed with an idea without checking with us first." The lack of consistent input solicitation throughout the research cycle engendered the perception that community partners were co-opted into a pre-determined idea of how to improve their wellbeing. Thus, inconsistent input solicitation among members of distinct organizational or professional backgrounds undermined the participatory climate that the partnerships attempted to create.

C. DIVERSITY ENGAGEMENT PRACTICES IN CBPR

Aim II: To understand partnership strategies, underlying ideological positions and institutional structures that attend to group diversity within the partnerships

RQ.2.: What partnership strategies, underlying ideological positions, and surrounding institutional structures do stakeholders perceive to attend to group diversity within the partnerships?

I identified a plurality of processes, strategies, competencies as well as underlying values, norms, and structures that attend to the implications group diversity within the partnerships. These diversity engagement practices (DEP) are classified by the socio-ecologic level at which they occurred, including individual level, group or interpersonal level, and structural level of the partnerships. These practices could be organized into: i) esteem-building and functional promoting practices that address the impacts of functional variations among partnership members, and ii) transcultural bridging practices that address the impacts of sociocultural variations among members. For each of these major categories, I delineated elements of the practices by the level of which the practice occurred. For each of the practice, I provide two illustrative excerpts from the interviews.

Practices of Promoting Partnership Esteem and Functional Capacities

I identified a multitude of practices at multiple socio-ecologic levels surrounding the partnerships that address the implications of variations in functional characteristics. These practices elevate the esteem of members for conducting the activities of the partnership and the assets of inherent variations in functional characteristics among members. Illustrative examples of these multi-level practices are shown in *Table 5.6*.

[-Insert Table 5.6 here-]

Individual Practices of Promoting Partnership Esteem and Functional Capacity

I identified one specific individual quality or characteristic of the individual that is pertinent to the promotion of partnership esteem and functional capacity. This identified individual characteristic is individual assertiveness.

Individual Assertiveness

An individual sense of assertiveness or risk-taking on behalf of one's community well-being was identified as a pertinent quality for promoting partnership esteem and functional capacity. This identified theme co-occurred with both functional characteristics (e.g. professional differences) and sociocultural characteristics (e.g. education or personality). Cultivating individual assertiveness could result from a partner's experience of social marginalization. A member of the deaf community partner panel explained that the growing up in "an oppressed situation where we weren't expected to be heard from" reinforced the interviewee's "responsibility to ask questions, to ask for clarification if we're not sure about things" (Example 5.6.1.A). Here, the individual's lived experience of being silenced reaffirmed his perceived duty to speak up and ascertain information from the participatory research partnership.

Developing individual assertiveness was thought to be crucial for partners of distinct professional backgrounds to be understand the domain of research. A community coordinator in Partnership B justified the importance of "[proactiveness] in asking questions, "you may not understand what [researchers are] talking about...[nor] the rationale behind it...[but] it's important for someone who's coming from the community's side to be proactive in asking questions to find out what's really going on" (Example 5.6.1.B). Developing the habit of asking questions could help community members attend to the processes and rationale of research in order to advance their collective interests. Hence, individual assertiveness was instrumental for

partners, particularly those from socially marginalized backgrounds, to advance their contributions on behalf of their represented constituents.

Group-level Practices of Promoting Partnership Esteem and Functional Capacity

I identified eleven interpersonal and group-level partnership practices that serve to promote the functional capacity or esteem of members. These functional promoting practices consist of building esteem of partners, such as fostering an esteem-promoting partnership environment, providing education to enhance partner engagement, validating partner's worldviews, and respecting partner's contributions; focusing on partnership tasks, harnessing capacity of partners; sharing ownership of project activities, including shared ownership of project interests; collective group decision-making; and enhancing partnership capacity of cultural insiders.

Building esteem of partners

Partners highlighted the importance of fostering individual esteem of partners to engage in the tasks, roles, and responsibilities of the partnership. This theme articulates the experience of building esteem of individual partners. The theme co-occurred with functional characteristics, such as professional, organizational, and partnership maturation variations, and with the sociocultural characteristic of variation in educational background. Interviewees shared the experience of building their own esteem to effectively advocate their constituents over time. A focus group participant of Partnership B admitted to asking such questions as, "Should I say that? Should I not say that?" And at what point should we take a more active role?" (Example 5.6.2.A). Nevertheless, the interviewee experienced "that process of growing and being more courageous or something to speak up more...for what I think I know about my community." With

prolonged partnership engagement, partners' esteem to "speak up" and share community insights appeared to increase over time.

Partners also referred to efforts to build esteem of specific partners to carry out tasks in a manner that enhanced their equitable contributions to the partnership. The academic co-PI of Partnership A recalled her invitation of community partners to take part in conference presentation (Example 5.6.2.B). Initially, specific community partners held reservations, "I'm not comfortable doing that. I don't have the experience or the knowledge." Nevertheless, she insisted that the partners could assist in answering questions or developing a presentation slide. Following this experience, she reported an improvement in the esteem of partners, "In fact, a couple of times... I wasn't able to make it and they presented without me. So I think that's like an indicator of a power shift." This partner's effort to empower community partners to deliver conference presentations leveled the power imbalance in that it redistributed the power-laden locus of research expertise (i.e. in dissemination) towards the community partners. This in turn enhanced the partners' esteem in spearheading activities of the research domain.

Additionally, I identified four sub-categories of partnership practices or process that fostered the esteem of partners for partnership activities: fostering esteem-promoting partnership environment, attaining education to enhance partner engagement, validating partner's worldviews, and respecting partner's contributions.

Fostering an esteem-promoting partnership environment

Partnerships engaged in efforts to foster a mutually supportive environment that elevated the esteem of partners for conducting partnership activities. Partners developed principles, processes, approaches, and culturally relevant modes of group participation to help other members speak up, challenge one another, and participate in partnership tasks with confidence. To illustrate, a football analogy reported by the academic PI of Partnership C was employed to convey the notion that partners "didn't like the idea of needing help" (Example

5.6.2.1.A). Metaphors of coaching staff, quarterback, and game plan instilled the notion that the “quarterback needs to follow the game plan that was determined by all of the players and the...coaching staff.” This analogy helped partners agree on a method to improve the communication of partnership concerns, “If they see something that says, “This play isn’t going to work” They call it...an “audible.” That has now become part of our language.” The use of a real-life analogy that resonates with partners’ identification with the rules of sports effectively promoted a collaborative environment by empowering partners to communicate their personal needs as team players.

In addition, community partners articulated that they benefited from the creation of an esteem-building partnership environment. A focus group participant in partnership F appraised such environment, “I think what this group has done is created that kind of environment that people are not ashamed or afraid. They feel that they can speak and will be heard” (Example 5.6.2.1.B). She contrasted the confidence-promoting setting of this partnership with one in which “you sit there and don’t open your mouth and you don’t say anything ... because you know it’s not going anywhere.” The esteem-building environment of this partnership enabled partners to take an active role in sharing their perspectives. As such, fostering an esteem-building group environment through mutually agreeable principles, processes, and culturally relevant modes of participation helped empower partners to engage in a participatory manner.

Education to enhance partner engagement

Partners reportedly sought out learning opportunities to enhance the skills and knowledge of overall members. These opportunities included formal research workshops, organized research conferences, language training courses, or informal exchange of knowledge to understand community-centered worldviews, such as Indigenous pedagogy. As illustrated, research partners initiated didactic opportunities to improve the research competencies of partners with distinct professional backgrounds. A research facilitator in Partnership F organized

a training effort to address inconsistent survey data collection practices among community site coordinators (Example 5.6.2.2.A). The interviewee dedicated the session to showcasing incomplete data across community sites and conveying his central message,

I'm not just bugging you because I want to, but really I know all the things that are happening on the ground, and it's unfortunate that the data's not showing it. And when ...we get to publish, and it's not doing justice to all the work that you're doing.

This example demonstrates how the didactic initiative of research partners instilled the importance of conducting research in a methodical manner among community partners.

In addition, partners organized bi-directional learning opportunities to exchange specific skillsets or insights offered by respective partners. An academic research coordinator in Partnership A described such mutual learning experience in which the research partners “lent our expertise with things like data analysis collection, grant funding processes, all reports... human subjects training, these kinds of things” while the tribal partners “train us [through] cultural seminars... to really deepen the understanding and trust and respect by kind of sharing knowledge with each other” (Example 5.6.2.2.B) These mutual learning experience not only embodied the participatory spirit of CBPR, but also validated the functional contributions of knowledge, skills, and perspectives offered by partners of distinct organizational and cultural backgrounds.

Validating partners' worldviews

Partners conveyed the practice of validating and acknowledging the utility of the perspectives, narratives, and worldviews of partners. This theme also includes a collective recognition that each constituent cultural worldview offers a unique value to the partnership. This theme most commonly co-occurred with the sociocultural characteristic of age and with the functional characteristic of professional background. The examples illuminate that this principle underlies the notion of shared partnership expertise. The academic PI of Partnership D advocated for her consideration of community knowledge as “a capacity model” rather than “a

deficit model” (Example 5.6.2.3.A) She brought up an assertion of her capacity model, “it always comes from a model that acknowledges the foundation of knowledge that comes from community.” In validating the expertise of community partners, the interviewee emphasized that the community partners are indeed the fundamental source of knowledge for the community-based partnership.

Moreover, validating partners’ perspectives was thought to support long-term relationship building. A community coordinator in Partnership B explained why she perceived the partnership to lack power conflicts, “we have different expertise; so for different issues, we go to different people for the answer...[M]ost of the time we respect the other party’s expertise, and we accept what they suggest” (Example 5.6.2.3.B). This partnership operated on the recognition that each member brought specialized expertise that the partnership could benefit from. The resulting balance of expertise among partners promoted overall partnership cohesion. Therefore, validating partner’s worldview helped enhance partnership equity and cohesion.

Respecting partners’ contributions

Partners articulated the practice of respecting the distinct functional contributions of overall members. This practice of respect involves fostering mutual respect, trust, and appreciation of functional contributions among partners. This theme mainly co-occurred with functional characteristics (e.g. organizational variation) and sociocultural characteristics (e.g. educational variation). Interviewees considered the value of respecting other individual contributions to be a guiding principle of participatory partnerships. An academic project coordinator in Partnership B asserted, “I think that’s really important for whoever’s joining this partnership to respect...every team member—no matter what their position or role is, no matter how much education degrees they have—really adds something to the project” (Example 5.6.2.4.A). Here, the partner advocated for the importance of respecting the functional contributions of partners regardless of differentiation in educational credentials.

On the other hand, partners, particularly those with lesser educational background or professional training, found this practice to empower their contributions to the partnerships. A community partner in Partnership A posited, “Even though they are very highly educated people, I’ve never been made to feel like I wasn’t valued. [laughs]...I think that mutual respect and trust is what works really well in our partnership.” The partner’s sense of intimidation due to educational differences was mitigated by the sense of mutual respect and trust fostered within this partnership. Respecting partners’ contributions served to enhance functional esteem and minimize feelings of intimidation among partners due to disparities in professional or educational backgrounds.

Focusing on partnership tasks

Partners conveyed the functional utility of organizing of partnership group structure, activities, and discussion around the actual tasks of the partnerships. Interviewees asserted that the development of task-based partnership delegation optimized the functional contributions of partners with distinct skillsets. An academic project coordinator in Partnership B recounted the partnership’s experimentation with the delegation of research activities among its partners (Example 5.6.3.A). Creating sub-teams based on each of the research aims was not effective “unless there was some sort of product or goal tied towards it that was very concrete.” Eventually, the development of sub-teams was “more driven by on an ad hoc basis of what needs to be done.” The organic structure of this partnership around ad-hoc deliverables rather than pre-imposed scientific goals promoted the engagement of partners in activities that accomplish discrete objectives of the partnership.

Similarly, the active delegation of partnership tasks by perceived partnership leaders enhanced the perception of functional utility among partners. According to a tribal program manager in Partnership A, the leading researcher “automatically kind of assign or ask for assignments...So everyone has a role. But she makes sure that roles are assigned...” (Example

5.6.3.B). The facilitation approach of this partner helped support the notion that all partners have distinct roles to contribute to the partnership. Hence, the structure of partnership activities around mutually agreeable tasks promoted the functional capacities of its members by ensuring that each member had tangible roles in achieving the partnership's goals.

Harnessing capacity of partners

Harnessing the capacities of partners was one of the key identified practices that promoted the functional capacities of partnership members. This practice involves holistic understanding of the functional expertise, skillset, and resources of distinct partners and designation of appropriate partnership tasks that correspond with their unique functional capacities. This theme mainly co-occurred with functional characteristics, including professional, skillsets and organizational variations. It was also identified to co-occur with some sociocultural characteristics, including variations in race and education attainment. The examples demonstrate partners' appreciation of and ability to leverage specific insights within the partnerships to address complex challenges within the focal community. A research investigator in Partnership E recognized the unique expertise for implementation issues among different tribal communities,

I quickly realized what I thought was going to really work out for this community is not working out...And so we ended up going back to them to say, "We're running into challenges right here...What can we do to ...?" ... if you allow yourself to say as a scientist, "You know what? I need your help. This can't be done without you. We need your input to some of these things that we're having to deal with," ... it puts this all on the same playing field, sort to speak (Example 5.6.4.A).

The interviewee's solicitation of tribal community expertise for community-oriented solutions combined with her relinquishment of knowledge expertise balanced the knowledge-based locus of partnership control.

In addition, interviewees described the way in which partners recognized the unique skillset of different individuals and delegated partnership tasks concurred with their

competencies. A community pastor in Partnership F characterized the exemplary qualities of his research partners,

[Partner] and her team were able to help identify what it was she needed us to do ...she would sit down and say, "Look. Let's talk about this. Now, [pastor], I need you to do A, B, C. [pastor], I need you to do this, that, or the other. You have gifts of speaking; and so when we have a public speaking I need you to plan a speech"...And we played right into it (Example 5.6.4.B).

This example demonstrates the ability of the partner (and research team) to recognize the functional assets of specific members and to assign the appropriate tasks accordingly. As a result, this process shaped the perception that [community partners] are treated as "equal partners." Thus, effective harnessing of individual capacity allowed the partnerships to maximize their functional strengths, as well as foster a sense of partnership equity.

Sharing ownership of project activities

Partners articulated the practice of sharing or yielding ownership of partnership activities, such as shared engagement in publication or dissemination of project findings. This theme mainly co-occurred with functional characteristics (e.g. organizational variation) and sociocultural characteristics (e.g. faith or race variation). Interviewees described the way in which shared ownership of project activities helped encourage partners' ownership of higher-level activities. A research investigator of Partnership E described such trajectory of tribal ownership,

[H]ow they were able to translate colorectal cancer into [tribe], in their own language...They came up with the name for the [coalition]... they felt like they needed that coalition; so that was their idea...And they wanted to become nonprofit; which is now what they're doing...[Y]ou'll only serve a small role in this, but they're going to be driving force of it. They're going to take it over (Example 5.6.5.A).

This experience suggests that tribal community partners' ownership of discrete project activities could pave way for partners to "take over" more complex initiatives.

Similarly, an academic researcher in Partnership C recounted a similar evolution of ownership among its members,

Over time, we've changed your model where that rotates. People who... take charge. There is ... more a collective sense of responsibility... We have a new member of our team...who...has really gotten to a point where he is able to contribute (Example 5.6.5.B).

Here, the practice of rotating ownership of partnership tasks enhanced collective ownership among partners, particularly among those with shorter partnership maturation experiences. These examples support the notion that sharing ownership of project activities built the esteem and momentum of partners to take charge in key activities.

Sharing ownership of project interests

Partners articulated the notion of shared ownership of project interests among partners. In contrast to the previous theme, this practice involves sharing or soliciting partners' agenda, theoretical or methodological approach. The theme mainly co-occurred with functional characteristics (e.g. organizational or professional variations) and sociocultural characteristics (e.g. variation in faith affiliations). At a broader level, partners articulated the principle of distributing resources among partners to carry out their own agenda of project initiatives. The Research Program Director in Partnership F described such vision,

[T]here are people there who have the necessary talent, the necessary expertise; and what we have done is partner with those people, provided resources for them, provided them with some sort of structure to then take the initiatives...that then makes them [and] us able to replicate it in other organizations (Example 5.6.5.1.A).

This recognition of partners' functional assets combined with the principle of sharing project resources empowered community partners to spearhead their own well-being initiatives.

Moreover, engaging partners in incorporating cultural elements into intervention components elevated their sense of ownership and esteem in carrying out partnership activities. An academic research coordinator in Partnership A stated,

[T]hey feel it belongs to them because they developed the curriculum and it reflects their cultural values and traditions and beliefs...I think many elders have felt that they've become involved in meeting with the youth during the curriculum. It's their knowledge that's being handed down to the youth and they feel that they've been asked for input, and that's the elder community in general...I think what made the difference was just always going to the community and asking for their input every time (Example 5.6.5.1.B).

The invitation of community elders and youths to share their cultural perspectives elevated their sense of curriculum ownership and motivated their participation in curriculum development. As illustrated, shared ownership of project interests improved the engagement of individuals in partnership activities as well as helped sustain their capacity to contribute cultural insights within their communities.

Collective group decision-making

Partners conveyed the practice of group decision-making processes to garner collective agreement from (the majority of) its members. A few partnerships or partnership affiliated groups (e.g. tribal council) adopted a consensus building model in which decisions could not be move forward without the agreement of all its members. Interviewees stressed the utility of collaborative decision-making of the partnership in promoting participatory implementation of its activities. The academic PI of Partnership C was obliged to persuade several community partners of such importance,

[T]here are other things where they feel like, "Why do we have to talk to the coaching staff when we do these things? And we shouldn't have to. We should be able to make these decisions..."...We expect them ... to reflect on things together so that it's never one set of eyes that makes a decision...[I]f you change one thing in our structure, it has tremendous ripple effects. They can't be making a decision without reflecting collectively (Example 5.6.6.A).

Here, the research partner made the case for "collective reflection" by pointing out that decisions made with "one set of eyes" could have consequential partnership impacts on all partners' domains of responsibility.

Within specific partnership settings, partners were attuned to the use of consensus decision-making within partnership sub-groups to advance collective action. A tribal program manager in Partnership A explained such consensus process, “I don’t think we’ve ever had to vote. A lot of our decision making comes from our smaller groups, site-based decisions. ..They don’t push the decision or tell us even that it has to be done right now” (Example 5.6.6.B). This approach to decision-making optimized the unique expertise of sub-groups whose input was needed for specific decisions. The practice of collective decision-making helped partners leverage the functional expertise of members in taking actions as a collective unit.

Enhancing partnership capacity of cultural insiders

Partners advocated for building the functional capacities of individuals viewed as cultural insiders or culturally bridging individuals (to be discussed) to conduct activities of the partnerships. This theme mainly co-occurred with sociocultural characteristics, including variations in hearing abilities, racial backgrounds, and faith-based affiliations. Interviewees reflected the value of supporting the capacities of partners in the areas where they needed technical support to effectively conduct activities of the partnership. An academic co-PI of partnership A stated,

So part of my commitment and value and passion for this work is to support capacity at the tribal level, and...I try not to say “build,” because I believe capacity exists; and so I try to support it however I can, but to also support capacity at the institutional level to learn how to do work that they haven’t had to yet (Example 5.6.7.A).

This statement exemplifies the value of supporting growing areas of community insiders’ organizational competence to optimize their capacity to conduct community-based research.

Partners also provided professional advancement opportunities for community cultural insiders in the domain of research. An academic program manager of Partnership G described such capacity building-efforts, “We have probably 12 to 15 now community members who we employ. They’re really consultants... so they are actually formally hired through HR to work for

[institution], but they're all community members, all deaf" (Example 5.6.7.B). This partnership contributed to research capacity building of deaf community members by hiring them to work for the research institution as curriculum developers or translators. Efforts to promote the capacities of cultural insiders enhanced overall partnership functional capacity by improving the competence of partners to conduct partnership activities in the capacity as researchers.

Structural Practices of Promoting Partnership Esteem and Functional Capacity

I identified four structural-level institutions, practices, and underlying cultural ideologies that influence the promotion partnership esteem and functional capacities of the partnerships. These determinants are community or tribal board, coalition network of partners, community collective activism, and cultural risk-taking for community well-being.

Community or tribal board

Partners described the engagement of existing community health board, tribal board (in partnerships serving AI/AN communities), or other forms of community governing structure in conducting partnership activities. Interviewees described the ways in which the oversight of these boards enhanced community participation in the development and implementation of partnership activities. A partnership research coordinator in Partnership A described the oversight structure of tribal partners consisting of the tribal council and the tribe cultural board,

[The] cultural co-op has done more of the like detail approval of everything, where tribal council has been more of the larger decisions. [U]sually tribal council still has to approve it, but cultural co-op will do a lot of the sort of initial approval or reviewing, or these kinds of things. (Example 5.6.8.A),

The two-tiered tribal board structure ensured that tribal community partners were equipped with a dedicated board of subject matter experts to approve the content of the intervention and a broader governing board to make tribal executive decisions.

In addition, the reputation of community boards within the focal community was thought to benefit the partnership. The academic PI of partnership B emphasized such utility of a community-based research board,

“Certainly some of the more active researchers in Chinese American cancer control have gone through [Board]...I think the more [Board] has a reputation in the community...People are beginning to see the benefit of affiliating with [Board], because it's more of a trusted name” (Example 5.6.8.B).

The board's reputation within the communities afforded research partners with credibility when conducting research activities within the communities. As such, the partnership oversight of the community or tribal board served to enhance the capacities of community partners for activities of research and improve the credibility of research partners within the communities.

Coalition network of partners

Partners referred to the influential presence of an organized network or coalition of close-linked organizations affiliated with the partnerships. These networks also include a formal (i.e. established entity) umbrella organization of network coalitions with a dedicated purpose (e.g. health improvements of focal communities). As shown in the examples, interviewees described the ways in which these coalition network structures offered supplemental expertise, resources, and decision-making guidance. A focus group participant in Partnership E asserted that the umbrella organization made it possible for different community organizations to address barriers to cancer care within focal tribal communities,

[W]e have the [partner], [organization], who is also ... every time we do something ... because ... we're under their umbrella ... Yeah, because they're always supportive of everything that we do...Everybody ... as many people that we could get in were involved in all of this. And so, again, I really believe in the collaboration, the network (Example 5.6.9.A).

The consolidation of different community organizations under “their umbrella” enhanced their collaboration and outreach capacities to address cancer-related barriers (e.g. transportation) that could not be achieved with one organization alone.

Similarly, a promotora in Partnership D asserted that the coalition organization provided support for the representation of “community voice” (Example 5.6.9.B). He explained,

[T]he community’s voice was being heard by the partners pretty well ... through the [coalition organization]’ meetings. The [coalition] were holding a promotora meeting once a week...And the county partner as well as the university partner would attend, and they’d help us come up with us ... brainstorm together on issues to be researched, how to conduct the research, and let us know what resources they could offer...

For this partnership, the coalition organization offered a neutral ground for partners of distinct professional and organizational backgrounds to support the community partners for research. Hence, an organized structure of partners’ network coalition could empower community partners to achieve a collective agenda for the partnership.

Community collective activism

Partners referred to the organizational capacities, resources, or history of community advocacy or collectivism to realize social actions for community well-being. As illustrated, interviewees elaborated on how the collective mobilization and political activism of community partners augmented relevant capacities for the partnership. The community PI of Partnership B recounted a history of political evolution within the focal Asian American communities,

[T]he nonprofits that are here do a very good job of organizing and of identifying issues, and now being more vocal about them than previously. And it helps now that there’s greater political power with Asian Americans. So there’s some representation now on the board of supervisors... (Example 5.6.10.A).

It is implied that the enhanced political representation of Asian American constituents augmented the advocacy capacities of partnership organizations for health issues relevant to the partnership.

Alternatively, a community organization leader in Partnership F recounted the social mobilization that culminated in the formation of her housing organization,

[T]hen we dealt then with the abandoned buildings. Once we got the drugs off the street, then we went into their abandoned buildings. So we decided, “OK You want to go into the abandoned buildings? We’re going to take over these buildings.” So we began to form a housing company (Example 5.6.10.B).

The interviewee’s grassroots activism experience provided the momentum to establish her organization which lent housing expertise to this partnership. In this way, community collective activism strengthened the action-oriented contributions of community partners and the community impact of partnership activities.

Risk-taking for community wellbeing

Finally, partners underscored a cultural notion commonly held by tribal members of taking risks or progressive actions collectively to advance their communal wellbeing.

Interviewees stated that such risk-taking ideology motivated their interests in collaborating with other partners to advance collective wellbeing. A tribal program manager in Partnership A contrasted the perceived “cautiousness” of other tribal nations to the interviewee’s tribal values,

We are very willing to take risks, safe risks...We do a lot of programs where we’re leaders in the field...And so we have developed, as a tribe, a lot of partnerships first... we’re going to try things, we’re going to maximize our ability in different ways. I think that’s a really big reason why they were so accepting of this. (Example 5.6.11.A),

Such pioneering tribal value facilitated their willingness to proactively build connections with research partners even when there was a perception of risk in doing so.

Similarly, a tribal research board member depicted the community-level esteem-building influence of his tribe’s risk-taking ideology,

The vision of [Tribe]... they say we’re the crazy ones; we’re the radical, wild [Tribe]. And the reason because of that is because we’re not afraid to take that risk...And I think that because of our culture, our belief system, our belief in ourselves, that we are not just the

dumb Indian...If we're going to find any answer, it has to come from us if we're going to do something (Example 5.6.11.B).

The self-described "radical" vision of the tribe instilled a cultural imperative of searching for a collective solution that is grounded in the cultural knowledge of the tribe. Cultural risk-taking ideology elevated the esteem of partners in taking ownership of partnership activities in that it promoted their motivation and empowerment to find solutions for their community well-being.

Transcultural and Interpersonal Bridging Practices

I distinguished a plurality of multi-level partnership practices and determinants that focus on the implications of sociocultural variations among partners. These transcultural and interpersonal bridging practices have the primary function of relating across cultural and interpersonal differences among partners for mutual understanding, emotional connection, and realizing collective action. Illustrative examples of these multi-level practices as conveyed in the interviews are shown in *Table 5.7*.

[-Insert Table 5.7 here-]

Individual Practices of Transcultural or Interpersonal Bridging

I identified four key individual-level qualities, personal characteristics, or values that are relevant to bridging cultural and interpersonal differences. These characteristics consist of individual leadership competence, individual credibility, demonstrating heart or passion for the partnership, and individual cultural humility.

Individual leadership competence

Partners referred to a number of leadership qualities or skills that are perceived to enhance individual engagement with partners of distinct sociocultural backgrounds. Identified leadership qualities include trustworthiness, respect, fairness, strong ethics, empathy, flexibility,

authenticity, engaging personality, and sense of humor. As illustrated, interviewees assert that individual embodiment of these skills helped create and maintain a positive partnership environment. A community coordinator for Partnership B appraised the leadership qualities of the partnership PI,

[W]hen there are differences of opinions ... after a certain amount of discussion, he is able to just make the decision as the leader, which I think is also important, so that there is a definite direction for the partnership (Example 5.7.1.A).

The PI's ability to negotiate for "a middle ground" and arrive at a mutually supported leadership decision promoted an environment in which "everyone's opinion is valued."

Interviewees also described the ways in which an individual's leadership competencies facilitated his ability to build productive relationships with partners of different social backgrounds. A community pastor in Partnership F qualified the leadership qualities of its PI,

He has a unique ability to understand his role, his gifts, his talents, and abilities; and he brings that to the table, coupled with his deep, sincere compassion for people...many of whom do not have the power to speak for themselves ...and...the tools to articulate what they need...[he] can identify with that... (Example 5.7.1.B)

This PI's awareness of his personal assets and his compassion for others strengthened his ability to empower and advocate for individuals of socially marginalized backgrounds. Effective application of leadership competence among partners, particularly among partnership leaders, was instrumental to the success of partnership bridging efforts.

Individual credibility

Individual credibility and reputation within the partner's community was found to be a key quality of transcultural and interpersonal bridging. This theme co-occurred with functional characteristics of group diversity, such as professional and organizational variations, and with sociocultural characteristics, such as variations in education and age. Interviewees maintained that individual credibility facilitated the acceptance of partners within partnership communities. A community co-partner PI recalled the nearly "serendipitous" introduction of the key academic

partner to the tribal community, “He knew her ex-husband or something, but he knew her as a go-getter, that she was somebody who would work really hard; and if she wanted something, she was going to make it happen.” (Example 5.7.2.A). Although the academic partner was known through personal connections, her acceptance within the tribal community was aided by her known reputation as a hard-working and strong-willed individual.

Alternatively, the director of research collaborative in Partnership E elaborated on his community reputation to support his assertion that racial/ethnic alignment was less important to the success of partnerships. He stated,

I have the added history of having worked as a clinician on the front lines, but even before I engaged [tribal communities] here in any research; so I was already well-known, reasonably well-respected by most. And so that’s probably helped me too (Example 5.7.2.B).

His frontline clinical experience and reputation within the tribal community was more influential to his acceptance by the tribal community than his racial and tribal background. Individual credibility within partnership communities or network was thus an important facilitator of transcultural relationship building, particularly among those viewed as community outsiders.

Demonstrating heart or passion for the partnership

Partners advocated for the relational importance of demonstrating heart for the partnership, showing that other partners are in the partners’ mind or that their hearts reside within the partnership communities. Interviewees asserted that this characteristic was more important in earning community trustworthiness than one’s professional or skillset qualification. A community pastor in Partnership C brought up such notion, “People don’t care a whole lot about what you know ... until first they know how much you care. So...And especially in a ... people need to know that you have their best interests at heart” (Example 5.7.3.A). Accordingly, prior to offering one’s skills and expertise, a partner needs to show that their personal investment in the partnership community to earn trust by its members.

A partner's demonstration of heart also helped foster interpersonal connections and overcome individual sociocultural differences. A deaf panel community partner in Partnership G recounted such quality of the partnership PI,

He just does not sign. ...He tried; he really couldn't learn. But I have to say that he has such a good heart. He has such good intentions. He is extremely supportive of us. And I wish that more deaf people in the community could see him in action...and meet him and understand that... (Example 5.7.3.B).

This PI's display of "good heart" and "good intentions" militated perceived social distance between him and deaf community partners and fostered positive interpersonal relationships despite his inability to sign (i.e. a key aspect of deaf cultural identity). Individual display of heart and concerns for others was requisite to mitigating social differences and nurturing trusting relationships among partners of distinct sociocultural backgrounds.

Individual cultural humility

Individual cultural humility was one of the promoting qualities of transcultural and interpersonal bridging. This theme encompasses explicit references to the concept of cultural humility, defined by Garcia and Trevalon (1988) as a combination of self-evaluation and critique, desire to fix power imbalances, and fostering partnerships to advocate for communities and populations. There are two additional characteristics of humility that interviewees articulated. First, expertise-based humility involves an awareness that one is not superior because of his social position and a willingness to recognize and seek expertise to community partners who hold specialized knowledge of interest. Second, advocacy-based humility involves the notion of advocating for those with lesser power in research (e.g. community members) before oneself. Interviewees explicitly named cultural humility or embodiment of its characteristics as integral to their partnership bridging efforts. A community partner co-PI of Partnership A shared her perceived importance of cultural humility,

I like the term cultural humility...I think that [it] is one of the characteristics that is indigenous to my tribe ... I don't assume that I know every native person...and their reality, because I don't. I'm just one person here in the tribe...I'm willing to assume that they're the experts on themselves...I just want somebody who knows themselves, is willing to do the self-reflection and self-critique, and the training that they need to do; and the apologies when necessary to their clients (Example 5.7.4.A).

The interviewee regarded cultural humility as one of the integral tribal values that she embodied. Moreover, although she was a tribal member, she was willing to cede tribal worldviews to tribal community members. Her statement embodied the “self-reflection and self-critique” and openness to learning that she espoused as ideals of cultural humility.

In addition, the advocacy-based humility was demonstrated in partners' acts of putting the interests of communities before themselves. A focus group participant of Partnership E recalled,

When I put something in the paper or a poster, I'm always the last ... and my friend said, “Who made that poster? You're the last one. You should be the first.” it doesn't matter, because the [Tribe] ... and I remember grandma and grandpa ... used to say that when you're there for the people, you put them in front of you. They're the children, the families. You put them ... you're back here. Don't ever, ever put yourself up there, because that's what true leaders... they're over here (Example 5.7.4.B).

Here, the interviewee embodied advocacy-based humility by prioritizing the authorship of tribal partners before herself even if it meant she would relinquish the academic norm of primary authorship. Individual commitment of these characteristics of cultural humility helped mitigate partnership sociocultural differences and foster equity by prioritizing the cultural needs and expertise of other partners before oneself.

Group-level Transcultural and Interpersonal Bridging Practices

I identified fourteen group-level partnership practices that serve to bridge transcultural and interpersonal differences among partners. These group-level practices consist of having

cultural bridging individuals, demonstrated partnership commitment; demonstrated involvement in the activities of partnership communities; building common vision among partners and building an inherently diverse movement; fostering personal bonds among partners; fostering transparent partnership discussions, including dialogue on social differences and on accountability; openness to mutual learning; flexibility with partnership processes; creating culturally consonant partnership solutions; and the pursuit of cultural revitalization efforts.

Having cultural bridging individuals

Recruiting and maintaining cultural bridging individuals is one of the key practices for effective transcultural and interpersonal bridging. Cultural bridging individuals are partners who have insider knowledge, skills, connections, and credibility to facilitate relationships, dialogue, and actions among partnership members of distinct sociocultural backgrounds. This theme mainly co-occurred with sociocultural characteristics of group diversity, including variations in age, faith and tribal affiliations, and with functional characteristics, including variations in professional backgrounds and skillsets. Interviewees described the ways in which cultural bridging individuals promoted relationship building among socioculturally heterogeneous partners. An academic research coordinator in Partnership A appraised such qualities of the academic co-PI,

I like that our leader is native. She's not from either community, so it's not the perfect bridge.... She knows she's not from those communities...But, at the same time, her own experiences inform us, and she is the bridge...And she has educated us a lot, and she educates them...on how to deal with us (Example 5.7.5.A).

The native researcher espoused the cultural bridging ideals of the co-PI because she used her insider-outsider perspectives to inform Native community partners and non-Native research partners on how to interact with one another. The combination of self-awareness, insider perspective, and interaction skills made this leader an effective cultural bridging individual.

These qualities were also observed in a research partner of Partnership F, as described by the research PI, “When we brought [Partner] on, it was like this door just flew open...He’s just a wonderful person... [and] has this engaging personality, and he’s Latino; and he could walk into these places that we were unable to...” (Example 5.7.5.B). This partner’s affable personality and cultural insights helped the partnership earn trust through his role as a “trusted connection.” Having effective cultural bridging individuals helped these partnerships nurture trusting and mutually supportive relationships among socioculturally heterogeneous partners.

Demonstrated partnership commitment

Partners conveyed the practice of demonstrated group commitment to the collective goals and interests of partnership. This practice could take the form of partners’ fulfillment of partnership activities and follow-through of promised partnership obligations. This theme co-occurred with professional and organizational variations as well as personality variations. Interviewees asserted that shared commitment to partnership activities strengthened group cohesion among partners. A focus group participant in Partnership B shared their perceived team work ethic,

[T]hey’re all workaholic[s]... We communicate with each other through email...Our workday is Monday through Sunday, any time...I think it works so far. Because [we are] so devoted to this project and so committed (Example 5.7.6.A).

These demonstrated commitment fostered a sense of mutual dedication that bridged the connections of partners despite differences in organizational and professional backgrounds.

Alternatively, demonstrating commitment to partnership communities helped mitigate negative perceptions about research. The Research Program Director in Partnership F recounted being challenged by community partners when she came onboard,

One [partner]...said, “How long are you planning to be here?”..She said, “Because if you’re not committed to being here for a long time, don’t bother to come and meet with me.”...“ I’m tired of groups coming in...You helicopter in, you take what you need, and helicopter out (Example 5.7.6.B).

After persuading the partner that she was “was here for the long haul,” she reflected on a lesson she learned, “her thing was, “If you are embedded with us, we are more likely to see real change happen. We’re more likely to be engaged in an effort that is serious about that.” This encounter illustrates how demonstrating one’s commitment could alleviate concerns about the lack of project sustainability communities experienced in prior research efforts. Hence, demonstration of partnership commitment helped promote engagement of overall partners and overcome negative perceptions related to the domain of research.

Demonstrated involvement in the activities of partnership communities

Partners expressed the utility of engaging in the activities of the partnership communities. This theme includes voluntary involvement in activities of the partnership communities outside partnership research or physical immersion in these communities. This theme mostly co-occurred with organizational variation, and with sociocultural characteristics of variations in tribal affiliations and age. Interviewees maintained that partners’ engagement in the events of partnership communities helped gain trust and acceptance by community partners. A community partner of Partnership A qualified the community involvement of the co-PI,

She doesn’t just say she cares about tribal communities. She’s involved with the tribal communities. She volunteers...She comes to community functions. She shows that she has a very sincere interest; and that really is a factor in building up trust in communities (Example 5.7.6.1.A).

This co-PI’s record of engaging in community events helped validate her passion for the community and earn collective trust from tribal members.

Furthermore, interviewees advocated for the requirement that external researchers immerse in the partnership communities prior to conducting community-based research. Citing the examples of hearing priests who lived with a deaf family, a member of the deaf community panel justified such immersion,

I would want [researchers] to feel comfortable with us first ... before really initiating a research project...Any kind of a person who's in that role needs to be involved in the community they serve, or otherwise there's actually always going to be a wall, a separation (Example 5.7.6.1.B).

A hearing researcher's immersion within the partnership communities was thought to help the individual acculturate to the norms of deaf community dismantle the social and cultural "wall" (e.g. differences in norms of participation) between hearing and deaf individuals. Hence, involving oneself in the affairs of partnership communities was instrumental to building trust-based relationships among partners of distinct sociocultural backgrounds.

Building common vision among partners

Partners described the practice of cultivating and supporting a common vision to bridge sociocultural differences among partnership members. This theme was distinctively co-occurred with variations in racial and tribal backgrounds. Interviewees articulated the ways in which this practice helped promote a collaborative environment and mitigate intra-group tensions. A focus group participant of Partnership B stated,

I feel that we feel comfortable enough to challenge each other...But then I think we all have a common goal, and also a very similar passion that whether it is for the community, whether or not it is for the science (Example 5.7.7.A).

For this partnership, sharing common goals and passion promoted an esteem-building group setting that encouraged partners to challenge one another in a mutually agreeable way.

Similarly, the academic PI of Partnership D highlighted the utility of building common goals in mediating within-partnership tensions,

...The community, [Institution], and [Organization] had to keep ... looking at the grant and saying, "This is for the greater good...How do we get over these challenges?...This is what we need to do because it's going to help our community." ... "We got to get along to get this done (Example 5.7.7.B).

For this tumultuous partnership, a consistent reminder of the grant's objectives motivated partners to work towards resolving intragroup conflicts. The practice of building common partnership visions helped promote an esteem-building partnership environment and mitigate within-partnership conflicts attributed to divergent interests among partners.

Fostering an inherently diverse movement

Partners described the practice of framing partnership activities as an inherently diverse social movement. The practice frames the activities of the research partnerships as part of a larger social movement that affects members of distinct sociocultural backgrounds. Partners also advocated for the inclusion of diverse social members to optimize the activities of the partnerships. This theme co-occurred with mainly sociocultural variations in age and race. The examples highlight the influence of this practice on the collective mobilization of organizationally distinct partners. A focus group participant in Partnership F characterized the underlying diversity of the partnership movement,

They really see it as something that ...we're not going to be concerned that you're Catholic or you're Pentecostal...This is a movement, and the movement includes a very diverse group of folks... Somehow this issue has affected everybody that's at this table (Example 5.7.7.1.A).

Despite coming from distinct affiliations, the church pastors were united by the perceived notion that the partnership movement addresses structural inequities impacting all of its members.

Alternatively, a promotora in Partnership D attributed collective achievement of the partnership to age diversity of its members,

[T]he promotoras were a multi-generational tool. We had little kids at our meetings. Sometimes some of the little kids would attend ... the parents and older people, younger people ...We all live in [the community] (Example 5.7.7.1.B).

The incorporation of community residents of various age groups was viewed as an asset in terms of fostering a multi-generational perspective of the promotoras. Hence, fostering a diverse

social movement within the partnership could enhance group solidarity and functional contributions of its socioculturally diverse members.

Fostering personal bonds

Partners described the practice of building personal connections among partners. These efforts include sharing personal background or participating in social activities to build connections as friends or family members. This theme mainly co-occurred with sociocultural characteristics, namely variations in racial and tribal affiliations. Interviewees emphasized the cultural importance of building personal connections to achieve successful sociocultural bridging among partners. A tribal program manager described a relevant tribal custom,

[W]hen you introduce yourself, say what your background is...it's a tribal thing, because we all come from different tribes...But it extended out to the people who aren't tribal...they would share, "I'm non-Indian, but I have all these ties to ..." You're looking for the commonality in people. And if you feel that you can relate in some level, then it's important (Example 5.7.8.A).

The notion of introducing one's family lineage regardless of Indigenous status was advocated to allow tribal members to identify a common hereditary ground.

In addition, interviewees asserted that sharing personal information helped promote relationship building among partners. The research investigator of Partnership E recounted,

I think what really helped us initially was [partner] would just love to joke...At that first meeting he started teasing us because we're from a different tribe; and he was just like, "Oh, yeah. I remember them now" ...And it just really set back that environment where we could just talk and begin to figure out where these individuals we're coming from, their own personal experience (Example 5.7.8.B).

The community partner's humorous reference to the interviewee's tribal affiliation created a positive, informal environment in which partners could engage in mutual dialogue. Hence, fostering interpersonal bonds helped partners bridge sociocultural differences by enabling partners to bond with one another as fellow human beings.

Fostering transparent partnership dialogue

Partners elaborated on the cultivation of open, iterative discussions on partnership goals, activities, and other relevant aspects of partnership research. Such dialogue also includes transparent discussions on dynamics and challenges that occur within the partnerships. This theme co-occurred with functional characteristics (e.g. organizational and professional variations) and sociocultural characteristics (e.g. variations in tribal, hearing, leadership, and racial backgrounds). Interviewees described the ways in which this practice enhanced the quality of relationships among partners of distinct functional and sociocultural backgrounds. A community tribal coordinator of Partnership A explained the contributions of open dialogue to trust building,

I think we've been really good about being really open about the process and how we go about it and what's going to happen, and the ownership ... they know they have the ability to say, "no," at any part or entirely... (Example 5.7.9.A).

The openness of communication on processes and the right of tribal partners to override any decision elevated a collective sense of trust among research and tribal members.

Alternatively, an academic evaluator of Partnership F maintained that transparent partnership dialogue helped resolve partnership tensions in a productive manner. She recalled,

We had a very direct discussion at one of the [committee] meetings about why are we doing research in the first place, and what does it mean to do research, and why do we care about evaluation; and then we wrote up a sort of a [memo] ... to answer that question. (Example 5.7.9.B).

The partnership engagement in conversations about the purpose and social implications of conducting research appeared to resolve concerns about balancing research and community interests. Hence, fostering transparent discussions on the goals, activities, and components of the partnership helped promote the development trusting relationships and resolve conflicts in a peaceful way.

Fostering dialogue on partnership social differences

Partners described the practice of fostering open dialogue focused on social differences among members. This practice involves engaging in dedicated dialogue on social differences or inequities within partnership (e.g. racism) or on factors associated with social differences among partners (e.g. differences in personal identity and approaches to partnerships). This theme mainly co-occurred with sociocultural characteristics, namely variations in race and personality. Interviewees conveyed that this practice enhanced reflexivity, humility, and trust within partnerships. An academic evaluator in Partnership F elaborated on the value of group discussions on race,

It's been just completely life changing in terms of my view of race, my understanding of these issues...We talk about race; we talk about our own racism...[and experienced] the joy of discovering that you're wrong...that you have the prejudices to begin with
(Example 5.7.9.1.A).

Here, open discussions on race helped the partners recognize their implicit racial bias and enrich their perspectives on racism in a humbling way.

Similarly, the academic researcher in Partnership C explained how racism discussions influenced partnership trust,

I think we commit to taking time to do [CBPR process]...[and] it opens up dialogue about barriers, especially community barriers, talking about racism, that within our core partners there is a level of trust that we actually get to what's happening not only in our partnership and kind of those dynamics, but what's happening in the larger community...
(Example 5.7.9.1.B).

This partnership's commitment to CBPR process made it possible to transpire dialogue about racism and race-related barriers within the partnership and the focal community. These conversations reflect the trust that was fostered among members of the partnership. Fostering effective dialogue on social differences deepened the level of trust and mutual understanding among the partners involved.

Fostering dialogue on accountability

Partners also referred to engagement in dialogue or actions to address accountability for partnership activities. Partners initiated such dialogue to ensure that overall members are accountable to the completion of partnership deliverables. Though oftentimes difficult, interviewees maintained that having intentional dialogue on accountability could effectively mitigate internal tensions within the partnerships. The County PI of Partnership D recounted such experience,

Well, at one point I said, "Well, if we don't want to do it, should we just give the money back?" ... well, I wrote a grant once for a community. And the community members said, "Are you kidding me? We don't want that." And I said, "OK We're giving the money back," and I did. [I told current partners] "If we don't want to do this, I'll give it back" ... And then say said, "No.".. "We want to do it (Example 5.7.9.2.A).

The interviewee drew upon from her past experiences of having such difficult dialogue to effectively challenge her current partners to be accountable to partnership deliverables.

Interviewees also engaged in group dialogue to increase their accountability of partners to the guiding principles of the partnerships. The Community PI of Partnership C applied the lesson she learned from previous partnership failures,

[F]or that relationship to have been severed, there was a lack of understanding about some things, that the principles to me were supposed to be the glue that held us together [didn't]... And so from that conversation with the core team we really dissected those principles to make sure that we all go on the same page... And we've made a commitment to revisit those principles... at least once a year we've got to revisit those principles with our partners (Example 5.7.9.2.B).

Her negative experiences with former community partners motivated her and her team to transform the working principles of the partnership into accountable criteria that its members should abide by. As illustrated, fostering dialogue to improve accountability helped mitigate partnership conflicts and deepen the level of engagement among partners.

Openness to mutual learning

Partners described the practice of mutual learning, which involves active promotion of mutual learning process to understand the perspectives and worldviews of socioculturally distinct partners. Integral to this practice is an openness to listening to the knowledge, interests, and concerns raised by other partners. This theme mainly co-occurred with sociocultural characteristics, such as variations in race and faith affiliations. Interviewees described the integration of this practice into group-level processes. An academic PI of Partnership A recalled,

One of the things that we did was... a bi-directional learning process, so that we have cultural trainings that are through readings and through videos and through meetings... And..[o]ne of the elders who's a weaver, and one of her young weaver folks met with us for quite some time to talk about sort of the evolution they'd seen in the tribe across time... (Example 5.7.10.A).

The reciprocal learning process benefited this partnership in that it drew upon the expertise of elders to understand historical events, including lived experience of oppression, from the perspectives of community cultural insiders.

Furthermore, partners advocated for developing mutual learning skills in order to successfully bridge membership differences within the partnerships. A community pastor in Partnership C offered such guidance,

I would say, "Come in there and just be honest with people." Present yourself and be willing to listen to what the people you're coming to have to say... Find out what's going on as much as you can about 'em ...[W]hat I saw [partners] do is... they've always made me feel like they were really listening ...when I had something to contribute (Example 5.7.10.B).

The interviewee appreciated that research partners were committed to learning about the context of his community and listening to his potential insights for the partnership. Hence, a commitment to mutual learning allowed the partnerships to draw from the unique expertise and insights of members with distinct sociocultural backgrounds.

Flexibility with partnership processes

Partners referred to the notions of patience and flexibility with time and expectations of its partners regarding group processes within the partnership. This theme commonly co-occurred with partnership variations in professional background and personality. Interviewees asserted that flexibility in partnership processes was requisite to promoting the engagement of partners of distinct sociocultural backgrounds. The academic co-PI of Partnership A recounted such experience involving tribal partners,

[T]hey get the work done, but their pattern's different than mine. They'll break for lunch, they'll sit and visit, ... Learning and respecting the differences in who we are as a team and the roles and obligations that we each have is a strength and a challenge. It's been really a pleasure for me to be able to learn a different way to be (Example 5.7.11.A).

In spite of having to accommodate the research timeline, the partner found the adapting to the work processes to those of tribal partners to be rewarding personally and professionally.

Alternatively, the academic PI of Partnership C was compelled to adjust to the communication style of community partners. She stated,

And we're constantly challenged by taking the time that's required ... we need things to move fast. And yet we need to take the time to make sure our interactions are, "How are you? What's going on today?... So the cultural differences are both within the community and between the community... and the academic partners in terms of communication patterns, communication styles, work ethic ... (Example 5.7.11.B).

Although the interviewee found the communicative adjustment to be challenging, she recognized that this accommodation was necessary to bridge cultural differences in work style. Hence, flexible accommodation for partnership processes was instrumental to engaging members of distinct functional and sociocultural backgrounds in a way that does not espouse tensions due to differential cultural modes of participation.

Creating culturally consonant partnership solutions

One of the key partnership practices of transcultural bridging is the creation of culturally consonant partnership solutions. Dressler defines cultural consonance as “degree to which individuals, in their own beliefs and behaviors, approximate the prototype for belief and behavior encoded in cultural models” (Dressler 2007, 2017). In the context of CBPR partnerships, I used the term culturally consonant solutions to denote the development of partnership intervention (or its components) that resonates with the cultural norms and repertoires of individuals involved. This practice encompasses the cohesive integration of cultural elements into the partnership intervention to meet the scientific standards of researchers while honoring the cultural worldviews of community members. This theme mainly co-occurred with both sociocultural characteristics (e.g. variations in hearing abilities, race, faith affiliation, and places of regional origin) and with functional characteristics (e.g. professional and organizational variations). Partners described the ways in which the collective development of their intervention components reflect the cultural consonance of their intervention with the worldviews of community partners. The academic PI of Partnership A explained the integration of cultural elements of the intervention,

[O]ne of the things that we’ve done in adapting or developing this curriculum is to do it in such a way as there are core elements that we think are important...using tradition, tribal values and culture, as both anchor and compass to ground them and to guide them....in many ways that’s unique to the canoe culture (Example 5.7.12.A).

The partners paid conscientious attention to the integration of tribal values and culture into the life skills curriculum such that the canoe culture uniquely becomes its guiding “anchor” and “compass.” This approach ensured that the intervention serves as a useful cultural product for the tribal youths being served.

In addition, the partnership's commitment to building culturally consonant solutions is reflected in the guiding principles and values honoring the contributions of community cultural worldviews. The academic PI of Partnership B conveyed this principle,

The other general principle...is every cultural belief that is out there that we think needs to be addressed should be validated in the sense that it exists and it's normative...But there's always a follow-up which is, "It's fine to believe that. We know that you believe that, and it's a good idea, but you should get colon cancer screening." So that's sort of the interplay between the evidence base and the culture... (Example 5.7.12.B).

This partnership principle reflects the primacy given to cultural worldviews by offering the health advice of colon screening as an option to consider within the community's health promotion norms. It helped ease the tension between the "evidence base" and "culture" in a way that honored community worldviews in the development of the intervention. As such, the pursuit of culturally consonant solutions promoted bridging organizational differences by generating partnership products that resonate with the cultural repertoire of members.

Pursuing cultural revitalization efforts

Partners articulated partnership efforts to promote cultural revitalization within the partnership communities. This theme co-occurred with sociocultural characteristics, such as variations in age and tribal status. Interviewees described the ways that the engagement of community members in partnership activities helped foster cultural revitalization efforts within their community. The tribal program manager of Partnership A recounted this experience,

the community's really thirsty for more cultural and learning from each other, and bringing out elders...a lot of kids don't really have ... a lot of kids in foster care or maybe live with extended family may not even really have a good relationship or a close relationship with an elder (Example 5.7.13.A).

The partnership provided an opportunity to connect youths with tribal elders as part of its intervention development and implementation. It helped maintain intergenerational transmission

of tribal knowledge, which particularly benefitted youths who did not have access to multigenerational family connections.

Alternatively, partners advanced the value of promoting community wisdom to empower other members for optimal engagement in the partnerships. The tribal research board member in Partnership E stated,

So I think that a lot of times...[people] take native thought and... they westernize it; and what happens is that we become confused and we don't know what we're doing. OK? So then what happens is that we don't have that trust in ourselves; so...I want to turn that around and teach that method (Example 5.7.13.B).

The interviewee attributed the perceived lack of confidence among tribal members to the “Westernization” of Indigenous knowledge. Consequently, he expressed the desire to teach the Indigenous cognitive approach to elevate the intellectual esteem of tribal members. Such revitalization efforts purportedly increased the confidence of tribal members to engage in partnership activities. As such, fostering cultural revitalization efforts enhanced the cultural ownership of partners for the partnership intervention as well as promoted the esteem of partners for engaging in partnership activities.

Structural Practices of Transcultural and Interpersonal Bridging

I identified six structural-level institutions, characteristics, practices, and underlying cultural ideologies that influenced transcultural and interpersonal bridging efforts within the partnerships. These structural determinants include history of partnership collaboration, funding support for partnership activities, community self-governance, cultural relatedness, history of research mistreatment, and structural oppression.

History of partnership collaboration

Partners described a history of partnership, collaboration, and connections between individuals or their representative institutions prior to the current partnership. In certain cases, favorable outcomes of these efforts strengthened collaborative relationship for the current partnership. This theme co-occurred with variations in organizational and professional backgrounds. The examples illustrate how the history of collaboration facilitated the acceptance of partnership, particularly by community members. In fact, a tribal research board member based his approval on such documented history,

Looking at the [University's] research history ... I think they've really come a long way in terms of really wanting to take that extra step to help. And so I partnered ... again...Actually, in my acceptance letter...I said, "I trust you. I don't trust very many people. I trust you (Example 5.7.14.A).

The University's demonstration of understanding, collaboration, and commitment to the focal tribal communities were crucial to earning the rare sense of trust from the interviewee.

Alternatively, a history of individual embeddedness within a partnering organization facilitated the eventual partnership collaboration. The academic PI of Partnership A recalled how the educational background of a tribal member facilitated the acceptance of research partners to the tribal communities. He stated,

[Partner], who at the time was just finishing up her master's program here at [University] and was a tribal member, and...ultimately was the director of the wellness program. So that all of those things kind of lined up in a way that I think really facilitated our ability to sort of ... been invited into the community (Example 5.7.14.B).

The educational training of a tribal partner at the University was one of the catalysts that led to the invitation of the research members to the tribal community. I note that such community-initiated invitation of researchers is rare and indicative of the strength of the inter-organizational collaboration between both parties. In essence, having a history of partnership collaboration was beneficial to gaining trust and enriching the quality of interpersonal interactions.

Funding support for partnership activities

Partners described the policies and actions of funding agencies that supported the community-engaged activities of the partnership. These accommodations include, funding policies that promote long-term community capacity-building for research or funding opportunities that facilitate the development of culturally consonant partnership solutions (see above). To illustrate, the community PI of partnership C recalled that the need to develop community capacity for research coincided with a change in funding patterns,

We need to build capacity within the community where the skills, all of that, stays in the community once the funding is gone...It was also at a time when what we say there was a paradigm shift with [Funder] that looked [like] we needed to get community people involved at this table... (Example 5.7.15.A).

For this partnership, the funder's "paradigm shift" towards greater community involvement allowed partners to develop a community-engaged partnership approach in a way that resonated with the funder's requirements.

Similarly, the academic co-PI for Partnership B benefited the funder's support for his interests in traditional Chinese medicine,

I'm very interested in...making sure the [Traditional Chinese Medicine] piece is in there significantly...and it turned out that [Funder] was tremendously interested in what we brought to it. They thought that was very innovative...and it really utilizes the indigenous community (Example 5.7.15.B).

The funding agency's appraisal of traditional Chinese medicine afforded this partnership with resources to develop interventions that resonate with the healing approaches of the focal communities. Such funding support was instrumental to the engagement of community partners and the creation of culturally consonant solutions within the partnerships.

Community self-governance

Partners articulated the influence of organizational structures, policies, and practices indicative of self-determination or self-governance of community partners. Communities that

have these forms of self-governance benefited collaboration efforts in that they offered dedicated structure and processes for supporting the cultural activities of the partnerships. To illustrate, an academic research coordinator elaborated on the operations of the cultural co-op and tribal council of the tribal partners,

Those are the two main tribal entities that have to approve. Cultural co-op has approved more of the actual like surveys, possible presentations... So cultural co-op has done more of the like detail approval of everything, where tribal council has been more of the larger decisions... usually tribal council still has to approve it, but cultural co-op will do a lot of the sort of initial approval or reviewing (Example 5.7.16.A).

The coordination among these tribal structures facilitated collaborative efforts of the partnership in that they benefited from an organized body that offered content expertise for intervention design and one that provided authoritative support for its overall activities.

Alternatively, variations in forms of self-governance within partnership communities could have distinctive implications for community engagement with research partners. The research PI described the social implications of such variations in tribal governance,

In [Tribe] traditional kinship, we live in large, long extended family networks ... So they're fairly autonomous in their decision making...Where the more intact [Tribe term] exist, they still yield a lot of traditional authority. Not like a democratically elected chairman and council level authority, but more traditional authority. They often can and do differ over different issues such as leadership...They also may differ over suggested social change (Example 5.7.16.B).

The distinction between the centralized leadership structure of communities with traditional kinship and the democratic structure of communities with tribal councils was thought to shape distinct community inclinations towards engagement and mobilization for research. Attention to such heterogeneity among tribal communities was thus essential to developing decision-making processes that resonate with specific modes of governance. Therefore, community self-governance influenced the capacity and engagement approach of partnership communities.

Cultural relatedness

Partners articulated the underlying cultural or tribal notion of fostering familial bonds or relationships with one another. Interviewees maintain that supporting cultural relatedness could promote relationship building among partners of distinct sociocultural backgrounds. A tribal program manager in Partnership A offered this suggestion,

Not [treating] us like we're just community people, that there's not that institutional kind of like, "I'm the professor," kind of a thing... I think just the value of family and things like that helped understand our value of family and extended relationships (Example 6.17.A).

The interviewee highlighted the tribal value of family and extended relationship in recommending against differential treatment of community members based on educational and professional backgrounds. In other words, practitioners should pay attention to the relational bond that these community members seek out of other partnership members over social markers like education and professional attainment.

Similarly, a tribal research member of Partnership E recommended,

[B]e a relative. Find out that we are related, no matter what. See, everything we do ... we say ... (Tribe term for all my relations). "We are all related," meaning ... that everything is relative; everything is relative to one another. There's a connection you always have (Example 6.17.B).

The interviewee's reference to "all my relations" suggested the cultural utility of fostering relational bond that transcends tribal identities. Practicing this cultural value enabled partners, particularly those of non-tribal background, to nurture interpersonal bonds with tribal community members. Therefore, attending to the cultural value of relatedness helped partners overcome sociocultural differences and build meaningful interpersonal connections with one another.

History of research mistreatment

Partners described a history of research mistreatment, exploitation, abuse, and other negative research experiences among members of the partnership communities. Interviewees described the ways in which historical research mistreatment informed negative perceptions of

research (and researchers) among community members. For example, a focus group participant of Partnership E recounted the evolution of research activities within the tribal community,

[A] lot of different people were research participants...and there was this lady ... in our office [who] actually banished a researcher from our reservation. So there's been some history with research. And then people always say, "We feel like we're research (inaudible... (Example 5.7.18.A).

Here, the myriad of historical experiences of tribal members, including passive research involvement and banishment of a researcher, shaped their perception of research exploitation. These experiences shaped localized resistance against community-engaged research efforts, particularly those initiated by outsiders.

In addition, history of research mistreatment could foster a sense of community protection or guardedness against the interests and activities of researchers. Partners articulated the notion of community watchfulness for potential research exploitation or for a "hidden research agenda." For instance, a community PI of partnership B admitted to initial reservations about engaging with research partners due to concerns about the academic institution they represented,

I think we initially were a little more cautious about getting in the partnership. There were some other partnerships with other [Institution] staff before that we joined in. [That] one was more the model of the university having an idea, the staff came, told us what the idea was, asked that we'd sign on to their proposal; and then sometimes we wouldn't even see the proposal (Example 5.7.18.B).

The interviewee's experience of inadequate engagement from members of the institution informed his initial hesitation in collaborating with current researchers from the same institution. These perceptions of watchfulness against research activities served to protect the interests and well-being of community members. However, they posed an additional challenge for efforts to build connections among partners of different sociocultural or organizational backgrounds.

Structural oppression

Partners articulated experiences of past and present structural oppression, such as institutional racism and discrimination against minorities, among partners or communities of socially marginalized groups. Expressions of structural oppression also include the control of corporate or business interests that perpetuate social inequities within the partnership communities. This theme co-occurred with sociocultural characteristics, particularly variations in race or religious affiliation. Interviewees maintained that the engagement of community members were challenged by the silencing effects of structural oppression. The academic PI of Partnership C supported this notion with the influences of agricultural business,

There are policies down there that are clearly against federal policy... There's agribusiness down there that has power over and above anything else; and the extent to which they can keep some of these structures hidden enables the power structures to maintain their power... [A]s a result, a lot of times people who haven't left the community have absolutely no idea that you could do things differently (Example 5.7.19.A).

The influence of agricultural businesses in perpetuating structural inequities was thought to discourage community partners from engaging in social change activities of the partnership.

The experience of structural oppression instilled a sense of community watchfulness against research activities conducted by members of the socially dominant group. A member of the deaf community partner panel in Partnership G admitted to these perceptions,

I've grown up with that experience... when hearing people ... hearing doctors, hearing nurses, hearing teachers ... that I've been fooled, I've been scarred ... and [with] any good hearing person I've always got this reservation in my mind whether or not they're going to be like "the others."... The second thing here is I sometimes admit that I wonder if people have a hidden agenda that they're not sharing with us... (Example 5.7.19.B).

The systematic experiences of mistreatment by hearing professionals led the interviewee to develop reservations against members of the hearing community (including researchers) and their concealed agenda. Such experiences of structural oppression challenged transcultural and

interpersonal bridging efforts of the partnerships due to the social distance or distrust against research activities of the perceived social majority.

D. SUMMARY AND SYNTHESIS OF RESEARCH FINDINGS

The inductive, qualitative analysis identified relevant characteristics of group diversity to partnership functioning, uncovered the benefits and challenges of group diversity to partnership functioning, and elicited diversity engagement practices (DEP) at multiple levels of the partnerships. In this section, I summarize the main findings from each of the research areas. *Figure 5.1* shows the relationships among thematic findings (with prominent themes exemplified under each overarching dimension or category).

[-Insert Figure 5.1 Here-]

For the first research area, I identified the characteristics of group diversity that were relevant to partnership functioning. I classified these characteristics under two major dimensions, functional and sociocultural characteristics. Functional characteristics were related to members' execution of partnership tasks and responsibilities, such as variations in professional background, organizational affiliation, and skillsets. These characteristics informed the range of capacities, experience, and engagement approaches with respect to partnership tasks and activities. Sociocultural characteristics were related to members' expressions of personal, social, and cultural identity, such as variations in personality, race, gender, education, and tribal affiliation. These characteristics informed personal, social, and cultural modes of group interaction, power dynamics, and group differentiation among members of distinct social backgrounds.

For the second research area, I elicited stakeholder-perceived benefits and challenges of group diversity within the partnerships. The perceived benefits of membership differences in group diversity include unique partnership expertise, novel partnership perspectives, and

relatability across partnership differences. The perceived benefits of membership similarities include acquired cultural insider contexts of partners and embeddedness within the partnership communities. Some of the key perceived challenges of membership differences in group diversity include internal division, partnership turnover, perceived social distance, lacking awareness of partners' contexts, and discomfort with partnership tasks.

The main partnership benefits of group diversity were attributed to membership differences in functional characteristics and membership similarities of sociocultural characteristics. The variable range of skillsets, organizational background, professional experiences, and relevant perspectives that individuals brought to the partnerships informed the reported benefits of functional differences among members, including unique partnership expertise and novel perspectives. However, functional heterogeneity in partnership membership does not entirely account for all the identified benefits of group diversity. Alignment in sociocultural backgrounds among members also informed the benefits of cultural insider perspective or community embeddedness. These beneficial characteristics are not necessarily mutually exclusive; it is possible that a diverse partnership was functionally heterogeneous in its makeup but included a subset of partners who were socioculturally similar to one another.

The main challenges of group diversity were attributed to membership differences in sociocultural characteristics. Reported partnership tensions, including internal division and social distance, were rooted in membership differences in race, gender, personality, and other relevant sociocultural characteristics. Of note, multiple identified challenges were linked to membership differences in functional characteristics, such as discomfort with partnership tasks or variable participation attributed to membership differences in professional or organizational backgrounds. However, challenges that were more consequential to partnership integrity, such as member turnover and social bias or discrimination, were linked to membership differences in characteristics that reflected differentiation in personal and cultural identities.

For the third research area, I identified DEP that attended to the implications of group diversity in the partnership. These DEP occurred at multiple socio-ecologic levels surrounding the partnerships; they include individual, group or interpersonal, and structural practices of group diversity. I classified these phenomena into practices that promote partnership esteem and functional capacities, and practices that bridge transcultural and interpersonal differences.

Practices of promoting partnership esteem and functional capacities served to enhance the esteem of members for conducting partnership activities and harnessing the range of functional contributions among members. At the individual level, the characteristic of assertiveness could help individuals advance their contributions as equitable members of the partnership. At the group level, fostering partnership esteem (including interpersonal actions, environment setting, and educational opportunities), building capacity of cultural insiders, and respecting partnership's contributions could promote the unique functional assets and reduce task-related discomfort or intimidation (often from professional, organizational, or educational disparities) among members. Shared ownership of project activities or agenda, and collective decision-making could help ensure that partnerships build collective commitment and shared responsibilities for putting partners' unique functional assets into practice. Finally, community-level structures and values, including community board, network coalition of partners, collective activism, and risk-taking could enhance the functional engagement of community members in the partnerships.

Transcultural and interpersonal bridging practices functioned to bridge cultural and interpersonal differences among partners for mutual understanding, relationship building, emotional connection, and realizing collective action across embedded cultural domains within the partnerships (e.g. research and community setting, tribal and non-tribal communities). At the individual level, the personal qualities of leadership, credibility, demonstrated passion, and cultural humility could enhance the capacities of individuals to bridge social and cultural

differences among partners. The group-level practices of leveraging culturally bridging individuals, demonstrating commitment and engagement in partnership activities, building common partnership visions and supporting an inherently diverse movement, developing interpersonal connections, and openness to mutual learning could help partners build trusting and mutually supported relationships across areas of sociocultural differences. Collective engagement in transparent dialogue, including those on social differences and on accountability, could help resolve conflict, distrust, and social distance among partners. Advancing culturally consonant solutions and supporting cultural revitalization could ensure that the partnership intervention honored the ownership of knowledge and expertise of community partners. At the structural level, history of collaboration, community oversight, and community self-governance could facilitate transcultural and interpersonal bridging efforts among partners. Conversely, experiences of research mistreatment and structural oppression could impede these bridging efforts.

CHAPTER VI: QUANTITATIVE RESULTS

This chapter presents the findings obtained from the deductive, quantitative portion of the study (Stage 2), which sought to evaluate whether partnership demographic entropy is associated with structural elements of the partnerships, and whether partnership demographic entropy is associated with participatory-decision making within the partnerships. It begins by summarizing the key characteristics of the quantitative sample. The main sections present the results of the descriptive analysis followed by the results of the logistic analyses for Aims III and Aims IV respectively.

The first major section of this chapter describes the univariate distributions of the variables used in the inferential analysis and the correlations among these variables. The univariate distributions revealed that partnerships generally had high levels of participatory decision-making, but variable degrees of demographic entropy or membership mixing with respect to measured demographic characteristics. The patterns of correlations demonstrate potential bivariate associations among specific indices of partnership demographic entropy and participatory decision-making. The second section presents the findings of the logistic and multinomial analyses examining whether partnership demographic entropy is associated with partnership approval structure, type of partnership project, and control of partnership resources. The results indicate that associations existed between two characteristics of partnership demographic entropy and partnership approval structure. The third section presents the results of the logistic analysis examining whether partnership demographic entropy is associated with participatory decision-making within the partnerships. The results did not support the association between partnership demographic entropy and participatory decision-making.

Sample Characteristics

I describe characteristics of CES respondents with non-missing demographic information

(N=404) based on the 2015 version of the CES dataset.³ Of these, 142 participants (35.1%) self-identified as members of the academic team while 262 participants (64.9%) were members of the community team. *Table 6.1* shows the distribution of respondents by partnership role, race, and gender. Notably, there was a significant difference in the racial composition of academic members and that of community members. Compared to academic members, more community members self-identified as American Indian/Alaskan Native, Hispanics, and Blacks. More academic members than community members were non-Hispanic Whites, Asian and Pacific Islanders, and mixed races. Non-Hispanic Whites comprised three-fifths of the academic members but just over one-third of community members. These patterns indicate that People of Color made up the majority of community team but remained minorities in the academic team of the partnerships.

[- Insert Table 6.1 Here -]

A. **DESCRIPTIVE ANALYSIS**

This section describes the distributions of each of the variables included in the inferential analysis and bivariate associations among the variables.

Univariate Analysis

Frequency Distributions of Structural Elements

Table 6.2 shows the percentage frequencies of partnership-level structural elements, specifically the type of partnership approval structure, type of partnership project, and entity in control of partnership resources. With respect to the structure the partnerships used to obtain approval for the research project on behalf of the community, the majority of the partnerships possessed an approval structure in the form of an agency or advisory board. Nearly three-fifths

³ The 2017 version of KIS and CES datasets that I received contained the analytical variables required for Stage 2 analysis (according to the MOU), not the demographic characteristics of sampled respondents. Therefore, I provide these descriptive results from the dataset that I received for preliminary analysis in 2015. The 2015 CES dataset contained non-missing demographic data among 404 respondents.

of the projects had an agency or advisory board while approximately one-fifth of the projects possessed structures of community governance (e.g. tribal/local government or health board) and slightly less than one-fifth of the projects reported employing individual or no community decision making structures.

There were three major types of projects that the partnerships engaged in. Approximately three-fifths of the projects were an intervention study (see *Table 6.2*). Slightly less than one-fifth of the projects were classified as descriptive projects. Nearly one-fifth of the projects were policy or other types of projects. These frequencies show that most partnerships were intervention projects in nature.

Nearly two-thirds of the partnerships reported that academic and community partners shared control in hiring personnel for the partnerships and in the distribution of financial resources within the partnerships. Three-fourths of the projects reported that both partners shared control of the distribution of in-kind resources within the partnerships (see *Table 6.2*).

[- Insert Tables 6.2 Here -]

Univariate Distributions of Analytical Variables

Table 6.3 describes the univariate characteristics (central tendencies and skewedness) of the following continuous and ordinal variables: participatory decision-making (*collective functional outcome*); partnership demographic entropy (gender, race, location, disability, LGBT, and youth entropies), perceived membership diversity and cultural similarity (*predictors*); community and academic interaction capacities, legitimacy, connection to political decision-makers, and connection to relevant stakeholders (*control factors*). *Figure 6.1-6.8* show the distributions of participatory decision-making and partnership demographic entropies.

[- Insert Table 6.3 Here -]

[- Insert Figures 6.1-6.8 Here -]

Collective Functional Outcome

The focal outcome of partnership collective functioning, participatory decision-making index, had a mean of 21.2 (SD = 3.23) and a median of 22 (Table 6.3). The distribution of the variable (Figure 6.8) was somewhat left skewed (skewness = -0.83). Accordingly, the majority of surveyed partners perceived that their partnerships had a high degree of equitable contribution to their collective decision-making process.

Predictors

The partnerships had moderate levels of entropy (or membership mixing) in terms of gender, high level of entropy in terms of race, low level of entropy in terms of location, and very low levels of entropy in terms of disability, LGBT status, International status, and youth status. The distribution of gender entropy was centered around 0.5 (M (Mean) = 0.54, SD (Standard Deviation) = 0.37). Accordingly, the partnerships generally had a moderate level membership mixing with respect to gender categories. The distribution of race entropy was uniform and centered around the value of 0.7 (M = 0.73, SD = 0.18), indicative of a high degree of membership mixing in the categories of race. On the other hand, the distribution of location entropy (M = 0.29, SD = 0.28) had a prominent mode near 0 and a smaller mode around 0.7. Accordingly, the partnerships were clustered around those with low degree of membership mixing in rural/urban location and those with high degree of such mixing. The distributions of disability entropy (M = 0.09, SD = 0.15), LGBT entropy (M = 0.11, SD = 0.18), International status entropy (M = 0.22, SD = 0.25) and youth entropy (M = 0.18, SD = 0.23) had a similar median value of 0 and were relatively right skewed (skewness = 0.67 - 1.53). As such, the partnerships had minimal degrees of mixing in the binary categories of disability, LGBT status, International status, and youth status.

As subjective measures of partnership diversity, partners reported high mean ratings both for perceived membership diversity (M = 4.31, SD = 0.80) and for cultural similarity (M = 3.84, SD = 1.12). Surveyed partners perceived that their partnerships included highly diverse members and, for the most part, had academic and community members who were culturally similar to one another.

Control Factors

Out of a possible score of five, partners reported high mean ratings for academic interaction capacity (M = 4.39, SD = 0.73) and community interaction capacity (M = 4.24, SD = 0.76). Partners reported similar high mean ratings of project legitimacy (M = 4.61, SD = 0.63), connections to political decision-makers (M = 3.90, SD = 0.79), and connections to relevant stakeholders (4.26, SD=0.79). As indicated, surveyed partners perceived that the partnerships exhibited high degrees of academic interaction effectiveness, community interaction effectiveness, project legitimacy, connection to political decision-makers and of connections to other relevant stakeholders.

Correlation analysis

Tables 6.4-6.15 show the Pearson correlation coefficients and their corresponding p-values for bivariate associations among the variables used in the analysis. As will be described below, significant correlations ($p < 0.05$) were found between the following: partnership approval structure and control of resources, partnership approval structure and type of partnership project, partnership demographic entropy and subjective measures of diversity, demographic entropy and control of resources, partnership demographic entropy and partnership approval structure, partnership demographic entropy and participatory decision-making, and partnership control factors and participatory decision-making. Of the eleven procedures of correlation

analyses performed, none showed evidence of potential multicollinearity (i.e. indicated by high values of correlation coefficients) among any pair of the analytical variables examined.

Partnership Structural Elements

The levels of correlation between partnership approval structure and control of resources (as binary dummy variables) ranged from -0.23 to 0.34 (see *Table 6.4*). Significant correlations were noted between the following: community governance and community oversight of personnel hiring ($r=0.31$, $p<0.01$); community governance and community oversight of financial resource sharing ($r=0.34$, $p<0.01$); community governance and community oversight of in-kind resource sharing ($r=0.22$, $p<0.01$); individual/no community decision and community oversight of in-kind resource sharing ($r=-0.14$, $p=0.04$). These results reveal that bivariate associations existed between partnership approval structure and control of partnership resources.

[- Insert Table 6.4 Here -]

The levels of correlation among control of partnership resources, type of partnership project (as binary dummy variables), and partnership duration ranged from -0.14 to 0.15 (see *Table 6.5*). However, findings generally indicate that control of partnership resources was not correlated with partnership duration, nor was it correlated with the type of partnership project.

[- Insert Table 6.5 Here -]

The levels of correlation among partnership approval structure, type of partnership project, and partnership duration ranged from -0.13 to 0.22 (see *Table 6.6*). Significant correlations were observed between the following: community governance and descriptive project ($r=0.22$, $p<0.01$); and agency or advisory board governance and descriptive project ($r=-0.15$, $p=0.04$). These results indicate that bivariate associations existed between the type of partnership approval structure and the partnership being a descriptive project.

[- Insert Table 6.6 Here -]

Partnership Demographic Entropy and Subjective Diversity

The levels of correlation among the seven indices of partnership demographic entropies ranged from -0.20 to 0.24 (see *Table 6.7*). Significant correlations were noted among the following: gender entropy and disability entropy ($r=0.18, p=0.01$); gender entropy and LGBT entropy ($r=0.15, p=0.04$); gender entropy and International status entropy ($r=0.15, p=0.04$); race entropy and International status entropy ($r=0.25, p<0.01$); location entropy and International status entropy ($r=-0.20, p<0.01$); and location entropy and youth entropy ($r=-0.15, p=0.04$). These results reveal that bivariate associations existed among these indices of partnership demographic entropy.

[- Insert Table 6.7 Here -]

The levels of correlation among partnership demographic entropy, perceived membership diversity, and perceived cultural similarity ranged from -0.16 to 0.15 (see *Table 6.8*). Significant correlations were observed between cultural similarity and partnership race entropy ($r=-0.16, p<0.01$). Significant correlations were also found between perceived diversity and gender entropy ($r=0.09, p=0.05$); between membership diversity rating and race entropy ($r=0.11, p=0.02$); and between membership diversity and partnership International status entropy ($r=0.15, p<0.01$). These findings indicate that certain characteristics of demographic entropy (i.e. gender, race, and International status) were positively associated with perceived membership diversity. Furthermore, partnership race entropy was negatively associated with perceived cultural similarity.

[- Insert Table 6.8 Here -]

Partnership Demographic Entropy and Structural Elements

The levels of correlation between partnership demographic entropy and control of partnership resources ranged from -0.14 to 0.18 (see *Table 6.9*). Significant correlations were

observed between the following: academic oversight of personnel hiring and gender entropy ($r=0.18$, $p=0.01$); community oversight of financial resource sharing and location entropy ($r=0.16$, $p=0.03$); community oversight of financial resource sharing and disability entropy ($r=0.16$, $p=0.03$); community oversight of in-kind resource sharing and disability entropy ($r=0.18$, $p=0.01$); and shared oversight of financial resource sharing and International status entropy ($r=0.16$, $p=0.03$). These results indicate that bivariate associations existed between specific indices of partnership demographic entropies and entity in control of partnership resources.

[- Insert Table 6.9 Here -]

The levels of correlation between partnership demographic entropy and partnership approval structure ranged from -0.27 to 0.27 (see *Table 6.10*). Significant correlations were found between the following variables: location entropy and community governance ($r=0.27$, $p<0.01$); location entropy and agency/advisory board governance ($r=-0.23$, $p<0.01$); International status entropy and community governance ($r=-0.27$, $p<0.01$), International status entropy and agency/advisory board governance ($r=0.22$, $p<0.01$). These findings show that bivariate associations existed between partnership approval structure and location entropy, and between partnership approval structure and International status entropy.

[- Insert Table 6.10 Here -]

The levels of correlation between partnership demographic entropy and type of partnership project ranged from -0.08 to 0.11 (see *Table 6.11*). No significant correlation was found between any type of partnership project and any index of partnership demographic entropy. Similarly, the no significant correlation was detected between partnership duration and any type of partnership demographic entropy; the levels of correlations among these variables ranged from -0.11 to 0.10 (see *Table 6.12*).

[- Insert Table 6.11 and Table 6.12 Here -]

Participatory Decision-Making, Demographic Entropy and Subjective Diversity

The levels of correlation among participatory decision-making, partnership demographic entropy, and perceived membership diversity ranged from -0.07 to 0.22 (see *Table 6.13*). Significant positive correlations were observed between participatory-decision making and gender entropy ($r=0.17$, $p<0.01$); participatory-decision making and location entropy ($r=0.09$, $p=0.05$); and between participatory decision-making and perceived membership diversity ($r=0.22$, $p<0.01$). These findings indicate that bivariate associations existed between participatory decision-making and partnership location entropy, and between participatory decision-making and partnership gender entropy. Bivariate association was also identified between participatory decision-making and perceived membership diversity.

[- Insert Table 6.13 Here -]

Participatory decision-making, demographic entropy, and partnership control factors

The levels of correlation among participatory decision-making, partnership demographic entropy, perceived membership diversity, and partnership control factors ranged from -0.11 to 0.45 (see *Table 6.14*). Significant correlations were found between participatory decision-making and each of the following: community interaction ($r=0.35$, $p<0.01$), academic interaction ($r=0.45$, $p<0.01$), project legitimacy ($r=0.31$, $p<0.01$), political connection ($r=0.13$, $p<0.01$), and stakeholder connection ($r=0.28$, $p<0.01$). Significant correlations were also observed between membership diversity and each of the following: community interaction ($r=0.15$, $p<0.01$), academic interaction ($r=0.24$, $p<0.01$), project legitimacy ($r=0.38$, $p<0.01$), political connection ($r=0.28$, $p<0.01$), and stakeholder connection ($r=0.39$, $p<0.01$). These findings reveal that bivariate associations existed between participatory decision-making and partnership control factors, and between membership diversity and partnership control factors.

[- Insert Table 6.14 Here -]

B. PARTNERSHIP DEMOGRAPHIC ENTROPY AND STRUCTURAL ELEMENTS

Aim III: To determine whether demographic entropy is associated with partnership approval structure, type of partnership project, and control of partnership resources within the partnerships

This section, organized by research question (RQ), presents the findings of the logistic and multinomial analyses examining the associations among partnership demographic entropy and three types of partnership structural elements: partnership structure for community approval, type of partnership project, and entity in control of partnership resources. To account for multiple testing of the seven indices of partnership demographic entropy, Bonferroni-corrected alpha (or significance level) of 0.01 was used to assess the significance of the estimated coefficients.

Association between partnership demographic entropy and approval structure

RQ.3.1: Is partnership demographic entropy associated with partnership approval structure?

Hypothesis 3.1: Partnership demographic entropy is associated with the type of partnership approval structure.

For this question, the results of the logistic analysis are discussed by each binary transformed variable of partnership approval structure: community governance, agency or advisory board, and individual or no community decision. *Tables 6.15 - 6.17* provide detailed effect estimates of having each of these partnership approval structures on the examined characteristic of partnership demographic entropy. The key model effect estimates include beta coefficients (β) and corresponding odds ratio (OR) of having applicable partnership structure relative to having no partnership approval structure for each unit increase of the focal partnership demographic entropy. For these and subsequent models, the intercept or constant terms do not offer meaningful interpretations and are omitted from discussion.

Overall, the results support the associations among community governance structure and two specific characteristics of partnership demographic entropy, partnership location entropy and International status entropy. Of the seven characteristics examined, one positive association and one negative association were found between partnership demographic entropy and the odds of having a community governance structure. Partnership location entropy was associated with increased odds of having a community governance structure compared to not having a community governance structure ($\beta = 2.42$, 95% C.I.: 1.13, 3.72), as shown in *Table 6.15*, Model 6.15.3. The odds of having a community governance structure was estimated to be 11.3 times (95% C.I.: 3.1, 41.1) the odds of not having a community governance structure for each unit increase in partnership location entropy. In addition, as shown in *Table 6.15*, Model 6.15.6, partnership International status entropy was associated with reduced odds of having a community governance structure compared to not having a community governance structure ($\beta = -3.32$, 95% C.I.: -5.21, -1.43). The odds of having a community governance structure was estimated to be 0.036 times (95% C.I.: 0.0055, 0.24) the odds of not having a community governance structure for each unit increase in partnership International status entropy.

[- Insert Table 6.15 Here -]

Of the seven demographic characteristics examined, one negative association and one positive association were found between partnership demographic entropy and the odds of having agency or advisory board. Partnership location entropy was associated with reduced odds of having an agency or advisory board structure compared to not having agency or advisory board governance structure ($\beta = -1.72$, 95% C.I.: -2.76, -0.68; see *Table 6.16*, Model 6.16.3). The odds of having an agency or advisory board governance structure was estimated to be 0.18 times (95% C.I.: 0.06, 0.51) the odds of not having an agency or advisory board structure for each unit increase in partnership location entropy. Partnership International status entropy was associated with increased odds of having agency or advisory board governance

structure compared to not having agency or advisory board governance structure ($\beta = 1.97$, 95% C.I. 0.68, 3.25; see *Table 6.16*, Model 6.16.6). The estimated odds of having agency or advisory board governance structure was 7.14 times (95% C.I.: 1.98, 25.8) the odds of not having agency or advisory board structure for each unit increase in partnership International status entropy.

[- Insert Table 6.16 Here -]

Of the seven characteristics examined, no association was found between any characteristic of partnership demographic entropy and the odds of having individual or community decision structure (see *Table 6.17*). The estimated odds ratio of having individual or no community decision structure (relative to no such structure) for each of the seven characteristics of partnership demographic entropy ranged from 0.24 (95% C.I.: 0.04, 1.45) for youth entropy to 2.83 (95% C.I.: 0.33, 24.1) for gender entropy but the 95% confidence intervals for these odds ratios included the value of one (i.e. indicative of no difference in the odds of having individual or no community structure relative to no such structure).

[- Insert Table 6.17 Here -]

Association between partnership demographic entropy and type of partnership project

RQ.3.2: *Is partnership demographic entropy associated with type of partnership project?*

Hypothesis 3.2: *Partnership demographic entropy is associated with the type of partnership project.*

Overall, the results indicate that partnership demographic entropy was not associated with the type of partnership project. Of the seven characteristics examined, no association was found between any characteristic of partnership demographic entropy and the relative risk of being a descriptive project or other project relative to being an intervention project (the referent category). As shown in *Table 6.18*, the estimated relative risk ratios (RRR) of being a

descriptive project relative to an intervention project ranged from 0.45 (95% C.I.: 0.06, 3.44) for gender entropy to 2.75 (95% C.I.: 0.71, 10.7) for location entropy. The 95% confidence intervals for these estimates included the value of one. Likewise, the estimated RRR of having other type of project relative to an intervention project ranged from 0.73 (95% C.I.: 0.16, 3.41) for International status entropy to 4.91 (95% C.I.: 0.52, 46.4) for gender entropy but the 95% confidence intervals for these estimates included one.

[- Insert Table 6.18 Here -]

Association between partnership demographic entropy and control of partnership resources

RQ.3.3: *Is partnership demographic entropy associated with control of partnership resources?*

Hypothesis 3.3: *Partnership demographic entropy is associated with entity in control of partnership resources.*

For this question, the results of the multinomial logistic analysis are discussed by each domain of control of partnership resources: personnel hiring, financial resource sharing, and in-kind resource sharing. *Tables 6.19 - 6.21* provide the effect estimates of multinomial logistic models examining the association between each characteristic of partnership demographic entropy and the relative risk of having joint partner (academic and community) control or having community control of resources relative to academic control of resources (as the referent category). Model effect estimates include beta coefficients (β) and corresponding relative risk ratios (RRR) of having community control or having joint partner control relative to academic control for each unit increase of the demographic entropy characteristic being tested.

Overall, the results provide limited evidence to support the association between partnership demographic entropy and the entity in control of partnership resources. Of the seven characteristics examined, one marginal association was found between partnership

demographic entropy and control of personnel hiring for the partnerships. Partnership gender entropy was associated with reduced relative risk of having community control of personnel hiring relative to academic control (RRR = 0.022, 95% C.I.: 0.001, 0.50), as seen in *Table 6.19*, Model 6.19.1. Partnership gender entropy was also associated with reduced relative risk of having joint partner control compared to academic control of personnel hiring (RRR = 0.061, 95% C.I.: 0.006, 0.60; see *Table 6.19*, Model 6.19.1).

[- Insert Table 6.19 Here -]

Of the seven demographic characteristics examined, one positive association and two marginal associations were found between partnership demographic entropy and control of financial resource sharing within the partnerships. Partnership disability entropy was associated with increased relative risk of having community control compared to academic control of financial resource sharing ($\beta = 4.72$, 95% C.I.: 1.11, 8.32; see *Table 6.20*, Model 6.20.4). The estimated relative risk of having community oversight of financial resource sharing was 112.2 (95% C.I.: 3.0, 4,143.8) times the relative risk of having academic oversight in this area for each unit increase in partnership disability entropy. Partnership race entropy was marginally associated with reduced relative risk of having community oversight compared to academic oversight of financial resource sharing (RRR = 0.15; 95% C.I.: 0.02, 0.90; see *Table 6.20*, Model 6.20.2). Partnership location entropy was also marginally associated with increased relative risk of having community oversight compared to academic oversight of financial resource control (RRR = 11.5; 95% C.I.: 1.1, 122.2; see *Table 6.20*, Model 6.20.3).

[- Insert Table 6.20 Here -]

Of the seven demographic characteristics examined, only one marginal association was found between partnership demographic entropy and control of in-kind resource sharing within the partnerships. Partnership disability entropy was marginally associated with increased

relative risk of having community oversight compared to academic oversight of this domain (RRR = 127.1; 95% C.I.: 1.6, 10,140.9; refer to *Table 6.21*, Model 6.21.4).

[- Insert Table 6.21 Here -]

C. PARTNERSHIP DEMOGRAPHIC ENTROPY AND COLLECTIVE FUNCTIONING

RQ.4: *Adjusting for academic and community interaction capacities, legitimacy and credibility, and connection to stakeholders, is partnership demographic entropy associated with participatory decision-making?*

Hypothesis 4: *Adjusting for academic and community interaction capacities, legitimacy and credibility, and connection to stakeholders, partnership demographic entropy is associated with participatory decision-making.*

This section, divided into two parts, presents the results of the logistic analysis examining the association between each of the seven characteristics of partnership demographic entropy and participatory decision-making. I also included perceived membership diversity as a proxy subjective predictor to compare model findings with those that used partnership demographic entropy as predictors. Robust standard errors adjusted for clustering of partnership responses of a total 163 partnerships in the merged dataset. A Bonferroni-corrected significance level (or alpha) of 0.01 was used for all models to account for multiple testing of seven demographic entropy characteristics. Overall, the first stage of the analysis revealed that partnership location entropy was marginally associated with the odds of participatory decision-making. In addition, perceived membership diversity was associated with the odds of participatory decision-making. However, the second stage of analysis revealed that these associations no longer persisted after accounting for partnership control factors.

Unadjusted association between partnership demographic entropy and participatory decision-making

The results of the unadjusted logistic models examining the associations between partnership demographic entropy and participatory decision-making are shown in *Table 6.22*. Key model effect estimates include beta coefficients (b) and corresponding odds ratio of high participatory decision-making (i.e. above median) relative to low participatory decision-making (i.e. below median) for each unit increase of the focal partnership demographic entropy. The results of likelihood ratio (LR) tests as well as Akaike Information Criteria (AIC) and Bayesian Information Criteria (BIC) and are provided to compare the fit of logistic models. Significant results of LR tests indicate that at least one of the predictors is useful for the model (i.e. one of the coefficients is not equal to zero). Generally, the lower AIC and BIC figures indicate a better model fit.

[- Insert Table 6.22 Here -]

Of the seven demographic characteristics examined, only one marginal association was detected between partnership demographic entropy and the odds of participatory decision-making. Specifically, partnership location entropy was marginally associated with increased odds of high participatory decision-making relative to low participatory decision-making ($\beta = 0.83$, 95% C.I.: 0.11, 1.54), shown in *Table 6.22*, Model 6.22.3. In comparison, a positive association was found between subjective diversity and the odds of participatory decision-making. Perceived membership diversity was associated with increased odds of high participatory decision-making relative to low participatory decision-making ($\beta = 1.47$ 95% C.I.: 1.13, 1.90), shown in *Table 6.22*, Model 6.22.8. Comparing the statistics of model fit between Model 6.22.3 and Model 6.22.8, the results of LR tests were both significant and the AIC values were nearly identical for both models. The BIC value in Model 6.22.8 was lower than that of

Model 6.22.3, suggesting that the model that used membership diversity as focal predictor was a better fit for the observed data than the model that used location entropy.

Adjusted association between partnership demographic entropy and participatory decision-making

Table 6.23 shows the results of the logistic models testing the associations between partnership demographic entropy and the odds of participatory decision-making, adjusted for partnership control factors. Key model statistics are identical to those of the unadjusted logistic models, with the additional inclusion of mean variance inflation factor (VIF) to assess potential concerns of multicollinearity among partnership control factors (i.e. indicated by $VIF < 4$).

[- Insert Table 6.23 Here -]

Focusing on *Table 6.23*, Model 6.23.3, partnership location entropy was no longer associated with the odds of participatory decision-making ($\beta = 0.66$, 95% C.I.: -0.09, 1.42) after adjusting for partnership control factors. Positive associations were observed between participatory decision-making and each of the following control factors and net of other variables: community interaction capacities ($\beta = 0.44$, 95% C.I.: 0.09, 0.78), academic interaction capacities ($\beta = 0.64$, 95% C.I.: 0.16, 1.11), and project legitimacy ($\beta = 0.53$, 95% C.I.: 0.13, 0.93). Interpreting significant effect estimates of this model, one unit of rating increase in community interaction rating was predicted to increase the odds of high participatory decision-making compared to low participatory decision-making by 54.5% (95% C.I.: 9.4%, 118.2%), controlling for other variables. Relative to low participatory decision-making, the predicted increase in the odds of high participatory decision-making was 89.3% (95% C.I.: 17.8%, 204.2%) for each unit increase in academic interaction rating after adjusting for the remaining variables. Adjusting for other variables, a one-unit increase in project legitimacy rating was estimated to increase the odds of achieving high (relative to low) participatory decision-

making by 69.4% (95% C.I.: 13.4%, 153.2%). The lower AIC and BIC values found in Models 6.23.3 compared to Model 6.22.3 suggest that this model was a better fit for the data. The low mean VIF value of 1.38 suggests minimal concerns for multicollinearity among the control factors added to the model.

Focusing on Model 6.23.8, perceived membership diversity was no longer associated with the odds of participatory decision-making ($\beta = 0.03$, 95% C.I.: -0.30, 0.36) after adjusting for partnership control factors. However, significant associations were observed between participatory decision-making and each of the following control factors and net of other variables: community interaction capacities ($\beta = 0.44$, 95% C.I.: 0.11, 0.78), academic interaction capacities ($\beta = 0.65$, 95% C.I.: 0.16, 1.13), and project legitimacy ($\beta = 0.54$, 95% C.I.: 0.14, 0.94). Interpreting significant effect estimates of this model, each unit increase in community interaction rating was estimated to increase the odds of high participatory decision-making compared to low participatory decision-making by 55.8% (95% C.I.: 11.6%, 117.6%) controlling for other variables. Controlling for other variables, the predicted increase in the odds of high relative to low participatory decision-making is 91.1% (95% C.I.: 17.5%, 210.8%) for each unit increase in academic interaction rating. Each unit increase in project legitimacy rating was estimated to increase the odds of achieving high participatory decision-making compared to low participatory decision-making by 70.8% (95% C.I.: 14.5%, 115.5%) after controlling for other variables. Lower AIC and BIC values in this model compared to Model 6.21.8 suggest that the adjusted model is a better fit than the unadjusted model. The low mean VIF of 1.45 does not warrant concerns for multicollinearity among partnership control factors added to the model.

In the remaining models with other characteristics of partnership demographic entropy used as the focal predictor, no significant association was found between participatory decision-making and partnership demographic entropy after adjusting for partnership control factors (see *Table 6.23*, Models 6.23.1-6.23.8). These results did not support the hypothesized association

between partnership demographic entropy and participatory decision-making after accounting for partnership control factors.

Sensitivity Analysis

Three procedures of sensitivity analyses to verify the appropriateness of logistic regression procedures did not change the nature of the focal association between partnership demographic entropy and participatory decision-making (as assessed by the significance and direction of β estimates of the focal predictor in the adjusted and unadjusted models) with two notable exceptions: First, when OLS regression was performed of the focal association (using a 25-point participatory decision-making scale), the association between partnership gender entropy and continuous participatory decision-making in the unadjusted model ($\beta = 3.46$, 95% C.I.: 0.47, 6.46) and adjusted model ($\beta = 2.45$, 95% C.I.: 0.38, 0.78) became marginally significant, as shown in *Table 6.24*, Model 6.24.1 and Model 6.24.3 respectively. Partnership disability entropy was also marginally associated with continuous participatory decision-making in the adjusted model ($\beta = -1.18$, 95% C.I.: -3.77, 0.02; see *Table 6.24*, Model 6.24.4). However, the original results regarding the focal association in the logistic models remained the same when continuous participatory decision-making (using 25-point scale and 20-point scale) was used instead of the binary outcome; and when the binary cutoff of participatory decision-making variable was changed from 22 (median cutoff) to 21 (mean cutoff).

[- Insert Table 6.24 Here -]

CHAPTER VII: DISCUSSION AND CONCLUSION

This chapter discusses each of the dissertation's major findings in light of the prior literature and the dissertation's limitations. It closes with a set of reasonable conclusions that can be drawn based on the findings. There are five sections. The first section summarizes the overarching aims that the study accomplished. The second section places the main findings from the inductive, quantitative stage of analysis with the deductive, quantitative stage of analysis in conversation with one another, thus triangulating the findings. The third section describes the methodological strengths of the study, followed by its limitations in the fourth section. The final section concludes with the overall contributions of the study, the implications for CBPR practice, and the recommendations for future research.

A. SUMMARY OF THE AIMS

This dissertation study identified the characteristics of group diversity that are relevant to the collective functioning of CBPR partnerships and examined the extent to which the nature and degree of these characteristics influenced the dynamics and collective functioning of the partnerships. This study used a mixed methods approach to accomplish four specific aims, the first two of which informed the inductive, qualitative portion and the latter two of which addressed the deductive, quantitative portion of the study. For the first aim, thematic analysis of the partnership stakeholder interviews identified the implicit and explicit characteristics of group diversity that were perceived to be meaningful to the collective functioning of the partnerships. The analysis identified what stakeholders perceived to be the benefits and challenges of these characteristics of group diversity to the collective functioning of the partnerships. For the second aim, thematic analysis of the interviews identified perceptions of diversity engagement practices (DEP), or the employment of partnership practices at multiple socio-ecologic levels that stakeholders perceived to attend to the implications of group diversity. For the third aim, logistic

analysis of partnership-level surveys evaluated the extent to which the characteristics of partnership demographic entropy were associated with structural elements of partnership control and resource sharing: partnership approval structure, type of partnership project, and control of partnership resources. For the fourth aim, logistic analysis of partnership and partnership-level surveys evaluated the extent to which the characteristics of partnership demographic entropy were associated with participatory decision-making within the partnerships.

B. MAJOR FINDINGS

Together, the qualitative and quantitative findings help to explain the ways in which the perceived benefits, challenges, and practices of group diversity inform the nature of the relationship between group diversity and collective functioning of the partnerships. This section first synthesizes the findings from the inductive, qualitative exploration (Stage 1) of the characteristics of group diversity, the perceived benefits and challenges of group diversity, and the employment of DEP in the partnerships. This is followed by a summary of findings from the deductive, quantitative evaluation (Stage 2) of the association between partnership demographic entropy and partnership structural elements, and between partnership demographic entropy and participatory decision-making. Triangulating the sets of findings helps to clarify where they agree with or diverge from one another. Finally, I present a revised conceptual framework reflecting the knowledge gained throughout the entire study.

Qualitative Findings

For the first aim of this study, the analysis identified two dimensions of group diversity based on how the stakeholders perceived the characteristics of group diversity to influence the functioning of the partnerships. Functional characteristics of group diversity were related to partnership members' execution of partnership tasks and activities in that they shaped the

variation of skillset, experience, and perspectives that were required to implement the tasks of the partnership. Sociocultural characteristics were related members' expressions of individual, social, and cultural identities in that they shaped the relatedness of these identities among members which could in turn influence group interaction and cohesion. These dimensions correspond to Pelled (1996)'s classification of diversity characteristics into job-related categories, which are linked to individual execution of cognitive tasks at work, and job-unrelated categories, which are not directly linked to the performance of the cognitive tasks. One distinction from the prior literature is that variation in education attainment was classified as a sociocultural characteristic because the stakeholders often considered this attribute to be a marker of social differences within the partnerships. One potential explanation is that, in the context of CBPR partnerships examined, research members with advanced educational attainment may be perceived to hold greater power base of scientific expertise relative to others (Wallerstein & Duran, 2006). Overall, the findings indicate that these characteristics of group diversity could influence the quality of interactions and collective experience of the partnerships.

Similarities or differences among partnership members in characteristics of group diversity may generate the benefits as well as challenges for the collective functioning of the partnerships. The findings revealed that the partnerships primarily benefited from membership differences in functional characteristics, such as variations in skillsets, professional background, and organizational affiliations. In the context of CBPR partnerships, it is possible that membership differences in functional characteristics could promote the achievements of the partnerships by maximizing the range of distinct functional contributions that could be offered by its members to accomplish the partnership tasks at hand. In relation to the prior literature, these findings concur with the notion that diversity of functional characteristics serve as proxies for access to a wider range of information, knowledge, skills, experiences, and perspectives that

could enhance team creativity, though how these factors influence the implementation of tasks may vary (William and O'Reilly, 1998).

Furthermore, the findings revealed that the partnerships benefited from membership similarities in sociocultural characteristics but faced challenges from membership differences in sociocultural characteristics. These implications reflect the extent to which members of similar sociocultural backgrounds align in shared experience of social, cultural, and structural marginalization and oppressions (Minkler et al., 2012; Muhammad et al., 2014; Plaut, 2010). Having members who align with one another in sociocultural characteristics may offer empathetic understanding of marginalization experiences and could potentially minimize sociocultural tensions within the partnerships. On the other hand, when then the experiences of marginalization are not acknowledged and effectively addressed by the partnerships, membership differences in sociocultural characteristics could contribute to the emergence of group-level conflicts, including the perceptions of social distance, distrust, and bias among members. With respect to the prior literature, these contextual explanations may partly inform the finding of a systematic review that diversity in gender, race, or age was associated with greater member turnover among professional workgroups (Milliken & Martins, 1996).

For the second aim of the study, the analysis uncovered two dimensions of DEP, or partnership strategies, processes and determinants that attend to the implications of group differences occurring within the partnerships: a) practices that promote functional capacities and esteem of partners, and b) practices that bridge transcultural and interpersonal differences among partners. While DEP may not be recognized by stakeholders as capacity-building practices in this area, they could be understood as “diversity work” in that they reorient the organization of partnership to promote the contributions of group differences and to eliminate interpersonal and institutional barriers against these efforts (Ahmed, 2012).

The findings suggest that practices that promote the functional capacities and esteem of partners could promote the benefits of membership differences in functional characteristics. These practices served to affirm and promote the diversified range of skillsets, professional and organizational background, among other functional capacities of partnership members. In effect, they could optimize the ability of the partnership to profit from the aggregated contributions of diverse expertise, skillsets, and perspectives of its members. In relation to the prior literature, these practices may address a number of community engagement barriers identified in Peterson's (2010) study of CBPR partnerships involving Native American communities. According to this study, community partners perceived lack of confidence in the research process and lack of collective internal motivation as barriers to their engagement in the partnerships; functional capacity and esteem promoting practices may serve to mitigate these barriers and potentially enhance the collective achievements of partnership tasks.

Furthermore, the findings suggest that transcultural and interpersonal bridging practices could promote the benefits of membership similarities in sociocultural characteristics and mitigate the challenges of membership differences in these characteristics. These practices could enhance the relationship-building capacities of culturally bridging individuals and organizations. Moreover, they could potentially alleviate the tensions of sociocultural differences among partners by fostering trust-based, mutually supportive connections and resolving interpersonal conflicts in a constructive manner. In turn, the quality of relationships that are fostered by these efforts could potentially foster a collaborative environment for promoting the functional capacities of partnership members. The findings of this study agree with those of Andrews et al. (2012), which found that academic and community members of CBPR partnerships perceived the bridging practices of aligned goals, transparent communication, and effective conflict resolution to influence the successes of the partnerships.

Quantitative Findings

For the third aim of the study, the evidence that demographic entropy within the partnerships is shaped in part by structural elements of the partnerships was limited. For partnership approval structure, partnerships with increased location entropy or membership mixing in rural/urban location was found to have greater odds of having community governance structure and reduced odds of having agency/advisory board structure (each relative to counterparts). One potential explanation is that partnerships that have greater membership mixing in rural/urban location may have been those that served AI/AN communities. Accordingly, Pearson et al.'s (2015) analysis of the RIH partnerships found that, relative to partnerships that served other communities of color, partnerships that served AI/AN populations were more likely to report greater resource and power sharing, which reflected the presence of community governance structures.

For type of project, the results demonstrated that partnership demographic entropy was not associated with any type of partnership project. This finding suggests that membership mixing with respect to demographic characteristics was unrelated to the type of partnership project. For control of partnership resource, partnerships with increased disability entropy or membership mixing in disability status was found to have greater odds of having community oversight relative to academic oversight of financial resource sharing. Given that partnership disability entropy was not associated with other remaining domains of resource control and that, to my knowledge, no prior research has examined these associations, further investigation is needed to understand why partnerships were heterogeneous in terms of disability status were more likely to have greater community control of financial resources.

For the fourth aim of the study, the evidence on the contribution of partnership demographic entropy to participatory decision-making was unsupported. None of the seven characteristics of partnership demographic entropy (race, gender, location, disability, LGBT

status, International status, youth status) was associated with participatory decision-making after adjusting for partnership control factors, including community interaction, academic interaction, project legitimacy, connection to political stakeholders and connection to other stakeholders. These findings concur with the meta-analyses of professional work groups which concluded that there was no effect of demographic characteristics of diversity (e.g. gender, race/ethnicity, age) on group performance (i.e. work quality, work quantity, and group cohesion) (Horwitz & Horwitz, 2007; Webber & Donahue, 2001). To my knowledge, no other empirical studies have examined the functional contributions of demographic characteristics of diversity within CBPR partnerships. Below, I offer potential explanations gained from this study's qualitative findings to inform the observed lack of quantitative association between demographic entropy and participatory decision-making within the partnerships.

Triangulation of the Qualitative and Quantitative Findings

In contrast to the nature of quantitative findings, the qualitative findings support the understanding that group diversity does influence the collective functioning of the partnerships. The qualitative findings indicate that the partnerships benefited from membership differences in functional characteristics and faced challenges from membership differences in sociocultural characteristics. However, the quantitative findings failed to support the association between any characteristic of demographic entropy and participatory decision-making within the partnerships. These contrasts in findings suggest that qualitative-identified (but not quantitatively examined) constructs and pathways clarify the nature of the quantitative focal association. Specifically, I consider two potential explanations: 1) other qualitatively-identified traits of group diversity influence partnership functioning but were not fully captured in the quantitative analysis 2) qualitatively-identified multi-level DEP that were not quantitatively examined could moderate the quantitative associations between group diversity and collective functioning of the partnerships.

First, the contrasts in findings points to the contributions of qualitative-identified traits of group diversity that were not examined in partnership-level surveys (i.e. KIS). Qualitatively, I identified novel functional traits and sociocultural traits of group diversity that were not quantitative measured. Furthermore, a number of functional and sociocultural traits were partially measured in KIS. For instance, the American Indian/Alaskan Native category under racial entropy do not fully encapsulate variations in tribal affiliations that could be used to derive the measure of partnership entropy in tribal affiliations. In addition, the specified categories under the measured characteristic of demographic entropy could result in other relevant dimensions of the characteristic be unaccounted for. For example, the use of youth and non-youth categories for the derivation of youth entropy index may have missed the specific enumeration of elders, whose involvement was qualitatively demonstrated to facilitate cultural revitalization efforts within the partnerships. As a result, the lack of observed associations between partnership demographic entropy and participatory decision-making could be explained by the lack of inclusion of relevant quantitative predictors of group diversity.

Furthermore, the observed high rating of membership diversity in the quantitative analysis suggests that qualitatively-derived but quantitatively unmeasured traits of group diversity could inform the perception of diverse membership. The lack of quantitative measures for these relevant traits, such as variations in skillsets and personalities, meant that quantitative analysis could not ascertain whether membership variation in these characteristics could explain the variance in partnership collective functioning. Overall, the nature of these findings merit consideration of other unmeasured functional and sociocultural characteristics that could inform the perception of diverse membership and influence partnership collective functioning.

The contrasts in findings from both stages also suggest the need to consider qualitatively derived DEP and the ways in which they informed the relationship between group diversity and collective functioning of the partnerships. Consistent with the findings of Oetzel et

al. (2018) that used the same RIH data, the quantitative findings indicate that academic interaction, community interaction, and project legitimacy predicted the odds of achieving high participatory decision-making after accounting for other variables. These findings also support the qualitative observations that the capacities of culturally bridging individuals as well as the credibility of individual partners and their organizations could be instrumental to optimizing the collaborative efforts of the partnerships. However, partnership control factors in the quantitative analysis do not fully address the spectrum of qualitative-identified individual, group, and structural practices transcultural and interpersonal bridging that may inform the positive perceptions of partnership capacities and experiences. Hence, the measured characteristics of interaction effectiveness and project credibility alone do not account for the breadth of transcultural bridging skills, capacities, and structures that promote the engagement of partnerships in the implications of group diversity.

The qualitative findings suggest that multi-level DEP could potentially moderate the focal association between group diversity and collective functioning of the partnerships. A partnership that promotes the esteem and functional capacities of its partners could potentially acquire enhanced benefits of membership differences in functional characteristics. A partnership that promotes transcultural and interpersonal bridging practices could potentially acquire enhanced benefits of membership similarities in sociocultural characteristics and mitigate the challenges of membership differences in sociocultural characteristics. Further elaboration of DEP in the quantitative surveys and additional consideration of complex DEP constructs that are best assessed qualitatively (e.g. risk-taking ideology) are needed to fully test the moderating influences of DEP on the focal association.

Enhanced understanding of group diversity and partnership collective functioning

The triangulation of qualitative and quantitative findings underscores the importance of considering contextual determinants and pathways that elaborate the relationship between group diversity and collective functioning of CBPR partnerships. *Figure 7.1* shows the revised conceptual model with enhancements and revisions based on the study findings. *Table 7.1* details the qualitative themes and quantitative measures that fall under these constructs.

In comparison to the original conceptual model (in Chapter III), the construct of group diversity is now separated into functional and sociocultural characteristics. The model distinguishes the partnership implications of group diversity into the benefits of functional similarities among partners, the benefits of sociocultural similarities among partners, and the challenges of sociocultural differences among partners. These characteristics of group are associated with the specific structural element of partnership approval structure. The model also accounts for practices promoting partnership esteem and functional capacities, and practices of transcultural and interpersonal bridging. These DEP are depicted to occur at individual, interpersonal, and structural levels.

Based on the model, membership variations in functional characteristics and sociocultural characteristics of group diversity could influence the collective functioning of the partnerships through three distinct pathways. The collective functioning of the partnerships may benefit from functional differences among partnership members and from sociocultural similarities among members (although the partnership could be overall diverse in terms of sociocultural characteristics). Conversely, the collective functioning of the partnerships may be dampened by the challenges of sociocultural differences among members.

DEPs are posited to moderate the relationships between group diversity and collective functioning of partnerships. Multi-level practices that promote partnership esteem and functional capacities could enhance the partnership benefits of functional differences among members.

Multi-level practices that bridge transcultural and interpersonal differences could enhance the partnership benefits of sociocultural similarities and mitigate the partnership challenges of sociocultural differences among members. Transcultural and interpersonal bridging practices could also enhance efforts to promote partnership esteem and functional capacities.

Accordingly, partnerships that have greater implementation of esteem and functional capacity promoting practices are predicted to experience higher levels of collective functioning due to enhanced benefits of functional differences among partners. Likewise, partnerships that promote greater levels transcultural and interpersonal bridging practices are predicted to experience higher level of collective functioning due to enhanced benefits of sociocultural similarities and diminished tensions from sociocultural differences among partners.

C. STUDY STRENGTHS

The dissertation study offers at least three methodological strengths for understanding the influences of group diversity and diversity-engaged practices on the collective functioning of CBPR partnerships. They include qualitative, quantitative, and mixed methods contributions.

For the inductive, qualitative stage of analysis (Stage 1), I identified the characteristics of group diversity that were relevant to partnership functioning and classified these characteristics under two overarching dimensions of group diversity. The analysis unveiled the perceptions of partnership benefits or challenges that were linked to similarities or differences among members with respect to specific characteristics of group diversity. The analysis further identified partnership strategies, characteristics, and structures that engage in group diversity and located them at the socio-ecologic level of partnership at which the practice occurred. This approach clarified the ways in which these multi-level processes and determinants addressed the partnership implications of group diversity.

For the deductive, quantitative stage of analysis (Stage 2), I used demographic compositional data to construct indices of partnership demographic entropy. I tested the functional influences of these indices across all the traits of gender, race and ethnicity, geographic location, disability, sexual minority status, national origin, and youth status. This represents an empirical enhancement of previous studies that examine one demographic effect at a time under the assumption that this trait adequately represents group diversity (Bell et al., 2011; Williams & O'Reilly, 1998). To account for the relationship between demographic entropy and structural characteristics of the partnerships, the analysis tested the association between partnership demographic entropies and each of: community approval structure, type of partnership project, and entity controlling partnership resources. Finally, linking partnership-level data on partnership processes with partner-level data on partnership processes and outcome permitted an evaluation of the association between partnership demographic entropy (and, in comparison with perceived membership diversity) and participatory decision-making that adjusted for partnership control factors and accounted for non-independence or clustering of responses by the partnerships.

The nested mixed methods design of the study allowed for the deductive, associational strengths of quantitative analysis to support (or refute) the inductive, exploratory findings from qualitative analysis. Specifically, the qualitative analysis identified perceived characteristics of group diversity, which expanded upon quantitatively assessed demographic indicators of group diversity. In addition, the qualitative analysis uncovered the perceived contributions of group diversity and of DEP, which provided the contexts and potential pathways for understanding the quantitative effects of group diversity on partnership collective functioning. Conversely, the quantitative analysis tested the associations between specified measures of partnership demographic diversity and a focal indicator of partnership collective functioning. The corroboration of two sources of data helped clarify the ways in which qualitatively-identified

contextual factors and moderators, particularly DEP, could potentially explain the discrepancies between the qualitative and quantitative findings. The embedded design allowed for the deductive, quantitative analysis to serve a secondary, complementary, and evaluative purpose to the larger inductive, qualitative analysis in responding to the overall research question.

D. STUDY LIMITATIONS

As described below, the dissertation has limitations stemming from the design of the parent study as well as each component (qualitative, quantitative, mixed method triangulation) of the dissertation study.

Parent Study

The sample limitations of RIH may limit the generalizability of the study findings to eligible, federally funded, self-identified CBPR projects. The computerized algorithms used to obtain project information from the NIH Research Portfolio Online Reporting Tools may have excluded projects that were not funded in 2009, that did not submit any project information, or received funding from other federal or private funding sources (Pearson et al, 2015). The RIH investigators were unable to contact and solicit participation from all Native American Research Center for Health V (NARCH V) projects, which may result in exclusion of community-engaged characteristics of tribal-based participatory projects (e.g. tribal oversight of research). Projects that did not self-identify with CBPR or community engagement approaches may have been excluded from the study sample. The inclusion mechanism may have also left out grants from research programs and project centers (or center grants), prevention research center, or any training mechanisms that did not contain a unique identifying number. However, the study investigators verified that the linking mechanism included CBPR projects that were linked with center grants. The research team made efforts to manually review project abstracts and include

projects that may have characteristics of CBPR but did not self-identify as such. However, the study findings may have limited applicability to the proportion of the overall population of CBPR projects that did not fit the criteria for self-identification of CBPR; were funded by an external source to the NIH and the CDC; were of short-term duration; and took place outside of the U.S. These partnerships could have variable characteristics of group diversity, partnership practices and outcomes of sociocultural importance that were not included in the RIH datasets.

In addition, the sample selection of participating partnerships in the quantitative surveys may have led to an overestimation of projects that reported positive partnership outcomes. For KIS, the oversampling of NARCH projects involving AI/AN community partners for the project sample may have resulted in higher proportion of projects that reported tribal governance structures. The recruitment of partners for CES surveys using the PI nomination method may have resulted in the selection of respondents that reported favorable perceptions of the partnerships. However, the logistic analysis made comparisons of between partnerships with participatory decision-making above the median and those below median rating. The findings are thus indicative of the effects of group diversity on the achievement of high-performing partnerships (relative to low-performing counterparts) in terms of fostering perceived equity among partners.

The selection of case study partnerships for qualitative interviews could have limited the extent to which the findings apply to the general experience of CBPR partnerships. The purposive sample selection criteria limited the case study partnerships to those of over three years that have community advisory structures and that addressed intervention and policy research. These long-term partnerships were more likely to report greater capacities and processes for engaging in group diversity. The sampled range of demographic and health contexts of these case partnerships may have missed other relevant characteristics of group diversity that were not qualitatively identified, such as sexual minority status or and other forms

of physical disabilities. The sample lacked *counterfactual* research projects (e.g. partnerships with minimal community governance) with which one could compare the practices and determinants of group diversity. Therefore, the findings should be regarded as promising practices and determinants of partnership diversity engagement among selected partnerships with demonstrative length of relationship building and evidence of community governance.

Dissertation Study

Qualitative Analysis

The thematic analysis of qualitative interviews may limit full contextual understanding of partnership experiences as communicated by partnership stakeholders. I made an analytical assumption that the interviewee's statements reflected the collective sentiment and experiences of the partnership. I did not have access to verbal and non-verbal communication, tone, and environmental setting of the interview that could have aided in the interpretation of interviewees' experiences. I was unable to ascertain these perceptions through observations of the lived experiences of the partnerships. I was not able to ascertain the identity nor role of interview participants (that were not verbally indicated) in the focus groups and panel interviews. The findings should thus be treated as secondary interpretations of articulations of partnership processes and dynamics without opportunities to conduct follow-up primary data collection.

The frame of thematic analysis relied on the assumption that partnership benefits, challenges, and practices of group diversity are attributable to characteristics of within-group differences explicitly or implicitly articulated in the interviews. For relevant interview questions on group diversity, the interviewer's prespecified categories of diversity (e.g., race, ethnicity, and gender) could have limited interviewee's discussions of the partnership implications of other characteristics of group diversity. This led me to consider the interview transcript in entirety (i.e. beyond those pertinent questions); however, I was unable to ascertain whether participants

perceived DEP to address group diversity, nor determine the full implications of these practices. Moreover, I was unable to explicitly probe the rationale, strategies, or motivations of the partnership's PI or founding members for establishing partnership structure of certain organizational makeup. As such, the findings could be regarded as secondary interpretations of perceived partnerships actions that attended to the implications of group diversity.

Furthermore, the analysis did not entirely account for occasional directional probing of interviewers that could influence the interviewee's thinking of diversity in a particular way. For example, the interviewer asked the interviewee if it was helpful to have culturally similar members. This mode of questioning does not elaborate on the interviewee's conceptualization of culture nor offer the possibility that culturally similar members are not always beneficial. It could limit the breadth of interviewee's response that could have, for example, elaborated on the implications of cultural differences. However, I considered the full range of partnership experiences and classified into benefits and challenges of similarities or differences in group diversity. In addition, I discussed examples of counterintuitive or deviation partnership dynamics, such as tensions arising from racism training, in an effort to illuminate the contingencies of DEP.

Quantitative Analysis

Due to the cross-sectional nature of quantitative data, causal inference could not be established between partnership demographic entropy and partnership structural elements, or between demographic entropy and collective functioning of CBPR partnerships. One could not rule out the possibility of reversal causation. For instance, the organizational makeup of a partnership could change over time after the partnership attains a certain level of collective functioning or resource sharing. Therefore, directionality of examined associations could not be affirmed through the analysis of cross-sectional quantitative data.

Three main limitations in the survey measures used in the analysis limit the external validity or cross-cultural equivalence of the findings. The participatory decision-making items in the CES asked participants to rate the frequency at which respondents felt that they contributed to the decision-making process and agreed with the decisions that the partnership made. They did not document the degree of inclusion or equity in actual group decision-making experiences. These items do not address the relative stake or perceived importance of the decisions that participants felt supported by or left out of. As observed in the qualitative interviews, members in the peripheral positions of the partnerships, such as community staff members, were included in programmatic decision-making but excluded from budgetary decision-making. These items may not account for cultural variations in decision-making consensus that were identified in the qualitative interviews, such as tribal leadership structure that is based on family kinship structure. Without further cross-cultural validation and elaboration of participatory decision-making, the outcome should be considered a proxy measure of equitable inclusion in a democratic model of decision-making in CBPR partnerships.

The limitations of the partnership demographic entropy indices and the partnership counts from the KIS used to construct the indices may lead to underestimation or misspecification of the focal association. As a measure, partnership demographic entropy indicates the extent to which partnerships are heterogenous or proportionately mixed with respect to categories of the focal characteristic. It does not provide information on what demographic category or what proportion of category make up the index. Measures that inform the compositional nature or direction of the categories, such as segregation or dissimilarity indices, could not be constructed due to unmeasured data to derive the denominators of these measures. The measure does not account for intersectionality of characteristics that capture the relevant assets of group diversity. The estimates of partnership counts provided by the partnership's PI/PD could lead to an underestimation of undisclosed or unknown demographic

characteristics among partnership members. While efforts were made to include all measured demographic characteristics, membership counts in categories of unmeasured group diversity traits that influence partnership functioning (e.g. variations in education or personality) were not available in the dataset. Moreover, it is unclear whether the existing categories of partnership demographic entropies correlate with variations in qualitatively-identified characteristics of functional capacity bridging and transcultural bridging importance, such as leadership styles, degree of assertiveness, and predisposing characteristics for cultural bridging (e.g. cultural humility). As such, the quantitative analysis offered exploratory findings on the influences of non-directional demographic heterogeneity of partnership members on the collective functioning of the partnerships.

The items on partnership control factors (community and academic interaction capacities, legitimacy, connection to political decision-makers, and connection to relevant stakeholders) in the CES relied on the respondent's perceptions of CBPR experiences and did not measure the actual dynamics and performance of the partnerships. The quantitative analysis attempted to account for the interaction capacities of academic and community partners that may influence the structural makeup of the partnership and perceptions of participatory decision-making by shaping the compositional structure of the partnerships and enhancing the collective experience of the partnerships. However, the rating items in the CES may have encouraged partners to report positive impressions of partnership capacities and credibility, which could positively skew the responses and raise concerns for potential multicollinearity. The items on academic and community interaction capacities do not elaborate on what comprise the confidence, skills, and confidence for effective interaction. In addition, these survey measures do not capture latent characteristics that may profoundly influence partnership capacities for effective functioning, such as the dynamics of power relations among different constituents and the history of partnership collaboration beyond the funded partnership

project. As such, this dissertation study may have overestimated the association between these control factors and collective functioning, which may potentially suppress the nature of the association between demographic entropy and collective functioning of the partnerships after adjusting for these control factors.

Limitations of Mixed Methods Triangulation

The mixed methods analysis of this study used the embedded design in which the inductive, qualitative analysis explored the influences and practices of group diversity while the quantitative analysis evaluated the associations between selected characteristics of group diversity and collective functioning of the partnership. Because of the data collection methods of the parent study, comprehensive triangulation of qualitative and quantitative findings could not be feasibly conducted. Although they both were based on the same set of eligible CBPR partnerships, the sample selection and data collection procedures for quantitative surveys and for qualitative interviews were conducted independently from one another. This study could not link the qualitative interview responses of a case study partnership directly with the quantitative survey results of its members. The cross-sectional, secondary mixed methods analytical approach made it impossible to use the qualitative findings to construct relevant measures to inform subsequent quantitative survey data collection. The findings of the study should be considered exploratory in that the inductive, qualitative portion uncovered the contexts and processes that informed the focal relationship and the deductive, quantitative portion tested a specific subset of the focal associations using two separate sets of samples of the partnerships for each portion. The analysis was not designed to specifically evaluate or compare the performance of one partnership against another.

E. CONCLUSION

This section summarizes how this study contributes to the field's mechanistic understanding of CBPR. It discusses the implications of the findings to the practice of CBPR. It then closes with overall conclusions that can be drawn from the findings and provides recommendations for future research.

Study Contributions

This mixed methods study is one of the first to demonstrate how the characteristics of group diversity, as subjectively perceived by partnership stakeholders and formally assessed using demographic measures, contribute to group-level dynamics and achievements of CBPR partnerships. It is one of the first empirical studies of CBPR partnerships that attempts to unpack “black box of diversity” by addressing question, “Why does group diversity matter in CBPR partnerships?” (Lawrence, 1997) Using separate samples of qualitative and quantitative data from the largest known mixed methods datasets of partnerships funded by the NIH and the CDC, the study offers practice-based evidence, or inductive examination of the contexts and elements that could influence the effectiveness of federally funded CBPR partnerships (Green, 2008, Hicks et al., 2012). The findings of the study inform the extent to which the characteristics of group diversity benefit or impede the collective functioning of the partnerships (Israel et al., 2018). The findings illuminate what practices are employed at multiple socio-ecologic levels to attend the consequences of group diversity occurring within the partnerships.

Implications for CBPR Practice

The findings of this study provide the following practice and policy considerations for CBPR practitioners, community partners, affiliated organizations and policy makers (referred to as CBPR stakeholders). CBPR stakeholders are encouraged to explore the characteristics

group diversity that partnership members perceive to be relevant for their partnerships and understand the ways these characteristics benefit or impede the collective functioning of the partnerships. They should promote collaborative practices at multiple levels of the partnership that draw upon the diverse range of functional assets among its members, including the creation of esteem-building, respectful, and task-sharing partnership environment. They should promote collaborative practices that bridge cultural and interpersonal differences at multiple levels of the partnership to support trust-based and empathetic relationship building, mutual understanding of partnership goals, and advocacy on behalf of partners of different sociocultural backgrounds. While the findings offer field-based illustrations of these practices, CBPR stakeholders should prioritize practices and structures that resonate with the cultural needs, interests, and capacities of their members. Promoting capacities and practices in these areas organically help ensure that the CBPR embodies a social transformation that advances a community-centered vision of empowerment (Trickett et al., 2011).

Overall Conclusion and Future Research

This mixed methods study provides evidence that perceived characteristics of group diversity can influence the collective functioning of CBPR partnerships. Attention to this area of practice could help ensure that CBPR is best positioned to recognize and affirm the worldviews of its culturally diverse partnership constituents in the joint production of knowledge and social action. The findings of this study demonstrate that membership differences in functional characteristics enhanced the collective functioning of the partnerships while membership differences in sociocultural characteristics impeded it. As such, partnerships can benefit from practices that promote the range of members' functional capacities and practices that promote cultural and interpersonal bridging among members of distinct sociocultural backgrounds.

Partnerships that incorporate these practices at individual, interpersonal, and structural levels may be best positioned to leverage the assets of group diversity to attain its collective goals.

To build upon the knowledge gained from this study, additional research using qualitative and quantitative methods should be conducted to evaluate the impacts of group diversity and DEP on long-term and capacity-building outcomes of CBPR partnerships. Qualitative interviews of partnership stakeholders and field observations of the partnerships should be conducted to understand the ways in which stakeholders perceive characteristics of group diversity to influence the sustained achievement of partnership outcomes. These efforts should also elicit from stakeholders what they perceive to be partnership practices that attend to the implications of group diversity, and the ways in which they perceive these practices to impact long-term and capacity-building outcomes of the partnerships. Quantitative surveys of the partnerships should be developed using cross-culturally validated, scale-based measures to examine the implementation of multi-level strategies, processes, and determinants of DEP as well as long-term outcomes of these practices, such as the quality of interpersonal relationships measured over time. The corroboration of qualitative and quantitative efforts will permit comprehensive examination of the ways in which DEP influence the relationship between group diversity and long-term achievements of the partnerships. These future directions may provide greater understanding of how CBPR can best leverage the added values of group diversity to realize the vision of health equity and social justice. Continued research efforts in this area could help assure that CBPR fully embraces diversity and inclusion in its practice.

APPENDIX

TABLES

Table 2.1: Typology of participatory research (adapted from New York Alliance against Sexual Assault, 2012)

	Participatory Action Research	Community-based Participatory Research	Participatory Learning and Action	Feminist Participatory Action Research	Empowerment Evaluation
Who (typically) initiates the study?	Researchers and community groups	Researchers	Researchers	Researchers and community groups	Community groups
Who develops the research question?	Researchers and community groups	The research team (researchers and community group members)	Community groups with assistance from researchers	Researchers and community groups (emphasis on community voice)	Community Groups with an optional researcher or evaluator.
Who (typically) conducts the research?	Researchers and community groups	Researchers	Community Groups, facilitated by researchers	Researchers and community groups (emphasis on community voice)	Community Groups with an optional researcher or evaluator.
Who analyzes the data and develops research findings?	Researchers and community groups	Researchers	Community Groups, facilitated by researchers	Researchers and community groups (emphasis on community voice)	Community Groups with an optional researcher or evaluator.
How is research linked to advocacy?	Research findings are used by the researchers and community groups to support community effects to affect change.	Researchers work with community groups to use research findings for positive action within the community	Community members create an action plan based on research findings; researchers help with that plan and use findings to attract outside help for the community	Participating in the research process can serve as a community empowerment tool, and findings are used by community groups and researchers to plan interventions	Community groups use research findings to carry out internal reforms and to refine their efforts to effect change in their communities

	Participatory Action Research	Community-based Participatory Research	Participatory Learning and Action	Feminist Participatory Action Research	Empowerment Evaluation
Who owns the research and how is it disseminated?	Ownership of the research findings is shared; the evaluator or researcher presents the research at the request of community group	Ownership and obligation to disseminate research findings are shared by researchers and community groups	Researchers own and present findings to the community groups	Results are communicated throughout the process; researchers, community members share findings and work together to publicize findings.	The community group is the primary owner and disseminator of the findings, but the evaluator may also use the findings in academic research.

Table 4.1: Constructs, operational definition, and potential variables or themes for the study

Constructs	Operational Definition	Potential ⁱ Variables or Themes [Data]
Group Diversity	<p>Group diversity refers to the extent to which members within a partnership vary with respect to identified sociodemographic, functional, cultural and other stakeholder-identified characteristics of within-group differences measured at the level of the partnership (Cox, 1994, Oetzel 2001).</p> <p>Dimensions of group diversity include variations among partnership members in sociodemographic characteristics among partnership members as well as variation among members in characteristics that inform functional contributions and cultural perspectives to the partnerships.</p> <p>In terms of sociodemographic characteristics, group diversity is typically measured quantitatively using the index of demographic entropy, which measures the distribution of individuals with different demographic characteristics among all potential reported categories within a group.</p>	<p>Estimated number academic members by following:</p> <ul style="list-style-type: none"> ▪ gender (DEMACA1) ▪ race/ethnicity (DEMACA2) ▪ rural/urban location (DEMACA3), ▪ disability status (DEMACA4) ▪ LGBT orientation (DEMACA5) ▪ International Status (DEMACA6) ▪ Youth status (DEMACA7) <p>Estimated number of community team members by following:</p> <ul style="list-style-type: none"> ▪ gender (DEMCOM1) ▪ race/ethnicity (DEMCOM2) ▪ rural/urban location (DEMCOM3), ▪ disability status (DEMCOM4) ▪ LGBT orientation (DEMCOM5) ▪ International Status (DEMCOM6) ▪ Youth status (DEMCOM7) <p>Community and academic capacity: membership diversity</p> <p>To what extent does/did this partnered project have what it needs to work effectively towards its aims?</p> <ul style="list-style-type: none"> ▪ Diverse membership (CAPCTY1C) <p>[Source: Quantitative KIS, CES]</p> <p>Perceived characteristics of group diversity</p> <ul style="list-style-type: none"> ▪ Range of research/community expertise ▪ Range of background in community-based research ▪ Range of leadership approaches <p>[Source: Qualitative PSI]</p>
Collective Functioning	<p>Collective functioning refers to collective achievements and actions that individuals gain from engaging in the partnerships with the</p>	<p>Participatory Decision-Making</p> <p>Thinking about the way decisions in this partnered project were made. How often did you...</p>

Constructs	Operational Definition	Potential Variables or Themes [Data]
	<p>potential to alter their respective practices and worldviews.</p> <p>The assumption is that distinct group achievements may exceed what individual members or in-groups could do on their own (e.g. community capacity for research conceptualization gained from co-learning in CBPR).</p>	<ul style="list-style-type: none"> ▪ Feel comfortable with the way decisions are made in this project (DECIS1A) ▪ Support the decisions made by the project team members (DECIS1B) ▪ Feel that your opinion is taken into consideration by other project team members (DECIS1C) ▪ Feel that you have been left out of the decision-making process (DECIS1D) ▪ Feel pressured to go along with decisions of the project team even though you might not agree (DECIS1E) <p>[Source: Quantitative CES]</p>
Academic and community interaction capacities	<p>Existing competencies and characteristics that allow respective academic and community partners to interact effectively with stakeholders in CBPR partnerships. These could include interaction skills, legitimacy, connections to external partnership stakeholders.</p>	<p>Community and Academic Interaction Capacities</p> <ul style="list-style-type: none"> ▪ Does the community research team have the knowledge, skills, and confidence to interact effectively with the academic research team? (BRIDG1A) ▪ Does the academic research team have the knowledge, skills, and confidence to interact effectively with the community research team? (BRIDG1C) ▪ Legitimacy and credibility (CAPCTY1D) ▪ Connection to political decision-makers, government agencies, other organizations/groups (CAPCTY1F) ▪ Connection to other relevant stakeholders (CAPCTY1G) <p>[Source: Quantitative CES]</p>
Cultural similarity among group members	<p>The degree to which CBPR partners identify with one another based on shared perception of common background and experiences (Williams & O'Reilly, 1998).</p> <p>It is assumed that this shared background and experiences will exert positive effects on group interactions.</p>	<p>Cultural Similarity</p> <ul style="list-style-type: none"> ▪ Does the academic research team have members who are from a similar cultural background as the community research team (BRIDG1B) <p>[Source: Quantitative CES]</p>

Constructs	Operational Definition	Potential ⁱ Variables or Themes [Data]
Diversity Engagement Practices (DEP)	Partnership strategies, ideological stances, institutional structures, and other stakeholder-identified (i.e. but previously unknown) elements of partnership dynamics through which the partnership attends to the implications of group diversity (i.e. on partnership dynamics).	<ul style="list-style-type: none"> ▪ partnership guiding principles and values for respecting and affirming individual differences ▪ partnership processes that seek to create an inclusive environment and celebrate inherent differences among partners, such as culture centered approach in research conceptualization ▪ embedded partnership values, such as cultural humility and building of trust <p>[Source: Qualitative PSI]</p>
Institutional or community-level support for diversity engagement practices	Existing institutional or community-level policies, practices, positions, and governance that could potentially shape group diversity and DEP of the partnerships	<ul style="list-style-type: none"> ▪ university or research policies, initiatives, funding, and technical assistance that support inclusion ▪ embedded community values supporting multiculturalism, or the affirmation of cultural differences among individuals ▪ professional development opportunities for community partners ▪ community engagement in governance structures or institutional review boards <p>[Source: Qualitative PSI]</p> <p>Resource and Power Sharing</p> <ul style="list-style-type: none"> ▪ Which partner hires personnel on the project? (SHARE1) ▪ Who decides how the financial resources are shared? (SHARE2) ▪ Who decides how the in-kind resources are shared? <p>Research Integrity</p> <p>Who made the final decision to approve participation in this research project on behalf of the community?</p> <ul style="list-style-type: none"> ▪ Agency leader, representative, board, or staff (INTERG4.AGENCY) ▪ Tribal/local government or health board/public health office (INTERG4.GOVERN) ▪ Individual community member(s) (INTERG4.INDIVID)

Constructs	Operational Definition	Potential ⁱ Variables or Themes [Data]
		<ul style="list-style-type: none"> ▪ Project advisory board (INTERG4.ADVIS) ▪ Other (INTERG4.OTHER) ▪ No community decision; individual research participants give/gave consent (INTERG4.NO_DEC) <p>Project Features Is this a descriptive, intervention, or policy study? (PROJECT)</p>

Notes:

- i. PSI denotes partnership stakeholder interviews. CES refers to Community Engagement Survey; KIS refers to Key Informant Survey. PSI are collected from the qualitative, inductive phase of the parent study, RIH. Both CES and KIS are collected from the quantitative, deductive phase of RIH.

Table 4.2 Number of transcripts coded by case study partnership and type of interview

Partnership	Coded Individual Interviews	Total Individual Interviews	Coded Panel Interviews	Total Panel Interviews	Coded Focus Group Interviews	Total Focus Group Interviews	Coded Documents	Total Documents	Total Non-unique* Participants
A	10	14	NA	NA	1	2	11	16	17
B	6	6	NA	NA	1	1	7	7	15
C	6	7	NA	NA	NA	NA	6	7	7
D	7	13	NA	NA	1	1	8	14	22
E	6	13	NA	NA	2	2	8	15	26
F	7	14	2	2	2	2	11	18	43
G	2	2	1	1	1	1	4	4	8
Total	44	69	3	3	8	9	55	81	138

* Due to the lack of identifier information in the de-identified RIH Qualitative dataset, I was unable to verify whether specific individuals who participated in individual and panel interviews also participated in focus group interviews.

Table 4.3 Illustration of qualitative coding approach

Question	Quotation Example	Code Applied	Rationale
Q.1.1 (Characteristic of Group Diversity)	5.2.C.1. "I see like [Partner] is like the PI of this project. Principal Investigator. Did you write the grant? Yeah. He wrote the grant, I thought. Yeah. So he's the PI. And then I see the [Institution] team has a team that comes in; and like [Partner] being the ... like the psychologist. [laughs] And [Partner] is always great with editing and input, because of his experience working with the Vietnamese project. Yeah. And then [Organization] being our community ... well-established community agency is involved in this partnership... (Partnership B, Focus Group Participant)	<ul style="list-style-type: none"> ▪ Variation in skillset (Part_skills et) 	<ul style="list-style-type: none"> ▪ Addresses the different skills that identified academic and community partners bring to the partnership, such as grant writing, editing and input.
Q.1.2 (Benefit and Barrier of Group Diversity)	5.4.D.1 I think what's working well is just the general partnership. There's been a very positive group dynamic. I think there's a lot of mutual respect for one another, and a good collaborative spirit among folks. And I think we all recognize that each person holds a very different knowledge and experience that a lot of times no other person will hold. There's just a lot of diverse skills and knowledge that the group has. It's actually pretty amazing how so many people hold different pieces of the puzzle, from the person who is a good relationship builder with community to the person who has knowledge of health promotion to someone who has specific knowledge around a specific research method to a good leader/facilitator to so many other things (Partnership B, Community PI)	<ul style="list-style-type: none"> ▪ Promoting group cohesion (cohes) ▪ Drawing upon unique expertise (helpexp) ▪ Variation in skillset (part_skills et) 	<ul style="list-style-type: none"> ▪ Addresses the positive group experience, mutual respect, and cohesion that could be attributed to different assets that different partners bring ▪ Conveys the notion that each person has distinct knowledge and experience that others don't have. ▪ Refers to different skills and knowledge partners have, such as relationship building, health promotion knowledge, research method.
Q.2 (Diversity Engagement Practice)	5.7.4.A I like the term cultural humility. ... I think that humility is one of the traits that is indigenous to my tribe ... But I think that sometimes we forget to be humble... I don't assume that I know every native person, every [Tribe] native person, and their reality, because I don't. I'm just one person here in the tribe. And I'm willing to learn. I'm willing to assume that they're the experts on themselves... I just want somebody who knows themselves, is willing to do the self-reflection and self-critique, and the training that they need to do; and the apologies when necessary to their clients. (Partnership A, Community Partner co-PI)	<ul style="list-style-type: none"> ▪ Individual cultural humility (indculthumil) ▪ Variations in tribal affiliations (part_tribe diff) 	<ul style="list-style-type: none"> ▪ Discusses the concept of cultural humility and the ways in which it is practiced in the interviewer's tribe and professional practice ▪ Differences between the interviewee's tribe and the tribe of (community) partners are implied.

Table 4.4 Organizational structure of the study codebook

Number	Name of Domain	Domain Description
<i>Q.1.1: What aspects of group diversity are perceived to be relevant to collective functioning of the partnerships?</i>		
1.	TRAIT	Characteristics of diversity of functional relevance or importance to the partnerships
1.1	Comm	Within-community
1.2	Res	Within-research
1.3	Partner	Within-partnership
<i>Q.1.2: In what ways do stakeholders perceive these aspects of group diversity to benefit or impede collective functioning of the partnerships?</i>		
2.	BENEFIT	Perceived benefit of diversity on partnership functioning or experience
3.	BENEFIT*	Perceived benefit of cultural similarity on partnership functioning or experience
4.	BARRIER	Perceived barrier or impediments of diversity on partnership functioning or experience
<i>Q.2.: What partnership strategies, underlying ideological positions, and surrounding institutional structures do stakeholders perceive attend to group diversity within the partnerships?</i>		
5.	PRACTICE	Practices and strategies that address partnership diversity (within-group differences). This includes individual, subgroup, or partnership-level elements.
5.1	Ind	Individual qualities of relational importance
5.2	Group	Interpersonal practices or dynamics within partnerships
5.3	Partner	Overall partnership practice, norms, or strategies (Note: Upon synthesis, this was consolidated with 5.2 as partnership or group-level practice)
6.	STRUCTURE	Organizational, institutional, and cultural structures and worldviews that address partnership diversity. This includes structural, social, and ideological elements that informs or shapes partnership practices.
6.1	Org	Organization or institutional practices
6.2	Cult	Cultural elements, values, or ideology
6.3	Soc	Societal structures or norms (of partner's social group)
<i>Descriptive codes: Non-analytical codes for description of interviewees</i>		
7.	ROLE	Identified partnership roles and demographic characteristics of the interview for descriptive purposes; used for descriptive coding of gender, race, partnership role etc. of interviewee
7.1	Gender	Gender
7.2	Race	Race
7.3	Ethnic	Ethnicity
7.4	Job	Identified partnership role

Table 5.1 Characteristics of case study partnerships

Partnership	Focal Area of Intervention	Focal Population	Location
Partnership A	Substance abuse prevention	Native Americans	Washington State
Partnership B	Colorectal cancer Screening	Asian Americans	California
Partnership C	Cardiovascular disease (faith-based)	African Americans	Missouri
Partnership D	Environmental justice	Multi-racial and ethnic groups	New Mexico
Partnership E	Cancer research	Native Americans	South Dakota
Partnership F	Nutrition, diabetes, healthcare access (faith-based)	Black and Latinos	New York
Partnership G	Healthy weight	Deaf populations	New York

Table 5.2 *Illustrative examples of functional characteristics of group diversity*

Characteristic of Group Diversity	Illustrative Example of Characteristic within Overall Partnership Members	Illustrative Example of Characteristic among Community Partners	Illustrative Example of Characteristic among Academic or Research Partners
Functional Characteristics			
5.2.A: Variation in professional background	5.2.A.1. "But that's what was exciting. Now to me what was really interesting with the different partnerships coming together around the table ... so people were sitting around the table for the first time ever. The promotoras came from different places. [Institute], which was the community environmental health project through [partner], and she brought in about three or four people..." (Partnership D, Academic Principal Investigator (PI))	5.2.A.2. "It's already a multidisciplinary team of tribal providers, community members, school staff, all that kind of [thing] ... it's a big group." (Partnership A, Tribal Board Manager)	5.2.A.3. "Right. And the organization, in fact, was founded ... when it was founded in '83 there were four founders. And they were multi-disciplinary: two physicians, one behavioral therapist, and one nurse practitioner. In and of itself, that's unusual." (Partnership F, Research Investigator)
5.2.B: Variation in organizational affiliation	5.2.B.1. "...We started with [University]. OK So you know that a [funding] applicant must include a research intensive partner, which we do not qualify for. In fact, under the ... there's the three ... there's the triad of a [funder], which is a community-based organization—the tribes or a coalition of tribes—and the research intensive partner. So we're unique—somewhat unique; I think we're still the only tribally sanctioned nonprofit model for a [funder]. I think every other [funder] recipient is a tribe... (Partnership E, PI/ Director of Research Collaborative)	5.2.B.2. "So you have that kind of network of people. And then you have all of these other community partners and organizations,...after school program. Various partners have kind of come and gone: [women's housing and economic development organization]. The [housing organization] was involved for a long time..." (Partnership F, Academic Evaluator)	

Characteristic of Group Diversity	Illustrative Example of Characteristic within Overall Partnership Members	Illustrative Example of Characteristic among Community Partners	Illustrative Example of Characteristic among Academic or Research Partners
5.2.C: Variation in the skillset of partners	5.2.C.1 "I see like [Partner] is like the PI of this project. Principal Investigator. Did you write the grant? Yeah. He wrote the grant, I thought. Yeah. So he's the PI. And then I see the [Institution] team has a team that comes in; and like [Partner] being the ... like the psychologist. [laughs] And [Partner] is always great with editing and input, because of his experience working with the Vietnamese project. Yeah. And then [Organization] being our community ... well-established community agency is involved in this partnership... (Partnership B, Focus Group Participant)	5.2.C.2. "And I think it's important to have a community. I think they should have one. But I don't think that we can all work together. One positive thing we can help each other with is having access to information. But because they can take advantage of captioning, but they can't really take advantage of sign language interpreting ... " (Partnership G, Community Member)	
5.2.D: Variation in research approach or viewpoint			5.2.D.3. And what I mean is you have to have some ... and I don't mean that [researcher] doesn't have this, but as a clinician... I take care of Chinese patients; and I see things as a clinician that I would never see as a researcher, for instance. It allows me a different view of how people are. It's experience then. (Partnership B, Academic Principal Investigator (PI).

Characteristic of Group Diversity	Illustrative Example of Characteristic within Overall Partnership Members	Illustrative Example of Characteristic among Community Partners	Illustrative Example of Characteristic among Academic or Research Partners
5.2.E: Variation in community engagement	5.2.E.1. "We had one phase that was kind of a rough one. And we had a staff member ... who was challenging and somewhat ... and he had a strong streak of Indian rightism, if you will. That's maybe an inappropriate term, but ... And it didn't fit well. And it was outside of the mainstream of what was developing..." (Partnership A, Academic PI)	5.2.E.2. "And then outside of that, it would be the mayors. They know some of where we're trying to go, because of their level of engagement, and of the roles that they have. Agendas that they have determine whether they want to own it or not. Look. We're talking agriculture here; and so we have mayors who have interests of farmers at hand, interests of the businesses at hand, and they can't have someone that might come in and threaten the competition..." (Partnership C, Community PI)	
5.2.F: Variation in partnership maturation	5.2.F.1. "I felt that the project has a coordinator, like [partner]'s case. [Partner] was hired; and she's new. I think sometimes I felt that since I'm not her direct supervisor, I don't feel responsible to give her any supervision, right?... Sometimes I felt like ... and I was in her role before, because I was at a younger age, and I was ... sometimes it's very intimidating, I'm sure." (Partnership B, Community Consultant)		

Table 5.3 Illustrative examples of sociocultural characteristics of group diversity

Group Diversity Characteristic	Illustrative Example of Characteristic within Overall Partnership Members	Illustrative Example of Characteristic among Community Partners
Sociocultural Characteristic		
5.3.A: Variation in gender	5.3.A.1. "It'll be very obvious. We are four academic white women, and we're working with an African American community. That in itself is huge. Women ... and the original grant was African American men. White versus African American. African American men, and then it grew to African American ages 18 and older in terms of the second round of funding for the gardens and nutrition education." (Partnership C, Academic Research Coordinator)	5.3.A.2 "And we selected those ... one of the things that we realized early is that our board was comprised of a lot of females; and so we wanted to make sure that we had the male perspectives in there. And so we asked several of the men that we knew who were involved..." (Partnership E, Focus Group Participant)
5.3.B: Variation in race	5.3.B.1. "My congregation is 90% African American. [Research partner] is Latino. [Research PI] is a white, Jewish male. So there was a slight hesitation at first. Why do you have this Jewish doctor coming who wants to spend time with me, picking my brain about who I am and what my passion for ministry is all about, and telling me all about the organization that he's head of? He doesn't live here in this community." (Partnership F, Community Pastor)	5.3.B.2 "The [Community area] is sort of the dumping grounds for so many environmental health problems. If we looked at community capacity regarding political voice and so forth among the different sectors, [Community] which is very strongly Spanish speaking is overrun ... has greater numbers of Spanish speaking, but it's overrun by whites." (Partnership D, Academic PI)
5.3.C: Variation in ethnicity	5.3.C.1. "Because [Community] is a Latino community and it's a black community, right? ...But there was uneven development [to] bring in both together in our faith-based initiative until four years ago we hired [research partner]...And as much as they can fill up the Latino churches, we can't. We're part of this. To have somebody who's culturally from there, who speaks the language was huge, right?" (Partnership F, Research Program Director)	5.3.C.2. "[Partner] is right. About research is that ... if you look at the census, and it tells you [Community] has 4700 people and 89 percent of those are Latino ... The next day Wal-Mart's going to come out and post Spanish signs all over the community, because they know that's ... But if the census says 90 percent of those Latinos don't own their own home, you're not going to see [organization] here building homes." (Partnership D, Focus Group Participant).

Group Diversity Characteristic	Illustrative Example of Characteristic within Overall Partnership Members	Illustrative Example of Characteristic among Community Partners
5.3.D: Variation in tribal affiliation	5.3.D.1. "And then Phase Two ... we added a different tribal community, [Tribe]. So that was different from what we started. That wasn't something we knew would happen in Phase One; so Phase Two has included working with a second tribal community, and that brings in a new dynamic into the partnership, because we have two tribal communities who also (inaudible) with each other. We're pretty close to each other in distance, but have had some challenges at times with each and successes." (Partnership A, Academic Research Coordinator)	5.3.D.2. "When I say "communities," I'm also including the tribes in the area over the past probably eight, nine years prior to ... probably the last six years actually prior to our submission of this grant; and I had also been working not with the [Organization] or the [tribal] community, but with [different Tribe]. So I knew the community, at least in [Tribe], pretty well through some of the work that we had done together." (Partnership E, Research Investigator)
5.2.E: Variation in religious or faith affiliation	5.3.E.1. "[Research partners] really hold it together. And [Partner] has never shared his faith....And the fact that he didn't have to come from a church, he didn't have to be religious; it just ... he was embraced by everyone, and just people just seemed to let go of their religious dogmas or ideas or whatever, and we just all wanted to be part of this bigger thing that was happening." (Partnership F, Focus Group Participant)	5.3.E.2. "And he's [Church]. He's pastor. And then the only ... so it's not really a community advisory board; it's almost like tiers. There's advisory staff; and then this Pastor [Partner] level, and Pastor [Partner]. I would say are pretty equivalent. Pastor [Partner] is a different church, and he provided a lot of the kind of the foundations for the leadership and job readiness with that first round of funding." (Partnership C, Academic Research Coordinator)
5.3.F: Variation in age	5.3.F.1. "And then [Partner] comes, and she's 16 and she's really tiny. She looks like she's maybe 15.3. And so we're all talking about these great ideas we have for doing stuff with youth and we're like, "So, [Partner], what do you think?" She goes, "Well, I just think that what youth would hear would be blah blah blah ..." [laughs] And it was like, "That's it. That's why we hire her." (Partnership A, Community co-PI)	5.3.F.2. "It really was, in part, because we saw the canoe and the tribal journey in general, not necessarily their hosting it, as something that youth could get engaged in, and one of the things that for us made good sense, because we're looking at prevention, is it does a couple of things. It's intergenerational; so it brings together elders and sort of the middle aged folks and the youth." (Partnership A, Academic PI)

Group Diversity Characteristic	Illustrative Example of Characteristic within Overall Partnership Members	Illustrative Example of Characteristic among Community Partners
5.3.G: Variation in personality	5.3.G.1. [Partner]’s great. She’s very soft spoken. But it’s people. It’s recruited a lot of bodies; so that’s not a simple task necessarily. So they have really good ... [Partner] just manages. Boom. just gets things done. I’m dealing with human subjects back and forth right now. And they emailed that they just wanted this in Chinese instead of English; so ... [laughs] ... she’s very good at that sort of thing. So he’s corralled a good crew... (Partnership B, Research co-investigator).	
5.3.H: Variation in leadership approach	5.3.H.1. "And I’m not saying [Partner] didn’t contribute, but her style just was unable ... her style could not compete with [Partner]’s style; so the dominant ... see, in a partnership [there] can’t be a dominant. There cannot be a dominant. There can be people in charge, but to dominate just doesn’t work in my money." (Partnership D, Community PI)	
5.3.I: Variation in language use	5.3.I.1. "And I would say in the development work we put a lot of time within our community to look at really translation, the linguistics. Just really our team has people from different parts of China basically ... have our different Chinese culture ... not ... [Partner] [is] actually not from China, but his language, his skill is superb that way ... that really we are offering as a team ... We are satisfying from both like Mandarin speaking and Cantonese speaking background." (Partnership B, Focus Group Participant)	5.3.I.2. "[A]nd what you’re saying are people who were in the [community board] are members of our deaf community in general, which is deaf people, hearing children of deaf adults, people who are sign language interpreters, and other people who work in conjunction with the signing deaf community. It could theoretically include school teachers and other people who use sign language who are not included in the community." (Partnership G, Community Partner)

Group Diversity Characteristic	Illustrative Example of Characteristic within Overall Partnership Members	Illustrative Example of Characteristic among Community Partners
5.3.J: Variation in physical abilities	5.3.J.1. "So there were deaf and hearing people, there were people with medical backgrounds, there were people with experience running groups for deaf people from a psychiatric perspective, but still people who had experience doing group education and things like that; and they looked over the entire curriculum with an eye for language information, accessibility, whether or not something would be easily teachable." (Partnership G, Community Partner)	
5.3.K: Variation in educational attainment	5.3.K.1. "[Academic PI]'s an M.D.from [University], a bachelor's from [University], residency at [University]. a straight path. He's a professor, a tenured professor at [University]. And he's not ... I was very intimidated in the beginning. And I still am to some extent. Like I feel like I'm not a PhD. [laughs] I can't really weigh in on important research design issues. But I think he really tries to see everybody's point of view on things. And not just him...[Partners are] all really leaders in their fields. So it's intimidating even for me; and I'm a PhD student." (Partnership B, Academic Research Coordinator)	5.3.K.2. "I think we're hit and miss there on whether or not we're really getting good representation of the variety of experiences that community members have, because people when they go through higher education are automatically quite different than people who haven't been through higher education, and people who understand research processes are very different from the community members that are often very naïve to those." (Partnership G, Focus Group Participant)
5.3.L: Variation in income	5.3.L.1. "And there was a power differential in the first four years in salary when you look at what the promotoras were making versus what I was making or what [Partner] was making or [Partner] with [Partnership]. So ... and I think that power thing came up a lot, that differential salaries, the basically the direction, how direction was happening; so all of that was a huge, huge barrier, I think. Which is why I think it went to the community the last four years. That was a strategic decision on our part..." (Partnership D, Health Department PI)	5.3.L.2. "My sense of it is very dynamic now that more low income immigrants are Mandarin speaking. And so it has changed that dynamic quite a bit. We came in saying we only wanted to work with Cantonese speakers and English speakers, 'cause we felt like the Mandarin population wasn't high enough. And it introduced a totally different piece of resource that we don't necessarily have. But then we realized you did that, and this generalizability is not as good. So we actually expanded to include Mandarin speakers." (Partnership B, Academic PI)

Group Diversity Characteristic	Illustrative Example of Characteristic within Overall Partnership Members	Illustrative Example of Characteristic among Community Partners
5.3.M: Variation in geographic location	5.3.M.1. But here in the past ... the first two years most of the power up there; and then the past couple years, [PI] she was like, "Well, look. We are in [City]. You guys are down here. You guys need to start doing this, setting this up, getting doing this. We can't do all this work." And that's when the power is shifted. But it shifted to where that we are out communicating, coming up with the strategies, coming up with new ideas, and then taking it to the university (Partnership C, Community Staff Member).	5.3.M.2. "And I come from the districts; so services are real limited out there. For us to have to come into [Community], for some of us that's like almost a two hour drive to go from [Community] over here...The roads at the time were worse than what they are now, but even now they're not always the greatest. Access to the different tribal programs is limited for those that live out to the district. [Community] gets everything. [laughs] And they get the first ... and then the districts get what's left over." (Partnership E, Tribal Board Staff Member)

Table 5.4 Illustrative examples of themes under benefits of group diversity

Partnership Benefits of Group Diversity	Illustrative Example [1]	Illustrative Example [2]
Benefits of Within-Partnership Differences in Group Diversity		
5.4.A Drawing on Unique Partner Expertise	5.4.A.1 This project is so interesting in the sense that this is a real marriage between research, a legal component, and then you have the community voice at the same time; and they all play a different role. There's emphasis in different moments of the history of this campaign that where it has been more about the legal, more about the research, and more about the community voice...[A]n example of that was the earlier specialty surveys that we did where we had the findings and we went back to our coalition...And then the question was like:...what should we do? And then my guess was like, OK, we're going to write another article and publish it. And then people are like, "No, let's use this data to actually file a legal complaint." And that was basically the action that we took...(Partnership F, Focus Group Participant)	5.4.A.2 [I] don't think that native people are something that's so different from everybody else. I think that if you come to work with native people from a standpoint of cultural humility and the concept that they're the expert on themselves, it's going to work for you. [Partner]'s not native....And she's trained amazing non-native and native counselors too for our wellness program...I don't think that you have to be native to do the work that I do. But, if you're not native, you need to have an understanding and you need to be willing to hold back and wait your turn. And even [Partner] learned that. She's native, but she was an outsider (Partnership A, Community co-PI)
5.4.A.I Drawing on Partnership Expertise for Research Implementation	5.4.A.I.1 For me, I kind of see the expertise from [partner organization]...I have the language skills, but I'm also learning some cultural difference in some ways that ... even within Chinese, they're a very diverse population; and it's also great with [partner]'s input from her background...But, for me, being a part of the team and seeing the expertise from my colleagues from [partner] and from [partner], in terms of really learning about how to best to outreach and communicate to deliver the message; so I see them as our in-house experts in terms of ... even if we have they greatest theory, we have to make it really understandable and applicable to the real people who really want to outreach...So I see that as a very key goal for the project, that they're making a direct connection and have the hands-on experience with the community every time. (Partner B, Focus Group Participant)	5.4.A.I.2 Our advisors, because of their positions and because of their histories, can really inform us really well about what the situation is like on the ground at each of our three tribal communities really exceptionally well. ..They also have really good senses for feasibility; so as we consider a variety of different research topics, they have strong opinions about [them] and can provide some really valuable feedback on feasibility, or to tweak tentative design and methods to a much better fit [to] the local surroundings...But there are even times when our council members even provide ... add in high level tweaks here and there, even above our grass roots base planning efforts, 'cause they know so-and-so, and the council is likely to act this way or that way or whatever. Or when they try to do this, this is what they encountered; so they'd suggest you'd do it differently like this, or whatever...(Partnership E, Research PI/Director of Research Collaborative)

Partnership Benefits of Group Diversity	Illustrative Example [1]	Illustrative Example [2]
5.4.B Novel Partnership Perspectives	<p>5.4.B.1 People in the community who are of the culture of that community—the staff or the team who are of the culture of the community—they I think just have a ... and rightly so ... have a free disposition that these guys don't. They don't understand. So having ... I happen to think that a mix of cultural background is the best. But if it's all on one side or the other side, then that doesn't work. I think we have a real richness when we bring many backgrounds together. (Partnership D, Community PI)</p>	<p>5.4.B.2 "[W]e ended up having a really good relationship, because I told her ... I said, "This is not just for us. It's for you too. Because I know for a fact that our tribal leaders weren't reading your protocols, weren't reading your abstracts and your publications, because they're so busy doing crisis management from day to day. And so to me this is respectful to both us and to you. We're giving you feedback and input that you would have never ever gotten. So it goes hand in hand." (Partnership E, Tribal Health Administrator)</p>
5.4.C Outsider Position/View on Partnership	<p>5.4.C.1 And she literally ... she was like a partner with us through all of this, because she went to every meeting from the beginning. And it didn't matter what the meetings were; she was at everything as an observer and also as a participant...And she was enough of an observer that she could give us feedback on what she saw and how things were going, but enough of a participant that she was really invested in the success of what we were doing; and I think that was a tremendous asset to us through that process.(Partnership F, Research PI)</p>	<p>5.4.C.2 Typically what happens is ... and it's a lot of times with student research...They don't know anything about us. They come out here; and then somebody mentions it. And so they come up and they say, "OK." And that's really how it's been. It's the researchers really want to go by what the tribe wants to do, and they're willing to follow our procedures and everything; and, honestly, non-native researchers are much more willing to bend over backwards to accommodate what the tribe wants than our own native researchers. Well, some I call my problem children ... [I and P laugh]because it's [with] like some of 'em, it's just like pulling teeth. It's: "You have to do this. If you want to do research, you have to follow these guidelines. This is when you have to do things. This is what we expect." (Partnership E, Tribal Board Staff Member)</p>

Partnership Benefits of Group Diversity	Illustrative Example [1]	Illustrative Example [2]
5.4.D Promoting Group Cohesion	5.4.D.1 I think what's working well is just the general partnership. There's been a very positive group dynamic. I think there's a lot of mutual respect for one another, and a good collaborative spirit among folks. And I think we all recognize that each person holds a very different knowledge and experience that a lot of times no other person will hold. There's just a lot of diverse skills and knowledge that the group has. It's actually pretty amazing how so many people hold different pieces of the puzzle, from the person who is a good relationship builder with community to the person who has knowledge of health promotion to someone who has specific knowledge around a specific research method to a good leader/facilitator to so many other things (Partnership B, Community PI)	5.4.D.2 So now people actually see [Partnership] as a "go to" place. There are different groups in the community that have asked [Partnership] staff to be part of their boards. It begins to ... address to that power dynamic. The other thing is it's not just the power between us; and there are clearly power dynamics, and I'm sure the academic team will talk about power amongst ourselves too. But even within the community, again, that power by enhancing ... so it's like a light. We bring a light to [County]; and, as a result, we enable people to I think ... and some of the skills and other kinds of things, exchanges ... and that we create a venue. They're very good about this. Gosh, they're better than our funding agencies a lot of times. (Partnership C, Academic PI)
5.4.E Relating across Partnership Differences	5.4.E.1 The other thing that we have, and you'll see ... it's a tiny step, but it's a step. We have two pastors that are working together. Pastors in this community have never worked together before; and I would encourage you to ask them about that. It's a huge shift; and that is a huge success. If we can help them to figure out ways to work together, then even after our grant is over, they will have that. Now, there's still some tensions around it. It's not perfect. But it's a step forward (Partnership C, Academic PI)	5.4.E.2 That was probably one of the more stronger points of working together: having access to ... [County], having the Department of Public Health ... I think that was the department at the time, or an office ... and having access to the people that work there and having kind of advocates for the community in the county...They were able to hear the community's concerns at their jobs ... at the county. More than anything, they were able to go and say, "Here's what's going on in the community," and they can advocate for us with policy makers as well. (Partnership D, Promotora)
Benefits of Within-Partnership Similarities in Group Diversity		

Partnership Benefits of Group Diversity	Illustrative Example [1]	Illustrative Example [2]
5.4.G Acquired Cultural Insider Context of Partners	<p>5.4.G.1 I'm not ashamed to say this: I think that the people who ... I think no matter how good your intentions are ... the people... I'm from Jamaica; so there we have a thing that says, "He who feels it, know it." ...I think that, to a certain degree, it's people of color who can best advocate for communities of color, whatever...that ethnic or racial community is (Partnership F, Research Program Director).</p>	<p>5.4.G.2 I think it is helpful, especially when you go out into the community ... when people say when she introduces herself like, "Oh. OK So you might know more about us." People would be more comfortable with them than if it was just, "Hi. My name is John Smith, and I'm from Kansas."... But I think it's more about the way she goes about it, [not] necessarily than just her own background. I think it's her experiences with the communities beforehand, with Alaska native and American Indian communities....But it gives us an initial buy-in, I think, and a willingness to listen. But if she didn't come with genuine concern and appreciation for them, then that wouldn't get her as far. (Partnership A, Community Tribal Coordinator)</p>
5.4.H Embeddedness within Partnership Communities	<p>5.4.H.1 [Partner] grew up in, was an integral member of, went off to college and came back to the community and took on a leadership role, and her liaison with the council and with members of the cultural co-op were instrumental in this as well. So I think it really has to do with some of those personal connections with members in the [tribal council] and the [tribal board]. The fact, too, that [Partner] is present to the point where people have mistaken her as a tribal member or a tribal employee speaks to that. (Partnership A, Academic PI)</p>	<p>5.4.H.2 [Partner] was not a member of my congregation at that time. But...it was very clear to me that here was a woman who had passion for her community. She lived in the [community], and had lived in [community], was a property owner in the [community]for 25 or 30 years... But she had this passion to see [community] come alive afresh and anew, to see it recover from what had happened here in 1968, '69, shortly after the assassination of Martin Luther King, Jr...And [partner] made me believe that I should be involved in it as well. And I began to take a second look at my calling to [community] (Partnership F, Community Pastor)</p>

Table 5.5 Illustrative examples of themes under challenges of group diversity

Partnership Challenges of Group Diversity	Illustrative Example [1]	Illustrative Example [2]
Challenges of Within-Partnership Differences in Group Diversity		
5.5.1 Internal tension within partnership	<p>5.5.1.A We just didn't access the community after that. We closed down. And we were just coming to meetings; and that's what we were reporting. We came to a meeting, and that was our timesheet...And as far as the trust, I don't think we really had a chance to work together enough to actually build any ... to build trust. I think that trust is a process of mutual respect and those things; and we really didn't work together enough in the same place in the same community to be able to do that ... It felt like for the university and the county this was kind of like one of many things to do. They're getting a big chunk of money for this... (Partnership D, Focus Group Participant)</p>	<p>5.5.1.B So [organization] brought in a consultant after [partner] got thrown out of her job to run [the organization]...it turned out it was the people from the church who had been stealing money from the coffers, not [partner]. It was just a mess. [Partner] rebounded and came back to work for another organization and has continued to do all the good work that she does. And it was very awkward at the beginning, because she was the clergy liaison in that church because they were one of our partners ... it was like, "Well, should we invite [partner], or should we invite [partner]?" That's why for years we had to tiptoe around them, but they had finally, finally made peace. (Partnership F, Research Investigator)</p>
5.5.1.I Personality-rooted partnership tension	<p>5.5.1.I.A [I]n the second phase,...[partner] became the leader; and it's his personality. It's just who he is. And it wasn't as much a collaborative effort. It shifted. But his intent was to empower the promotoras or promotores; and I know that's what he really wanted, that they took the lead. So he kind of shut off everybody, 'cause he wanted them to take the lead. But his own leadership style disrupted their being able to take the lead; so he stayed the leader. So it was ... and for me it was kind of an interesting ... "Well, yeah, we want these guys to learn and really be able to tell us what they think we need to do." But that didn't really happen. (Partnership D, Community PI)</p>	<p>5.5.1.I.B I had someone who cannot take constructive criticism put a strain on the work relationship....They could not take constructive criticism; so it really did put a strain on it to the point where we had to be called by our director too. You could feel the tension...Yeah, that's how it went...But now it's good. (Partnership F, research project coordinator panel)</p>

Partnership Challenges of Group Diversity	Illustrative Example [1]	Illustrative Example [2]
5.5.1.II Membership turnover	<p>5.5.1.II.A And so, as it turned out, we did not have university input really the last I would say almost two years. That was just ... and it was egos and ... And so I found that to be a real loss. And now [partner], who had been in the first four years, she dropped out the second—actually, after the first year of the second phase. 'Cause she felt, “This is not going anywhere,” from her perspective. And she’s also a very strong leader. So the dynamic there ... so I would say that clouded trying to really analyze academic and community partnering; and so personalities cannot be taken out of the dynamic. (Partnership D, Community PI)</p>	<p>5.5.1.II.B [O]ne of the women that I mentioned left ... had a lot going on in her personal life; and I think at times that was keeping her from doing her job. So there was a lot of conflict around that, setting up clear expectations of what she promised to do; and then she wouldn’t do that. And so it was causing conflict in the group; and so we were able to ... we had the conversation. There was a lot of words shared, some of them angry, and all sorts of things...I think ultimately part of the reason why she didn’t continue with the project after she had a child is things that were going on in her own life; ... I think she just kind of demonstrated all of the things that we’re dealing with in the community and her personal life. (Partnership C, Academic researcher)</p>
5.5.2 Social distance	<p>5.5.2.A I think [the reputation of institution] has been mixed over the years. I think there’s been some perceptions in the past about them being very research oriented, and then coming into communities and then getting data that they need, and then leaving; and then providing analysis of data that they collected. More recently, though, I think the reputation has softened a lot, has gotten a lot better, that they’re more seen as a partner in the research, rather than a just an organization that will come, do the research, and then leave. (Partnership B, Community PI)</p>	<p>5.5.2.B [W]e were in the wellness program, which has the stigma of that’s where you go if you’re in trouble with drugs. When you get released from jail ... you have to go there for weekly meetings ... stuff like that. And while everyone acknowledges that those are all good, things to have, some people don’t want to be seen walking into it, or out of it; or, “You have to go to wellness. What did you do?” kind of thing...And so that’s another reason we’re glad to be out of that building ... is hopefully there won’t be that same stigma. Some of our [consent] forms ...said, “the wellness program,” at the top of it in the letterhead. And trying to explain ...“Yes, it’s sort of about drug and alcohol abuse prevention ... “...“But it’s not that kind of thing. Your kids are not wellness clients...” (Partnership A, Community Program Staff/Tribal Board Member)</p>

Partnership Challenges of Group Diversity	Illustrative Example [1]	Illustrative Example [2]
5.5.2.I Distrust of scientific approaches	5.5.2.I.A Well, most deaf people’s experience of scientists and researchers is: “You want to fix me.” There’s cochlear implants, there’s various testing on audition and people’s ability to hear and the problem of deafness... Of not being able to hear something. The community we work with doesn’t care about fixing their ears. They are fully competent, actualized human beings. They have jobs. They have a full and rich communication in American Sign Language...So there’s always this sense of, “What are you going to do? What do you want to research about me? Are you going to try to tell me that there’s something wrong with me? Are you actually going to work with me?” And I think we’re still overcoming a lot of that too. People see research and they think cochlear implants and fixing deafness; and they go, “I don’t want any part of that.” (Partnership G, Focus Group Participant)	5.5.2.I.B They’ve had quite a bit of research in concert with universities in the past. Much of that has lent itself to a significant air of mistrust and distrust, which we can perceive... People still bring out examples of helicopter research and [were] never heard again. “And drew our blood for whatever reason. We don’t know. And we never heard about it. And we don’t know where our samples are.”...So we deal with that, and we deal with the ramifications and consequences of that. We needed to try to show that we are different, that our approach, our values are different from those of our academic partners; and we can only just show you through actions how we can be different. (Partnership E, Research PI/Director of Collaborative)
5.5.2.II Community vigilance of partnership activities	5.5.2.II.A I don’t want to speak ignorantly of this, but I think one of the challenges is: from conversations with [Partners] and [Pastor] is that it seems like when people start doing ...when African American men or women start doing something that really looks like it’s going to make a change, other African American people sometimes look at that and either want to put a stop to it or don’t trust exactly what they’re doing, or ... I think that goes on a lot. And so it’s hard to say if people buy in. I think people see we’re trying to do something that hopefully will make the community better, but I don’t know if they buy into it. (Partnership C, Academic Researcher)	5.5.2.II.B When researchers come in, we don’t care about the alphabet soup. I don’t care that you have a PhD from [institution], wherever ... That doesn’t matter to me. It matters to me how you interact with the board, how you interact with the community. If I hear that you’re really rude out in the community ... and it will get back to us, ‘cause we have so many interconnections here that if you’re rude to the clerk down at Big Bats, eventually one of us will hear about it; and it’s like, “Well, who do you think you are?”..And so we’ll just naturally just say ...We’ll put our front up and be very defensive, and we’ll give you a hard time. (Partnership E, Tribal Board Coordinator)

Partnership Challenges of Group Diversity	Illustrative Example [1]	Illustrative Example [2]
5.5.2.III Racial bias	<p>5.5.2.III.A So I'm not sending this guy anything. He's not going to get whatever. And so I think that's really what it comes from. It's always there... In most places we ... our names for different tribes or different nationalities is really non-judgmental...But to the white man... [tribal term] means "fat." "It takes the fat." It means "greedy." And that's the only word that we have for white man... it's very judgmental. But it's said ... in that perspective it's done because of the past that we've had. So that's really where there is a lack of trust, even for that word. (Partnership E, Tribal Research Board Member)</p>	<p>5.5.2.III.B So it came time to [place] to our funders; and we created some posters of what we've done throughout the year... And basically the way the academic side treated us was like ... they took us, the Mexicans, to [place] to show them as their subjects ... they wrote ... and data pretty poster for us ... and they're here to present; and then they wanted us to put a table with chips and salsa on it and sit in front of it... One person forgot the chips and salsa, and he got really, really mad because ... he wasn't part of the pony show for the funders ...and for the people in [place]. ... [A]fter that it was just fighting, fighting, fighting. And then we took that racism training; and two or three people walked out because they said they were not ... they didn't have a racist bone in their body; so they used their privilege and walked out. (Partnership D, focus group participant)</p>
5.5.2.IV Gender bias	<p>5.5.2.IV.A That created friction...And so even asking for an MOU, as I say, where you don't trust me ... "Well, no, we don't trust you."... the lead PI was not from the community. They would sabotage the community PI because he was male and the network was with the women. And so I, being female and being part of that network, I would come in and neutralize and say, "Hey, let's look at this." I was always trying to bring it back and hold it accountable. (Partnership D, Academic PI)</p>	<p>5.5.2.IV.B Historically, a lot of the organizations that worked in the [community] were male dominant; and I think that there is some bias from ... Of, "You females, you ... trying to change us and our power ... " And, actually, I'm sorry, the [county] at that time was very male dominant in power. I don't think there was one female who had a leadership role in the county. Yeah. Yeah. It has changed. (Partnership D, County PI)</p>

Partnership Challenges of Group Diversity	Illustrative Example [1]	Illustrative Example [2]
5.5.3 Balancing interests among partners	<p>5.5.3.A There's... a need in the community for ... food access and the gardens provide the fresh fruit and vegetables [as well as] ... an academic research need, improving health and nutrition of African Americans that have one of the highest rates of cardiovascular disease in [State].... They would say, "We need jobs. And if I had a job, then I could worry about having enough time to cook a meal or eat this food." But they don't identify maybe their access to food or their high diabetes or cardiovascular rates as a problem or a need when they maybe just want jobs, or they are struggling with institutional racism. Or a sense of hopelessness or some of these other really big barriers for them. ...[T]he project ... ia catalyst to begin those conversations; ... I may [b]e frustrated, or they may be frustrated ..."Well, we really just need jobs." Or ... "So why are we doing gardens when ... ?" (Partnership C, academic research coordinator)</p>	<p>5.5.3.B [D]uring the first phase of the partnership I think the university was in charge of the ... being principal investigators ... and [in] the second phase the community was. And when that shift took place these other partners were kind of like ... they still wanted to be calling shots, and the community had a chance to be in the driver's seat; and I don't think...the university and county partners—were comfortable with it... I think their egos were probably hurt, because these uneducated people were talking about publishing papers and having their names put on these publications that these professors need to have tenure ... and that the county needs to show that they're doing something for the community...And so it's a very paternalistic relationship that is like, "We're taking care of you guys. We'll take care of this." And we're like, "No, we can put our names on the papers to we're doing the research or whatever else." (Partnership D, Promotora)</p>
5.5.4 Lacking awareness of community context	<p>5.5.4.A [This researcher] was doing ...some economic development here on the reservation...She's of Asian descent ...she said, "I'd like to meet with you and talk to you about the cultural awareness and some of the protocols." So she walks in, and she walks in with a sack of flour. OK? And she sets it: "And here's a gift. And here's a sack of flour,"...And she sits down, and she's just looking at the floor, and she starts talking. But she would never look at me; so I said, "Are you going by protocol?" And so she burst out laughing...And then at the end I told her ..., "I really appreciate the gift. [laughs] It's not that I don't care for it." "But," I said, "You need to understand something." I said, "We have a high rate of diabetes here on the reservation. White flour is very dangerous for us, and it's a lot of carbohydrates in it." And I said, "You want to bring flour next time?" I said, "Bring some maybe wheat flour, and that might be more healthier." I said, "Better yet, bring some fresh vegetable[s] or fruit..."(Partnership E, Tribal Board Member)</p>	<p>5.5.4.B [The IRB] has been great to work with, but they kept asking or requiring certain things because that's the way IRBs have always reviewed research, not taking into account unique situations in a tribal community;...I finally called and said, "Let's talk about this, because it's not gonna happen. What the [organization] IRB is requesting or requiring is not going to happen." ...And I said, "Well, you know that this is a sovereign nation that we're talking about. And, quite frankly, they don't have to do anything because the [organization] says they do." And she said, "Well, what does that mean? What does that mean, 'sovereign nation?'" And so I gave her this one minute really talking. (Partnership A, Academic co-PI)</p>

Partnership Challenges of Group Diversity	Illustrative Example [1]	Illustrative Example [2]
5.5.5 Ambiguity in partnership roles	5.5.5.A "[A]ctually, at the beginning of the planning, some of the roles are not very clear-cut, I felt...It wasn't clear ... it wasn't whether it was my role or the [organization] role to come up with a curriculum for the nutrition aim. Yeah. So there was some discussions and then ... and plus, because I'm a consultant, so I'm also bound by the time [and] the amount of hours that they give me." (Partnership B, Community Consultant)	5.5.5.B "... if they don't have all that information, is it OK to say, "Here's what we need to plant," if we all decide together, "Here are the kinds of things we want to plant." Can somebody here, an academic partner, actually craft some of that for them? Or should they be responsible for doing everything? ...that continues to be a struggle for us." (Partnership C, Academic PI)
5.5.5.I Ambiguity in representing partnership community	5.5.5.I.A Interviewee A: those people that have late hearing loss or other hearing loss have completely different needs than those of us who are deaf; and many of them who have hearing loss have identity issues: they don't even accept who they are or know who they are. ..So their issues come in along with regular meetings and take additional time, and I think that frustrates those of us who are deaf ASL users. I think it creates a cultural conflict. Interviewee B:...those people who have lost their hearing still function as people who are culturally hearing in the majority culture. They have "full access" to the hearing world, because they have lost something. They have lost the ability to hear...Many of them acquire sign language, but the people who are on this group didn't sign, didn't have any interest in sign, and then they showed up at our meeting; and we ended not being able to finish our work because they were there and not really ready. (Partnership G, Community Partner Panel)	5.5.5.II.B I feel like because I live, work, and breathe the community, I am a representative of the community. I have had to ask myself that question a lot, being a part of the national community committee and its leadership. I work for the university. And so some would see me being divided. How is that you can serve two? But I feel like my university partners hired me to be the community rep...They needed somebody in the community to help them know what the pulse of the community was. And so, with me gaining my master's, I feel like I would be in a better position to help my university partners know what the needs of the community are, and be able to address those needs. (Partnership C, Community PI)

Partnership Challenges of Group Diversity	Illustrative Example [1]	Illustrative Example [2]
5.5.6 Communication barriers	<p>5.5.6.A I felt it was very intimidating. I mean I tried to empower [partner]. But sometimes maybe if her supervisor will speak for her a little bit more or give her more support ... [T]hat piece sometimes is actually very intimidating as in for a community group to be sitting with six or seven PhDs in the group. I felt uncomfortable speaking up. Actually, sometimes I still don't ... even though I have so much experience. And I know that they look upon me as a community expert, right? But sometimes I felt, "Oh, I don't know." I ... maybe it's somewhat cultural. I don't know with some of these cultures ...Yeah, some of it can be the Chinese part of me. Yeah, the Chinese piece of it...Maybe the Chinese is: we don't want to rock the boat. I don't want to bring up [the] controversial a lot ... controversy. And still I felt strongly that, or I felt safe. (Partnership B, Community Consultant)</p>	<p>5.5.6.B Sometimes I knew that I was missing information in some of those instances. Yes, I can remember when that happened. Your statement made something occur to me; and it's not exactly a conflict, but there's a lot of reading expected, and I get overwhelmed with that....And it's very hard on the deaf community. Many of them are uncomfortable with having to read a lot in English...Often, when I'm reading something in English, I have to translate it...We have to depend on both languages; and one is visual, and one is not. And often we're given articles to review full of statistics and other research-ese(?) and it's very difficult for us. I have a master's degree in English. I do. But I am not used to reading this research-ese(?) and statistical language. It's quite overwhelming... (Partnership G, Community Partner Panel)</p>
5.5.7 Lag in partnership processes	<p>5.5.7.A And I think because we've talked to [partner] about this before, because she'll be like, "I hear all the stuff you're doing, and you're so far from where we are." And [partner] started there too. I mean 2004, 2005, 2006, until we finally started in 2007 to actually have that. It's such a slow process, and our meetings used to be, "OK We've got our timeline. And, OK, how are we going to do this?" And we would have events where four people would show up; and those were usually the four family members that like we brought with us. ..Yeah, it was really ... it was difficult; and you kind of have to stay the course and believe in the process. (Partnership A, Community Partner Co-PI)</p>	<p>5.5.7.B [W]hen new people come onboard, because they don't know the history or the way that we've been operating that kind of thing, and they try to come with something new, it causes us to have to step back and bring them up on where we are, how we operate that kind of thing. And so there's a lot that that takes time...so we got a lot of that when new people come onboard, helping them to understand the processes that we operate through. And so to the point that here we've got local knowledge in the community. They have a good sense of what works best, what has worked best in past years, or whatever that looked like, versus another level of experience coming from outside of the community (Partnership C, Community PI).</p>

Partnership Challenges of Group Diversity	Illustrative Example [1]	Illustrative Example [2]
5.5.8 Discomfort with partnership tasks	<p>5.5.8.A [M]aybe to the researchers certain things are very obvious or like they all know about this, but, for us, we're used to just running programs in the community with not much regulation or rules to follow...We just do what works or what we think will work, right? But with the research structure, things are somewhat more rigid at some point... I guess sometimes I feel that we or I, coming from the community, we're not sure what the researchers are really looking for; or we feel like ... or they want certain things, and they think that it should be easy to obtain...Like certain kinds of information from the community; and they think that would be easy to be done. So they would just say, "OK You go do it." [laughs] But when we are the ones who implement it, sometimes it's challenging. (Partnership B, Community Coordinator)</p>	<p>5.5.8.B Interestingly ... everything's in a historical context. And I think at that time had we proposed: well, let's address economic democracy and racism right off the bat. But we didn't name them; and, of course, that's part of the pulp...Yeah. That was always the underlying pull of ... but we didn't name them, and we also I don't think had the skills or the tools to address them that we do now. I think we've grown a bit. (Partnership D, County PI)</p>
5.5.9 Variable participation among partners	<p>5.5.0.A I would say the main challenge is to get the pastors to jump on board. Although the church is part of the coalition, just getting them to make time to make the change. That's where the coordinator's supposed to come in...[The] coordinator's supposed to be able to have access to the pastor to say, "OK This is what's going on. This is what we need to do. This is what we need to change." And a lot of time that doesn't happen, whether it's because of the chain of command ... Because in some churches—the bigger church[es]—there's a ... the coordinator guy speak[s] to the ministry director. The ministry director got to speak to the overseer of operations. The operations got to speak to... church secretary. And then the pastor. And by the time it gets up to...you're all the way back down again...It's two months now; so it's like sometimes there's not enough access. (Partnership F, Focus Group Participant)</p>	<p>5.5.9.B I think a lot of them feel ownership to the project, and certainly ownership towards the work that they're doing, the health education work that they're doing. It sounds like from what [partner] was saying ... I'm not as close to lay health workers...But what it sounds like from what she said, the lay health workers, the intervention group, seems to have ... might feel a greater locus of control, as opposed to the control group, which is just recruiting participants, and they're not doing the actual education work, but they're more serving as a liaison for another person to do the actual education work. (Partnership B, Community PI)</p>

Partnership Challenges of Group Diversity	Illustrative Example [1]	Illustrative Example [2]
5.5.9.I Variable input solicitation from partners	5.5.9.I.A It felt like [organization] was a second class citizen, that was invited to the big table...and: "Just be happier here. And we're not really interested in your ideas. This is your piece, and we'll help you do it the right way." It wasn't quite that bad, but, like the whole thing on Chinese medicine ... I'm used to being rejected in life because I'm an outsider...You just keep contributing until people get the value of what you bring to the table...it took about a year, really. (Partnership B, Academic co-PI/health practitioner)	5.5.9.I. B Sometimes we wish we had been there from the beginning..And often we're joining in a bit later, and they're asking us and we're answering questions, but we might be there after the horse is out of the gate. It's not wrong necessarily, but it might have saved time if we could be there from the beginning. The problem, we know, is that we only meet once a month, and these researchers work every day... and they have to come up with ideas...But they never proceed with an idea without checking with us first. (Partnership G, Community Partner Panel)

Table 5.6 Illustrative examples of themes under functional capacity and esteem promoting practices

Promoting Partnership Esteem and Functional Capacities	Illustrative Example [1]	Illustrative Example [2]
Individual-level Practice		
5.6.1 Individual Assertiveness	5.6.1.A. As deaf people, we have also learned that we have a responsibility to ask questions, to ask for clarification if we're not sure about things. Oftentimes I think we're used to being passive. Many of us grew up in an oppressed situation where we weren't expected to be heard from; and I think that we're in a process of learning to be assertive and learning to get more clarification, and I think that we're getting better at this. I think young students going into [institution] —young deaf students—seem to know a bit better how to be assertive than many of us. (Partnership G, Community Partner Panel Member)	5.6.1.B. I think for someone who's from the community, you need to be proactive in asking questions, because a lot of times the researchers, they're discussing all these things about research and why they do things like that; and you may not understand what they're talking about, or you may not understand the rationale behind it...And I think it's important for someone who's coming from the community's side to be proactive in asking questions to find out what's really going on, or why we're doing things this way or that, because maybe to them it's just so obvious; like they all understand why things should be done that way and they didn't think that they need to explain it. But for someone without the background, you need to ask questions. (Partnership B, Community Coordinator)
Group or Partnership-level Practice		
5.6.2 Building esteem of Partners	5.6.2.A Sometimes I think ... I say, "Oh, I don't know. Should I say that? Should I not say that?" And at what point should we take a more active role?...also learning to feel that I know my community, that I can speak for my community... I felt for me that process of growing and being more courageous or something to speak up more, to learn to speak up for what I think I know about my community. (Partnership B, Focus Group Participant)	5.6.2.B But I think in terms of power related to expertise and ability, yes, people tended to put that on me... well, just in doing the work ... but as we started doing presentations at scientific conferences, I would invite the community partners, and they would say, "Oh, no, there's no way I could do that. I'm not comfortable doing that. I don't have the experience or the knowledge or ... I just can't do that." And I'd say, "Well, just come. Help me answer questions. Do you want to do a slide or two? Great." Until now, we're at a position where we co-present totally. And, in fact, a couple times, at least once, I wasn't able to make it and they presented without me. So I think that's like an indicator of a power shift. (Partnership A, Academic co-PI)

Promoting Partnership Esteem and Functional Capacities	Illustrative Example [1]	Illustrative Example [2]
5.6.2.1 Fostering an esteem-promoting partnership environment	5.6.2.1.A They didn't like the idea of needing help...Because we have a mix of men and women on the team... we decided to go with a football analogy. We have the coaching staff, which is on the side, that helps to determine the play, but it's doing it based on the strengths and the game plan that needs to happen on the field. On the field are our local staff; and there's a quarterback for each component. And that quarterback needs to follow the game plan that was determined by all of the players and the...coaching staff. Or, when people are out on the field and someone goes to the left, but the quarterback decides to throw to the right, there's nobody to catch the ball. ...The other thing that's been really fabulous about this analogy is there's something about the quarterback taking the lead on decision-making...If they see something that says, "This play isn't going to work" They call it...an "audible." That has now become part of our language... (Partnership B, Academic PI)	5.6.2.1.B I think what this group has done is created that kind of environment that people are not ashamed or afraid. They feel that they can speak and will be heard; and I think that's very different from some other organizations... We've all been a part of organizations where you sit there and don't open your mouth and you don't say anything ... because you know it's not going anywhere....I can remember probably six years ago saying, "We need to do ..." And [at] every meeting I would say, "We need to do ..." And I would say the same thing, and eventually I knew by saying it over and over that ... eventually it was going to happen. (Partnership F, Focus Group Participant)
5.6.2.2 Education to enhance partner engagement	5.6.2.2.A What we presented to them were the findings from the different surveys they collected...and I knew it wasn't going to portray an accurate picture of what they have witnessed to be the changes, because we were missing a lot of information...to show them: "I'm not just bugging you because I want to, but really I know all the things that are happening on the ground, and it's unfortunate that the data's not showing it. And when the literature, this is what ... why we get to publish, and it's not doing justice to all the work that you're doing."... it was so powerful. (Partnership F, Research Facilitator)	5.6.2.2.B So we certainly have lent our expertise with things like data analysis collection, grant funding processes, all reports ... all the things we do here and are very used to and that maybe the tribal communities weren't as used to ... human subjects training, these kinds of things. We helped them with that. They also train us. So we have cultural seminars... another goal that we've had, to really deepen the understanding and trust and respect by kind of sharing knowledge with each other and being open to learning new things. (Partnership A, Academic Research Coordinator)

Promoting Partnership Esteem and Functional Capacities	Illustrative Example [1]	Illustrative Example [2]
5.6.2.3 Validating partners' worldviews	5.6.2.3.A [I]t's certainly not a deficit model of knowledge from a community perspective, but rather a capacity model. There's already tremendous knowledge, vnuism(?) knowledge from what I call organic venues from within the community. So when we're going to tap into those venues, it's: which one are we going to tap? how are we going to tap it? how do we even acknowledge the depth and width of expertise? So it always comes from a model that acknowledges the foundation of knowledge that comes from community. (Partnership D, Academic PI)	5.6.2.3.B I don't know if there are any real power struggles, because I think we ...all have different expertise. Like we look to [organization] for all their research related problems and questions we have; and [organization] is more the community expert. We know how the community feels about how the project or how things work or won't work. And [organization], their specialty is working with the traditional Chinese medicine, practitioners ... so I kind of see it that way too. Like we have different expertise; so for different issues, we go to different people for the answer...And most of the time we respect the other party's expertise, and we accept what they suggest. (Partnership B, Community Coordinator)
5.6.2.4 Respecting partners' contributions	5.6.2.4.A We all come from different walks of life and have different experiences that we bring to the table; and we all respect each other... So I think that's really important for whoever's joining this partnership to respect not just the PI...And so I think every team member—no matter what their position or role is, no matter how much education degrees they have—really adds something to the project. (Partnership B, Academic Project Coordinator)	5.6.2.4.B I feel like if I ever have a question, I never hesitate to ask. I've never been made to feel like I'm lesser than them. Even though they are very highly educated people, I've never been made to feel like I wasn't valued. [laughs] So ... but I think that mutual respect and trust is what works really well in our partnership. (Partnership A, Community Partner)
5.6.3 Focusing on partnership tasks	5.6.3.A [I]n the beginning we really tried to create a lot of structure; like, "We're going to have a subteam to address this aim, and a subteam to address ... " ...But it turns out the subteams ... nothing really happened unless there was some sort of product or goal tied towards it that was very concrete... Like we were going to have a method subteam, but that didn't really work out very well. [laughs] So people signed up. It actually didn't work out very well. So now the subteams are more driven by on an ad hoc basis of what needs to be done (Partnership B, Academic Project Coordinator)	5.6.3.B [W]hen we have a meeting, she'll automatically kind of assign or ask for assignments; not even assign it out, but just say who's going to be this, this, or this...So everyone has a role. But she makes sure that roles are assigned...(Partnership A, Tribal Program Manager)

Promoting Partnership Esteem and Functional Capacities	Illustrative Example [1]	Illustrative Example [2]
5.6.4 Harnessing capacity of partners	5.6.5.4.As a scientist, I quickly realized what I thought was going to really work out for this community is not working out...And so we ended up going back to them to say, “We’re running into challenges right here. What can we do to ... ? Is there any recommendations that you have so that we can recruit more people in this area?” And I think when you begin to provide ... if you allow yourself to say as a scientist, “You know what? I need your help. This can’t be done without you. We need your input to some of these things that we’re having to deal with,” I think it really lessens ... it puts this all on the same playing field, sort to speak. And I think it really helped in that way. (Partnership E, Research Investigator)	5.6.5.4.B She wanted us as equal partners. And she and her team were able to help identify what it was she needed us to do, and where she needed us to be, when she needed us to be there...she would sit down and say, “Look. Let’s talk about this. Now, [pastor], I need you to do A, B, C. [pastor], I need you to do this, that, or the other. You have gifts of speaking; and so when we have a public speaking I need you to plan a speech...”...And we played right into it; and it was a good play. (Partnership F, Community Pastor)
5.6.5 Sharing ownership of project activities	5.6.5.A My goodness ...[even] how they were able to translate colorectal cancer into [tribe], in their own language, using their own language. They came up with the name for the [coalition]... they felt like they needed that coalition; so that was their idea. And they wanted to become nonprofit; which is now what they’re doing. So you just need to, I guess, be open to the fact that, yeah, you’ll only serve a small role in this, but they’re going to be driving force of it. They’re going to take it over. And I say that is really important when a tribe—or any community—takes ownership of whether it’s a study or... (Partnership E, Research Investigator)	5.6.5.B Over time, we’ve changed your model where that rotates. People who note take change. There is a sense ... more a collective sense of responsibility... We have a new member of our team...who himself went through leadership and job readiness classes...and has really gotten to a point where he is able to contribute. (Partnership C, Academic Researcher)
5.6.5.1 Sharing ownership of project interests	5.6.5.1.A So...there are people there who have the necessary talent, the necessary expertise; and what we have done is partner with those people, provided resources for them, provided them with some sort of structure to then take the initiatives...that then makes them [and] us able to replicate it in other organizations. (Partnership F, Research Program Director)	5.6.5.1.B [I] think that they feel it belongs to them because they developed the curriculum and it reflects their cultural values and traditions and beliefs. They are involved. I think many elders have felt that they’ve become involved in meeting with the youth during the curriculum. It’s their knowledge that’s being handed down to the youth and they feel that they’ve been asked for input, and that’s the elder community in general....I think what made the difference was just always going to the community and asking for their input every time. So the more that happened, the more ownership they got, and really understood they were the ones holding the reins really. (Partnership A, Academic Research Coordinator)

Promoting Partnership Esteem and Functional Capacities	Illustrative Example [1]	Illustrative Example [2]
5.6.6 Collective group decision-making	5.6.6.A [T]here are other things where they feel like, “Why do we have to talk to the coaching staff when we do these things? ..We should be able to make these decisions.” And what we’ve talked about is that’s where audibles come in. ... We, as an academic team, reflect on things together. We expect them ... they have local meetings ... Where we ask them to reflect on things together so that it’s never one set of eyes that makes a decision. That it’s always a collective ... because if you change one thing in our structure, it has tremendous ripple effects. They can’t be making a decision without reflecting collectively. They don’t necessarily have to include us, but they have to at least do it together ... [laughs] ... so that it’s not one person making the decision (Partnership B, Academic PI).	5.6.6.B We sat around with the [board] of both tribes and the porganization] and just talked about what it was, benefits, things at our commitment level, and whatever; and we all just discuss it. And it’s consensus. I don’t think we’ve ever had to vote. A lot of our decision making comes from our smaller groups, site-based decisions. So ... but they don’t ever ... they basically facilitate us making it. They don’t push the decision or tell us even that it has to be done right now. Whenever we’re ready to decide, or whoever needs to be informed first. So that’s been a good thing. (Partnership A, Tribal Program Manager)
5.6.7 Enhancing partnership capacity of cultural insiders	5.6.7.A So part of my commitment and value and passion for this work is to support capacity at the tribal level, and I never say ... I try not to say “build,” because I believe capacity exists; and so I try to support it however I can, but to also support capacity at the institutional level to learn how to do work that they haven’t had to yet, which is engage in MOUs and IRB agreements with sovereign nations. (Partnership A, Academic co-PI)	5.6.7.B We have probably 12 to 15 now community members who we employ. They’re really consultants, but the [institution] wouldn’t let us call them consultants ... so they are actually formally hired through HR to work for [institution], but they’re all community members, all deaf. So three of them are on our translation teams. Five of them are actual ASL sign models on our computer surveys...Two of them do back translation, which is watching the ASL and writing down what it is. (Partnership G, Academic Program Manager)
Structural-level Practice		

Promoting Partnership Esteem and Functional Capacities	Illustrative Example [1]	Illustrative Example [2]
5.6.8 Community or tribal board	<p>5.6.8.A So in [Tribe] that was or is ...the tribal council, and the cultural cooperative, cultural co-op...Cultural co-op has approved more of the actual like surveys, possible presentations. We go to them for... interviews, curriculum. They help develop the curriculum. So cultural co-op has done more of the like detail approval of everything, where tribal council has been more of the larger decisions. Not that we don't ... usually tribal council still has to approve it, but cultural co-op will do a lot of the sort of initial approval or reviewing, or these kinds of things. And it's shifted. Sometimes cultural co-op hasn't been meeting, so then it was just tribal council. But cultural co-op is officially our advisory board. (Partnership A, Academic Research Coordinator)</p>	<p>5.6.8.B Certainly some of the more active researchers in Chinese American cancer control have gone through [Board]. People who do things, for instance, like cardiovascular or things like that, they haven't felt the need to go through us because we are the cancer group. People who want to come can come; and people that don't want to come, don't have to; although I think the more [Board] has a reputation in the community, the better. People are beginning to see the benefit of affiliating with [Board], because it's more of a trusted name. (Partnership B, Academic PI)</p>
5.6.9 Coalition network of partners	<p>5.6.9.A Because we already know all of these barriers that the people don't have transportation. They don't have money to ride the bus.. and [organization], they're the backbone of all of these things that are happening. Along with that, we have the [partner], [organization], who is also ... every time we do something ... because they're ... we're under their umbrella ... all these programs under [organization] ... so we always give 'em a PR. Yeah, because they're always supportive of everything that we do. And so a lot of people were involved... And so, again, I really believe in the collaboration, the network. (Partnership E, Focus Group Participant)</p>	<p>5.6.9.B I think the community's voice was being heard by the partners pretty well ... through the [coalition organization]' meetings. The [coalition] were holding a promotora meeting once a week. Yeah, it was about once a week. And the county partner as well as the university partner would attend, and they'd help us come up with us ... brainstorm together on issues to be researched, how to conduct the research, and let us know what resources they could offer to the communities. (Partnership D, Promotora)</p>

Promoting Partnership Esteem and Functional Capacities	Illustrative Example [1]	Illustrative Example [2]
5.6.10 Community collective activism	5.6.10.A I think the nonprofits that are here do a very good job of organizing and of identifying issues, and now being more vocal about them than previously. And it helps now that there's greater political power with Asian Americans. So there's some representation now on the board of supervisors, whereas before there were maybe one or no persons of Chinese descent represented on the board, or even of Asian American descent; and now there are four out of eleven seats. And the mayor—the interim mayor—is actually Asian American now. (Partnership B, Community PI)	5.6.10.B And then what we were doing in my neighborhood specifically ... the main issue was the drugs and the crime, and I became the chairperson of [committee]; and we went all over the country telling people they need to take the drugs out of our community, and we forced the police to do who was all connected in the drug scene...And then we dealt then with the abandoned buildings. Once we got the drugs off the street, then we went into their abandoned buildings. So we decided, "OK You want to go into the abandoned buildings? We're going to take over these buildings." So we began to form a housing company. So we had the [organization]; and then we developed all of this housing...(Partnership F, Community Organization Leader)
5.6.11 Risk-taking for community wellbeing	5.6.11.A We are very willing to take risks, safe risks. [laughs] But we do a lot of programs where we're leaders in the field...And so we have developed, as a tribe, a lot of partnerships first, or been the leader in a lot of different ... we're going to try things, we're going to maximize our ability in different ways. I think that's a really big reason why they were so accepting of this. We're not a tribe that's ... that's been victimized. Or like has that kind of cautiousness that I see a lot of other tribal nations have, just the apprehension about people coming in. We're very careful about our data and things like that, but we're open to trying to improve our systems by sharing it with someone like [partner] to help us. (Partnership A, Tribal Program Manager)	5.6.11.B The vision of [Tribe]... they say we're the crazy ones; we're the radical, wild [Tribe]. And the reason because of that is because we're not afraid to take that risk; and sometimes it makes us a little comical at times when people tease about and make fun of [us], but the majority of the times we take that stand. And I think that because of our culture, our belief system, our belief in ourselves, that we are not just the dumb Indian. We are not dumb Indians. [laughs] And we can do whatever we need to do...If we're going to find any answer, it has to come from us if we're going to do something. And so I think the teachings of our elders growing up, putting that ... instilling that belief in us ... and so when we try to do something, maybe sometimes we don't know the right way and we kind of stand out where, "Oh, those are those [Tribe]." (Partnership E, Tribal Research Board Member)

Table 5.7 Illustrative examples of themes under transcultural and interpersonal bridging practices

Transcultural and Interpersonal Bridging	Illustrative Example [1]	Illustrative Example [2]
Individual-level Practice		
5.7.1 Individual leadership competence	5.7.1.A I can see at meetings that everyone’s opinion is valued, and we always try to find middle ground when there are differences in opinion; yet there’s always the need for someone to take the leadership...position sometimes. And I think [Partner] ... he’s able to do that. Like when there are differences of opinions, he is able to ... after a certain amount of discussion, he is able to just make the decision as the leader, which I think is also important, so that there is a definite direction for the partnership. (Partnership B, Community Coordinator)	5.7.1.B [Partner] has a unique ability to understand his role, his gifts, his talents, and abilities; and he brings that to the table, coupled with his deep, sincere compassion for people, for hurting people, many of whom do not have the power to speak for themselves...They don’t have the information ...and...the tools to articulate what they need...[he] can identify with that...(Partnership F, Community Pastor)
5.7.2 Individual credibility	5.7.2.A He knew her ex-husband or something, but he knew her as a go-getter, that she was somebody who would work really hard; and if she wanted something, she was going to make it happen...And so I think part of it was the proximity, part of it was the fact that a friend of a friend was working here. And I don’t know. It almost felt serendipitous, just ... feel as we were meant to. (Partnership A, Community Partner co-PI)	5.7.2.B [Racial/ethnic alignmeny] helps less than you’d think that it should, that issues of the saliency of the topic, perceptions of benefit—particularly accruing to one’s family or tribe—far outweigh the racial or ethnic identity of the investigator here in our backyard among the Lakota. I have the added history of having worked as a clinician on the front lines, but even before I engaged [tribal communities] here in any research; so I was already well-known, reasonably well-respected by most. And so that’s probably helped me too. (Partnership E, Director of Research collaborative)
5.7.3 Demonstrating heart for the partnership	5.7.3.A I would just say, “If you’re planning on doing that, go in there with a mindset that you’re just going to be honest with people, and you’re going to follow up on whatever promises you make or whatever decisions that are made.” Make it happen. Every community’s different. But then in a lot of ways we’re all alike. People don’t care a whole lot about what you know ... until first they know how much you care. So...And especially in a ... people need to know that you have their best interests at heart. (Partnership C, Community Pastor)	5.7.3.B [Partner]... just does not sign. He’s a farmer from [State]...He’s a big, huge man, and he’s got big fingers. He tried; he really couldn’t learn. But I have to say that he has such a good heart. He has such good intentions. He is extremely supportive of us. And I wish that more deaf people in the community could see him in action, and meet him and understand that...We have biases that are ingrained in us from our childhood experiences. And you see this big hearing guy who won’t pick up sign language and you wonder what in the world he’s doing in our world. Why is he here? But I have to tell you, the more that I get to know him, the more that I think that he is just a neat individual. (Partnership G, Deaf Community Panel Partner)

Transcultural and Interpersonal Bridging	Illustrative Example [1]	Illustrative Example [2]
5.7.4 Individual cultural humility	5.7.4.A I like the term cultural humility. I like the idea that ... I think that humility is one of the traits that is indigenous to my tribe...But I think that sometimes we forget to be humble. ...the romantic stereotypes can be just as damaging, or have been just as damaging as the more negative stereotypes, or ones that are being more negative... I don't assume that I know every native person, every [Tribe] native person, and their reality, because I don't. I'm just one person here in the tribe. And I'm willing to learn. I'm willing to assume that they're the experts on themselves...I just want somebody who knows themselves, is willing to do the self-reflection and self-critique, and the training that they need to do; and the apologies when necessary to their clients. (Partnership A, Community Partner co-PI)	5.7.4.B I'm doing all of these things. [A] lot of times ... we don't say, "Well, I do this and I do that. Well ... and this is what happened." We don't talk like that. When I put something in the paper or a poster, I'm always the last ... my name; and my friend said, "Who made that poster? You're the last one. You should be the first." it doesn't matter, because the [Tribe] ... and I remember grandma and grandpa ... they used to say that when you're there for the people, you put them in front of you. They're the children, the families. You put them ... you're back here. Don't ever, ever put yourself up there, because you're ... And that's what true leaders, people who care about people ... they're over here. They don't want all that fame and fortune and the glory. (Partnership E, Focus Group Participant)
Group or Partnership-level Practice		
5.7.5 Having cultural bridging individuals	5.7.5.A I like that our leader is native. She's not from either community, so it's not the perfect bridge or whatever. She doesn't pretend to ... she knows she's not from those communities. She's not, "Well, I'm native, so I'm in." But, at the same time, her own experiences inform us, and she is the bridge. She's always been that bridge. And she has educated us a lot, and she educates them, being that she's a PhD and totally up to her ears in like academic training. She educates them on how to deal with us... where we're coming from. (Partnership A, Academic Research Coordinator)	5.7.5.B When we brought [Partner] on, it was like this door just flew open....He just ... first of all, he's just a wonderful person...But he just has this engaging personality, and he's Latino; and he could walk into these places that we were unable to recruit at all before he arrived. So I think that's it. I think [Partner] has done the same thing with African American churches. I don't think [Partner] and I, if we were just the only ones walking around, would have been able to do this...So I think having a few trusted connections like that is sort of what the key is...So they became very trusted in the community; and, through them, we're trusted. (Partnership F, Research PI)

Transcultural and Interpersonal Bridging	Illustrative Example [1]	Illustrative Example [2]
5.7.6 Demonstrated commitment to partnership	<p>5.7.6.A But I wanted to emphasize on this. I don't know. I think this group or this partnership is unique to others, maybe from another partnership from another country. I don't know if it's the same. It's an individual characteristic, and they're all workaholic[s]. I mean that's a requirement. Yes. We communicate with each other through email. There is no such thing as [a] weekend. Our workday is Monday through Sunday, any time. Anything happening, any idea ... just pop it out. I don't know if it's a good plan for this, but I think it works so far. Because so devoted to this project and so committed (Partnership B, Focus Group Participant)</p>	<p>5.7.5.6.B [M]y first task was to meet our community partners ...One [partner]...said, "How long are you planning to be here?"..."Because if you're not committed to being here for a long time, don't bother to come and meet with me."..."I'm tired of groups coming in ...You helicopter in, you take what you need, and helicopter out."...And I had to persuade her that I was here for the long haul before she would be willing to be a part of this...[T]here are two lessons from that. One, it's communities who say, ..."We're not to be mined." ..You get published...there's no change happening in our communities from what you've learned from us.".. [S]econdly, I think her thing was, "If you are embedded with us, if you're here for the long haul, we are more likely to see real change happen. We're more likely to be engaged in an effort that is serious about that."...You have the community...saying..."I am defining the relationship."..."And...that, as a leader, there's going to be some longevity to your involvement with us." (Partnership F, Research Program Director)</p>
5.7.6.1 Demonstrated involvement in activities of partnership communities	<p>5.7.6.1.A I know that she gets involved in the communities personally and not just professionally. She cares about the community. She cares about the tribal communities in general; and so that trust has been established by her. Like you were saying, "walking the talk." She doesn't just say she cares about tribal communities. She's involved with the tribal communities. She volunteers. She helps out. She comes to community functions. She shows that she has a very sincere interest; and that really is a factor in building up trust in communities. And with us staff too. It shows that she's really committed and she really cares. It's not just she's doing it 'cause she has to; she's does it because she wants to. (Partnership A, Community Partner)</p>	<p>5.7.6.1.B [I] would really want a researcher to come, and I would want them to feel comfortable with us first ... before really initiating a research project... "Come live with me. Come meet us." There was a fascinating thing about any hearing priests who want to work with the deaf community need to go live with a deaf family before they would join a seminary...In the Jehovah[']s Witness faith if someone wants to become a preacher or a reverend and work in a ministry with deaf people in their church, they have to go live with a deaf family. I think it's [for] two years before they can enter the Jehovah[']s Witness seminary....If they can do that, then the researchers can come and live with us for two years...Yeah, they have a choice. They can come do this. If you can't satisfy it, then go away. But, if you can, then it will make you so much better...Any kind of a person who's in that role needs to be involved in the community they serve, or otherwise there's actually always going to be a wall, a separation (Partnership G, Community Partner Panel Member)</p>

Transcultural and Interpersonal Bridging	Illustrative Example [1]	Illustrative Example [2]
5.7.7 Building common vision among partners	5.7.7.A [W]e cultivate....in a way that I still count that is a very fortunate way ... I've heard a lot of other stories about teams don't work together because they have very different perspective. But here, for me, is like a very special one, because I feel that we feel comfortable enough to challenge each other, whether it may be in a fun way, or whether it might be in like kind of head to head way. [laughs] But then I think we all have a common goal, and also a very similar passion that whether it is for the community, whether or not it is for the science ... I think we are learning to communicate with each other better and better as we grow (Partnership B, Focus Group Participant)	5.7.7.B I was like, "We got to make this work."...The community, [Institution], and [Organization] had to keep coming back and looking at the grant and saying, "This is for the greater good. [laughs] How do we get over these challenges? OK This is what we need to do because it's going to help our community." So constantly coming back to the essence of the grant to see ... "We got to get along to get this done" (Partnership D, Academic PI)
5.7.7.1.A Building an inherently diverse movement	5.7.7.1.A They really see it as...we're not going to be concerned that you're Catholic or you're Pentecostal...This is a movement, and the movement includes a very diverse group of folks... 'Cause they're all coming around an issue that's important to them. Somehow this issue has affected everybody that's at this table; and this particular issue doesn't...discriminate...If they got ... This issue is so deep and so strong that whether you are tall, short, fat, redhead, blond-haired ...Whatever you are, somehow you or a family member or your neighbors ... somebody's caught up in this so that this is a movement (Partnership F, Focus Group Participant)	5.7.7.1.B I don't think the community partners, as the principal investigators, would have been successful had it not been for somebody, for an elder ... that knows, that's been part of the county, that's been part of the university, and that is still a part of the community. And so I think that we definitely need to have multi-generational ... and the promotoras were a multi-generational tool. We had little kids at our meetings. Sometimes some of the little kids would attend ... the parents and older people, younger people ... And there's concern. We all live in ... even though it's the same community, the older people live in their homes, the younger people are out in the streets ... and the babies are all over the place (Partnership E, Promotora)

Transcultural and Interpersonal Bridging	Illustrative Example [1]	Illustrative Example [2]
5.7.8 Fostering personal bonds among partners	5.7.8.A And one of the things we did was, when you introduce yourself, say what your background is. And it's a tribal thing, because we all come from different tribes...But it extended out to the people who aren't tribal; and they probably just felt that they had to, but they would share. "I'm non-Indian, but I have all these ties to ... " ... You're looking for the commonality in people. And if you feel that you can relate in some level, then it's important ... I don't know how to describe it, but I think it's kind of a sense of the value of culture, and kind of like, "This is where I come from" (Partnership A, Tribal Program Manager)	5.7.8.B Oh, my goodness ... we've just had such a wonderful relationship with them; and I think what really helped us initially was [partner] would just love to joke. That helped ... that's how we were introduced. At that first meeting he started teasing us because we're from a different tribe; and he was just like, "Oh, yeah. I remember them now" ... talking about [partner]. And it just really set back that environment where we could just talk and begin to figure out where these individuals we're coming from, their own personal experience. And we let them talk (Partnership E, Research Investigator)
5.7.9 Fostering transparent partnership dialogue	5.7.9.A I think between the teams the level of trust is pretty high because we've worked with each other a lot....I think we've been really good about being really open about the process and how we go about it and what's going to happen, and the ownership ... they know they have the ability to say, "no," at any part or entirely, or bring their concerns to cultural co-op or whoever (Partnership A, Community Tribal Coordinator)	5.7.9.B We always had this tension over how much is going into research and how much is going into program; and I think it's not an unhealthy tension, because...if the push comes to shove, we care more about the program than we do about the research. And that was pretty much shared by all of us... But we also knew that you won't get funded if you use your dollars just for programs ... We had a very direct discussion at one of the [committee] meetings about why are we doing research in the first place, and what does it mean to do research, and why do we care about evaluation; and then we wrote up a sort of a paper about ... to answer that question. Not a paper for publication, but a little memo (Partnership F, Academic Evaluator)
5.7.9.1 Fostering dialogue on social differences	5.7.9.1.A So, for me, it's been just completely life changing in terms of my view of race, my understanding of these issues, and the fact that in this coalition we talk about these issues. We talk about race; we talk about our own racism...I don't know if this applies to other people or not ...I've talked to another friend who does community based work, and she agreed with this, which is that the joy of discovering that you're wrong, that your prejudices are ... it's both this shock that you have the prejudices to begin with—the strength of those prejudices—but then the moment where you realize how wrong you are (Partnership F, Academic Evaluator)	5.7.9.1.B I think we commit to taking time to do that; and because of that that, it opens up dialogue about barriers, especially community barriers, talking about racism, that within our core partners there is a level of trust that we actually get to what's happening not only in our partnership and kind of those dynamics, but what's happening in the larger community that's either making what we're doing work or not work. So what's going on...is that there is a level of trust; that because we focus on some of the process pieces, that we're able to identify what's real for people maybe (Partnership C, Academic Researcher)

Transcultural and Interpersonal Bridging	Illustrative Example [1]	Illustrative Example [2]
5.7.9.2 Fostering dialogue on accountability	<p>5.7.9.2.A Well, at one point I said, “Well, if we don’t want to do it, should we just give the money back?” And they thought, “Are you kidding me?” I actually ... well, I wrote a grant once for a community. For, not with ... for a community. And ... it was such a great learning experience. It happened to be a different community, a different grant ... and got it. And the community members said, “Are you kidding me? We don’t want that.” And I said, “OK We’re giving the money back,” and I did. I gave the money back. [I told current partners] “If we don’t want to do this, I’ll give it back” ... And then say said, “No.”..“We want to do it.” (Partnership D, County PI)</p>	<p>5.7.9.2.B Back to what I called a fork in the road with some of our community partners...because they didn’t fully understand the CBPR process they really didn’t know how to operate with us ...to the point that we ended up ending that relationship...But what I concluded...is that our principles, they got to become more than just words on a piece of paper. [F]or that relationship to have been severed, there was a lack of understanding about some things, that the principles to me were supposed to be the glue that held us together, that we should have been able to talk about whatever it was that wasn’t working..And so from that conversation with the core team we really dissected those principles to make sure that we all go on the same page about what was on the paper and how it was operationalized ... And we’ve made a commitment... [at least] once a year we’ve got to revisit those principles with our partners (Partnership C, Community PI)</p>
5.7.10 Openness to mutual learning	<p>5.7.10.A One of the things that we did was, in the grant proposal that we followed through on, is a bi-directional learning process, so that we have cultural trainings that are through readings and through videos and through meetings. Our first meeting actually was a tour of the [Tribe] Museum, and also then meeting with the elders..for lunch, much as we did yesterday. And [Partner], who’s one of the elders who’s a weaver, and one of her young weaver folks met with us for quite some time to talk about sort of the evolution they’d seen in the tribe across time and some of the things that they’d experienced as a youth and the boarding school experiences that many of them had had (Partnership A, Academic PI)</p>	<p>5.7.10.B I would say, “Come in there and just be honest with people.” Present yourself and be willing to listen to what the people you’re coming to have to say. Find out ... do a fact find. Find out what’s going on as much as you can about ’em. And just ... what I saw [partners] do is just come in and tell us what they had in mind; and they wanted to know if we were interested, and they were honest. And they’ve always made me feel like they were really listening ...when I had something to contribute as far as something to say (Partnership C, Community Pastor)</p>

Transcultural and Interpersonal Bridging	Illustrative Example [1]	Illustrative Example [2]
5.7.11 Flexibility with partnership processes	5.7.11.A [T]hey get the work done, but their pattern's different than mine. They'll break for lunch, they'll sit and visit, and every time I do, it's like, "This is so great. Why don't I do this more often?" But it can be a challenge, because I'm sitting there thinking, "We have all these things to do, but this is important." ...Learning and respecting the differences in who we are as a team and the roles and obligations that we each have is a strength and a challenge. It's been really a pleasure for me to be able to learn a different way to be (Partnership A, Academic co-PI)	5.7.11.B [E]ven amongst our local partners, there's differences in terms of how to engage...And we're constantly challenged by taking the time that's required ... we need things to move fast. And yet we need to take the time to make sure our interactions are, "How are you? What's going on today? I need this. Can you tell me when you tell me when you might be able to do it?" ... as opposed to. "And do I need this done in 15 minutes? Can you get to it?" which comes across as disrespectful or negative in any number of different ways...So the cultural differences are both within the community and between the community...and the academic partners in terms of communication patterns, communication styles, work ethic ... (Partnership C, Academic PI)
5.7.12 Creating culturally consonant partnership solutions	5.7.12.A [O]ne of the things that we've done in adapting or developing this curriculum is to do it in such a way as there are core elements that we think are important...[T]he [intervention] is a life skills program that provides youth with the skills necessary to navigate through life without being pulled off course by alcohol and drugs, using tradition, tribal values and culture, as both anchor and compass to ground them and to guide them....in many ways that's unique to the canoe culture; and that metaphor fits the canoe and derives from it. (Partnership A, Academic PI)	5.7.12.B The other general principle... is every cultural belief that is out there that we think needs to be addressed should be validated in the sense that it exists and it's normative; and unless there's some crazy ... some data that says that this is really bad ... [laughs] ... we think it's OK to validate it. But there's always a follow-up which is, "It's fine to believe that. We know that you believe that, and it's a good idea, but you should get colon cancer screening." So that's sort of the interplay between the evidence base and the culture issue. It's how we're trying to resolve it. So we don't get into an argument with culture.... (Partnership B, Academic PI)

Transcultural and Interpersonal Bridging	Illustrative Example [1]	Illustrative Example [2]
5.7.13 Cultural revitalization among partnership communities	5.7.13.A But I think, again, the community's really thirsty for more cultural and learning from each other, and bringing out elders. The elder/youth piece is a huge portion that I haven't talked about yet that... that's exciting for us...a lot of kids don't really have ... a lot of kids in foster care or maybe live with extended family may not even really have a good relationship or a close relationship with an elder...I think the value that the community's supportive of the kind of innovative approaches ... like I was talking about trying new things and whatnot ... Everyone's sort of on the same track there. (Partnership A, Tribal Program Manager)	5.7.13.B So our way of thinking ...our elders always said, "Think about things a full circle before you come to a decision, OK, if you want to solve a problem. Think of full circle.."..But that teaching, again, comes from a different perspective. It's a left and right brain teaching that's holistic in our way. So I think that a lot of times when people look at native people, they take native thought and they put ... they westernize it; and what happens is that we become confused and we don't know what we're doing. OK? So then what happens is that we don't have that trust in ourselves; so my thing is that now [what] I want to do is I want to turn that around and teach that method. And that's what my curriculums do. It teaches that method (Partnership E, Tribal Reserach Board Member)
Structural-level Practice		
5.7.14 History of partnership collaboration	5.7.14.A I really look at some of the partnerships that [Instiution is] creating here on this reservation, and a lot of the stuff they're doing is really dynamic. I really enjoyed listening to their research, because I think that they really have a good understanding, and they set up a good partnership with key people here on the reservation. And, looking at the [University's] research history, their report card ... I think they've really come a long way in terms of really wanting to take that extra step to help. And so I partnered ... again, I chose them. Actually, in my acceptance letter to sit on a board and some of the curriculum that I'm developing, I said, "I trust you. I don't trust very many people. I trust you" (Partnership E, Tribal Research Board Member)	5.7.14.B One of our strong suits was hiring [partner], who at the time was just finishing up her master's program here at [University] and was a tribal member, and was going back to work in the wellness program and ultimately was the director of the wellness program when [partner] left. So that all of those things kind of lined up in a way that I think really facilitated our ability to sort of ... been invited into the community, to have them identify an area of potential problem and need, to have found a funding revenue that seemed quite appropriate for this kind of work, to have been able to identify a key member in the community to serve as our lead, and having [Partner] as the liaison between the two. I think all made that really happen (Partnership A, Academic PI)

Transcultural and Interpersonal Bridging	Illustrative Example [1]	Illustrative Example [2]
5.7.15 Funding support for partnership activities	5.7.15.A [W]hat I heard from my university partners was that our community partners are too dependent on the university partners. We need to build capacity within the community where the skills, all of that, stays in the community once the funding is gone, whatever that looks like...It was also at a time when what we say there was a paradigm shift with [Funder] that looked [like] we needed to get community people involved at this table. And the planning and all of that..So I was onboard for community partners and university partners sitting down at the table to plan and develop... (Partnership C, Community PI)	5.7.15.B I'm very interested in the survey research side of it. and making sure the [Traditional Chinese Medicine] piece is in there significantly so we have enough to write about, because that's my interest in this, the traditional Chinese medicine piece. So that got funded, and it turned out that [Funder] was tremendously interested in what we brought to it. They thought that was very innovative, which wasn't surprising to me because no one's done it; and it really utilizes the indigenous community...(Partnership B, Academic Co-PI)
5.7.16 Community self-governance	5.7.16.A So in [tribe] that was or is ... well, the tribal council, and the cultural cooperative, cultural co-op. Those are the two main tribal entities that have to approve. Cultural co-op has approved more of the actual like surveys, possible presentations. We go to them for ... (inaudible) ... the project. Yeah, interviews, curriculum. They help develop the curriculum. So cultural co-op has done more of the like detail approval of everything, where tribal council has been more of the larger decisions. Not that we don't ... usually tribal council still has to approve it, but cultural co-op will do a lot of the sort of initial approval or reviewing, or these kinds of things. And it's shifted. Sometimes cultural co-op hasn't been meeting, so then it was just tribal council. But cultural co-op is officially our advisory board (Partnership A, Academic Research Coordinator)	5.7.16.B The nine districts are largely organized along [Tribe term]. In [Tribe] traditional kinship, we live in large, long extended family networks ... which are called, well ... [Tribe term]..in the majority of those nine districts...[have] the best examples of intactness of the old traditional [Tribe term]. So they're fairly autonomous in their decision making...Where the more intact [Tribe term] exist, they still yield a lot of traditional authority. Not like a democratically elected chairman and council level authority, but more traditional authority. They often can and do differ over different issues such as leadership, for instance. They also may differ over suggested social change...whether to take the reservation wet from being a dry reservation...Or considering a smoking ban in public spaces, they could be expected to differ about that (Partnership E, Research PI)
5.7.17 Cultural relatedness	5.7.17.A Not treating us like we're just community people, that there's not that institutional kind of like, "I'm the professor," kind of a thing...I don't know. "I have the PhD, and you don't."...Yeah, those are probably personal qualities, I guess, that ... I think just the value of family and things like that helped understand our value of family and extended relationships and things (Partnership A, Tribal Program Manager)	5.7.17.B If I was going to give a suggestion: be a relative. Find out that we are related, no matter what...See, everything we do ... we say ... (Tribe term for all my relations). "We are all related," meaning ... and I would say I think we taught Einstein this. He must have learned it somehow, $e=mc^2$, because that's basically what Einstein is saying, that everything is relative; everything is relative to one another. There's a connection you always have (Partnership E, Tribal Research Board Member)

Transcultural and Interpersonal Bridging	Illustrative Example [1]	Illustrative Example [2]
5.7.18 History of research mistreatment	5.7.18.A [A] lot of different people were research participants—people taking about different things—and there was this lady ... in our office. She actually banished a researcher from our reservation. So there’s been some history with research. And then people always say, “We feel like we’re research (inaudible), when in fact, in reality, we don’t have enough research, enough representative research anyway, for American Indians... (Partnership E, Focus Group Participant)	5.7.18.B I think we initially were a little more cautious about getting in the partnership. There were some other partnerships with other [Institution] staff before that we joined in. But..that one was more the model of the university having an idea, the staff came, told us what the idea was, asked that we’d sign on to their proposal; and then sometimes we wouldn’t even see the proposal. We’d just write the letter of support, saying that, “Yes, we agreed to be involved; and this is what we’ll do. We’ll reach out to our population.....” Yeah, at least two other researchers...prior to our work with the [partnership] (Partnership B, Community PI)
5.7.19 Structural oppression	5.7.19.A [R]ural communities, in my experience, are very different than urban communities with the exposure to anything different, and it may also be [State]...There are policies down there that are clearly against federal policy. Whether or not it is brought to light as such, they actually try not to bring it to light. There’s agribusiness down there that has power over and above anything else; and the extent to which they can keep some of these structures hidden enables the power structures to maintain their power. And I think, as a result, a lot of times people who haven’t left the community have absolutely no idea that you could do things differently (Partnership C, Academic PI)	5.7.19.B I don’t feel abused per se [as] [Participant] says, but I’ve grown up with that experience like I mentioned ... when hearing people ... hearing doctors, hearing nurses, hearing teachers ... that I’ve been fooled, I’ve been scarred ... and [with] any good hearing person I’ve always got this reservation in my mind whether or not they’re going to be like “the others.” ...The second thing here is I sometimes admit that I wonder if people have a hidden agenda that they’re not sharing with us...(Partnership G, Community Partner Panel Participant)

Table 6.1: Characteristics of partner-level survey respondents

Characteristics of Community Engagement Survey Respondents* (N=404)

	% All Respondents	% Academic Partners	% Community Partners	<i>p</i> - <i>value</i> **
<i>Gender</i>				
Female	73.2 %	67.9 %	76.6 %	0.108
Male	26.8	32.1	23.4	
<i>Race and Ethnicity</i>				
American Indian	12.0 %	6.5 %	15.5 %	0.004
Alaskan Native	1.1	0.9	1.2	
Hispanic	11.6	5.6	15.5	
Asian	8.0	8.3	7.7	
Pacific Islander	0.7	0.9	0.6	
Non-Hispanic White	46.4	60.2	37.5	
Black	15.2	10.2	18.5	
Mixed Race	3.6	5.6	2.4	
Other	1.5	1.9	1.2	
<i>Role</i>				
Principal Investigator		20.5 %	17.6 %	
Key Personnel		55.4	49.8	
Staff		15.7	11.6	
Other		8.4	21.1	

Notes:

* valid or non-missing values are used for calculation of percentages

**p-value for Chi-square test of independence for gender, and race and ethnicity

Table 6.2: Summary statistics for partnership structural elements

		Personnel Hiring	Financial Resource	In-Kind Resource
Community	%	10.1%	6.5%	8.6%
	n	20	13	17
Academic	%	26.1%	29.5%	11.1%
	n	52	59	22
Both	%	63.3%	63.5%	74.8%
	n	126	127	148
Don't Know	%	0.5%	0.5%	5.6%
	n	1	1	11

Project Type		
Descriptive	%	17.6%
	n	35
Intervention	%	62.8%
	n	125
Policy or Other	%	19.6%
	n	39

		Individual or No Community Decision	Agency or Advisory Board	Community Governance
Yes	%	18.0%	59.0%	22.5%
	n	36	118	45
No	%	82.0%	41.0%	77.5%
	n	164	82	155

Table 6.3: Univariate statistics for analytical variables

	Gender Entropy	Race Entropy	Location Entropy	Disability Entropy	LGBT Entropy	International Entropy	Youth Entropy
N	194	196	196	191	181	186	189
Mean	0.54	0.73	0.29	0.09	0.11	0.22	0.18
Standard Deviation	0.18	0.37	0.28	0.15	0.18	0.25	0.23
25th Percentile	0.45	0.50	0.00	0.00	0.00	0.00	0.00
50th Percentile (Median)	0.59	0.69	0.29	0.00	0.00	0.16	0.00
75th Percentile	0.67	1.01	0.70	0.18	0.22	0.41	0.33
Skewness	-0.83	0.26	0.16	1.53	1.50	0.67	0.86

	Participatory Decision Making	Perceived Diversity	Cultural Similarity	Community Interaction	Academic Interaction	Project Legitimacy
N	440	445	446	446	446	444
Mean	21.28	4.31	3.84	4.24	4.39	4.61
Standard Deviation	3.13	0.80	1.12	0.76	0.73	0.63
25th Percentile	20	4	3	4	4	4
50th Percentile (Median)	22	4	4	4	5	5
75th Percentile	24	5	5	5	5	5
Skewness	-0.93	-1.03	-0.67	-0.61	-1.28	-1.77

	Political Connection	Stakeholder Connection	Partnership Duration (Year)
N	444	442	197
Mean	3.90	4.26	8.23
Standard Deviation	0.92	0.79	0.42
25th Percentile	3	4	5
50th Percentile (Median)	4	4	7
75th Percentile	5	5	10
Skewedness	-0.51	-1.00	1.24

Table 6.4: Correlation analysis of partnership approval structure and control of partnership resources

Pearson Correlation (p-value)	Community Oversight of Personnel Hire	Academic Oversight of Personnel Hire	Shared Oversight of Personnel Hire	Community Oversight of Financial Sharing	Academic Oversight of Financial Sharing
Community Governance	0.3052 (0.00)	-0.124 (0.08)	-0.0718 (0.31)	0.3436 (0.00)	-0.086 (0.23)
Agency/Advisory Board Governance	-0.1653 (0.02)	0.0039 (0.96)	0.1122 (0.11)	-0.2338 (0.00)	0.0488 (0.49)
Individual/No Community Decision	-0.1137 (0.11)	0.1365 (0.05)	-0.0757 (0.29)	-0.0707 (0.32)	0.0394 (0.58)
Pearson Correlation (p-value)	Shared Oversight of Financial Sharing	Community Oversight of In-Kind Sharing	Academic Oversight of In-Kind Sharing	Shared Oversight of In-Kind Sharing	
Community Governance	-0.0889 (0.21)	0.221 (0.00)	-0.0383 (0.59)	-0.0731 (0.31)	
Agency/Advisory Board Governance	0.0859 (0.23)	-0.0717 (0.32)	0.0036 (0.96)	0.0777 (0.28)	
Individual/No Community Decision	-0.0232 (0.74)	-0.1445 (0.04)	0.0417 (0.56)	-0.0274 (0.70)	

Table 6.5: Correlation analysis among partnership resource control, type of project, and duration

Pearson Correlation (p-value)	Community Oversight of Personnel Hire	Academic Oversight of Personnel Hire	Shared Oversight of Personnel Hire	Community Oversight of Financial Sharing	Academic Oversight of Financial Sharing
Project Type - Descriptive	0.0251 (0.73)	-0.0587 (0.41)	0.0426 (0.55)	0.1449 (0.04)	-0.0976 (0.17)
Project Type - Intervention	-0.0218 0.76	0.0279 (0.70)	0.0019 (0.98)	-0.1332 (0.061)	0.0214 (0.76)
Project Type - Other	0.0026 (0.97)	0.0219 (0.76)	-0.0427 (0.55)	0.0232 (0.75)	0.0676 (0.34)
Partnership duration	0.0126 (0.86)	-0.0137 (0.85)	0.021 (0.77)	-0.1031 (0.15)	-0.0159 (0.82)

Pearson Correlation (significance)	Shared Oversight of Financial Sharing	Community Oversight of In-Kind Sharing	Academic Oversight of In-Kind Sharing	Shared Oversight of In-Kind Sharing
Project Type - Descriptive	0.0230 (0.75)	-0.0010 (0.99)	-0.0383 (0.59)	-0.0036 (0.96)
Project Type - Intervention	0.0616 (0.39)	-0.0671 (0.35)	0.0014 (0.98)	0.1145 (0.11)
Project Type - Other	-0.097 (0.17)	0.0836 (0.24)	0.0358 (0.62)	-0.1377 (0.054)
Partnership Duration	0.0846 (0.24)	-0.0611 (0.40)	-0.0412 (0.57)	0.0729 (0.31)

Table 6.6: Correlation analysis among partnership approval structure, type of partnership project, and partnership duration

Pearson Correlation (p-value)	Community Governance	Agency/Advisory Board Governance	Individual/No Community Decision
Project Type - Descriptive	0.2236 (0.00)	-0.01496 (0.04)	-0.0457 (0.52)
Project Type - Intervention	-0.1309 (0.07)	0.0741 (0.30)	0.0375 (0.60)
Project Type - Other	-0.055 (0.44)	0.0532 (0.46)	-0.0018 (0.98)
Partnership Duration	-0.0804 (0.26)	0.0576 (0.42)	0.0257 (0.72)

Table 6.7: Correlation analysis among partnership demographic entropy indices

Pearson Correlation (p-value)	Gender Entropy	Race Entropy	Location Entropy	Disability Entropy	LGBT Entropy	International Entropy
Gender Entropy						
Race Entropy	-0.0006 (0.99)					
Location Entropy	0.0403 (0.58)	-0.1009 (0.16)				
Disability Entropy	0.182 (0.00)	-0.0467 (0.52)	0.1063 (0.14)			
LGBT Entropy	0.1511 (0.04)	0.1096 (0.14)	-0.1199 (0.11)	0.2317 (0.00)		
International Entropy	0.1527 (0.04)	0.2489 (0.00)	-0.1995 (0.01)	-0.055 (0.46)	0.2384 (0.00)	
Youth Entropy	0.0936 (0.20)	0.0416 (0.57)	-0.1535 (0.04)	0.1585 (0.03)	0.2364 (0.00)	0.0151 (0.84)

Table 6.8: Correlation analysis among partnership demographic entropy indices, cultural similarity, and membership diversity

Pearson Correlation (p-value)	Cultural Similarity	Membership Diversity
Gender Entropy	0.0153 (0.75)	0.0928 (0.05)
Race Entropy	-0.1647 (0.00)	0.1068 (0.02)
Location Entropy	0.0056 (0.91)	-0.0665 (0.16)
Disability Entropy	-0.014 (0.77)	0.0499 (0.30)
LGBT Entropy	0.0214 (0.66)	0.0087 (0.86)
International Entropy	0.0762 (0.12)	0.145 (0.00)
Youth Entropy	-0.0403 (0.40)	-0.0168 (0.73)

Table 6.9: Correlation analysis among control of partnership resources and partnership demographic entropy

Pearson Correlation (p-value)	Community Oversight of Personnel Hire	Academic Oversight of Personnel Hire	Shared Oversight of Personnel Hire	Community Oversight of Financial Sharing	Academic Oversight of Financial Sharing
Gender Entropy	-0.1004 (0.16)	0.1752 (0.01)	-0.1325 (0.07)	-0.0843 (0.24)	-0.0149 (0.84)
Race Entropy	-0.1268 (0.08)	-0.0638 (0.38)	0.105 (0.16)	-0.1381 (0.054)	0.0731 (0.31)
Location Entropy	0.0837 (0.24)	-0.046 (0.52)	-0.0245 (0.73)	0.1567 (0.03)	-0.0394 (0.58)
Disability Entropy	0.0588 (0.42)	0.0664 (0.36)	-0.0907 (0.21)	0.1602 (0.03)	-0.1377 (0.06)
LGBT Entropy	0.0061 (0.94)	0.0609 (0.42)	-0.0521 (0.49)	0.0003 (1.00)	-0.0486 (0.52)
International Entropy	-0.0213 (0.77)	-0.1205 (0.10)	0.1337 (0.07)	-0.1383 (0.060)	-0.0863 (0.24)
Youth Entropy	0.0467 (0.52)	0.0496 (0.50)	-0.066 (0.37)	-0.0075 (0.92)	-0.0349 (0.63)

Pearson Correlation (p-value)	Shared Oversight of Financial Sharing	Community Oversight of In-Kind Sharing	Academic Oversight of In-Kind Sharing	Shared Oversight of In-Kind Sharing
Gender Entropy	0.0243 (0.74)	-0.1181 (0.10)	0.0036 (0.96)	0.0172 (0.81)
Race Entropy	-0.0331 (0.64)	-0.1161 (0.11)	0.0604 (0.40)	0.0265 (0.71)
Location Entropy	-0.0582 (0.42)	0.1006 (0.16)	-0.0885 (0.22)	-0.1053 (0.14)
Disability Entropy	0.054 (0.46)	0.1819 (0.01)	-0.0793 (0.28)	-0.0055 (0.94)
LGBT Entropy	0.0529 (0.48)	-0.053 (0.48)	0.0424 (0.57)	0.069 (0.36)
International Entropy	0.1643 (0.03)	-0.0905 (0.22)	-0.0012 (0.99)	0.0058 (0.94)
Youth Entropy	0.0454 (0.54)	-0.0386 (0.76)	0.0186 (0.80)	0.074 (0.31)

Table 6.10: Correlation analysis among partnership approval structure and partnership demographic entropy

Pearson Correlation (p-value)	Community Governance	Agency/Advisory Board Governance	Individual/No Community Decision
Gender Entropy	-0.1272 (0.08)	0.0853 (0.24)	0.0687 (0.34)
Race Entropy	-0.0337 (0.64)	0.0287 (0.69)	0.0262 (0.72)
Location Entropy	0.2733 (0.00)	-0.2341 (0.00)	0.0168 (0.81)
Disability Entropy	0.1226 (0.09)	-0.0866 (0.23)	-0.0147 (0.84)
LGBT Entropy	-0.0565 (0.45)	0.1105 (0.14)	-0.0703 (0.35)
International Entropy	-0.269 (0.00)	0.2243 (0.00)	0.0188 (0.80)
Youth Entropy	0.1271 (0.08)	-0.0104 (0.89)	-0.1146 (0.12)

Table 6.11: Correlation analysis among type of partnership project and partnership demographic entropy

Pearson Correlation (p-value)	Descriptive Project	Intervention Project	Other Project
Gender Entropy	-0.0809 (0.26)	-0.0305 (0.67)	0.1146 (0.11)
Race Entropy	0.0327 (0.65)	-0.0678 (0.35)	0.0511 (0.48)
Location Entropy	0.0877 (0.22)	-0.1221 (0.09)	0.0645 (0.37)
Disability Entropy	0.004 (0.96)	-0.0232 (0.75)	0.0243 (0.74)
LGBT Entropy	0.0447 (0.55)	-0.0643 (0.39)	0.0353 (0.64)
International Entropy	0.0677 (0.36)	-0.0172 (0.82)	-0.0441 (0.55)
Youth Entropy	0.0468 (0.52)	-0.0559 (0.45)	0.0229 (0.75)

Table 6.12: Correlation analysis among partnership duration and partnership demographic entropy

Pearson Correlation (p-value)	Partnership Duration
Gender Entropy	0.0266 (0.76)
Race Entropy	0.0532 (0.46)
Location Entropy	0.0046 (0.95)
Disability Entropy	0.1049 (0.15)
LGBT Entropy	0.0029 (0.97)
International Entropy	-0.0276 (0.71)
Youth Entropy	-0.1109 (0.13)

Table 6.13: Correlation analysis among participatory decision-making, partnership demographic entropy, and perceived membership diversity

Pearson Correlation (p-value)	Participatory Decision- Making
Gender Entropy	0.168 (0.00)
Race Entropy	-0.0743 (0.12)
Location Entropy	0.0933 (0.05)
Disability Entropy	-0.0700 (0.15)
LGBT Entropy	0.0027 (0.96)
International Entropy	0.0286 (0.56)
Youth Entropy	-0.0212 (0.66)
Perceived Member Diversity	0.2197 (0.00)

Table 6.14: Correlation analysis among participatory decision-making, partnership demographic variables, and partnership control factors

Pearson Correlation (p-value)	Community Interaction	Academic Interaction	Project Legitimacy	Political Connection	Stakeholder Connection	Partnership Duration
Participatory Decision-Making	0.3520 (0.00)	0.4465 (0.00)	0.3127 (0.00)	0.1352 (0.00)	0.2882 (0.00)	0.0203 (0.67)
Gender Entropy	0.0168 (0.72)	0.0977 (0.04)	0.0791 (0.10)	0.0652 (0.17)	0.0589 (0.22)	0.0266 (0.76)
Race Entropy	0.0296 (0.53)	-0.0294 (0.54)	-0.0205 (0.67)	-0.0074 (0.88)	-0.0047 (0.92)	0.0532 (0.46)
Location Entropy	0.0596 (0.21)	0.0821 (0.08)	0.0683 (0.15)	0.021 (0.66)	0.0441 (0.36)	0.0046 (0.95)
Disability Entropy	-0.0373 (0.44)	0.0264 (0.58)	0.0132 (0.79)	0.0552 (0.25)	0.0461 (0.34)	0.1049 (0.15)
LGBT Entropy	0.0148 (0.76)	0.0039 (0.94)	-0.1001 (0.04)	0.0064 (0.87)	0.0063 (0.90)	0.0029 (0.97)
International Entropy	0.0164 (0.74)	0.0497 (0.31)	0.0479 (0.32)	0.0281 (0.56)	-0.0078 (0.87)	-0.0276 (0.71)
Youth Entropy	-0.0775 (0.11)	-0.0482 (0.31)	-0.056 (0.24)	0.0881 (0.07)	0.0215 (0.65)	-0.1109 (0.13)
Membership Diversity	0.1447 (0.00)	0.2352 (0.00)	0.3835 (0.00)	0.2809 (0.00)	0.3900 (0.00)	0.0026 (0.96)

Table 6.15: Effect estimates of binary logistic regression of community governance approval structure on demographic entropy

Effect estimates for binary logistic models ^{1,2,3}								
Binary Outcome: Community Governance		Referent Category: No Community Governance						
		Model 6.15.1: Gender Entropy		Model 6.15.2: Race Entropy		Model 6.15.3: Location Entropy		
		β	OR	β	OR	β	OR	
Entropy Predictor	-1.623 (0.927)	0.197 (0.183)	-0.222 (0.469)	0.801 (0.376)	2.426 (0.659)	***	11.314 (7.453)	***
Constant	-0.376 (0.504)	0.686 (0.346)	-1.079 (0.378)	0.340 (0.128)	-2.077 (0.316)	***	0.125 (0.040)	***
<i>Model Statistics</i>								
LR (Chi-squared)	3.03		0.22		14.89	***		
df	1		1		1			
<hr/>								
		Model 6.15.4: Disability Entropy		Model 6.15.5: LGBT Entropy				
		β	OR	β	OR			
Entropy Predictor	1.787 (1.070)	5.974 (6.393)	-0.806 (1.064)	0.447 (0.475)				
Constant	-1.388 (0.210)	*** (0.052)	0.250 (0.052)	*** (0.202)	-1.084 (0.202)	***	0.338 (0.068)	***
<i>Model Statistics</i>								
LR (Chi-squared)	2.69		0.60					
df	1		1					
<hr/>								
		Model 6.15.6: International Entropy		Model 6.15.7: Youth Entropy				
		β	OR	β	OR			
Entropy Predictor	-3.320 (0.965)	** (0.035)	0.036 (0.035)	** (0.714)	1.237 (2.459)			
Constant	-0.646 (0.215)	** (0.113)	0.524 (0.113)	** (0.230)	-1.434 (0.230)	***	0.238 (0.055)	***
<i>Model Statistics</i>								
LR (Chi-squared)	15.44	***		2.95				
df	1			1				

Note:

¹Numbers in parentheses are linearized standard errors.

²* p <.05 ** p < .01 *** p < .001 (two-tailed tests)

³OR denotes odds ratio.

Table 6.16: Effect estimates of binary logistic regression of agency/advisory board approval structure on demographic entropy

Effect estimates for binary logistic models ^{1,2,3}							
Binary Outcome: Agency/Advisory Board		Referent Category: No Agency/Advisory Board					
	Model 6.16.1: Gender Entropy		Model 6.16.2: Race Entropy		Model 6.16.3: Location Entropy		
	β	OR	β	OR	β	OR	
Entropy Predictor	0.967 (0.819)	2.629 (2.152)	0.159 (0.396)	1.172 (0.464)	-1.717 (0.531)	**	0.180 (0.095)
Constant	-0.184 (0.461)	0.832 (0.383)	0.234 (0.323)	1.264 (0.408)	0.872 (0.224)	***	2.392 (0.535)
<i>Model Statistics</i>							
LR (Chi-squared)	1.41		0.16		10.83		
df	1		1		1		
	Model 6.16.4: Disability Entropy		Model 6.16.5: LGBT Entropy				
	β	OR	β	OR			
Entropy Predictor	-1.163 (0.978)	0.313 (0.306)	1.333 (0.906)	3.794 (3.436)			
Constant	0.436 (0.173)	* 1.546 (0.268)	* 0.161 (0.176)	1.175 (0.207)			
<i>Model Statistics</i>							
LR (Chi-squared)	1.42		2.27				
df	1		1				
	Model 6.16.6: International Entropy		Model 6.16.7: Youth Entropy				
	β	OR	β	OR			
Entropy Predictor	1.966 (0.655)	** 7.141 (4.680)	** -0.091 (0.635)	0.913 (0.580)			
Constant	-0.105 (1.983)	0.900 (0.179)	0.326 (0.186)	1.385 (0.258)			
<i>Model Statistics</i>							
LR (Chi-squared)	9.68		0.02				
df	1		1				

Note:

¹Numbers in parentheses are linearized standard errors.

²* p < .05 ** p < .01 *** p < .001 (two-tailed tests)

³OR denotes odds ratio.

Table 6.17: Effect estimates of binary logistic regression of individual/no community approval structure on demographic entropy

Effect estimates for binary logistic models^{1,2,3}						
Binary Outcome: Individual/ No Community Decision		Referent Category: No Individual/Community Decision				
	Model 6.17.1: Gender Entropy		Model 6.17.2: Race Entropy		Model 6.17.3: Location Entropy	
	β	OR	β	OR	β	OR
Entropy Predictor	1.042 (1.093)	2.836 (3.099)	0.183 (0.500)	1.201 (0.600)	0.154 (0.652)	1.166 (0.760)
Constant	-2.050 (0.637) **	0.129 (0.082) **	-1.628 (0.417) ***	0.196 (0.082) ***	-1.537 (0.269) ***	0.215 (0.058) ***
<i>Model Statistics</i>						
<i>LR (Chi-squared)</i>	0.95		0.13		0.06	
<i>df</i>	1		1		1	
	Model 6.17.4: Disability Entropy		Model 6.17.5: LGBT Entropy			
	β	OR	β	OR		
Entropy Predictor	-0.260 (1.277)	0.771 (0.985)	-1.156 (1.231)	0.315 (0.387)		
Constant	-1.471 (0.218) ***	0.230 (0.050) ***	-1.388 (0.221) ***	0.250 (0.055) ***		
<i>Model Statistics</i>						
<i>LR (Chi-squared)</i>	0.04		0.96			
<i>df</i>	1		1			
	Model 6.17.6: International Entropy		Model 6.17.7: Youth Entropy			
	β	OR	β	OR		
Entropy Predictor	0.194 (0.757)	1.214 (0.919)	-1.422 (0.915)	0.241 (0.221)		
Constant	-1.505 (0.254) ***	0.222 (0.056) ***	-1.262 (0.224) ***	0.283 (0.063) ***		
<i>Model Statistics</i>						
<i>LR (Chi-squared)</i>	0.07		2.66			
<i>df</i>	1		1			

Note:

¹Numbers in parentheses are linearized standard errors.

²* p < .05 ** p < .01 *** p < .001 (two-tailed tests)

³OR denotes odds ratio.

Table 6.18: Summary effect estimates of multinomial logistic regression of type of partnership project on demographic entropy

Effect estimates for multinomial logistic models ^{1,2,3}							
Referent Category: Intervention Project							
Characteristic	Gender	Race	Location	Disability	LGBT	Inter-national	Youth
	RRR	RRR	RRR	RRR	RRR	RRR	RRR
<u>Descriptive Project</u>							
Entropy							
Predictor	0.451 (0.467)	1.395 (0.725)	2.753 (1.902)	1.198 (1.556)	2.220 (2.412)	1.848 (1.433)	1.832 (1.506)
<u>Other Project</u>							
Entropy							
Predictor	4.912 (5.627)	1.527 (0.768)	2.214 (1.446)	1.548 (1.888)	1.994 (2.163)	0.734 (0.576)	1.474 (1.190)
<u>Model Statistics</u>							
LR (Chi-squared)	3.27	0.92	2.98	0.13	0.74	0.99	0.63
df	2	2	2	2	2	2	2

Note:

¹Numbers in parentheses are linearized standard errors.

²* p < .05 ** p < .01 *** p < .001 (two-tailed tests)

³RRR denotes relative risk ratio.

Table 6.19: Effect estimates of multinomial logistic regression of partnership demographic entropy on oversight of personnel hiring

Effect estimates for multinomial logistic models ^{1,2,3}							
Referent Category: Academic Control of Resources							
	Model 6.19.1: Gender Entropy		Model 6.19.2: Race Entropy		Model 6.19.3: Location Entropy		
	β	RRR	β	RRR	β	RRR	
<u>Community Control of Personnel Hiring</u>							
Entropy Predictor	-3.827 *	0.022 *	-0.851	0.427	1.181	3.258	
	(1.596)	(0.035)	(0.781)	(0.333)	(0.962)	(3.135)	
Constant	1.072	2.921	-0.459	0.632	-1.380 **	0.252 **	
	(0.890)	(2.600)	(0.554)	(0.350)	(0.423)	(0.106)	
<u>Shared Control of Personnel Hiring</u>							
Entropy Predictor	-2.791 *	0.061 *	0.536	1.709	0.207	1.230	
	(1.163)	(0.071)	(0.470)	(0.803)	(0.593)	(0.729)	
Constant	2.402 *	11.044 ***	0.470	1.600	0.803 **	2.233 **	
	(0.688)	(7.597)	(0.375)	(0.600)	(0.232)	(0.518)	
<i>Model Statistics</i>							
LR (Chi-squared)	8.34 *		4.41		1.57		
df	2		2		2		
	Model 6.19.4: Disability Entropy		Model 6.19.5: LGBT Entropy				
	β	RRR	β	RRR			
<u>Community Control of Personnel Hiring</u>							
Entropy Predictor	0.380	1.463	-0.445	0.641			
	(1.624)	(2.375)	(1.507)	(0.966)			
Constant	-1.050 **	0.350 **	-0.852 **	0.426 **			
	(0.327)	(0.115)	(0.324)	(0.138)			
<u>Shared Control of Personnel Hire Hiring</u>							
Entropy Predictor	-1.181	0.307	-0.782	0.458			
	(1.088)	(0.334)	(0.955)	(0.437)			
Constant	0.930 ***	2.536 ***	0.967 ***	2.629 ***			
	(0.198)	(0.503)	(0.208)	(0.546)			
<i>Model Statistics</i>							
LR (Chi-squared)	1.74		0.66				
df	2		2				

	Model 6.19.6: International Entropy		Model 6.19.7: Youth Entropy	
	β	<i>RRR</i>	β	<i>RRR</i>
<u>Community Control of Personnel Hiring</u>				
Entropy Predictor	0.617 (1.148)	1.853 (2.128)	0.232 (1.111)	1.261 (1.401)
Constant	-1.084 ** (0.351)	0.338 ** (0.119)	-1.035 ** (0.354)	0.355 ** (0.126)
<u>Shared Control of Personnel Hiring</u>				
Entropy Predictor	1.295 (0.734)	3.651 (2.681)	-0.568 (0.716)	0.567 (0.406)
Constant	0.564 * (0.221)	1.758 * (0.389)	0.934 *** (0.215)	2.544 *** (0.548)
<i>Model Statistics</i>				
<i>LR (Chi-squared)</i>	3.38		1.00	
<i>df</i>	2		2	

Note:

¹Numbers in parentheses are linearized standard errors.

²* p <.05 ** p < .01 *** p < .001 (two-tailed tests)

³RRR denotes relative risk ratio.

Table 6.20: Effect estimates of multinomial logistic regression of partnership demographic entropy on oversight of financial resource sharing

Effect estimates for multinomial logistic models ^{1,2,3}							
Referent Category: Academic Control of Resources							
	Model 6.20.1: Gender Entropy		Model 6.20.2: Race Entropy		Model 6.20.3: Location Entropy		
	β	RRR	β	RRR	β	RRR	
<u>Community Control of Financial Resource Sharing</u>							
Entropy Predictor	-1.489 (1.580)	0.226 (0.356)	-1.913 * (0.922)	0.148 * (0.136)	2.445 * (1.204)	11.530 * (13.887)	
Constant	-0.755 (0.838)	0.470 (0.394)	-0.257 (0.624)	0.773 (0.483)	-2.418 *** (0.608)	0.089 *** (0.054)	
<u>Shared Control of Financial Resource Sharing</u>							
Entropy Predictor	0.249 (0.917)	1.283 (1.176)	-0.398 (0.446)	0.672 (0.300)	0.055 (0.566)	1.056 (0.598)	
Constant	0.584 (0.516)	1.794 (0.927)	1.032 ** (0.373)	2.808 ** (1.048)	0.719 ** (0.223)	2.053 ** (0.458)	
<i>Model Statistics</i>							
LR (Chi-squared)	1.27		4.62		5.08		
df	2		2		2		
	Model 6.20.4: Disability Entropy		Model 6.20.5: LGBT Entropy				
	β	RRR	β	RRR			
<u>Community Control of Financial Resource Sharing</u>							
Entropy Predictor	4.720 ** (1.841)	112.204 ** (206.600)	0.455 (1.783)	1.576 (2.809)			
Constant	-2.018 *** (0.408)	0.133 *** (0.054)	-1.489 *** (0.362)	0.226 *** (0.082)			
<u>Shared Control of Financial Resource Sharing</u>							
Entropy Predictor	2.012 (1.253)	7.479 (9.371)	0.678 (0.974)	1.970 (1.918)			
Constant	0.563 ** (0.183)	1.756 ** (0.322)	0.640 ** (0.192)	1.896 ** (0.365)			
<i>Model Statistics</i>							
LR (Chi-squared)	6.80 *		0.50				
df	2		2				

	Model 6.20.6: International Entropy		Model 6.20.7: Youth Entropy	
	β	<i>RRR</i>	β	<i>RRR</i>
<u>Community Control of Financial Resource Sharing</u>				
Entropy Predictor	-2.259 (1.729)	0.105 (0.181)	0.115 (1.349)	1.122 (1.513)
Constant	-1.186 ** (0.361)	0.306 ** (0.110)	-1.497 *** (0.384)	0.224 *** (0.859)
<u>Shared Control of Financial Resource Sharing</u>				
Entropy Predictor	1.074 (0.680)	2.926 (1.989)	0.386 *** (0.706)	1.471 *** (1.039)
Constant	0.441 * (0.215)	1.554 * (0.334)	0.660 ** (0.202)	1.934 ** (0.391)
<i>Model Statistics</i>				
<i>LR (Chi-squared)</i>	6.87 *		0.32	
<i>df</i>	2		2	

Note:

¹Numbers in parentheses are linearized standard errors.

²* p < .05 ** p < .01 *** p < .001 (two-tailed tests)

³RRR denotes relative risk ratio.

Table 6.21: Effect estimates of multinomial logistic regression of partnership demographic entropy on oversight of in-kind resource sharing

Effect estimates for multinomial logistic models ^{1,2,3}						
Referent Category: Academic Control of Resources						
	Model 6.21.1: Gender Entropy		Model 6.21.2: Race Entropy		Model 6.21.3: Location Entropy	
	β	RRR	β	RRR	β	RRR
<u>Community Control of In-Kind Resource sharing</u>						
Entropy Predictor	-1.968 (1.727)	0.140 (0.241)	-1.613 (0.937)	(0.187)	2.073 (1.184)	7.950 (9.415)
Constant	0.737 (0.932)	2.089 (1.947)	0.866 (0.721)	2.377 (1.714)	-0.881 (0.497)	0.414 (0.306)
<u>Shared Control of In-Kind Resource Sharing</u>						
Entropy Predictor	0.000 (1.334)	1.000 (1.334)	-0.441 (0.639)	0.644 (0.411)	0.698 (0.849)	2.010 (1.707)
Constant	1.872 * (0.754)	6.498 * (4.897)	2.225 *** (0.555)	9.254 *** (5.131)	1.714 *** (0.300)	5.549 *** (1.662)
<i>Model Statistics</i>						
LR (Chi-squared)	2.20		3.28		3.31	
df	2		2		2	
	Model 6.21.4: Disability Entropy		Model 6.21.5: LGBT Entropy			
	β	RRR	β	RRR		
<u>Community Control of In-Kind Resource sharing</u>						
Entropy Predictor	4.842 * (2.236)	126.746 * (283.382)	-1.845 (2.135)	0.158 (0.337)		
Constant	-0.856 (0.420)	0.425 (0.178)	-0.049 (0.404)	0.952 (0.384)		
<u>Shared Control of In-Kind Resource Sharing</u>						
Entropy Predictor	1.805 (1.873)	6.082 (11.390)	-0.439 (1.303)	0.645 (0.840)		
Constant	1.730 *** (0.258)	5.641 *** (1.455)	2.029 *** (0.296)	7.609 *** (2.255)		
<i>Model Statistics</i>						
LR (Chi-squared)	5.77		0.85			
df	2		2			

	Model 6.21.6: International Entropy		Model 6.21.7: Youth Entropy	
	<i>β</i>	<i>RRR</i>	<i>β</i>	<i>RRR</i>
<u>Community Control of In-Kind Resource sharing</u>				
Entropy Predictor	-1.311 (1.451)	0.269 (0.391)	-0.798 (1.472)	0.450 (0.663)
Constant	0.029 (0.418)	1.029 (0.430)	-0.136 (0.414)	0.873 (0.362)
<u>Shared Control of In-Kind Resource Sharing</u>				
Entropy Predictor	0.027 (0.959)	1.027 (0.986)	-0.042 (0.988)	0.959 (0.947)
Constant	1.877 *** (0.315)	6.532 *** (2.058)	1.912 *** (0.301)	6.768 *** (2.037)
<u>Model Statistics</u>				
<i>LR (Chi-squared)</i>	1.39		0.43	
<i>df</i>	2		2	

Note:

¹Numbers in parentheses are linearized standard errors.

²* p < .05 ** p < .01 *** p < .001 (two-tailed tests)

³RRR denotes relative risk ratio.

Table 6.22: Effect estimates of unadjusted binary logistic regression of participatory decision-making on demographic entropy characteristics

Effect estimates for binary logistic models ^{1,2,3}						
Referent Category: Low Participatory Decision-Making						
	Model 6.22.1: Gender Entropy		Model 6.22.2: Race Entropy		Model 6.22.3: Location Entropy	
	Std. Error adjusted for 159 clusters		Std. Error adjusted for 159 clusters		Std. Error adjusted for 161 clusters	
	β	OR	β	OR	β	OR
Focal Predictor	1.155 (0.718)	3.173 (2.279)	-0.489 (0.285)	0.613 (0.175)	0.827 * (0.364)	2.287 * (0.832)
Constant	-0.496 (0.399)	0.609 (0.243)	0.473 (0.227) *	1.604 (0.364) *	-0.146 (0.148)	0.865 (0.128)
<i>Model Statistics</i>						
LR (Chi-squared)	3.32		3.19		5.95 *	
df	1		1		1	
AIC	1.38		1.39		1.38	
BIC	-2038.14		-2038.02		-2051.91	
<hr/>						
	Model 6.22.4: Disability Entropy		Model 6.22.5: LGBT Entropy			
	Std. Error adjusted for 157 clusters		Std. Error adjusted for 151 clusters			
	β	OR	β	OR		
Focal Predictor	-0.836 (0.669)	0.433 (0.290)	0.330 (0.595)	1.391 (0.828)		
Constant	0.183 (0.123)	1.201 (0.147)	0.049 (0.124)	1.050 (0.130)		
<i>Model Statistics</i>						
LR (Chi-squared)	1.44		0.30			
df	1		1			
AIC	1.39		1.39			
BIC	-1984.87		-1915.36			

Effect estimates for binary logistic models^{1,2,3}

Referent Category: Low Participatory Decision-Making

	Model 6.22.6: International Entropy		Model 6.22.7: Youth Entropy	
	Std. Error adjusted for 154 clusters		Std. Error adjusted for 157 clusters	
	β	OR	β	OR
Focal Predictor	-0.282 (0.389)	0.754 (0.293)	-0.011 (0.428)	0.990 (0.424)
Constant	0.173 (0.141)	1.189 (0.167)	0.122 (0.130)	1.130 (0.147)
<i>Model Statistics</i>				
LR (Chi-squared)	0.58		0.00	
df	1		1	
AIC	1.39		1.39	
BIC	-1955.61		-2012.11	

	Model 6.22.8: Perceived Membership Diversity	
	Std. Error adjusted for 161 clusters	
	β	OR
Focal Predictor	0.383 ** (0.132)	1.467 ** (0.194)
Constant	-1.553 ** (0.592)	0.212 ** (0.125)
<i>Model Statistics</i>		
LR (Chi-squared)	9.79 **	
df	1	
AIC	1.37	
BIC	-2061.13	

Note:

¹Numbers in parentheses are linearized standard errors.

²* p < .05 ** p < .01 *** p < .001 (two-tailed tests)

³OR denotes odds ratio.

Table 6.23: Effect estimates of binary logistic regression of participatory decision-making on demographic entropy characteristics adjusted for partnership control factors

Effect estimates for binary logistic models ^{1,2,3}						
Referent Category: Low Participatory Decision-Making						
	Model 6.23.1: Gender Entropy		Model 6.23.2: Race Entropy		Model 6.23.3: Location Entropy	
	Std. Error adjusted for 158 clusters		Std. Error adjusted for 158 clusters		Std. Error adjusted for 160 clusters	
	β	OR	β	OR	β	OR
Entropy Predictor	0.853 (0.684)	2.346 (1.604)	-0.460 (0.287)	0.631 (0.181)	0.663 (0.387)	1.940 (0.750)
Community Interaction	0.434 * (0.175)	1.543 * (0.270)	0.437 * (0.178)	1.548 * (0.276)	0.435 * (0.176)	1.545 * (0.272)
Academic Interaction	0.660 ** (0.253)	1.936 ** (0.490)	0.662 ** (0.247)	1.939 ** (0.478)	0.638 ** (0.242)	1.893 ** (0.458)
Project Legitimacy	0.561 ** (0.203)	1.754 ** (0.356)	0.562 ** (0.203)	1.753 ** (0.356)	0.527 * (0.205)	1.694 * (0.347)
Political Stakeholder	-0.222 (0.142)	0.801 (0.114)	-0.218 (0.141)	0.804 (0.113)	-0.202 (0.142)	0.817 (0.116)
Other Stakeholder	0.350 * (0.162)	1.419 * (0.229)	0.353 * (0.164)	1.424 * (0.234)	0.363 * (0.164)	1.438 * (0.236)
Constant	-8.326 *** (1.299)	0.000 *** (0.000)	-7.581 *** (1.232)	0.001 *** (0.001)	-7.967 *** (1.179)	0.000 *** (0.000)
<i>Model Statistics</i>						
LR (Chi-squared)	83.40 ***		84.20 ***		83.98 ***	
df	6		6		6	
AIC	1.22		1.22		1.22	
BIC	-2048.08		-2048.88		-2059.75	

Effect estimates for binary logistic models^{1,2,3}

Referent Category: Low Participatory Decision-Making

**Model 6.23.4:
Disability Entropy**

**Model 6.23.5:
LGBT Entropy**

Std. Error adjusted
for 156 clusters

Std. Error adjusted
for 151 clusters

	β		OR		β		OR
Entropy Predictor	-1.087 (0.738)		0.337 (0.249)		0.594 (0.584)		1.812 (1.059)
Community Interaction	0.442 * (0.176)	*	1.556 * (0.274)	*	0.473 * (0.183)	*	1.604 * (0.293)
Academic Interaction	0.621 ** (0.238)	**	1.861 ** (0.443)	**	0.699 ** (0.266)	**	2.012 ** (0.536)
Project Legitimacy	0.532 ** (0.202)	**	1.703 ** (0.344)	**	0.552 ** (0.209)	**	1.736 ** (0.362)
Political Stakeholder	-0.211 (0.145)		0.809 (0.117)		-0.175 (0.145)		0.839 (0.122)
Other Stakeholder	0.372 ** (0.161)	**	1.451 ** (0.234)	**	0.335 * (0.164)	*	1.398 * (0.229)
Constant	-7.635 *** (1.168)	***	0.000 *** (0.001)	***	-8.377 *** (1.292)	***	0.000 *** (0.000)
<i>Model Statistics</i>							
LR (Chi-squared)	79.61	***			84.40	***	
df	6				6		
AIC	1.23				1.21		
BIC	-1993.14				-1935.63		

Effect estimates for binary logistic models^{1,2,3}

Referent Category: Low Participatory Decision-Making

	Model 6.23.6: International Entropy		Model 6.23.7: Youth Entropy	
	Std. Error adjusted for 153 clusters		Std. Error adjusted for 156 clusters	
	β	OR	β	OR
Entropy Predictor	-0.483 (0.397)	0.617 (0.245)	0.187 (0.460)	1.206 (0.555)
Community Interaction	0.456 ** (0.178)	1.577 ** (0.281)	0.457 ** (0.175)	1.580 ** (0.276)
Academic Interaction	0.671 ** (0.252)	1.956 ** (0.493)	0.689 ** (0.255)	1.991 ** (0.508)
Project Legitimacy	0.576 ** (0.204)	1.778 ** (0.362)	0.549 ** (0.203)	1.732 ** (0.352)
Political Stakeholder	-0.194 (0.143)	0.824 (0.118)	-0.196 (0.143)	0.822 (0.118)
Other Stakeholder	0.286 (0.162)	1.331 (0.216)	0.305 * (0.157)	1.356 * (0.213)
Constant	-7.804 *** (1.208)	0.000 *** (0.000)	-7.977 *** (1.217)	0.000 *** (0.000)

Model Statistics

LR (Chi-squared)	80.13 ***	82.53 ***
df	6	6
AIC	1.22	1.22
BIC	1965.42	-2024.60

Effect estimates for binary logistic models^{1,2,3}

Referent Category: Low Participatory Decision-Making

**Model 6.23.8:
Perceived Membership
Diversity**

Std. Error adjusted
for 161 clusters

	β		OR	
Entropy Predictor	0.031 (0.168)		1.032 (0.173)	
Community Interaction	0.443 ** (0.171)		1.558 ** (0.266)	
Academic Interaction	0.648 ** (0.248)		1.911 ** (0.474)	
Project Legitimacy	0.536 ** (0.204)		1.708 ** (0.349)	
Political Stakeholder	-0.216 (0.139)		0.806 (0.112)	
Other Stakeholder	0.351 * (0.163)		1.420 * (0.231)	
Constant	-7.910 *** (1.159)		0.000 *** (0.000)	

Model Statistics

LR (Chi-squared)	82.38	***
df	6	
AIC	1.23	
BIC	-2069.26	

Note:

¹Numbers in parentheses are linearized standard errors.

²* p < .05 ** p < .01 *** p < .001 (two-tailed tests)

³OR denotes odds ratio.

Table 6.24 Effect estimates of OLS regression of participatory decision-making on demographic entropy characteristics for sensitivity analysis (note: models with notable findings are shown here)

Effect estimates for OLS model ^{1,2}				
	Model 6.24.1: Gender Entropy Std. Error adjusted for 159 clusters		Model 6.24.2: Disability Entropy Std. Error adjusted for 157 clusters	
	β		β	
Entropy Predictor	3.464 *		-1.581	
	(1.515)		(1.232)	
Constant	19.447 ***		21.434 ***	
	(0.884)		(0.212)	
<i>Model Statistics</i>				
R ²	0.03		0.01	
AIC	5.11		5.13	
BIC	-416.13		-386.24	
	Model 6.24.3: Gender Entropy Std. Error adjusted for 158 clusters		Model 6.24.4: Disability Entropy Std. Error adjusted for 156 clusters	
	β		β	
Entropy Predictor	2.449 *		-1.874 *	
	(1.046)		(0.960)	
Community Interaction	0.607 *		0.579 *	
	(0.262)		(0.264)	
Academic Interaction	1.245 ***		1.292 ***	
	(0.299)		(0.304)	
Project Legitimacy	0.680 *		0.657 *	
	(0.289)		(0.272)	
Political Stakeholder	-0.173		-0.137	
	(0.151)		(1.613)	
Other Stakeholder	0.453 *		0.482 *	
	(0.231)		(0.229)	
Constant	7.528 ***		8.753 ***	
	(1.744)		(1.599)	
<i>Model Statistics</i>				
R ²	0.27		0.26	
AIC	4.85		4.87	
BIC	-491.69		-463.94	
Mean VIF	1.38		1.39	

Note: ¹Numbers in parentheses are robust standard errors. ²* p < .05 ** p < .01 *** p < .001 (two-tailed)

Table 7.1 Qualitative themes and quantitative measures under the refined conceptual model

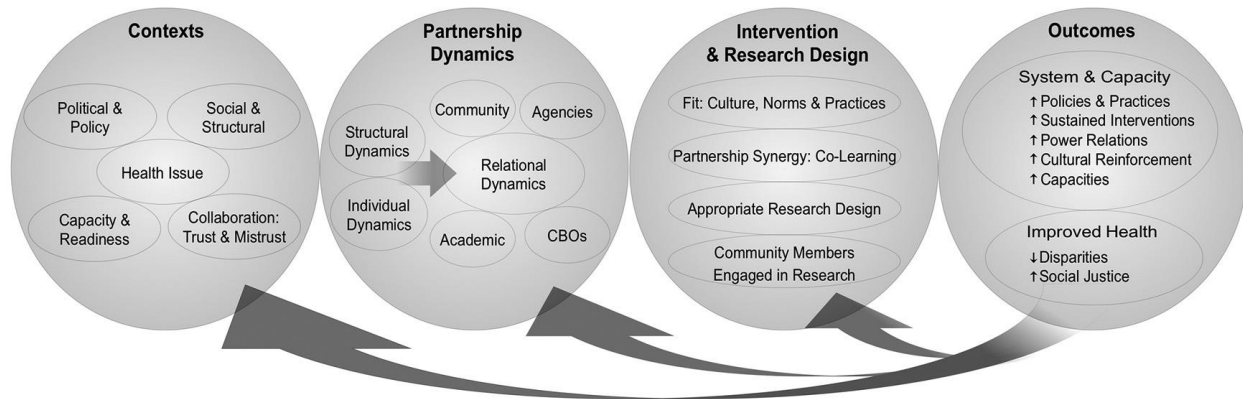
Construct	Qualitative-identified Theme	Quantitative-tested Measure
Functional characteristic of group diversity	<ul style="list-style-type: none"> ▪ Variation in professional background ▪ Variation in organizational affiliation ▪ Variation in the skillset of partners ▪ Variation in research approach or viewpoint ▪ Variation in community engagement or activism experiences ▪ Variation in maturation experience 	
Sociocultural characteristic of group diversity	<ul style="list-style-type: none"> ▪ Variation in gender ▪ Variation in race ▪ Variation in ethnicity ▪ Variation in tribal affiliation ▪ Variation in religious or faith affiliation ▪ Variation in age ▪ Variation in personality ▪ Variation in leadership approach ▪ Variation in language use ▪ Variation in physical abilities ▪ Variation in educational attainment ▪ Variation in income ▪ Variation in geographic origin 	<ul style="list-style-type: none"> ▪ Partnership gender entropy ▪ Partnership race entropy ▪ Partnership location entropy ▪ Partnership disability entropy ▪ Partnership LGBT entropy ▪ Partnership International status entropy ▪ Partnership youth entropy
Partnership structural element		<ul style="list-style-type: none"> ▪ Community approval structure
Benefits of primarily functional differences	<ul style="list-style-type: none"> ▪ Drawing on Unique Partner Expertise ▪ Drawing on Partnership Expertise for Research Implementation ▪ Novel Partnership Perspectives ▪ Outsider Position/View on Partnership ▪ Promoting Group Cohesion ▪ Relating across Partnership Differences 	
Benefits of primarily sociocultural similarities	<ul style="list-style-type: none"> ▪ Acquired Cultural Insider Context of Partners ▪ Embeddedness within Partnership Communities 	
Challenges of primarily sociocultural differences	<ul style="list-style-type: none"> ▪ Internal tension within partnership ▪ Personality-rooted partnership tension ▪ Partnership turnover 	

Construct	Qualitative-identified Theme	Quantitative-tested Measure
	<ul style="list-style-type: none"> ▪ Social distance within partnership ▪ Distrust of scientific approaches ▪ Community vigilance of partnership activities ▪ Racial bias within partnership ▪ Gender bias within partnership ▪ Balancing interests among partners ▪ Lacking awareness of community context ▪ Ambiguity in partnership role ▪ Ambiguity in representing partnership community ▪ Communication barrier ▪ Discomfort with partnership tasks ▪ Variable participation among partners ▪ Variable input solicitation from partners 	
Practices of promoting partnership esteem and functional capacities	<p><i>Individual-level Practice:</i></p> <ul style="list-style-type: none"> ▪ Individual Assertiveness <p><i>Group-level Practice:</i></p> <ul style="list-style-type: none"> ▪ Building esteem of Partners ▪ Fostering an esteem-promoting partnership environment ▪ Education to enhance partner engagement ▪ Validating partners' worldviews ▪ Respecting partners' contributions ▪ Focusing on partnership tasks ▪ Harnessing capacity of partners ▪ Sharing ownership of project activities ▪ Sharing ownership of project interests ▪ Collective group decision-making ▪ Enhancing partnership capacity of cultural insiders <p><i>Structural-level Practice:</i></p> <ul style="list-style-type: none"> ▪ Community or tribal board ▪ Coalition network of partners ▪ Community collective activism ▪ Risk-taking for community wellbeing 	

Construct	Qualitative-identified Theme	Quantitative-tested Measure
Transcultural and interpersonal bridging practices	<p><i>Individual-level Practice:</i></p> <ul style="list-style-type: none"> ▪ Individual leadership competence ▪ Individual credibility ▪ Demonstrating heart or passion for the partnership ▪ Individual cultural humility <p><i>Group-level Practice:</i></p> <ul style="list-style-type: none"> ▪ Having cultural bridging individuals ▪ Demonstrated commitment to partnership ▪ Demonstrated involvement in activities of partnership communities ▪ Building common vision among partners ▪ Building an inherently diverse movement ▪ Fostering personal bonds among partners ▪ Fostering transparent partnership dialogue ▪ Fostering dialogue on social differences ▪ Fostering dialogue on accountability ▪ Openness to mutual learning ▪ Flexibility with partnership processes ▪ Creating culturally consonant partnership solutions ▪ Cultural revitalization among partnership communities <p><i>Structural-level Practice:</i></p> <ul style="list-style-type: none"> ▪ History of partnership collaboration ▪ Funding support for partnership activities ▪ Community self-governance ▪ Cultural relatedness ▪ History of research mistreatment ▪ Structural oppression 	<ul style="list-style-type: none"> ▪ Academic interaction capacities ▪ Community interaction capacities ▪ Project legitimacy ▪ Connection to political stakeholders ▪ Connection to other stakeholders
Collective functioning of partnerships		<ul style="list-style-type: none"> ▪ Participatory decision-making

FIGURES

Figure 2.1 CBPR Conceptual Logic Model (adapted from Lucero et al., 2016)



Contexts	Partnership Dynamics	Intervention & Research Design	Outcomes
<ul style="list-style-type: none"> • Social-Structural: Social-Economic Status, Place, History, Environment, Community Safety, Institutional Racism, Culture, Role of Education & Research Institutions • Political-Policy: National/Local Governance, Policy & Funding Trends • Collaboration: Historic Collaboration & Trust between Community/Academic Partners • Capacity: Community/Academic Partner Capacity & Readiness • Health Issue: Perceived Severity by Community/Academic Partners 	<p><u>Structural Dynamics</u></p> <ul style="list-style-type: none"> • Diversity • Complexity • Formal Agreements • Sharing Power/Resource • CBPR Principles Alignment • Time in Partnership <p><u>Individual Dynamics</u></p> <ul style="list-style-type: none"> • Core Values • Participation Motivation • Personal Relationships • Cultural Identities/Humility • Bridge People • Personal Belief/Spirituality • Reputation <p><u>Relational Dynamics</u></p> <ul style="list-style-type: none"> • Safety: Community Voice/Language • Trust • Flexibility: Dialogue, Listening & Mutual Learning • Leadership/Influence • Power Dynamics/Stewardship • Self & Collective Reflection • Participatory Decision-making & Negotiation • Knowledge Integration: Group Process • Task Roles & Communication 	<ul style="list-style-type: none"> • Interventions: Cultural Fit & Culturally-Centered • Intervention Informed by Local Settings & Organizations • Partner Shared Synergy & Trust • Language: Academic & Community Terminology • Research & Evaluation Design Reflects Partnership Input • Bidirectional Translation, Implementation & Dissemination • Community Members Engaged in All Research Activities 	<p><u>CBPR System & Capacity</u></p> <ul style="list-style-type: none"> • Policy & Practices Changes – In both Universities & Communities • Sustainable/Culturally-Centered Interventions for Broader Reach • Changed Power Relations & Empowerment - Community Voices Heard • Productivity Measures, i.e. Papers, Grant Applications, Grant Awards • Cultural Reinforcement, Revitalization & Renewal • Develops Capacities to Benefit Individuals & Partner Agencies <p><u>Improved Health</u></p> <ul style="list-style-type: none"> • Transformed Social & Economic Conditions • Reduced Health Disparities

Figure 3.1 Main conceptual model for the dissertation study

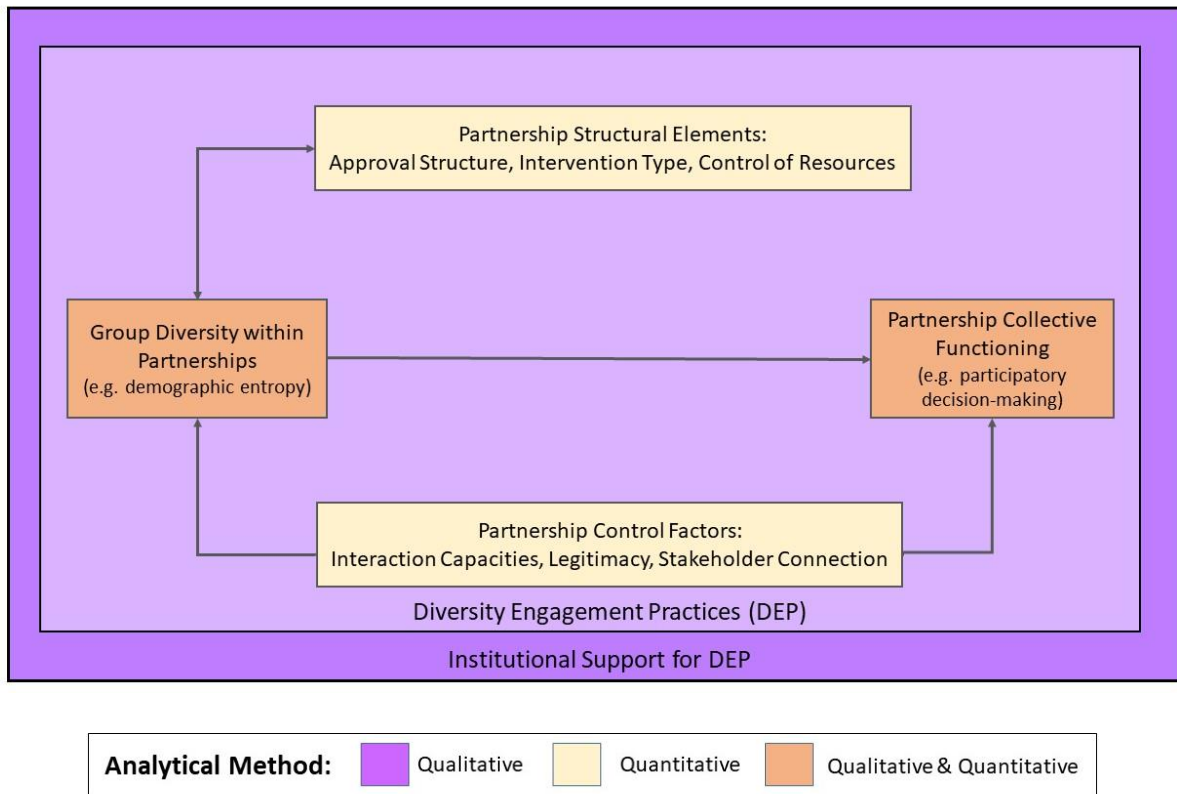


Figure 4.1 Sample selection process for the parent study

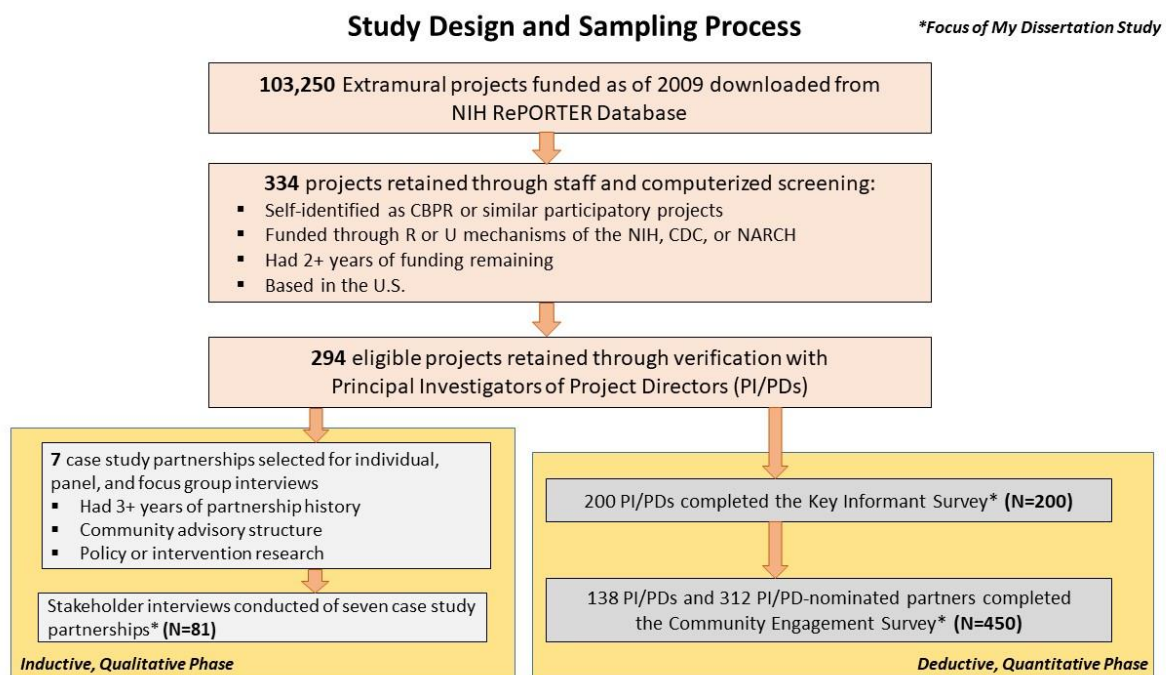


Figure 4.2 Mixed methods design of the dissertation study and the parent study

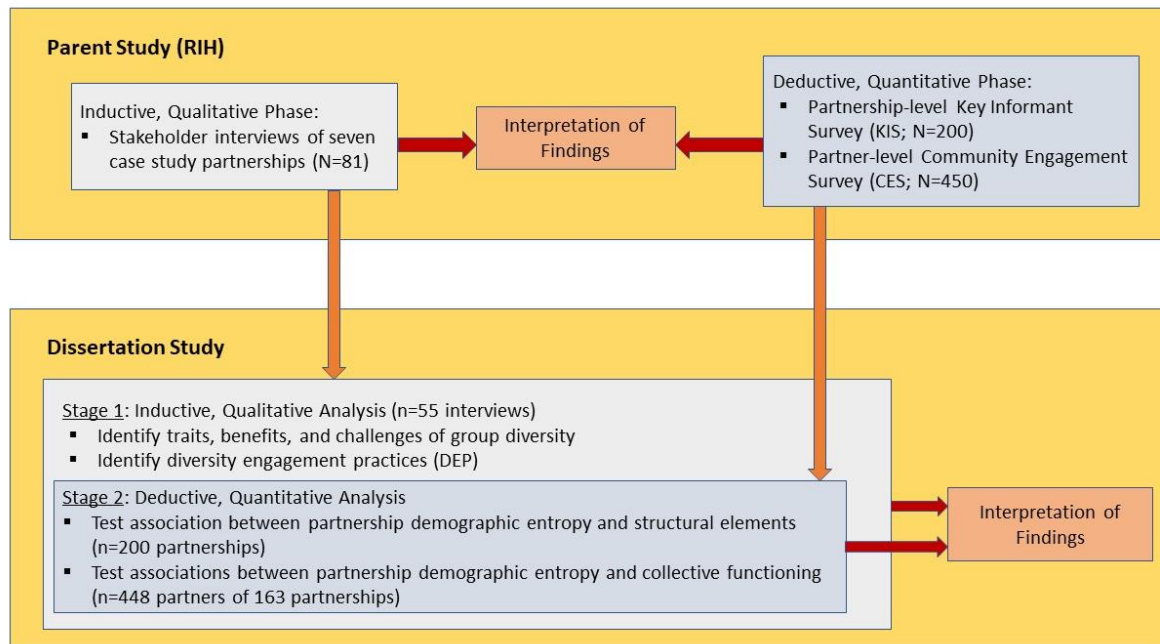


Figure 5.1 Relationships among qualitative themes

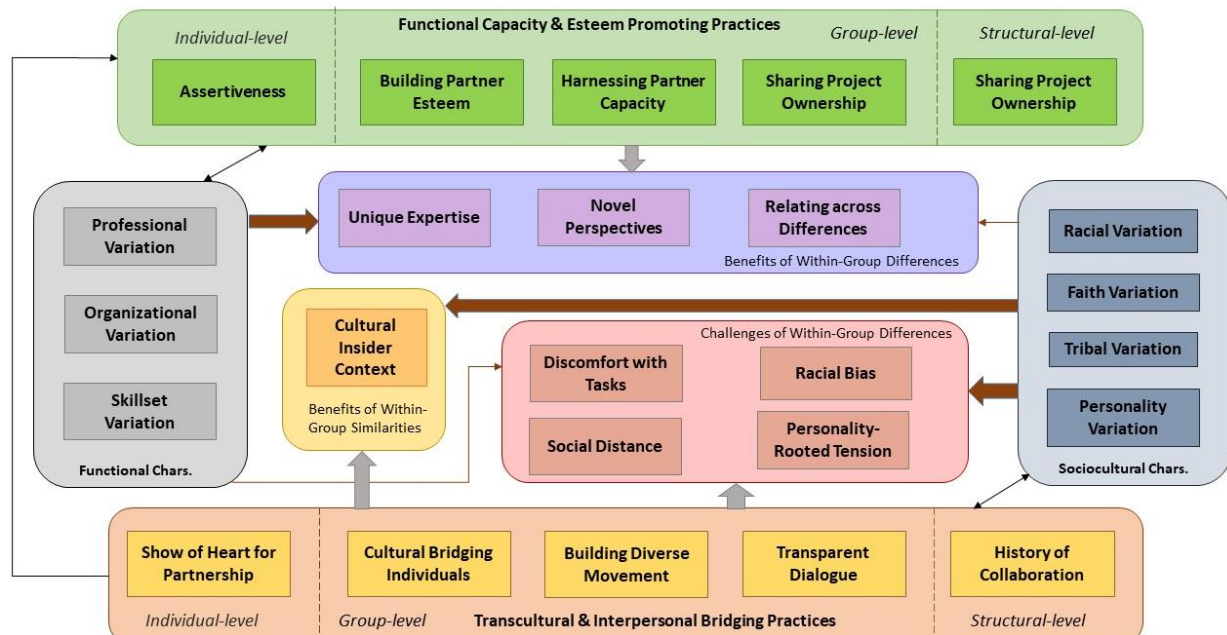


Figure 6.1-6.8 Histograms of focal analytical variables

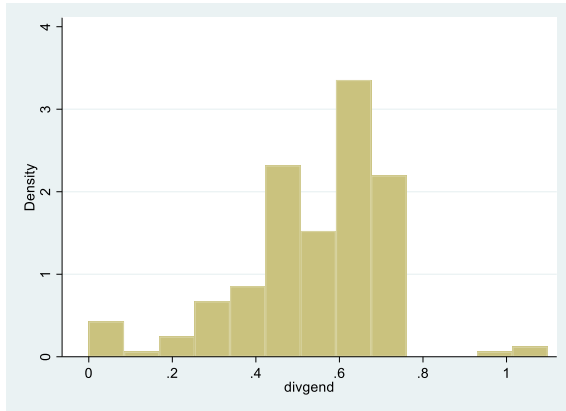


Fig 6.1: Histogram of Gender Entropy

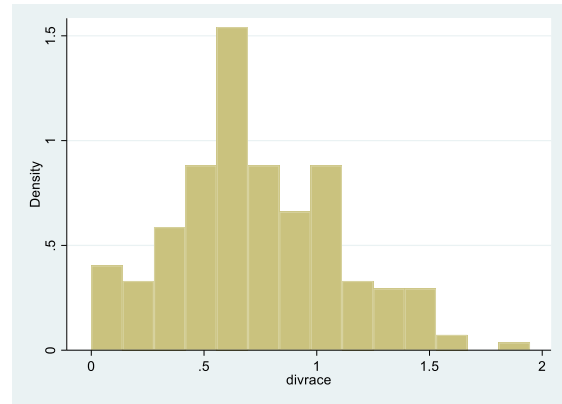


Fig 6.2: Histogram of Race Entropy

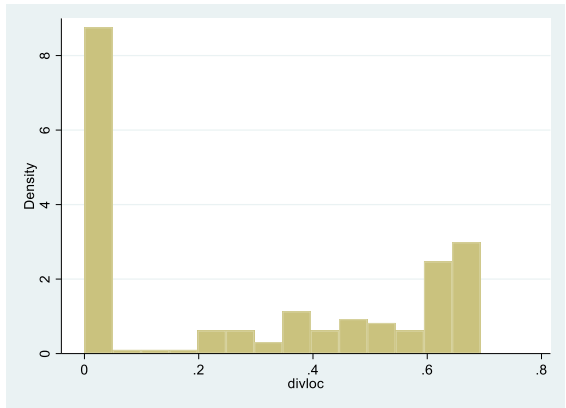


Fig 6.3: Histogram of Location Entropy

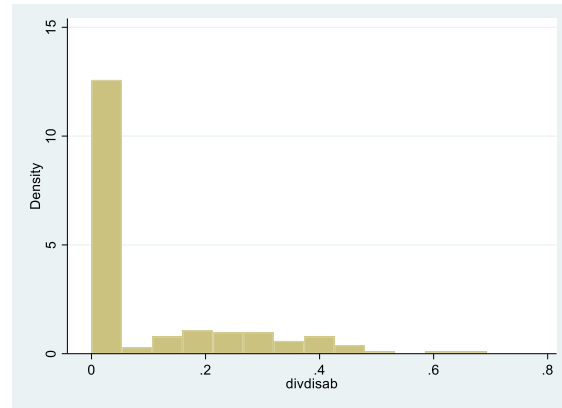


Fig 6.4: Histogram of Disability Entropy

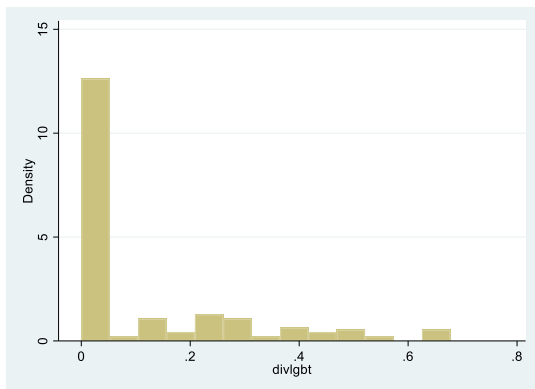


Fig 6.5: Histogram of LGBT Entropy

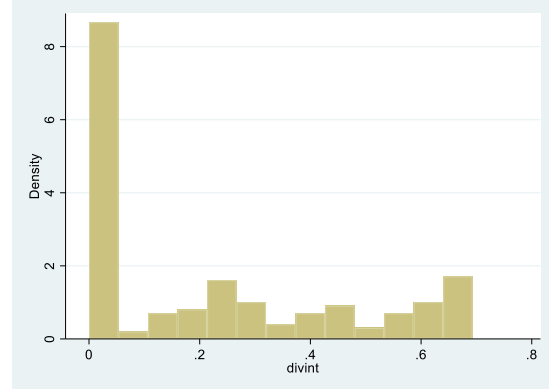


Fig 6.6: Histogram of International Entropy

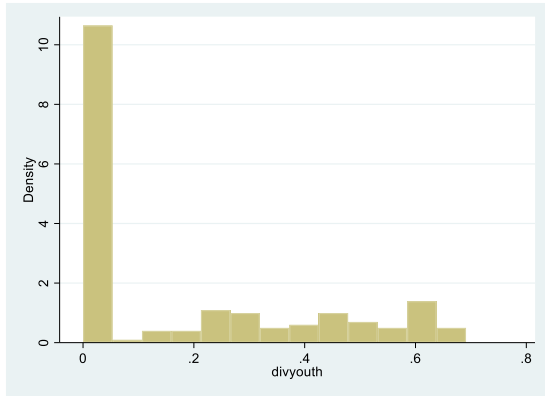


Fig 6.7: Histogram of Youth Entropy

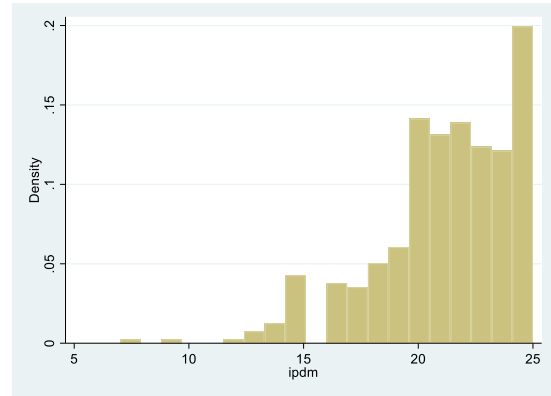
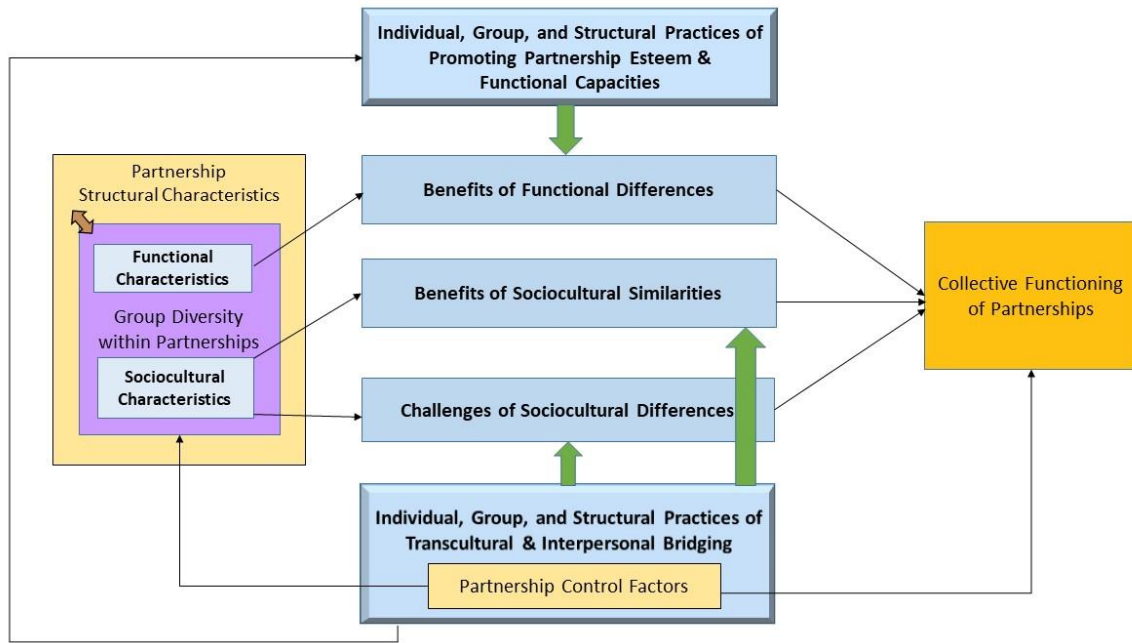


Fig 6.8: Histogram of Participatory Decision-Making

Figure 7.1 Revised study conceptual model



STUDY INSTRUMENTS

RIH Key Informant Survey Instrument

Concept	Item	Survey Question	Response	Var label	Reference
CONSENT					
I		This study has been explained to me. I have had a chance to ask questions. I volunteer to take part in this research. If I have questions later about the research, I can ask one of the researchers listed above. If I have questions about my rights as a subject, I can call the University of Washington Human Subjects Division at (206) 543--0098. I will receive a copy of this informational statement.	0. I do not accept 1. I accept. I want to participate. 2. I do not accept, because <u>my research does not include a</u> community engagement component.	ACCEPT	
II		You have indicated that you DO NOT want to participate in the Research for Improved Health: A National Study of Community---Academic Partnerships survey. If this is correct, please select the button below, and hit NEXT.	1. I DO NOT want to participate. (By clicking here you will be permanently removed from the participant list.) <i>Show if: (ACCEPT = 0:[I do not accept. (If you wish to return and participate later, simply close this window).]) or (ACCEPT = 2:[I do not accept, because my research does not include a community engagement component.]])</i>	DECLINE	
A. PROJECT FEATURES					
		STEM: For this research study it is important for us to learn about certain features of your project. We are referring specifically to a project that received federal funding in 2009: [insert project name].			
1		Does [insert project name] involve community individuals and/or agencies as <u>partners</u> ?	1. Yes 0. No	PROJEC1	
2		Do you consider [insert project name] to be community based participatory research, or something similar?	1. Yes 0. No <i>Show if: (PROJEC1=0:[NO])</i>	PROJEC2	
3		How would you like to classify the type of your project?	open---ended <i>Show if: (PROJEC2=0:[NO])</i>	PROJEC3	
4		What are the funding dates?	<i>Show if: (ACTIVITY = U48) or (ACTIVITY = U26)</i>	NARCH1	
	1	Start Date (mm/dd/yyyy)	enter date	FUND_START	
	2	End Date (mm/dd/yyyy)	enter date	FUND---END	
5		What is/was the total funding amount?	enter \$_ <i>Show if: (ACTIVITY = U48 PRC) or (ACTIVITY = U26 NARCH)</i>	NARCH2	
6		What is/was the federal funding institute(s) or center(s) for [insert project name]?	enter name <i>Show if: (ACTIVITY = U48 PRC) or (ACTIVITY = U26 NARCH)</i>	NARCH3	
		STEM: We are interested in the length of your work with individuals and agencies prior to and after the current funding period.			
7		To your best estimate, how many <i>years</i> and <i>months</i> has this currently funded project, [insert project name], been in existence ?	- Years AND - Months	PROJEC4 & PROJEC4M	cp New
8		To your best estimate, how many <i>years</i> and <i>months</i> have you been involved in this particular project?	- Years AND - Months	PROJEC5 & PROJEC5M	

9		To your best estimate, how many <i>years</i> and <i>months</i> has this particular partnership been in existence? Please include total time, even when the partnership was not funded.	Years AND Months	PROJEC6Y & PROJEC6M	cp New Mea
10		Now we are asking you about the type of study you are conducting.			
11		Is this a descriptive, intervention, or policy study? Descriptive study: needs assessment, community profile, epidemiological study, etc. Intervention study: specific programs to reduce or address health	1. <u>Descriptive</u> 2. <u>Intervention</u> 3. <u>Policy</u>	PROJEC7	
12		You marked "other" in the previous question. What other type of policy was this study?	<u>open---ended</u>	PROJEC7.TEXT	
11		Does your research project involve the collection and use of human specimens (hair, skin, cells, blood, etc.)?	1. <u>Yes.</u> 0. <u>No</u>	PROJEC8	BD, new que
12		Based on your experiences in [insert project name], please tell us how confident you are that your project will achieve its goals.	1. <u>Not confident at all</u> 2. <u>Not very confident</u> 3. <u>Neutral</u>	PROJEC9	
B. RESOURCE AND POWER SHARING					
		STEM: Now to continue the survey, this next section pertains to resource sharing and training			
13		Which partner hires personnel on the project? By community partners we mean agencies, organizations, tribal community, health departments, or other entities representing communities. By academic partners we mean university or research institutions.	1. Community partner(s) 2. Academic partner(s) 3. Both 4. Don't know	SHARE1	
14		Who decides how the financial resources are shared?	1. Community partner(s) 2. Academic partner(s) 3. Both 4. Don't know	SHARE2	Rand, Khodyakov
15		Who decides how the in---kind resources are shared?	1. Community partner(s) 2. Academic partner(s) 3. Both 4. Don't know	SHARE3	
16		Thinking of the overall budget, how are the project's financial resources divided among community partners and academic partners?		SHARE4	rand?
	1	Academic partner(s)	%	SHARE4A	
	2	Community partner(s)	%	SHARE4B	
C. RESEARCH INTEGRITY					
17		Have community partners received human subjects training?	1. None of them 2. Some of them 3. Most of them 4. All of them 5. Don't know	INTERG1	Cp created
18		Have partners who either collect, help interpret, or review data signed confidentiality agreements ?	1. None of them 2. Some of them 3. Most of them 4. All of them 5. Don't know	INTERG2	
19		Are there guidelines in place as to what would happen if a partner breaches confidentiality ?	1. No 2. Yes 3. Don't know 4. Does not apply	INTERG3	

Concept	Item	Survey Question	Response	Var label	Reference
20		Who made the final decision to approve participation in this research project on behalf of the community? <i>Please choose all that apply.</i>		INTERG4	BD and Puneet, new
	1	Agency leader, representative, board, or staff		INTERG4.AGENCY	
	2	Tribal/local government or health board/public health office	1. Yes 0. No	INTERG4.GOVERN	
	3	Individual community member(s)	1. Yes 0. No	INTERG4.INDIVID	
	4	Project advisory board	1. Yes 0. No	INTERG4.ADVIS	
	5	Other	1. Yes 0. No	INTERG4.OTHER	
	6	No community decision; individual research participants give/gave consent	1. Yes 0. No	INTERG4.NO_DEC	
21		On the last page, you indicated that an 'other' entity made the final decision to approve participation in this research project on behalf of the community. Please describe this entity.	open---ended <i>Show if: INTERG4 is---any---of{Other}</i>	INTERG5	
D. FORMAL AGREEMENTS					
		STEM: This next section seeks information about formal agreements between the academic and community partners.			
22		Please indicate whether or not your partnership has written formal agreements such as a Memorandum of Agreement/Understanding (MOU) or Tribal or Agency Resolution.	1. Yes 0. No	AGREE1	Gottlieb,1993
23		Did research approval for [insert project name] involve a verbal agreement between partners?	1. No 2. Yes 3. Don't know	AGREE2	
24		In a few sentences, can you describe the nature of the verbal agreement?	open---ended <i>Show if: (AGREE2=1{YES})</i>	AGREE3	
25		Thinking about your MOU or other formal agreement(s), does it include any provisions or language about:	<i>Show if: (AGREE1 = 1:{Yes})</i>		
	1	Distributions of funds	1. No	AGREE4A	Gottlieb,1993
	2	A written mission statement	2. Yes	AGREE4B	Gottlieb,1993
	3	Written objectives	3. Don't know	AGREE4C	Gottlieb,1993
	4	Clear expectation for partner's role	4. Does not apply	AGREE4D	New
	5	Clear decision---making process (e.g., consensus vs. voting)		AGREE4E	New
	6	Conflict resolution		AGREE4F	
26		Thinking about your MOU or other formal agreement(s), does it include any provisions or language about:			
	1	Publication or authorship?	1. Yes No	AGREE5	cp adapted from ORI web site
	2	Intellectual Property Agreements?		AGREE8	
	3	Data use/sharing?		AGREE10	
27		Does the publication or authorship agreement include:	<i>Show if: (AGREE5=1:{YES})</i>	AGREE6	Puneet
	1	Where the results will be presented and/or published	1. No	AGREE6A	
	2	How authorship is determined	2. Yes	AGREE6B	
	3	Who will have the final authority to approve presentations or publications	3. Don't know	AGREE6C	

Concept	Item	Survey Question	Response	Var label	Reference
28		You have indicated the MOU or formal agreement includes a publication or authorship agreement. Who has the final authority to approve presentations or publications?	Open---ended <i>Show if: (AGREE 6C=1[YES])</i>	AGREE7	
29		Does the Intellectual Property Agreement include provisions or language about knowledge that is protected from outside use (e.g. traditional knowledge, medicines, stories)?	1. No 2. Yes 3. Don't know 4. Does not apply	AGREE9	cp adapted from ORI web site
30		In the data use/sharing agreement who owns the data? Please choose all that apply.	<i>Show if: (AGREE10 = 1:[Yes])</i>	AGREE10A	cp adapted from ORI web site
	1	The researcher	1. Yes 0. No	AGREE10A.RESEARCHER	
	2	The researcher's institution	1. Yes 0. No	AGREE10A.RES_INSTITUTION	
	3	The community	1. Yes 0. No	AGREE10A.COMMUNITY	
	4	Tribal government	1. Yes 0. No	AGREE10A.TRIBALGOV	
	5	Jointly owned by both community/tribe and university/research institution	1. Yes 0. No	AGREE10A.JOINTLY	
	6	Funder	1. Yes 0. No	AGREE10A.FUNDER	
	7	Date owned by no one	1. Yes 0. No	AGREE10ANO_OWNER	
	8	Other governing body, please describe	1. Yes 0. No	AGREE10AOTHER	
8t	Please describe	open---ended	AGREE10AOTHER.TEXT		
31		In the data use/sharing agreement, do students have access to the data?	1. No 2. Yes 3. Don't know Does not apply	AGREE10B	
32		In the data use/sharing agreement, is there information about the process for secondary data analysis?	1. No 2. Yes 3. Don't know Does not apply	AGREE10C	
33	1	Are there any limitations to the use of the data?	1. Yes 0. No	AGREE12	
	2t	Please briefly describe the limitations to the use of the data.	open---ended <i>Show if: (AGREE12=1:[YES])</i>	AGREE12A	
E. CONCRETE OUTCOMES					
34		Are there any papers in press or published about this project?	1. No 2. Yes 3. Don't know 4. Does not apply	OUTCOM1	
35		Has this project led to any additional research or funding?	1. No 2. Yes 3. Don't know 4. Does not apply	OUTCOM2	
36		Has [insert project name] developed any of its own evaluation instruments (formative, process, or outcome) or measures?	1. No 2. Yes 3. Don't know 4. Does not apply	OUTCOM3	BD, new item

Concept	Item	Survey Question	Response	Var label	Reference
37		As a result of your study working with your community, have any IRB policies, procedures, or practices been developed or revised ? Please choose all that apply.		OUTCOM4	cp new measure
	1	Developed	1. Yes 0. No	OUTCOM4.DEVELO	
	2	Revised	1. Yes 0. No	OUTCOM4.REVISE	
	3	Neither	1. Yes 0. No	OUTCOM4.NEITHER	
F. PARTNERSHIP ROLES					
		STEM: Now we would like to ask a few questions about partnership roles .			
38		Thinking about the extent to which the community partners have been, currently are, or will be involved in the research, please choose one response for each research activity below.			
	1	Developing community--based theories of the problem or intervention	1. Community partners were/are ACTIVELY ENGAGED in this activity 2. Community partners CONSULTED on this activity 3. Community partners DID NOT/DO NOT participate in this activity 4. Not at this stage of research 5. Does not apply	PARTR1A	Rand, Khod-yakov
	2	Grant proposal writing		PARTR1B	
	3	Background research		PARTR1C	
	4	Choosing research methods		PARTR1D	
	5	Developing sampling procedures		PARTR1E	
	6	Recruiting study participants		PARTR1F	
	7	Implementing the intervention		PARTR1G	
	8	Designing interview and/or survey questions		PARTR1H	
	9	Collecting primary data		PARTR1I	
	10	Analyzing collected data		PARTR1J	
	11	Interpreting study findings		PARTR1K	
	12	Writing reports and journal articles		PARTR1L	
	13	Giving presentations at meetings and conferences		PARTR1M	
G. RELATIONAL DYNAMICS					
39		Has this project had any formal trainings or substantial discussions about:		DYNAM1	
	1	Racism, sexism, and/or other forms of oppression	1. Not at all 2. To a small extent 3. To a moderate extent 4. To a great extent 5. To a very great extent	DYNAM1A	BD, new item
	2	Cultural sensitivity		DYNAM1B	
	3	Cultural humility		DYNAM1C	
	4	Community Based Participatory Research (CBPR)		DYNAM1D	
	5	Self & collective reflection		DYNAM1E	
	6	Privilege and power		DYNAM1F	
	7	Dialogue, listening, and mutual learning		DYNAM1G	
	8	Conflict resolution		DYNAM1H	
H. DEMOGRAPHICS					
		STEM: In this next section we will collect demographic information about members of the academic and community partnership.			
40	1	What is your role in the project?	1. Principal Investigator ---Academic 2. Key personnel--- Academic 3. Staff --- Academic 4. Other 5. Principal Investigator---Community 6. Key personnel--- Community 7. Staff --- Community	ROLE1	NW, new item

	2	You marked 'other' as your project role. What is your role project?	open---ended <i>Show if: (ROLE1=4:{OTHER})</i>	ROLE1_OT		
Concept	Item	Survey Question	Response	Var label	Reference	
56		Race/ethnicity				
		To your best estimate, of the (insert number of community team members) community team members approximately how many are: <i>Please indicate the number of individuals.</i>		DEMCOM2		
	1	American Indian or Alaska Native	- Individuals	DEMCOM2A		
	2	Black or African American	- Individuals	DEMCOM2B		
	3	Native Hawaiian or other Pacific Islander	- Individuals	DEMCOM2C		
	4	Asian	- Individuals	DEMCOM2D		
	5	White or Caucasian	- Individuals	DEMCOM2E		
	6	Hispanic or Latino	- Individuals	DEMCOM2F		
	7	Mixed race	- Individuals	DEMCOM2G		
57		Location				
		To your best estimate, of the (insert number of community team members) community team members approximately how many are: <i>Please indicate the number of individuals.</i>		DEMCOM3		
	1	Reside in a rural area	- Individuals	DEMCOM3A		
	2	Reside in urban area	- Individuals	DEMCOM3B		
		Disabilities				
		To your best estimate, of the (insert number of community team members) community team members approximately how many are: <i>Please indicate the number of individuals.</i>		DEMCOM4		
	People with disabilities	- Individuals	DEMCOM4A			
58		Sexual Orientation				
		To your best estimate, of the (insert number of community team members) community team members approximately how many are: <i>Please indicate the number of individuals.</i>		DEMCOM5		
		Lesbian, gay, bisexual, transgender, queer, two---spirit, or intersex	- Individuals	DEMCOM5A		
69		International Status				
		To your best estimate, of the (insert number of community team members) community team members approximately how many are: <i>Please indicate the number of individuals.</i>		DEMCOM6		
		Refugee or foreign---born	- Individuals	DEMCOM6A		
60		Age				
		To your best estimate, of the (insert number of academic team members) academic team members approximately how many are: <i>Please indicate the number of individuals.</i>		DEMCOM7		
		Youth and young adults	- Individuals	DEMCOM7A		
I. PARTNER CONTACTS						
		<p>STEM: The second part of this survey will include academic and community partners. Please give us the names, phone numbers, and email addresses of at least two and up to three active and/or engaged community team partner and one other academic team partner or lead agency key personnel. Two community partners and one academic partner will receive the survey, the third community partner will serve as an alternate. For purposes of this survey, please only include partners who can read in English and have access to email.</p> <p>The information you provide is for research purpose only and will not be shared or disclosed to ANY other entities outside the research team and funding agency. Your community and academic partners will each receive \$20 for completing the second part of this survey.</p>				

		<p>If your partners' contact information is not readily available, you can simply close this survey window and retrieve the information. When you are ready to return to the survey, log in using the survey link and PIN sent to you.</p> <p>To copy and paste contact information directly into the survey: Mac users: COMMAND + C (copy) and COMMAND + V (paste) PC users: CTRL + C (copy) and CTRL + V (paste)</p>			
Concept	Item	Survey Question	Response	Var label	Reference
61		Contact information for one Academic Partner		APAR	
		Unique CUSTOMID system---generated		APARID	
		First name of your Academic partner in [insert partnership name]	open---ended	APARA	
		Last name of your academic partner in [insert partnership name]	open---ended	APARB	
		Agency name of Academic partner in [insert partnership name]	open---ended	APARC	
		Email of your Academic partner in [insert partnership name]	open---ended	APARD	
		Second Email (if available) of your Academic partner in [insert partnership name]	open---ended	APARE	
		Phone of your Academic partner in [insert partnership name]	open---ended	APARF	
		Mailing street address of your Academic partner in [insert partnership name]	open---ended	APARG	
		City of your Academic partner in [insert partnership name]	open---ended	APARH	
		State of your Academic partner in [insert partnership name]	open---ended	APARI	
		Zip of your Academic partner in [insert partnership name]	open---ended	APARJ	
62		Contact information for Community Partner 1			
		Unique CUSTOMID system---generated		CARP1ID	
		First name of your Community partner 1 in [insert partnership name]	open---ended	CPART1A	
		Last name of your community partner 1 [insert partnership name]		CPART1B	
		Agency Name of Community Partner 1 in [insert partnership name]	open---ended	CPART1C	
		Email of your Community partner 1 in [insert partnership name]	open---ended	CPART1D	
		Second email (if available) of your Community partner 1 in [insert partnership name]	open---ended	CPART1E	
		Phone of your Community partner 1 in [insert partnership name]	open---ended	CPART1F	
		Mailing street address of your Community partner 1 in [insert partnership name]	open---ended	CPART1G	
		City of your Community partner 1 in [insert partnership name]	open---ended	CPART1H	
		State of your Community partner 1 in [insert partnership name]	open---ended	CPART1I	
		Zip of your Community partner 1 in [insert partnership name]	open---ended	CPART1J	
63		Contact information for Community Partner 2			
		Unique CUSTOMID system---generated		CARP2ID	
		First name of your Community partner 2 in [insert partnership name]	open---ended	CPART2A	
		Last name of your community partner 2 [insert partnership name]	open---ended	CPART2B	
		Agency Name of Community Partner 2 in [insert partnership name]	open---ended	CPART2C	
		Email of your Community partner 2 in [insert partnership name]	open---ended	CPART2D	
		Second Email (if available) of your Community partner2 in [insert partnership name]	open---ended	CPART2E	
		Phone of your Community partner 2 in [insert partnership name]	open---ended	CPART2F	
		Mailing street address of your Community partner 2 in [insert partnership name]	open---ended	CPART2G	
		City of your Community partner 2 in [insert partnership name]	open---ended	CPART2H	
		State of your Community partner 2 in [insert partnership name]	open---ended	CPART2I	
		Zip of your Community partner 2 in [insert partnership name]	open---ended	CPART2J	
64		Just in case one of the two community partners you have recommended does not respond to the second survey, we would like contact information for a third alternate community partner. Does you have a third community partner in [insert name of project]?	1. No, I DO NOT have a third community partner 2. Yes, I have contact information for a third community partner	CPART3Y_N	
65		Contact information for Community Partner 3	Show if: (CPART3Y_N=1:[Yes, I have contact information for a third community partner])		
		Unique CUSTOMID system---generated		CARP3ID	
		First name of your Community partner 3 in [insert partnership name]	open---ended	CPART3A	
		Last name of your community partner 3 [insert partnership name]	open---ended	CPART3B	
		Agency Name of Community Partner 3 in [insert partnership name]	open---ended	CPART3C	
		Email of your Community partner 3 in [insert partnership name]	open---ended	CPART3D	

		Second Email (if available) of your Community partner 3 in [insert partnership name]	open---ended	CPART3E	
		Phone of your Community partner 3 in [insert partnership name]	open---ended	CPART3F	
		Mailing street address of your Community partner 3 in [insert partnership name]	open---ended	CPART3G	
		City of your Community partner 3 in [insert partnership name]	open---ended	CPART3H	
		State of your Community partner 3 in [insert partnership name]	open---ended	CPART3I	
		Zip of your Community partner 3 in [insert partnership name]	open---ended	CPART3J	
Concept	Item	Survey Question	Response	Var label	Reference
66		<p>There are other Principal Investigators or key personnel who also could not provide contact information for their academic research partners. We would like to know more: can you tell us why you are unable to provide this information?</p> <p><i>Show if: ((APARA was---not---answered) and (APARB was---not---answered) and (APARC was---not---answered) and (APARD was---not---answered) and (APARE was---not---answered) and (APARF was---not---answered) and (APARG was---not---answered) and (APARH was---not---answered) and (APARI was---not---answered) and (APARJ was---not answered)) and (((CPAR1A was---answered) or (CPAR1B was---answered) or (CPAR1C was---answered) or (CPAR1D was---answered) or (CPAR1E was---answered) or (CPAR1F was---answered) or (CPAR1G was---answered) or (CPAR1H was---answered) or (CPAR1I was---answered) or (CPAR1J was---answered)) and ((CPAR2A was---answered) or (CPAR2B was answered) or (CPAR2C was---answered) or (CPAR2D was---answered) or (CPAR2E was---answered) or (CPAR2F was---answered) or (CPAR2G was---answered) or (CPAR2H was---answered) or (CPAR2I was---answered) or (CPAR2J was---answered))) or ((CPAR1A was---answered) or (CPAR1B was---answered) or (CPAR1C was answered) or (CPAR1D was---answered) or (CPAR1E was---answered) or (CPAR1F was---answered) or (CPAR1G was---answered) or (CPAR1H was---answered) or (CPAR1I was---answered) or (CPAR1J was---answered)) or ((CPAR2A was---answered) or (CPAR2B was---answered) or (CPAR2C was---answered) or (CPAR2D was---answered) or (CPAR2E was answered) or (CPAR2F was---answered) or (CPAR2G was---answered) or (CPAR2H was---answered) or (CPAR2I was---answered) or (CPAR2J was---answered)))</i></p>	<p>open---ended (See show if condition in the left column.)</p>	<p>NO_PARTNERA (Same sequence for: NO_PARTNERB, NO_PARTNERC, the var name paths just need to be adjusted accordingly.)</p>	
67		<p>As we mentioned earlier, this is a two---part survey. You have the option of continuing on with the second part of the survey now (survey part 2 will take 30 minutes to complete), or of being reminded to complete the second part in a few days. You will receive an additional \$20 for completing the second part of the survey.</p>	<p>1. Continue with part two now 2. Receive a reminder in a few days about completing part two</p>	PARTTWO	
		<p>Thank you for participating in the Research for Improved Health: A National Study of Community---Academic Partnerships survey.</p>			

RIH Community Engagement Survey Instrument

Concept	Item	Survey Question	Response	Variable Label	Reference
		Welcome to the survey of [insert study name]....			
I		This study has been explained to me. I have had a chance to ask questions. I volunteer to take part in this research. If I have questions later about the research, I can ask one of the researchers listed above. If I have questions about my rights as a research subject, I can call the University of Washington Human Subjects Division at (206) 543---0098. I will receive a copy of this informational statement.	1. I accept . I want to participate. 0. I do not accept . (If you wish to return and participate later, simply close this window)	ACCEPT	
II		You have indicated that you DO NOT want to participate in the Research for Improved Health: A National Study of Community---Academic Partnerships survey. If this is correct, please select the button below, and select NEXT. If you would like to participate , return to the previous page by selecting PREVIOUS on the bottom of this screen. If you would like to think about it some more, please just close your browser. You can then decide later if you would like to participate, and use the same URL and PIN to log in.	1. I DO NOT want to participate. (By clicking here you will be permanently removed from the participant list) <i>Show if: (ACCEPT=0:[I do not accept. (If you wish to return and participate later, simply close this window.)])</i>	DECLINE	
<p>Note: This select series of questions shaded in peach are asked of participants who completed KI survey but did not provide academic or community partner information in the KI survey, and have agreed to be invited to take the CE survey. These questions are not included in the CE survey for the community and academic partners.</p>					
III		Thank you for completing the Community---Engaged survey (Part 2) for the Research for Improved Health study. Some Principal Investigators or key personnel did not provide contact information for their community or academic partners in the Key Informant survey (Part 1). Because this study is about partnerships, we would like to invite your research partners to participate in a brief 30 minute survey. Can you take a few minutes to provide their contact information?	0. No, I cannot provide further contact information for my community and/or academic partners. 1. Yes, I can provide further contact information for my community and/or academic partners	NO_PARTNER1	
IV	1t	There are other Principal Investigators or key personnel who also could not provide contact information for their academic research partners . We would like to know more: can you tell us why you are unable to provide this information?	open---ended	NO_PARTNERA	
	2t	There are other Principal Investigators or key personnel who also could not provide contact information for their community research partners . We would like to know more: can you tell us why you are unable to provide this information?	open---ended	NO_PARTNERC	
	3t	There are other Principal Investigators or key personnel who also could not provide contact information for their community and/or academic research partners . We would like to know more: can you tell us why you are unable to provide this information?	open---ended	NO_PARTNER2	
	4t	There are other Principal Investigators or key personnel who also could not provide contact information for their community and/or academic research partners . We would like to know more: can you tell us why you are unable to provide this information?	open---ended	NO_PARTNER3	
V	1	Unique customid of academic partner	research staff---constructed	APARID	
	2	Unique customid of community partner 1	research staff---constructed	CPAR1ID	
	3	Unique customid of community partner 1	research staff---constructed	CPAR2ID	
	4	Unique customid of community partner 1	research staff---constructed	CPAR3ID	

Concept	Item	Survey Question	Response	Variable Label	Reference
SECTION A: CONTEXT					
		STEM: In this section we have a few questions about community and academic capacity . By capacity, we mean the talent, abilities, and resources needed to work in partnership.		CONTEXT	
1		Based on your experiences in the [insert project name], please tell us how confident you are that your project will achieve its primary aims .	1. Not confident 2. A little confident 3. Somewhat confident 4. Fairly confident 5. Extremely confident	CONXT1	
2		Including [insert project name], on how many community--engaged research projects have you served as a community or academic partner?	Project(s)	CONXT2	
Community capacity					
3		We are interested in community and academic capacity for effective partnership. To what extent does/did this partnered project have what it needs to work effectively towards its aims ?		CAPCTY1	Rand, Khodyakov
	1	Skills and expertise	1. Not at all	CAPCTY1A	
	2	Data and information	2. Very little	CAPCTY1B	
	3	Diverse membership	3. Somewhat	CAPCTY1C	
	4	Legitimacy and credibility	4. Mostly	CAPCTY1D	
	5	Ability to bring people together for meetings and activities	5. To a great extent	CAPCTY1E	
	6	Connections to political decision---makers, government agencies, other organizations/groups	<i>Show if: (CAPACTY1H=5:[To a great extent]) or (CAPACTY1H=4:[Mostly]) or (CAPACTY1H=3:[Somewhat])</i>	CAPCTY1F	
	7	Connections to relevant stakeholders.		CAPCTY1G	
	8	Other		CAPCTY1H	
	9t	On the previous page, you indicated the partnered project needs some 'other' element to work effectively towards its aims. Please explain what you meant by 'other.'	open---ended	CAPCTY1_OT	
SECTION B: GROUP DYNAMICS					
Bridging					
4		To what extent, would you say, do members of the community and the academic research teams in your [insert partnership name] partnership interact effectively? By community partners we mean agencies, organizations, tribal communities, health departments, individuals, or other entities representing communities. By academic partners we mean university or research institutions.		BRIDGING	
	1	Does the community research team have the knowledge, skills, and confidence to interact effectively with the academic researcher team?	1. Not at all 2. Very little	BRIDG1A	
	2	Does the academic research team have members who are from a similar cultural background as the community research team?	3. Somewhat 4. Mostly	BRIDG1B	
	3	Overall, does the academic research team have the knowledge, skills, and confidence to interact effectively with the community research team?	5. To a great extent	BRIDG1C	
Alignment with principles					
5		Below is a list of principles for community---engaged research . Please indicate the extent to which your partnership uses the following principles.		ALIGNMENT_WIT H_PRINCIPLES	
	1	This project builds on resources and strengths in the community	1. Not at all	PRINCP2A	2002 Israel et al, Principles of CBPR
	2	This project facilitates equitable partnerships in all phases of the research	2. Very little	PRINCP2B	
	3	This project helps all partners involved to grow and learn from one another	3. Somewhat	PRINCP2C	
	4	This project balances research and social action for the mutual benefit of all partners	4. Usually	PRINCP2D	
	5	This project emphasizes what is important to the community (environmental and social factors) that affect well---being	5. To a great extent	PRINCP2E	
	6	This project disseminates knowledge and findings to all partners and involves all partners in the dissemination process		PRINCP2F	
	7	This project views community---engaged research as a long term process and a long term commitment		PRINCP2G	

	8	This project fits local/cultural beliefs, norms, and practices		PRINCP2H	Dutta, culture---centered
Concept	Item	Survey Question	Response	Variable Label	Reference
Core values					
6		Thinking about the shared understanding of the missions and the strategies of [insert partnership name], to what extent do you agree or disagree with the following statements?		CORE_VALUES	
	1	Members of our partnership have a clear and shared understanding of the problems we are trying to address	1. Strongly Disagree 2. Disagree	VALUE1A	Allies Against Asthma
	2	There is a general agreement with respect to the mission of the partnership	3. Neither agree nor disagree 4. Agree	VALUE1B	
	3	There is general agreement with respect to the priorities of the partnership	5. Strongly Agree	VALUE1C	
	4	Members agree on the strategies the partnership should use in pursuing its priorities		VALUE1D	
Task roles and communication					
7		Please think about the community partners' involvement in research and indicate the community partners' level of involvement at each of the following stages of the research process.		TASK_ROLES_AND_COMMUNICATION	
	1	Developing community---based theories of the problem or intervention	1. Community partners DID NOT/DO NOT participate in this activity 2. Community partners were/are CONSULTED on this activity 3. Community partners were/are ACTIVELY ENGAGED in this activity 4. Not at this stage of research 5. Does not apply	TASK1A	Rand, Khodyakov
	2	Grant proposal writing		TASK1B	
	3	Background research		TASK1C	
	4	Choosing research methods		TASK1D	
	5	Developing sampling procedures		TASK1E	
	6	Recruiting study participants		TASK1F	
	7	Implementing the intervention		TASK1G	
8		Please think about the community partners' involvement in research and in the community partners' level of involvement at each of the following of the research process.		TASK_ROLES_AND_COMMUNICATION_2	Rand, Khodyakov
	1	Designing interview and/or survey questions	1. Community partners DID NOT/DO NOT participate in this activity 2. Community partners were/are CONSULTED on this activity 3. Community partners were/are ACTIVELY ENGAGED in this activity 4. Not at this stage of research 5. Does not apply	TASK1H	
	2	Collecting primary data		TASK1I	
	3	Analyzing collected data		TASK1J	
	4	Interpreting study findings		TASK1K	
	5	Writing reports and journal articles		TASK1L	
	6	Giving presentations at meetings and conferences		TASK1M	
9	1	Who initiated the study?	1. The community partners(s) 2. The academic partner(s) 3. Both 4. Other	TASK2	
	2t	On the last page, you indicated that an 'other' entity initiated the study. Please describe this entity.	Open---ended	TASK2_OTH	
Influence & power dynamics					
		STEM: Thinking about the current partnership, [insert name of research project], please indicate your views on influence and power dynamics in the partnership.		INFLUENCE_AND_POWER_DYNAMICS	
10		All partners had equal voice in deciding which funding opportunities were sought for this project.	1. Strongly disagree 2. Disagree	INFLU1	
	1	I have influence over decisions that this partnership makes	3. Neither agree nor disagree	INFLU2	Israel, 1994

	2	Overall, I am satisfied with the amount of influence that each partner has over decisions that this partnership makes	4. Agree 5. Strongly agree	INFLU3	Israel, 1994
Concept	Item	Survey Question	Response	Variable Label	Reference
11		Thinking about the way decisions in this partnered project were made . How often did you...		PARTICIPATORY_DECISION_MAKING	Rand, Khodyakov a = .681 a = .790
	1	Feel comfortable with the way decisions are made in the project	1. Never	DECIS1A	
	2	Support the decisions made by the project team members	2. Rarely	DECIS1B	
	3	Feel that your opinion is taken into consideration by other project team members	3. Sometimes	DECIS1C	
	4	Feel that you have been left out of the decision making process	4. Often	DECIS1D	
	5	Feel pressured to go along with decisions of the project team even though you might not agree	5. Always	DECIS1E	
12		Whether or not I agree, overall I feel committed to the decisions that are made by the partnership.	1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Strongly agree	DECIS2	Becker, et al, 2003
Dialogue, listening, and mutual learning					
		Thinking about your experiences in the most recent meetings with your community/academic partner in [insert name of organization], please indicate your perception of the quality of dialogue or conversation .		DIALOG_LISTENING_MUTUAL_LEARNING	
13	1	We showed positive attitudes towards one another	1. Strongly disagree 2. Disagree 3. Neither agree nor disagree 4. Agree 5. Strongly agree	PARTIC1	Oetzel, 2001
	2	Everyone in our partnership participated in our meetings		PARTIC2	
	3	We listened to each other		PARTIC3	
14	1	Arguments that occurred during our meetings were constructive		COOP1	
	2	When disagreements occurred, we worked together to resolve them		COOP2	
	3	Even though we didn't have total agreement, we did reach a kind of consensus that we all accept		COOP3	
15	1	There were disrespectful remarks made during the conversation		RESPEC1	
	2	There was hidden or open conflict and hostility among the members		RESPEC2	
	3	The way the other members said some of their remarks was inappropriate		RESPEC3	
Leadership/stewardship					
16		Please think about all of the people who provided either formal or informal leadership in this partnered project and rate the overall effectiveness of your project's leadership in each of the following areas...		LEADERSHIP	
	1	Taking responsibility for moving the project forward	1. Very ineffective 2. Ineffective 3. Somewhat effective 4. Effective 5. Very effective	LEADR1A	
	2	Inspiring or motivating people involved in the project		LEADR1B	
	3	Encouraging active participation of academic and community partners in the decision-making		LEADR1C	
	4	Communicating the goals of the project		LEADR1D	
	5	Working to develop a common language		LEADR1E	
	6	Fostering respect between partners		LEADR1F	
	7	Developing trust between partners		LEADR1G	
	8	Creating an environment where differences of opinion can be voiced		LEADR1H	
	9	Resolving conflict among partners		LEADR1I	
	10	Helping the partners be creative and look at things differently		LEADR1J	
	11	Recruiting diverse people and organizations into the project		LEADR1K	
12	Providing orientation to new partners as they join the project	LEADR1L			
17		Please choose the statement that best describes how well your project used...		STEWARDSHIP	Rand, Khodyakov
	1	The team's financial resources	1. Makes poor use 2. Makes fair use	LEADR2A	
	2	The team's in-kind resources		LEADR2B	

	3	The team's time	3. Makes average use 4. Makes good use 5. Makes excellent use	LEADR2C
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Concept	Item	Survey Question	Response	Variable Label	Reference
SECTION C: INTERVENTION/RESEARCH, PROXIMAL OUTCOMES					
Partnership Synergy					
18		Please think about the people and organizations that are/were partners in [insert name of project] and answer the following questions. By working together, how well are/were you and your partners able to...		PARTNERSHIP_SYNERGY	
	1	Develop goals that are widely understood and supported in this partnership	1. Not at all	SYNGY1A	Cronbach
	2	Develop strategies that are most likely to work for your community or stakeholders as a whole	2. A little 3. Sometimes	SYNGY1B	
	3	Recognize challenges and come up with good solutions	4. Mostly	SYNGY1C	
	4	Respond to the needs and problems of your stakeholders or community as a whole	5. To a great extent	SYNGY1D	
	5	Work together as a team		SYNGY1E	
SECTION D: OUTCOMES					
		STEM: In this section, we are interested to learn how participating in [insert name of research project] has influenced broader contexts and the capacity of all research partners.			
Systems and capacity changes					
19		Please indicate to what extent you think your project:		SYSTEMS_AND_CAPACITY_CHANGES	
	1	Improved the access, delivery, and quality of health services (broadly defined) in the community	1. Not at all 2. To a small extent	OUTCM1A	Rand, Khodyakov
	2	Resulted in sustained partnerships among agencies	3. To a moderate extent 4. To a great extent	OUTCM1B	
	3	Resulted in policy changes	5. To a very great extent 6. Not applicable	OUTCM1C	
	4	Improved the overall health status of individuals in the community		OUTCM1D	
	5	Received public recognition or acknowledgment from local policy makers and/or government officials		OUTCM1E	
	6	Resulted in acquisition of additional financial support		OUTCM1F	
	7	Improved the overall environment in the community		OUTCM1G	
	8	Please list/explain any other important outcomes of [insert name of research project].	open --- ended (250 characters)	OUTCM1H	
20		Please indicate the extent to which you think you enjoyed/are likely to enjoy the following benefits as a result of participating in this partnered project.		OUTCOME_BENEFITS_PERSONAL	Rand, Khodyakov
	1	Enhanced my own reputation	1. Not at all 2. To a small extent	OUTCM2A	
	2	Enhanced my ability to affect public policy	3. To a moderate extent 4. To a great extent	OUTCM2B	
	3	Increased utilization of my expertise or services	5. To a very great extent	OUTCM2C	
	4	Increased my ability to acquire additional financial support		OUTCM2D	
21		Please indicate the extent to which you think the community partners/agencies enjoyed/are likely to enjoy the following benefits as a result of participating in this partnered project.		OUTCOME_BENEFITS_AGENCY	
	1	Enhanced the agencies' reputation	1. Not at all 2. To a small extent	OUTCM3A	
	2	Enhanced the agencies' ability to affect public policy	3. To a moderate extent 4. To a great extent	OUTCM3B	
	3	Increased utilization of agencies' expertise or services	5. To a very great extent	OUTCM3C	
	4	Increased agencies' ability to acquire additional financial support		OUTCM3D	
Changes in power relations					
		STEM: In this section, we are interested to learn how participating in [insert name of research project] has influenced relations, sustainability, and health outcomes.			
22		Thinking about power relations between the community and academic team members of [insert name of research project], please indicate the extent to which you agree or disagree with each statement below.		POWER_RELATIONS_SUSTAIN	
	1	Community team members have increased participation in the research process	1. Strongly disagree 2. Disagree	POWR1A	
	2	Community team members can talk about the project in other settings such as a community or political meeting	3. Neither agree nor disagree	POWR1B	

	3	Community team members can apply the findings of the research	4. Agree	POWR1C	
	4	Community team members can voice their opinions about research in front of	5. Strongly agree	POWR1D	
	5	Community team members have sought continuing formal or informal education		POWR1E	
Concept	Item	Survey Question	Response	Variable Label	Reference
Sustainability					
23		Thinking about the sustainability of [insert name of research project], please indicate the extent to which you agree or disagree with the following statements.		SUSTAINABILITY	
	1	I am committed to sustaining the community---academic relationship with no or low funding	1. Strongly disagree 2. Disagree	SUSTN1	
	2	This project is likely to continue forward after this funding is over	3. Neither agree nor disagree 4. Agree	SUSTN2	
	3	Our partnership carefully evaluates funding opportunities to make sure they meet both community and academic partners' needs	5. Strongly agree	SUSTN3	SH create
Health outcomes					
24		In your opinion, how much did or will your research project [insert name of research project] improve the health of the community?	1. Not at all 2. A little 3. Somewhat 4. Quite a bit 5. A lot	HEALTH	
Trust					
		STEM: Finally, the last section in this survey is about trust in the research partnership. We are interested to learn your views on how the type and level of trust has evolved during the course of the project. For these questions, we are asking about the 7 types of trust defined below.		TRUST	Lucero ---new measure
		1. Critical Reflective Trust: Trust, in this partnership, is at the place where mistakes and other issues resulting from differences (in culture; power) can be talked about and resolved in a good way. 2. Proxy Trust: Members of this partnership are trusted, because someone who we trust invited them, therefore we trust them. 3. Functional Trust: Members of this partnership are working together for a specific purpose and timeframe, but mistrust may still be present 4. Neutral Trust: We are still getting to know each other; there is neither trust nor mistrust. 5. Unearned Trust: Trust, is based on member's title or role with limited or no direct interaction prior to this project. Examples of title or roles may include: a community outsider, a physician, or community organizers. 6. Proxy Mistrust: Members of this partnership are not trusted because someone who we do not trust invited them, therefore we mistrust them. 7. No Trust Members of this partnership do not trust each other. It is likely that trust will			
25		Using the definitions of trust provided above , please indicate your views on trust in the [insert project name] for each question below.		TRUST1	Lucero ---new measure
	1	At the beginning of your partnership, what type of trust did you have?	1.No trust 2.Proxy Mistrust	TRUST1A	
	2	What type of trust do you think you have now?	3.Unearned Trust	TRUST1B	Lucero ---new measure
	3	What type of trust do you think you will achieve in the future?	4.Neutral Trust 5.Functional Trust 6.Proxy Trust 7. Critical Reflective	TRUST1C	Luxuary items
26		Thinking about the level of trust between team members , please indicate the extent to which you agree with the following statements		TRUST_CONT	
	1	I trust the decisions others to make about issues that are important to our projects	1. Strongly disagree	TRUST2	Figuroa et. al, 2002
	2	I am comfortable asking other people to take responsibility for project tasks even when I am not present to oversee what they do	2. Disagree 3. Neither agree nor disagree	TRUST3	
	3	I can rely on the people that I work with on this project	4. Agree	TRUST4	
	4	People in this group/community have confidence in one another	5. Strongly agree	TRUST5	

Concept	Item	Survey Question	Response	Variable Label	Reference
27		What is your role in the project? <i>Please choose one response for each line.</i>		ROLE1	NW, new item
	1	Member of Community team	1. Principal Investigator 2. Key personnel 3. Staff 4. Other 5. Not a member of this team	ROLE1A	
	2	Member of Academic Team		ROLE1B	
	3t	You marked 'other' as your project role. What is your role in the project?	Open---ended Show if: (ROLE1A=4:[Other]) or (ROLE1B=4:[Other])	ROLE1_OT	
28		Please describe your role in the project	open---ended	ROLE2	NW, new item
SECTION E: DEMOGRAPHICS					
29	1	How would you describe your gender?	1. Female 2. Male 3. Transgender 4. Other (<i>if other gender, please specify</i>)	GENDER	
	2t	<i>(If other gender, please specify)</i>	open---ended	GENDER.TEXT	
30	1	What is your racial/ethnic origin?	1. American Indian 2. Alaska Native 3. Hispanic 4. Asian 5. Pacific Islander 6. White 7. Black 8. Mixed Race 9. Some other race (<i>if other race, please print the name of the race</i>)	CERACE	
	2t	<i>(if other race, please print the name of the race)</i>	open---ended	CERACE.TEXT	
Feedback				FEEDBCK	
		Finally, we would like your general comments on [insert project name].			
31		Can you tell us anything else about the positive or negative outcomes of [insert project name] not captured in this survey?	open ---ended (250 characters)	FEEDBCK	

Qualitative Stakeholder Interview Guide

Research for Improved Health: A Study of Community-Academic Partnerships Interview Guide: Version (July 2011)

Authored by: CBPR Research for Improved Health Study Team.

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I. Introduction

Thank you so much for participating in this interview. The purpose of this study is to take an in-depth look at participatory research **projects** and **partnerships** from diverse communities around the country. We are not here to “evaluate” this partnership but rather to learn from your experience. We hope to better understand what makes for “successful” projects that involve partnering between communities and universities to reduce health disparities.

We’re interested in your experience with this participatory research project and partnership. We’d like to hear from you in your own words about the challenges and successes in this process and about any outcomes that you feel may have come from this partnership.

You were chosen as a participant in this study because you are a partner in the _____ project (or partnership). We appreciate you taking the time to speak with us, as your experience will help us to better how these kinds of partnerships work together to address challenges and make things better in our communities. We expect this interview to take up to about 60-90 minutes of your time.

II. Individual and Project Background *(keep this section brief)*

1. I’d like to begin by asking you how you came to be involved in this partnership. How and why did you start?
2. *(If appropriate):* Can you help me understand how the community and university came together on this partnership? *(Probe: Who initiated the partnership? Did it come from academic, community or both?)*
3. Can you describe your role and the work you are doing in the partnership? *(Probe: Are you representing an institution/agency or are you participating as yourself? If yes, what does it mean for you to represent an organization or group?)*

**Optional – ONLY If Personal Motivation was not answered in Question 1 or 3.*

4. Could you describe your involvement a little more personally -- what passions, concerns, or values specifically motivated you to work with the partnership?

III. Context for All Communities

It's our understanding that the _____ community(ies) is (are) involved in this partnership:

5. What do you think we need to know about the community(s) [or tribe] that would help us understand your partnership? (*Probe: History or current organizing or capacity building around health issues? Other issues? Strategies for addressing socio-economic conditions? (For tribes: history of self-determination in health or education? Language/cultural programs?)*)
6. To your knowledge, has the University partnered with the community on different research projects before your project? If yes, what was that experience like? (*Probe: How do researchers new to the community learn about the community's history and culture? Does the tribe/community have an orientation process? Do researchers independently learn about the community, and if so, how?*)

We'd like to ask you to talk a little about the community process for working with the university including getting research approvals and agreements to work with your community (if you were involved in this)

7. If you were involved, can you describe the approval or agreement processes for the university to work with the community or tribe? (*Probe: Were there specific concerns or conditions, i.e. requiring community benefits, data agreements, joint publication, accountability, etc.*)
 - a. For tribes, can you describe who was involved and what levels were involved in the tribal approval process?
8. Do you have a Community or Tribal Advisory Board or Boards? Can you describe them?
9. When thinking about the Community or Tribal Advisory Board(s) (or council, committee etc) what role do they take with the research? What decisions do they make? (*Probe: What power (or authority) do they have with this project?*)
10. For tribes, what decisions do the tribal leadership take with the research? What is the relationship between the tribal advisory board or governing body make?

IV. Intervention Research Questions *For Intervention Projects Only*

Since your research project is focusing on an intervention, we'd like to ask you more here about the process of developing and implementing your program or intervention _____ (*name the intervention or program*).

First, we want to ask you how the intervention has been developed:

11. In what ways have knowledge and experience from the community (or cultural beliefs, values and practices) influenced your project?
12. In what ways has knowledge from professional articles or "evidence" and "best practices" from around the country influenced your project/intervention?
13. Have local programs or agencies contributed to the development and implementation of the project? If yes, how? (*Probe: Were resources provided to support the intervention? Was local staff given time off and allowed to participate? Was local staff expertise incorporated in to the intervention?*)

14. What outcomes or benefits have you seen or expect to see as a result of the intervention?
15. Do you think the community perceives these benefits or intended benefits of the project?
16. (If you are a Community partner): Do you think this project/partnership has contributed or has the potential to contribute to any policy or practices changes at the community level?
17. (If you are a University partner): Do you think this project/partnership has changed the way the University does business, i.e., any of its policies or practices in doing research with communities?
18. What are your plans for sharing project findings in the community? (*Probe: For example, will there be newspaper articles, pamphlets, videos, websites, toolkits? Will there be presentations at community events, dinners, staff meetings, etc.?*)
19. Could you please describe how the community (or tribe) will be identified in published project reports? And who decided how the community or tribe would be identified? (*Probe: Did the Community or Tribal Advisory Committee place any restrictions on how the tribe could be identified in published reports? And if so, what kinds of restrictions were placed?*)

V. Policy Research Questions *For Policy Projects Only*

Since your partnership is focusing on policy (and legal) changes and using “research data to influence this change,” we now want to talk more about the policy change strategies and actions you’ve used.

20. Was the policy change you are seeking an initial goal or did it become relevant during the course of the project? If so, why or what happened to make it a pressing issue?
21. We’d like to ask you about the steps your partnership might have taken to bring about policy change. How would you describe your involvement in making your policy issue important or in setting a policy agenda with policymakers?
22. Could you describe how you think data or evidence was used in working towards policy change? (When and how was data used? What was the role of the different partners in gathering or presenting the data or evidence? Was data presented in a way that was understood by community members?)
23. Could you describe the role of advocacy and people telling their stories or providing personal testimony to create policy change?
24. (*If appropriate*): If the partnership has not yet been successful at promoting the policy/legal change you want, do you think the partnership’s work improved the policy environment for this issue? If so, how? If not, is there a plan to re-initiate work towards this change again in the future? (*Probes: new mechanisms to support political partnerships, new structures for community voices at the table, policy-makers more inclined to consider impact of decisions on communities in future*)

VI. Partnership/Group Dynamics

We’re interested in understanding more about how you believe your partnership works together as a group:

25. Can you describe what is working **well** in your partnership and give some examples? (*Probe: Can you describe what happens in meetings when the partners come together?*)

Where do you meet? Who leads the meetings? If translation is needed, is it provided? Who does the translation? Who prepares the handouts? Is there collaborative decision-making?

26. Can you describe some of the challenges in your partnership, i.e., what might not be working so well and give some examples of what could be improved? (*Probe: Are there things hard to discuss as a group? What happens if an individual disagrees with the community's decision about aspects of a research project?*)

Now we want to ask you specifically about power relations. While one goal in a CBPR partnership is to make sure everyone can contribute equally, the reality is that this is difficult or sometimes impossible.

27. Can you share some thoughts on how power between the university and community might work in this partnership, i.e., can you provide an example of a conflict or power issue that you've had? (*Probe: Has anything ever put this partnership in jeopardy? What happened?*)

We are interested in learning more about how trust works between researchers and community members. We'd like for you to think about where your partnership started in terms of levels of trust between partners, and where you think your partnership is now.

28. Prior to this project, what was your experience with health intervention research? How did **you** feel about research before you were involved and how has your involvement affected your viewpoint?
29. In your own words, how do you define trust for this kind of partnership? Have there been any trust issues that have affected your partnership, i.e., examples of disagreements between university and community team members that might have affected trust among members?
30. In general, how would you describe the level of trust at the beginning of your partnership and how has it changed over time? What do you think made it change?

VII. Individual Level Issues

Now we'd like to ask a few questions about individuals in the partnership to help understand what kinds of qualities you think are important.

31. Thinking about your experience in this group, what sorts of personal qualities should someone have to be involved?
32. How about for the project leaders? academic PI? community PI or community coordinator?

We would also like to hear your views about some of the cultural issues that may come up in this kind of partnership.

33. We've observed that some of your university research team members share a similar racial, ethnic or cultural background to your community members. Do you think this makes a difference in terms of the partnership or in terms of the research? If so, how?
34. What about when people share the same gender? Does this make a difference in terms of the partnership and of the research?

VIII. Partnership Outcomes

We now want to dig a little deeper into partnership outcomes that you are hoping to achieve through your work together. In thinking about the whole or big picture your partnership is dealing with:

35. What would you say have been successes for your partnership? (*Probe: Community ownership of the program? Sustainability? Community Capacities? Greater trust between partners, new skills for intervention work, new abilities to start other programs or obtain more grants, resources or take on other issues?*)
36. In what ways do you feel individual community members have benefitted from serving as part of the project team?

IX. Research Design

37. How would you describe your research approach? How do you think using a CBPR approach in your partnership has influenced this project in how it is working, or has worked, towards achieving its goal of addressing community issues?

X. Summary

We're coming to the end now and just wanted to ask you for some concluding remarks.

38. If another group were going to start this kind of partnership, what kinds of things would you tell them in order to help them be successful?
39. Is there anything else you'd like to add?

We would like to express our sincerest gratitude for sharing your thoughts and experiences with us here today. Your time and devotion is truly appreciated. Many Thanks!!

For more information on Qualitative Case Study Design, contact: Julie Lucero, jelucero@salud.unm.edu; or Nina Wallerstein, PI, nwallerstein@salud.unm.edu, University of New Mexico

DISSERTATION STUDY QUALITATIVE CODEBOOK
Created by Paul Chandanabhumma (Version 6)

Purpose: This document shows a list of codes that have been developed from analysis of 55 RIH stakeholder interviews across seven case study partnerships.

Key Research Questions:

- Question 1.1: What aspects of group diversity are perceived to be relevant to partnership functioning? (Domains 1)
- Question 1.2: In what ways do these aspects of group diversity benefit or impede partnership functioning? (Domains 2-4)
- Question 2: What are the partnership strategies, underlying ideological positions, and surrounding institutional structures that address group diversity within partnerships? (Domains 5-6)

Coding Notation:

- Codes are presented in format “#. # A: B” where # is code number (levels separated by .), A is abbreviated code name, B is full codename
- Domains and codes with prefix \ are organizational categories (i.e. used for organization only; application to transcripts is not expected). Larger domains (level 1-2) are capitalized.
- Codes with prefix # are descriptive codes (e.g. demographic information of interviewees)

1. \TRAIT: Traits of diversity of functional relevance or importance to partnerships
 - 1.1 \Commtrait: Traits within-community partners or members
 - 1.1.1 Comm_faithdiff: religious affiliation or sectoral differences
 - 1.1.2 Comm_engagediff: differences in organizational engagement approach
 - 1.1.3 Comm_profdiff: professional differences
 - 1.1.4 Comm_langdiff: linguistic differences
 - 1.1.4.1 Comm_langnatdiff: differences in language nativity
 - 1.1.5 Comm_agediff: age-based differences
 - 1.1.6 Comm_SESdiff: socioeconomic differences
 - 1.1.7 Comm_orgdiff: community organization differences
 - 1.1.8 Comm_intsectdiff: intersectional differences
 - 1.1.9 Comm_incardiff: incarceration differences
 - 1.1.10 Comm_tribediff: tribal differences
 - 1.1.11 Comm_ethndiff: ethnic differences
 - 1.1.12 Comm_racediff: Community racial differences
 - 1.1.13 Comm_genderdiff: Gender differences within communities
 - 1.1.14 Comm_educdiff: Education differences within communities
 - 1.1.15 Comm_skilldiff: Skill differences within communities
 - 1.1.16 Comm_regdiff: Community regional differences
 - 1.2 \Restrait: Traits within-research partners
 - 1.2.1 Res_viewdiff: differences in research approach
 - 1.2.2 Res_profdiff: professional differences
 - 1.3 \Partrait: Traits within overall partnership

- 1.3.1 Part_profdiff: professional differences
 - 1.3.1.1 Part_skilldiff: skillset differences
- 1.3.2 Part_engagediff: differences in community engagement or activism
- 1.3.3 Part_racediff: racial differences
- 1.3.4 Part_orgdiff: organizational differences
- 1.3.5 Part_persdiff: personality differences
 - 1.3.5.1 Part_leaddiff: differences in leadership approaches
- 1.3.6 Part_langdiff: linguistic differences
- 1.3.7 Part_educdiff: educational differences
- 1.3.8 Part_heardiff: hearing differences
- 1.3.9 Part_genderdiff: gender differences
- 1.3.10 Part_tribediff: tribal differences
- 1.3.11 Part_faithdiff: faith differences
- 1.3.12 Part_ethndiff: ethnic differences
- 1.3.13 Part_agediff: partnership age differences
- 1.4.14 Part_maturediff: Partnership maturation differences
- 1.34.15 Part_regdiff: Partnership regional differences
- 2. \BENEFIT: Perceived benefit of diversity to partnership functioning or experience
 - 2.1 Relate: relate across partnership differences
 - 2.2 Outside: outsider stance on partnership
 - 2.2.1 Outside_eval: offer evaluation on partnership dynamics
 - 2.3 Barrier_less: less institutional barrier in partnership
 - 2.4 Helpexp: draw on unique expertise
 - 2.4.1 Helpexp_impl: facilitate research implementation
 - 2.5 Cohes: promote group cohesion
 - 2.6 Newpartview: added partnership perspectives
 - 2.7 Excite_res: excitement from research
- 3. \BENEFIT*: Perceived benefit of cultural similarity on partnership functioning or experience
 - 3.1 Contxtins: gain insider contexts of partners
 - 3.1.1 Contxtins_embed: embeddedness in partnership comm.
- 4. \BARRIER: Perceived barrier or impediments of diversity on partnership functioning or experience
 - 4.1 Varpar: variable participation by partners
 - 4.1.2 Varpar_resacct: account for variable participation in research
 - 4.1.3 Varpar_input: variable input solicitation from partners
 - 4.2 Outcomlack: tension from lack of outcome
 - 4.3 Dynamiclack: lack access to intra-group dynamics within partners
 - 4.4 Roleamb: ambiguity in partnership role
 - 4.4.1 Roleamb_commrep: ambiguity in representing community
 - 4.4.2 Roleamb_lackleader: role ambiguity due to inadequate leadership
 - 4.5 Lagtime: lag time in partnership process
 - 4.6 Intdiv: internal tension within partnership
 - 4.6.1 Intdiv_person: internal tension due to personality differences
 - 4.6.2 Intdiv_turnover: internal tension influencing turnover
 - 4.7 Balint: balancing partnership interests

- 4.7.1 Balint_confint: Conflict of interest
- 4.8 Discompart: discomfort in partnership activities
- 4.9 Commbar: communication barrier
 - 4.9.2 Commbar_lang: language communication barrier
- 4.10 Socdist: social distance among partners
 - 4.10.1 Socdist_scitrust: distrust in scientific research
 - 4.10.2 Socdist_commwatch: community watchfulness
 - 4.10.3 Socdist_racebias: racial bias in partnership
 - 4.10.4 Socdist_gendbias: gender bias in partnership
 - 4.10.5 Socdist_langbias: language bias in partnership
 - 4.10.6 Socdist_tribebias: Tribal bias in partnership
- 4.11 Contxtlack: lack awareness of community context
 - 4.11.1 Contxtlack_gov: lack of understanding of community governance
- 4.12 Improcultapprop: improper cultural appropriation
- 5. \PRACTICE: Practices and strategies that address partnership diversity (within-group differences). This includes individual, subgroup, or partnership-level elements.
 - 5.1 \Indiv: individual qualities of relational importance
 - 5.1.1 Indspirit: individual spirituality
 - 5.1.2 Indcred: individual credibility within partnership community
 - 5.1.3 Indopen: individual openness
 - 5.1.4 Indassert: individual assertiveness
 - 5.1.5 Indlead: individual leadership
 - 5.1.6 Indhumor: having individual humor
 - 5.1.7 Indculthumil: Cultural humility
 - 5.1.8 Indmentor: Individual mentorship
 - 5.1.9 Indcommitheart: showing that partners are in your mind
 - 5.2 \Group: interpersonal practices or dynamics
 - 5.2.1 Validview: validate partner's perspectives
 - 5.2.1.1 Validview_cultshift: shift cultural perspective
 - 5.2.2 Cultbridg: have cultural bridge
 - 5.2.2.1 Cultbridg_trust: cultural bridge building partnership trust
 - 5.2.2.2 Cultbridg_coord: centralized bridging coordinator
 - 5.2.2.3 Cultbridg_alignexp: align partner with comm. exp.
 - 5.2.2.4 Cultrbridg_aligndem: align partner with demographic
 - 5.2.3 Commit: show commit to partnership
 - 5.2.3.1 Commit_involve: involve in activities of partnership communities
 - 5.2.4 Opencollab: openness to collaboration among partners
 - 5.2.5 Conn: build connections across partnership differences
 - 5.2.5.1 Conn_vision: build common vision among partners
 - 5.2.5.2 Conn_diverse: frame as diverse movement
 - 5.2.5.3 Conn_indbond: creating personal bond
 - 5.2.6 Esteem: build partner esteem
 - 5.2.6.1 Esteem_env: foster environment for partners to speak up
 - 5.2.6.2 Esteem_respect: respect partner's contributions

- 5.2.6.3 Esteem_educ: partnership education to improve engagement
- 5.2.7 \Cultcons: culturally consonant practice
 - 5.2.7.1 Cultcons_openlisten: open to mutual listening
 - 5.2.7.2 Cultcons_openlearn: open to mutual learning
 - 5.2.7.3 Cultcons_opendisc: open, iterative discussion of partnership
 - 5.2.7.3.1 Cultcons_question: probe for partnership engagement
 - 5.2.7.3.2 Cultcons_socdisc: Open dialogue about social differences
 - 5.2.7.3 Cultcons_taskfocus: focus on partnership tasks
 - 5.2.7.4 Cultcons_closediscuss: close discussion among partners
- 5.2.8 Undcontxt: understand context of partners
- 5.2.9 Processflex: flexibility with partnership process
- 5.2.10 Harness: harness partner capacity
- 5.2.11 Groupdecis: group decision-making
 - 5.2.11.1 Groupdecis_miss: group decision-making missing
 - 5.2.11.2 Groupdecis_coll: collaborative group decision-making
- 5.2.12 Outcomimprov: partnership outcome improving dynamics
- 5.3 \Partner: overall partnership practice, norms, or strategies
 - 5.3.1 Partnerhx: history of partnership
 - 5.3.1.1 Partnerhx_trust: trust in current partnership
 - 5.3.1.2 Partnerhx_invest: investment in current partnership
 - 5.3.1.3 Partnerhx_invite: History of partnership invitation
 - 5.3.2 Collsupport: get collective support
 - 5.3.3 Shareproj: share project ownership to partners
 - 5.3.3.1 Shareproj_int: share project interests
 - 5.3.3.2 Shareproj_fund: sharing funding
 - 5.3.4 Resourceall: provide research for all partners
 - 5.3.5 Sharefind: share usable findings to partners
 - 5.3.6 Collsol: search for solutions to meet partner needs
 - 5.3.7 Cultconsol: culturally consonant solution
 - 5.3.7.1 Cultconsol_rev: cultural revival
 - 5.3.8 Account: accountability to partnership commitment
 - 5.3.9 Commins_capbuild: build capacity of partnership insiders
- 6. \STRUCTURE: Organizational, institutional, and cultural structures and worldviews that address partnership diversity. This includes structural, societal, and ideological elements.
 - 6.1 \Org: Organization or institutional practices
 - 6.1.1 Umborg: umbrella organization or coalition for partnership
 - 6.1.1.1 Umborg_resource: sustain resource for partnership
 - 6.1.1.2 Umborg_decis: influencing partnership decision-making
 - 6.1.2 Fundaccomm: funding accommodation for partnership activities
 - 6.1.2.1 Fund_barrier: funding barrier
 - 6.1.2.2 Fund_alt: alternative sources of funding
 - 6.1.3 \Commcap: community capacity
 - 6.1.3.1 Commcap_PI: community organization as primary partner
 - 6.1.3.2 Commcap_staff: community staffing

- 6.1.3.3 Commcap_collact: community collective action
 - 6.1.3.3.1 Commcap_collactlack: Lack of community collectivism
- 6.1.3.4 Commcap_lead: community leadership
- 6.1.4 Org_cred: organizational credibility
- 6.1.5 \Projchar: characteristics of intervention
 - 6.1.5.1 Projchar_engage: Engagement Project Orientation
 - 6.1.5.2 Projchar_cult: cultural project orientation
- 6.1.6 Commboard: community board
 - 6.1.6.2 Commbord_guide: board guides partners.
 - 6.1.6.3 Commboard_cred: board credibility
 - 6.1.6.4 Commboard_sustneed: sustainability need
- 6.1.7 Selfgov: community self-governance
 - 6.1.7.1 Selfgov_resource: governance resource control
 - 6.1.7.2 Selfgov_open: governance openness
- 6.1.8 Resaccom: research accommodation
- 6.2 \Cult: Cultural elements, values, or ideology
 - 6.2.1 Risktake: risk-taking for community well-being
 - 6.2.2 Preserv: cultural preservation
 - 6.2.3 Fullcirc: holistic thinking
 - 6.2.4 Relatedness: Sense of relatedness
- 6.3 \Soc: Societal structures or norms
 - 6.3.1 Hxres: community history of research
 - 6.3.1.1 Hxres_watch: motivates protection role
 - 6.3.2 Socopress: structural oppression
 - 6.3.3 Businfl: Business influence
- 7. \ROLE: Identified partnership roles and demographic characteristics of interviewees (descriptive only)
 - 7.1 \Gender: gender
 - 7.1.1 #Male: male
 - 7.1.2 #Female: female
 - 7.2 \Race: race
 - 7.2.1 #White: White
 - 7.2.2 #Black: Black
 - 7.3 \Ethnic: ethnicity
 - 7.3.1 #Chinese: Chinese
 - 7.3.2 #Vietnam: Vietnamese
 - 7.3.3 #Jamaican: Jamaican
 - 7.3.4 #Latino: Latino
 - 7.4 \Job: partnership role
 - 7.4.1 #Comm: community partner
 - 7.4.1.1 #Comm_PI: community PI
 - 7.4.1.2 #Comm_wellead: community well-being leader
 - 7.4.1.2 #Comm_healthorg: comm. health rep.
 - 7.4.1.3 #Comm_tribe: tribal member
 - 7.4.1.3.1 #Comm_tribe_staff: tribal staff member

- 7.4.1.5 #Comm_mgr: comm. partner. manager
- 7.4.1.6 #Comm_board: community board member
- 7.4.1.7 #Comm_Church: Church practitioner
 - 7.4.1.7.1 #Church_coord: Church coordinator
- 7.4.1.8 #Comm_laywork: Community lay worker
- 7.4.2 #Acad: academic partner
 - 7.4.5.1 #Acad_PI: Academic PI
 - 7.4.5.2 #Acad_Univfac: University faculty
 - 7.4.5.3 #Acad_tribe: Academic tribal member
 - 7.4.5.4 #Acad_mgr: Academic partner manager
- 7.4.3 #PH_practice: public health practitioner
 - 7.4.3.1 #Healthdept_PI: health county PI
- 7.4.4 #Healthprov: Healthcare provider
- 7.5 \Phys: physical ability
 - 7.5.1 #Phys_deaf: deaf

**Memorandum of Understanding between University of California, Los Angeles;
University of New Mexico; and University of Washington
on the Dissertation Research of Pornsak (Paul) Chandanabhumma
*Working Title: A Mixed Methods Study of the Influences of Organizational Diversity on Partnership
Processes and Achievements of Community-based Participatory Research***

Responsibilities and Scope of Work for UCLA, UW, and UNM

The purpose of this Memorandum of Understanding (MOU) is to outline the scope of work and responsibilities for the dissertation study of Paul Chandanabhumma, PhD student in Community Health Sciences at University of California, Los Angeles (UCLA). The goal of his study is to examine the extent to which heterogeneity in the organizational makeup of the partnerships⁴ (or organizational diversity) influences partnership dynamics and collective functioning of community-based participatory research (CBPR). A review of the existing literature identified gaps in understanding the relationships among organizational diversity, partnership strategies to manage potential organizational differences, and collective achievements for CBPR partners. Under the direction of the doctoral committee and Principal Investigators of *Research for Improved Health: A National Study of Community-Academic Partnerships* (the RIH study)⁵, Paul will conduct a mixed methods study using three RIH datasets: 1) qualitative interviews of case study partnerships located at University of New Mexico (UNM) 2) quantitative partnership-level surveys located at University of Washington (UW) and 3) quantitative partner-level survey located at University of Washington (UW).

Specific Aims

The specific aims for this study are:

Aim I: Identify and describe the ways in which perceptions of organizational diversity within partnerships could promote or impede partnership functioning in CBPR

Aim II: Identify and describe partnership strategies, underlying ideological positions and institutional structures that address potential organizational diversity in CBPR

Aim III: Identify and describe the implications of partnership practices that address potential organizational diversity for transformative achievements of CBPR among its partners

Aim IV: Construct and assess demographic measures of organizational diversity, or demographic heterogeneity, of CBPR partnerships

⁴ The existing literature on organizational diversity assesses group heterogeneity using measures of social identity, as well as examines other qualities such as range of skill set, organizational background, and work approach. My proposed study focuses on group heterogeneity at the aggregate level of the partnerships, and examines the implications of group heterogeneity on the collective performance of the partnerships.

⁵ As of June 2016, current members of the UCLA doctoral committee include: Chandra Ford (Chair, Community Health Sciences), Marjorie Kagawa-Singer (Community Health Sciences), Dawn Upchurch (Community Health Sciences), Darnell Hunt (Sociology), and Bonnie Duran (Social Welfare, University of Washington). The Principal Investigators of the RIH study (or the RIH PIs): Bonnie Duran, Nina Wallerstein, and Malia Villegas.

Aim V: Examine whether demographic heterogeneity in CBPR partnerships is associated with partnership approval structure, type of intervention, and control of partnership resources

Aim VI: Examine whether, adjusting for partnership control factors, demographic heterogeneity is associated with collective functioning of CBPR partnerships

Scope of Work

The following describes the scope of work as adapted from *Protocol for Student Involvement in the Research for Improved Health: A National Study of Community-Academic Partnerships Project*⁶

PhD Student: Paul Chandanabhumma

- Present proposed study to the RIH PIs for approval and complete institutional procedures to access full datasets
- Conduct independent analysis, write-up, and publication of the dissertation study
- Consult Chair and members of the Doctoral Committee to discuss research progress, questions, and insights throughout the dissertation study
- Inform the RIH PIs of significant changes and implications for the research proposal if the research questions, aims, and methods change significantly
- Submit dissertation findings or publication to the RIH PIs for review, feedback, and approval
- Present findings (via web or conference call) to the RIH PIs after the analysis is complete
- Honor the protocols of the RIH study, including the Protocol for Student Involvement, Code of Ethics and Integrity, Publication Guidelines, Data Use, Confidentiality, and Honor Statement

Chair of the Doctoral Committee: Chandra Ford

- Provide supervision, review, comment, and approve study proposal, analysis plan, findings, dissertation, and publications
- Provide guidance, feedback, and approval of any substantive changes to research questions, aims, and methods
- Provide guidance and support for related questions, challenges, and concerns throughout the dissertation process
- Participate in meetings and key communication involving the student and the RIH PIs as needed
- Contribute to the development of manuscripts and publications

RIH Principal Investigators and Investigator: Bonnie Duran, Nina Wallerstein, and John Oetzel

- Review and approve study proposal, analysis plan, findings, and publications, including any significant changes to research questions, aims, and methods

⁶ CBPR Research for Improved Health Study Team. 2011. Protocol for Student, Fellow, Pre-Doc, and Post Doc Involvement in the Research Team. Project Protocols, National Congress of American Indians Policy Research Center. From: NARCH V (Indian Health Service/NIGMS/NIH U261HS300293 2009-2013), a partnership between the National Congress of American Indians Policy Research Center (Sarah Hicks, PI); the University of New Mexico Center for Participatory Research (Nina Wallerstein, PI); the University of Washington Indigenous Wellness Research Institute (Bonnie Duran, PI); and CBPR projects nationwide.

- Provide processed, complete, and if possible, electronically transferrable versions of qualitative and quantitative datasets
- Offer guidance and support for required institutional procedures to access datasets
- Provide study information, resources, or referrals for questions related to the RIH study
- Inform the student and Chair of the Doctoral Committee of major activities of the RIH study with implications to the dissertation study
- Contribute to the development of manuscripts and publications
- Serve on the Doctoral Committee as appropriate⁷

Research Methods

This is a cross-sectional mixed methods study involving secondary analysis of three sources of data from the RIH study: qualitative stakeholder interviews, quantitative partnership-level Key Informant Survey (KIS) and partner-level Community Engagement Survey (CES). Qualitative examination of the implications of perceived organizational diversity and of its associated partnership strategies (Aims I-III) will complement quantitative assessment of the effects of demographic heterogeneity on partnership dynamics and performance (Aims IV-VI).

For qualitative analysis, Paul will analyze interviews to examine i) the ways in which perceptions of organizational diversity could promote or impede partnership functioning (Aim I), ii) partnership strategies that are used to address potential organizational differences as well as their underlying ideological positions and institutional structures (Aim II), and iii) implications of such partnership practices for the transformative achievements of academic and community partners (Aim III).

For quantitative analysis, he will construct indices of demographic heterogeneity of partnerships (Aim IV). He will perform exploratory analyses of the indices, and assess their associations with perceived diversity and cultural similarity (Aim IV). Using logistic regression, he will test the associations between demographic heterogeneity, and approval structure, type of intervention, and control of resources (Aim V). He will perform regression analyses to test whether, adjusting for partnership control variables, demographic heterogeneity is associated with collective functioning of the partnerships (Aim VI).

Analyses for Aim I-III will be among stakeholder interviewees of 7 case study partnerships (N=100). For Aim IV-VI, analyses will involve merging KIS data and CES datasets by unique project ID. The KIS dataset contains demographic and administrative information of enrolled partnerships as reported by their Principal Investigators or Project Directors (PI/PD) (N=200). The CES dataset contains data on perceived processes and outcomes of the partnerships among a sample of PI/PD-nominated partners (N=450).

Quantitative analysis will require the use of the following classes of variables:

Class of Analytical Variables	Data Source
Demographics (Section H)	KIS
Research Integrity (Section C)	KIS

⁷ This is open to discussion regarding roles and responsibilities of doctoral committee member with the student

Class of Analytical Variables	Data Source
Resource and Power Sharing (Section B)	KIS
Group Dynamics (Section B)	CES
Project Features (Section A)	KIS
Context (Section A)	CES

Other variables may be included as reasonably expected to address the specific aims. Please see the appendix for a detailed list of survey items for these classes of analytical variables.

Required Procedures for Data Access

In accordance with the guidelines of the RIH study, UNM and UW, the following paperwork and/or procedures will be completed to access the RIH datasets:

- Protocol for Student Involvement in the Research for Improved Health: A National Study of Community-Academic Partnerships Project
- Research for Improved Health: A National Study of Community-Academic Partnerships Code of Ethics and Integrity
- Research for Improved Health: A National Study of Community-Academic Partnerships Publication Guidelines
- Research for Improved Health: A National Study of Community-Academic Partnerships Data Use, Confidentiality & Honor Statement
- Click COI certification for UNM HSC Conflict of Interest Office
- UW and UNM IRB Procedures to be added as co-investigator of the RIH study

Timeline

This will be an approximately two-year study (June 2016 - March 2018) that will begin upon the approval of the MOU. Below is the current projected timeline for the study:

Quarter	Major Activities
June-July 2016	<ul style="list-style-type: none"> ▪ Present proposed study to Principal Investigators of the RIH study ▪ Complete required procedures to access full datasets (stakeholder interviews, KIS and CES datasets)
July - October 2016	<ul style="list-style-type: none"> ▪ Obtain stakeholder interviews, KIS and CES datasets ▪ Clean KIS and CES, and merge both datasets (Aim IV-VI) ▪ Conduct initial set of stakeholder interviews (Aim I-III) to establish preliminary coding schemes
November 2016 - May 2017	<ul style="list-style-type: none"> ▪ Conduct qualitative analysis of remaining stakeholder interviews until thematic saturation is reached (Aim I-III)
June 2017 - Sept 2017	<ul style="list-style-type: none"> ▪ Conduct quantitative analysis using merged KIS and CES surveys (Aim IV-VI)

October 2017 - January 2018	<ul style="list-style-type: none"> ▪ Synthesize results, discussions, and conclusions of the overall study
February - March 2018	<ul style="list-style-type: none"> ▪ Expected oral defense of dissertation study ▪ Presentation of study findings to PIs of the RIH study

**Appendix of Analytical Variables for
Memorandum of Understanding between University of California, Los Angeles;
University of New Mexico; and University of Washington
on the Dissertation Research of Pornsak (Paul) Chandanabhumma**

The following table is a list of variable classes and illustrative items that will be required for quantitative analysis in Paul’s dissertation research. Other variables may be included as reasonably expected to address the aims of the study.

Variable Class and Illustrative Item	Data Source⁸	Specific Aim	Planned Variable Use
<u>Demographics</u> Estimated number of academic and community partners by: gender, race/ethnicity, rural/urban location, disability status, LGBT orientation, International status, youth status (DEMACA1-7, DEMCOM1-7)	KIS	Aims IV-VI	Indices of demographic heterogeneity will be created and used as focal predictors
<u>Context</u> Rating of diverse membership (CAPCTY1C) Rating of cultural similarity between academic and community members (BRIDG1B)	CES	Aim IV	Will use for assessment of demographic heterogeneity measures
<u>Project Features</u> Type of Community approval structure: agency leader, representative, board, or staff; tribal/local government or health board/public health office; individual community member(s); project advisory board; other; no community decision (INTERG4, INTERG5)	KIS	Aim V	Will test for association with demographic heterogeneity
<u>Project Features</u> Type of study: descriptive, intervention, or policy (PROJEC7)	KIS	Aim V	Will test for association with demographic heterogeneity
<u>Resource and Power Sharing</u> Which partner: hires personnel on the project; decides how financial resources are shared;	KIS	Aim V	Will test for association with demographic heterogeneity

⁸ CES refers to Community Engagement Survey; and KIS refers to Key Informant Survey

Variable Class and Illustrative Item	Data Source ⁸	Specific Aim	Planned Variable Use
decides how in-kind resources are shared (SHARE1-3)			
<u>Group Dynamics</u> Ratings that partners: feel comfortable with the way decisions are made in the project; support the decisions made by the project team members; feel that your opinion is taken into consideration by other project team members; feel that you have been left out of the decision making process; feel pressured to go along with decisions of the project team even though you might not agree (DECIS1A-E)	CES	Aim VI	Composite measure will be used as outcome in focal analysis
<u>Group Dynamics</u> Ratings of: constructiveness of disagreements; working together to resolve disagreements; reaching acceptable consensus (COOP1-3) Ratings of: disrespectful remarks; hidden and open conflict and hostility; inappropriate way of saying remarks (RESPEC1-3) Ratings of agreement with: partnership mission; partnership priorities; partnership strategies (VALUE1B-D)	CES	Aim VI	Will include as mediating variables
<u>Group Dynamics</u> The extent to which academic and community partners have knowledge, skills, and confidence to interact effectively with one another (BRIDG1A, BRIDG1C)	CES	Aim VI	Will include as control variables
<u>Project Features</u> Total year and month of partnership existence, including unfunded time (PROJEC6Y&PROJEC6M)	KIS	Aim VI	Will include as control variables
<u>Context</u> Rating of legitimacy and credibility; connection to political decision-makers, government agencies, other organizations/groups; connections to relevant stakeholders (CAPCTY1D, CAPCTY1F, CAPCTY1G)	CES	Aim VI	Will include as control variables

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