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Outcomes of a Community-Based Participatory Research Partnership Self-Evaluation: The Rochester Healthy Community Partnership Experience

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Abstract

Background: Community-based participatory research (CBPR) can effectively address health disparities among groups that are historically difficult to reach, disadvantaged, of a minority status, or are otherwise underrepresented in research. Recent research has focused on the science of CBPR partnership constructs and on developing and testing tools for self-evaluation. Because CBPR requires substantial investment in human and material resources, specific factors that support successful and sustainable research partnerships must be identified. We sought to describe the evolution, implementation, and results of a self-evaluation of a CBPR partnership.

Methods: Academic and community members of the Rochester Healthy Community Partnership (RHCP) and researchers from the University of New Mexico–Center for Participatory Research collaborated to evaluate RHCP with qualitative and quantitative research methods and group analysis.

Results: The self-evaluation was used to provide an overall picture of the "health" of the partnership, in terms of sustainability and ability to effectively collaborate around community priorities. RHCP members revisited the partnership's mission and values; identified associations between partnership practices, dynamics, and outcomes; and elicited insight from community and academic partners to help guide decisions about future directions and the sustainability of the partnership. Positive partnership dynamics were associated with perceived improvements in health and equity outcomes.

Conclusions: Although engaging in a comprehensive self-evaluation requires substantial investment from stakeholders, such assessments have significant value because they enable partners to reflect on the mission and values of the partnership, explore the history and context for its existence, identify factors that have contributed to outcomes, and plan strategically for the future.

Keywords

Community-based participatory research, Immigrant health, Program evaluation

CBPR is an effective method of addressing health-related disparities[1] among persons who historically have a high risk of disease,[2,3] are difficult to reach,[4,5] are of a minority status,[6–8] or are otherwise underrepresented in research.[9–11] Although CBPR is considered effective in many ways, the demands of CBPR programs are substantial,[12] and researchers engaged in this approach have acknowledged the requirement of immense investments in human and material

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resources.[13] More recently, researchers have focused on the science of CBPR[14,15] and sought to identify factors that contribute to successful and sustainable research partnerships; additionally, they are developing and testing tools for self-evaluation[16–20] in real-world settings. Here, we discuss one partnership's experience, after 10 years of programming, to cocreate and implement a self-evaluation. The goal was to provide feedback to the partnership to enhance its capacity to improve the health of the community's immigrant and refugee residents.

RHCP

The city of Rochester is located in southeastern Minnesota. It is the third-largest city in the state, with a population of nearly 119,000 (www.census.gov/quickfacts/fact/table/rochestercityminnesota, US/PST040219). Approximately 13.8% of the Rochester population is foreign born. RHCP was formed in 2004 by clinician-researchers at Mayo Clinic and Hawthorne Education Center (HEC), an adult education center serving diverse immigrant and refugee communities in Rochester, Minnesota. The impetus for the partnership stemmed from HEC's efforts to understand why a tuberculosis (TB) prevention and control program was ineffective among its learners. After reaching out to Mayo Clinic, HEC and Mayo Clinic staff with expertise in infectious diseases formed an investigative team.

By using a CBPR approach, the project team discovered several factors related to knowledge and perceptions of TB that were held by HEC staff and learners; these factors contributed to avoidance of TB discussions and unwillingness to participate in screening.[21] Insight gained from this work enabled the project team to design a community-led TB education and screening program, which was implemented at HEC. The program was successful in terms of educating learners and staff, and it improved screening and treatment rates.[22] Subsequently, the program was incorporated into ongoing HEC processes, and it continues to this day.[23] After the success of this program, a research team from Mayo Clinic, HEC staff, and other community partners developed an ongoing research partnership to address other health issues affecting local immigrant and refugee communities. Thus, RHCP was formed to "promote health and well-being among the Rochester population through community-based participatory research, education, and civic engagement."[24]

RHCP has since matured into a well-established, experienced, and productive research partnership that includes multiple academic and community partners. RHCP contributes to a wide range of health-related research projects, including those focused on infectious disease, physical activity and nutrition, diabetes management, and pediatric and adult obesity.[25–37] Community and academic members have sought to participate as equal partners in all stages of research design, implementation, and dissemination. A list of RHCP partner organizations is included in the Appendix.

Impetus for Evaluation

During a 10-year period, RHCP experienced considerable growth in the number of organizational and community partners and in the number of concurrent projects. The complexity, breadth, and scope of projects also increased, which in turn necessitated greater time and investment from all partners to coordinate and implement projects. Thus, a decade after its inception, members of RHCP believed that it was important to revisit the partnership's mission and values. They aimed to conduct a comprehensive evaluation that would determine the overall "health" of the partnership, in terms of sustainability and ability to effectively collaborate around community priorities; the evaluation further sought to identify factors that contributed to partnership outcomes and explore options for sustainability.

Identifying an Evaluation Partner

RHCP members believed that it was imperative to identify an evaluation partner that would be aligned with RHCP's values and participatory approach. The decision to partner with the University of New Mexico–Center for Participatory Research (UNM-CPR) was made on the basis of their extensive collective experience in CBPR evaluation[14,19,38] and in developing measures and processes to assess partnership practices related to health outcomes,[16] health equity,[17] and policy.[39] Discussions between RHCP and UNM-CPR included identifying shared values in participatory processes and having a strong commitment to RHCP partnership engagement at every stage of the evaluation. Throughout the evaluation process, UNM-CPR was an integral resource for technical assistance and guidance.

METHODS

All evaluation processes and procedures, along with copies of instruments, were submitted to the Mayo Clinic Institutional Review Board (IRB) and exempted from further review, based on Code of Federal Regulations 45 CFR 46.

Four-Step Evaluation Process

RHCP and UNM-CPR had a significant common experience of working with academic and community partners and a collective willingness to engage in the evaluation process. They decided that a self-evaluation approach that used a sequential, four-step, mixed-methods process would be appropriate and feasible. The four steps were 1) creation of a historical timeline; 2) adaptation of the CBPR conceptual model; 3) mixed-methods data collection; and 4) participatory data analysis (Table 1). The first 2 evaluation steps were described previously.[40] The current manuscript presents the methods and results of the qualitative and quantitative analyses.

Qualitative Methods and Analysis

Qualitative methods included various group sessions, facilitated by RHCP academic and community partners. Initial groups focused on the creation of a partnership timeline and adaptation of the CBPR conceptual model. The partnership timeline served as a starting point for the evaluation and enabled academic and community partners to identify the initial context and major events of the partnership's history that contributed to the evolution and trajectory of the group. Adaptation of the CBPR conceptual model was a result of group reflection on the relevance of the domains of the model for RHCP's work. This process prepared the partners for subsequent evaluation activities and provided the overarching context for the results.[40]

RHCP academic (n = 5) and community (n = 6) partners also participated in semistructured interviews that were facilitated by a member of UNM-CPR. The interviews were conducted by using a guide that was adapted from the Research for Improved Health Partnership interview guide.[19,41] The adaptation was piloted by a local researcher before it was finalized and used for most of the interviews, as described previously in this journal.[40] The guide is available online.[42] In the process of developing inclusion criteria for the evaluation, we had to account for varying degrees of engagement[43] among partners. We decided to interview only individuals with significant experience in RHCP projects and initiatives (i.e., leadership in more than 1 project) to elicit thorough and insightful feedback.

Interviews were recorded and transcribed, and initial data analysis was conducted by UNM-CPR using Dedoose,[44] a web-based platform for analyzing qualitative data. The initial

Table 1. RHCP Evaluation Process

Step 1 Partnership Timeline	Step 2 CBPR Conceptual Model	Step 3 Mixed-Methods Data Collection	Step 4 Participatory Data Analysis
Creation of the RHCP timeline Included relevant community history and events, key partnership events, key people, and key processes Developed by using a focus group format	Review of the CBPR conceptual model,[15,18] followed by a facilitated discussion of how to adapt it to RHCP Four domains in the CBPR conceptual model: 1) Contexts 2) Partnership dynamics 3) Research and intervention 4) Outcomes Two additional domains used in the current analysis: 1) CBPR 2) Partnering vision	Qualitative method, interview Adapted interview guide[19,40] to reflect targeted interest, then conducted semistructured interviews with key community and academic partners Quantitative method, survey Chose questions and scales for the partnership survey, [20,40] then surveyed all members	Analyzed data and provided individualized reports of survey and interview findings to RHCP partners Compared RHCP partner responses to national benchmarks of best practices Hosted an evaluation summit to facilitate collective reflection

Abbreviations: CBPR = community-based participatory research; RHCP = Rochester Healthy Community Partnership.

analysis started with one author (A.L.R.) coding interview transcripts to identify themes and constructs that aligned with the four domains of the CBPR conceptual model (Table 1). Coding was validated by another author (A.L.S.). We used two additional codes: "CBPR" (any explicit mention of CBPR or of processes and outcomes directly associated with RHCP) and "partnering vision" (any direct references to specific desires or recommendations about future steps; advice that partners would give to others forming a CBPR partnership; and partnership sustainability). These two codes also were treated as domains in the analysis. By coding the interview themes and constructs within the domains of the CBPR conceptual model, we created a framework for the RHCP assessment that was based on our understanding of the contexts and desired outcomes. This framework could then be used to evaluate the quality and success of RHCP's partnering practices and how these practices affected implementation of research projects and strategies.

Group Summary and Collective Review

Three authors (A.L.R., B.B., A.L.S.) created the initial categorizations and produced summary reports. UNM-CPR sent the reports to the RHCP evaluation team for further review, collective reflection, and analysis.

Each theme was presented in a grid format that included supporting quotes and emerging questions. The RHCP evaluation team, which consisted of academic and community partners, reviewed each summary report individually and then collectively during weekly meetings held over the course of several months. The team used a discussion and consensus process to identify key findings associated with each domain of the RHCP CBPR model and then created a comprehensive report. This report was presented over the course of several meetings to a larger group of RHCP partners for review and feedback.

Quantitative Methods and Analysis

After completing the qualitative interviewing phase, evaluation partners adapted the Research for Improved Health Community Engagement Survey[20,41] to meet the specific needs of RHCP. Survey questions assessed several aspects of partnership contexts and partnership processes. It also asked about the short-term output of partnership synergy and intermediate outcomes of systems and capacity changes. The adapted survey maintained the integrity of the instrument and used scales with established reliability and validity.[17,20] The 128-item survey was hosted online by SurveyMonkey and is available online.[42]

Fifty-one individuals received an email invitation to complete the survey (22 academic partners and 29 community partners). All had participated in at least 1 past RHCP program. Electronic survey data were analyzed by UNM-CPR. Scale scores for partnership context, capacity, and outcome measures were summarized as mean scores across nonmissing items. Pearson correlation coefficients were calculated to assess the strength and significance of associations between scale scores. The threshold for statistical significance for all analyses was $\alpha = 0.05$. We used conventional thresholds for Pearson coefficients, with $r = 0.1$ indicating a "small" level of correlation, $r = 0.3$ indicating "medium" correlation, and $r = 0.5$ indicating "large" correlation.

RHCP Evaluation Summit

The summarized survey findings were reviewed by the RHCP evaluation group and then by the same key RHCP partners described above. RHCP hosted a large, half-day summit with community and academic partners to discuss the results, revisit the partnership's mission and vision, and determine future directions. RHCP previously has hosted whole- or half-day summits at moments of key, complex decision-making for the partnership or one of its programs. During the summit, an academic member of RHCP provided an overview of the evaluation results and facilitated discussion in response to key questions. Another RHCP member recorded notes in real-time that summarized results of the activities and discussion.

RESULTS

Qualitative Results

Table 2 summarizes the themes and constructs identified from the focus group discussions and individual interviews. Findings and representative statements are stratified by the corresponding domain of the CBPR conceptual model.

Table 2. Major Themes Identified From Focus Group Discussions and Individual Interviews

Construct	Summary	Representative Statement
Context		
Shared community health concerns	Although communities had diverse origins, those represented in RHCP shared a number of health issues common to the US migration experience.	"So, the voice of the community was clear and loud: we are diabetic, we are obese, we are underserved; we don't have money; we don't have insurance. We go to the emergency department. That's our only escape." —Community partner
Effect of early RHCP experience	The first RHCP project, focused on TB education and screening, instilled a strong sense of values and commitment to the CBPR process, and it prepared them for future projects.	"But I think what was successful for us was not having any pressure to produce artificially. So we didn't start with money; we started without money, and we were able to really think about what our core values and missions were without having the pressure of deadlines as it relates to projects or budgets needing to be distributed. From the beginning, I think that really helped us to operate through that lens of what the value system is for RHCP, and I think that was our biggest benefit, was making all our mistakes before there was money attached from deadlines and things. Because I'm sure we would have artificially constructed and rushed stuff that would not have been in line with our principles." —Academic partner
CBPR		
Core value ascertainment	Academic and community partners reported a shared understanding of CBPR as a core value of the partnership.	"This is how can we make it work, how can we decide, how can we move, you know? So, I think CBPR—it's winning because of that approach…because the community is an integral part." —Community partner "I think that [CBPR] has kept us grounded in the needs of the communities, and it has forced us to listen, as professionals, to the needs of our communities." —Academic partner
Operational concerns	Partners acknowledged various challenges inherent in CBPR, including complexity, commitment to participatory process, and substantial allocation of time and resources.	"CBPR is just an intense approach. It demands a lot of human resource and time. I think there's almost always something that's happening. So if one project is kind of at a lull, there's something else that's being caught up on. Occasionally, there'll be periods, brief periods, [when] the sea is calm, and people can kind of take a breath. But I'd say, for the most part, it's been pretty constant." —Academic partner
Partnering vision		
Shared responsibility	Interviewees expressed a shared sense of responsibility and a desire to help their communities.	"As a member of that community, I have a stake in the success of the community." —Community partner
Broadening scope	Some partners believed that RHCP should consider developing a center and providing a broader range of social services.	"I think a physical spot where we welcome the community in—we are the place for the community. We are the place that the community comes, and they know they can come to promote health, manage illness, be—bring the family, care for the family.… It would be nice to be known as the Rochester Healthy Community Partnership Center, or Rochester Healthy Community Center, or somewhere that the community just felt welcome to come." —Community partner

(table continues)

Table 2. (*continued*)

Construct	Summary	Representative Statement
Partnering vision (*continued*)		
Limiting scope	Other partners suggested that RHCP remain focused on meeting community needs through research.	"We need a center of RHCP—like an RHCP center that is the incubator for all these projects. 'Cause we, actually, have a lot of good knowledge—good skills of working together, and working on projects, and working with the community over time, to develop—to look at what truly are the needs and how can we explore how best to meet them through research." —Community partner
Partnership sustainability	The need for greater infrastructure is a shared concern among partners.	"What would make RHCP more sustainable? Infrastructure, infrastructure, infrastructure. And that's going to be hard. As much as I say that, inasmuch as others may or may not have said that, anybody else who says that, it's going to be hard because, with that, having infrastructure means we're going to have to give up some ownership and it's going to have to change." —Community partner
Partnership sustainability	Partners expressed concern over volunteer burnout.	"I think we're getting to a point where . . . we're going to stretch the volunteerism spirit a bit much. On the other hand, we need to maintain that legacy of complete volunteerism among both community and academic partners." —Academic partner
Partnership dynamics		
Trust	Commitment to open communication and relationship building has contributed to the high levels of trust among partners.	"So there was some trust broken at some point. . . . So there was a meeting about what's happened, how do we get things back on track, what are your overall feelings? And so, that personal attention went a long way in us building a more firm relationship and us knowing each other's styles and how we react to things and understanding where we're coming from." —Community partner
Decision-making	Although certain technical or related decisions may remain with academic partners, all important decisions related to projects and strategy are made collaboratively by academic and community partners.	"One thing I like about RHCP is that everyone has a platform. They [academic partners] can express their opinion and, ultimately, if it takes, we're going to vote for it. Or we're going to see where the majority goes. Believe me, we [community partners] can kill a plan if we all agree—or the majority agrees. And that's how we have functioned." —Community partner
Research and intervention		
Collaborative goals	Community partners drive the research agenda.	"So we don't want to move a project forward unless there's buy-in from everybody. So if somebody else—if a community still is not—does not agree on one perspective of it, I mean, there's no point in going ahead with it. Because if we expect them to be completely participatory, even up to recruitment and enrollment and measurement, but they had not signed on to that to begin with, it's just not going to happen." —Academic partner
Community leadership	Partners attributed RHCP's success to the active leadership roles assumed by community partners in all project phases and to the effective leveraging of institutional resources.	"I was struck by the amount of input from community partners in every single stage of that project. I mean it was spearheaded by community in terms of these are priorities, like we're going to focus on healthy eating and being physically active. And then all the way down from the work groups. . . . But, yeah, communities, they are represented in the study, were represented from even before the project was even funded, even in the grant preparation, during all stages up until now." —Community partner

(table continues)

Table 2. (*continued*)

Construct	Summary	Representative Statement
Outcomes		
Personal	Partners reported having enriched relationships, camaraderie, and friendships because they were part of RHCP.	"I think I've, personally, been enriched by all the relationships. I think I've become a better person because of the relationships." —Academic partner
Personal	RHCP has provided a venue for students to gain practical experience and for academic partners to learn new skills.	"I've learned about CBPR. I really didn't know the method at all before. I think I've gotten better at listening to partners, because the more you listen, the better the study gets." —Community partner
Personal	Partners thought their RHCP experience mutually benefitted themselves and the broader community.	"I get a lot of knowledge from [RHCP] that I didn't know before. That's one thing. The second—I was actually involved in [a] program that had benefit for the community. So it was [a] win-win situation to me." —Community partner
Program	RHCP has successfully designed and implemented multiple projects, with health interventions being positively received by partners and participants.	"The first thing that I have seen with some of the [RHCP study] participants is they are taking their health in their own hands. So they are active. They are engaged. They feel that we gave them some powerful tool to be in charge of their own health." —Community partner
Community	Community partners reported an increased understanding, familiarity, and confidence in the research process, and they gained skills and formed relationships that helped them assist their communities in other areas.	"I like to think of myself as a savvy community member, and found out a number of years ago that I wasn't so savvy about my own community and didn't know that a lot of these problems existed. . . . So I think I'm more aware and have been richer for all of that. And it ties in. . . . I've gained a lot of knowledge and gained a lot of political skill sets by necessity as we navigate these." —Community partner
Organizational	RHCP has included roles for students in multiple research projects, which has positively affected curriculums and student outcomes at partnering academic institutions.	"I mean, it's really very cool for me, as an educator, to demonstrate how we've been involved in the last 5 years, how many groups of students have participated, and then the outcomes for our community members. And they're pretty proud to see that evolution—the students are. So I think it has contributed to our learning organization." —Academic partner
Organizational	Larger partnering institutions benefited from the authentic community engagement undertaken by their employees who were RHCP academic partners.	"What I heard back then [before RHCP] was that Mayo Clinic only was for rich people. They didn't care about the community. They wanted to use the Latinos or any minority community just for—to do experiments. . . . Now, I think there's a little bit more openness about Mayo Clinic. I think the face of Mayo—little by little—not big steps, but little by little—they have been going into the communities, and they have been able to be more open to listen to the needs of the people that they are in need to receive, actually, medical help—medical services." —Community partner
Policy	RHCP has helped improve IRB policies.	"Well, we've influenced not enough, but changed IRB policies in some educational aspects, to try and improve the review for this type of work. . . . There's been a number of things that we've changed and a number that we're still frustrated with, so it has changed the way Mayo does business, but there's a lot of things that still need to change." —Academic partner

Abbreviations: CBPR = community-based participatory research; IRB = institutional review board; RHCP = Rochester Healthy Community Partnership; TB = tuberculosis.

Contexts

RHCP partners believed that overarching contextual factors were essential to understanding the mission and vision of the partnership and for understanding subsequent group dynamics, research processes, and outcomes. For example, although RHCP partners had diverse origins and pathways of migration to Rochester, they shared concerns about health challenges facing their communities. These challenges, all cited as part of the US migration experience, included stress,[45] infectious disease risk,[46] changes in diet[30] and exercise,[26] and health care access.[47]

When considering the context of RHCP, it is important to note that the partnership formed to address a specific community need (reducing the incidence of TB), and all initial partners were volunteers who had committed to the project, regardless of whether it was funded. Several RHCP partners believed that this initial successful project instilled a strong sense of values and commitment to the CBPR approach and prepared partners for future projects.

Partnering Vision

A major goal when conducting interviews was to characterize the vision that inspired ongoing, committed participation by community and academic partners. Interviewees expressed a shared sense of responsibility and a desire to help their communities. When asked about vision and future direction, some partners believed that RHCP should provide broader social services, whereas others preferred that it remain focused on meeting community needs through research. Although many partners envisioned a future stand-alone RHCP with its own space and funding to provide services, a specific place was not consistently articulated.

Partnership Dynamics

Interviewees described numerous aspects of partnership processes and dynamics, including communication, decision-making, and trust. Although high levels of trust within RHCP were evident, this trust was not always assumed; academic and community partners reflected on barriers to and facilitators of trust that arose over time. The levels of trust expressed during interviews seemed to span a continuum, with individuals' trust levels corresponding to their length of time and experience in RHCP. Factors contributing to high levels of trust among partners included the duration of participation, key events, and consistent demonstrations of commitment to open communication and building relationships.

Partners described overall satisfaction with existing communication, in terms of styles, strategies, and frequency. Academic partners were the primary drivers of formal communication (e.g., meeting minutes, group email), but both academic and community partners identified communication as a high priority, involving frequent contact and accessibility. This high-contact approach to communication was necessary to facilitate partner engagement and accomplish the many consensus-driven tasks and decisions involved in RHCP programming.

Partners acknowledged the different types of decisions made within RHCP. Some of the more technical decisions were likely to remain within the purview of academic partners, for example, identification of potential research funding sources and publication venues. However, all important decisions about ideas for projects and strategies to move projects forward in any phase of research required collective input and support. Community partners also coauthored manuscripts for peer-reviewed journals if they contributed significantly to the conception, design, or implementation of projects. Manuscripts were not submitted without their edits and approval.

Research and Intervention

Interviewees indicated that the community partners were the primary drivers of the research agenda, in terms of deciding which health-research issues would be addressed. Although this approach facilitated buy-in and consensus-building among partners, it also limited the range of issues that RHCP could address. Consistent with their approaches to communication style and strategy, RHCP partners also showed commitment to a high-contact, consensus model of decision-making in the development, implementation, and dissemination phases of research. The intensity and strategic value of this approach was acknowledged by academic and community partners alike.

As prospective organizations sought to partner with RHCP on various projects and initiatives, they often initially contacted one of the academic partners, who then discussed

it with the larger group of academic and community partners during a recurring meeting. If the group believed that there was alignment between organizations, representatives of the prospective partnering organization were invited to a subsequent introductory meeting to share more about their organization's mission and potential opportunities to work together. With time, it became apparent that organizational commitment to ongoing, frequent communication was essential for sustaining productive relationships between groups.

Research findings were disseminated at three distinct levels: to participants, to the community, and to academics through publications and presentations. Dissemination was primarily directed toward the broader ethnic community from which individual participants were recruited. Local or state-level policymakers were included less frequently.

CBPR

Interviewees had a shared understanding of CBPR as a core value and approach, and academic and community partners agreed that CBPR was an authentic way of working with diverse communities. Although partners endorsed CBPR as an approach, they also acknowledged its challenges, including its inherent complexity, a high level of commitment to participatory processes, and substantial investment of volunteer time and resources. Nevertheless, interviewees reflected that a major source of commitment and motivation for community partners was the potential benefits for community members who were recruited to RHCP research projects.

Outcomes

The RHCP research projects have focused on evaluating the effectiveness of specific interventions to address health disparities. Overall, interviewees believed that RHCP outcomes existed at multiple levels and that its impact was broad and deep. Partners attributed the success of RHCP to the active leadership role assumed by community partners in all project phases and to the effective leveraging of institutional resources.

Partners reported personal outcomes, such as having enriched relationships, camaraderie, and friendships as a result of being part of RHCP, and they described gaining practical skills, self-awareness, and broader exposure to different cultures, ideas, and processes. RHCP also provided a venue for learners to gain practical research experience and for academic partners to learn new skills. Several partners reported that RHCP helped inspire young health care students to become leaders through participation in CBPR. Partners thought their RHCP experience mutually benefitted themselves and the broader community.

From an academic perspective, RHCP has had multiple successful program outcomes. Health intervention projects that were designed and implemented by RHCP were positively received by partners and participants, as evidenced by high rates of study recruitment and retention. One example project is the Healthy Immigrant Families study, which aimed to improve physical activity and nutrition behaviors among immigrant and refugee families.[37] This study had a family retention rate of 91% at 12 months and 82% at 24 months after the intervention. RHCP has successfully secured competitive funding, ranging from small intramural awards to large National Institutes of Health Research Project (R01) awards, and community and academic partners have coauthored and published numerous reports.[22,34,48] Community partners continue to propose new health studies, often more than can be accommodated with the existing volunteer capacity.

Representatives from every organizational partner reported outcomes that benefitted their institutions after engaging with RHCP. For example, RHCP has included roles for nursing and medical students in research projects, and these experiences have influenced the curriculum and student learning outcomes. Community members' perceptions of Mayo Clinic also have changed positively because of authentic community engagement through RHCP. Partners believed that RHCP activities have improved Mayo's reputation among community members because they facilitated partnerships between Mayo Clinic and community organizations and improved access to clinical services.

Partners discussed community outcomes, such as RHCP's role in community-building and capacity development. Community partners reported an increased understanding of, familiarity with, and confidence in the research process. They further reported that the skills gained and relationships formed through RHCP have helped them in other areas to benefit their communities.

Relative to other outcome categories, RHCP's impact on policy has been modest. Successful examples have affected

change at an organizational level, rather than through broader health policies. However, an important example of RHCP's successful impact on local health is its first project; its work on developing a TB education and screening program has led to a sustained local policy change.[23] Another example of RHCP's impact on policy involves Mayo Clinic's IRB. RHCP members have presented to IRB staff, raising awareness of CBPR practices and approaches to working with immigrant, refugee, and minority groups. Partners reported that RHCP has influenced entrenched IRB processes in a manner that facilitates approval and support for community-engaged research.

The sustainability of RHCP was a common concern. Partners generally acknowledged that RHCP has grown to the point that burnout among community and academic partners is a fundamental issue that must be addressed. Community and academic partners also overwhelmingly recognized that infrastructure must be purposefully developed to support the increasingly complex work and number of projects sustained within RHCP. However, we did not identify any consensus about what the infrastructure should look like.

Partners acknowledged that the process of securing infrastructure would likely necessitate certain tradeoffs, which may not necessarily align with the goals of the partnership. They considered whether RHCP could or should be incorporated into a large institution that could provide ongoing resources and infrastructure. This topic was seriously debated by the group because being integrated into a large institution, such as Mayo Clinic, could have a marked impact on the partnership. A major shared concern was the possible tradeoff of reduced autonomy to conduct projects in alignment with CBPR principles in exchange for ongoing infrastructure support from a large institution.

Quantitative Results

Of the 51 individuals invited to participate in the electronic survey, 36 (71%) responded; 65% were female, 59% were non-White, and 42% were community partners.

Associations between Partnership Context and Dynamics and Partnership Outcomes

We identified measures of partnership context and dynamics that had large effect-size associations with partnership synergy. These measures included leadership, bridging social capital, resource management, participation in dialogue and mutual learning, partner-focused alignment with CBPR principles, and partner values (Table 3). Bridging social capital describes linkages between societal sectors that often operate independently (e.g., community members and academics). Measures of partnership contexts and processes with large effect-size associations with systems and capacity change included bridging social capital and community involvement in analysis and dissemination of results as part of research tasks and communication. Other notable associations between measures of partnership contexts, processes, and systems and

Table 3. Associations Between Measures of RHCP Partnership Contexts and Dynamics and RHCP Research Processes and Outcomes (N = 31)

Partnership Context and Dynamics[a]	Pearson r	
	Research Processes[b,d]	Research Outcomes[c,d]
Partnership capacity	0.46**	−0.07
Bridging social capital	0.73***	0.56**
Alignment with CBPR principles		
Community focus	0.46**	0.19
Partner focus	0.59***	0.37*
Partner values	0.57***	0.43*
Research tasks and communication		
Background research (n = 30)	0.35	0.31
Data collection	0.30	0.25
Analysis and dissemination	−0.03	0.51**
Dialogue and mutual learning		
Participation	0.59***	0.12
Cooperation	0.40*	0.20
Disrespect	−0.37*	0.001
Trust	0.10	0.22
Influence and power dynamics	0.47**	0.47**
Participatory decision-making	0.22	0.44*
Leadership	0.78***	0.34
Resource management	0.66***	0.36*

Abbreviations: CBPR = community-based participatory research; RHCP = Rochester Healthy Community Partnership.

[a] Contexts and dynamics were modified from Oetzel et al[20]; used with permission.

[b] Research processes were assessed by the partnership synergy domains (Figure 1).

[c] Research outcomes were assessed by the systems and capacity change domains (Figure 1).

[d] *P < 0.05; **P < 0.01; ***P < 0.001.

capacity change included influence and power dynamics, participatory decision-making, partner values, partner-focused alignment with CBPR principles, and resource management.

Integration of Qualitative and Quantitative Results

By using methods of inquiry that corresponded to domains in the CBPR conceptual model, we obtained rich data that confirmed deep engagement across participating partners and a strong commitment to the ongoing development of RHCP. The quantitative component of the evaluation helped us confirm and elaborate on the qualitative findings with a larger sample of RHCP partners. Together, the qualitative and quantitative results confirmed the important relationship between partnership processes, intervention outputs, and community and health outcomes. With a deeper understanding of these relationships, RHCP partners further adapted the CBPR conceptual model (Figure 1).

At the evaluation summit, qualitative and quantitative results were discussed in depth. Partners agreed that the mission of RHCP is still relevant and meaningful, and they believed that the partnership should continue its work. Partners generally agreed that the RHCP could not feasibly undertake the responsibility of building a brick-and-mortar structure or provide direct-care services because of insufficient human and financial resources, even though such options had been highlighted in the focus group discussions and interviews. Some noted that existing institutions within Rochester already had the necessary infrastructure to provide direct services. The group discussed RHCP's role as a voice for underrepresented communities and its role as an advocate for immigrant and refugee communities. Ultimately, partners agreed that for RHCP to continue its mission, developing long-term infrastructure for sustainability beyond specific grant support would be necessary to maintain ongoing research activities and initiatives.

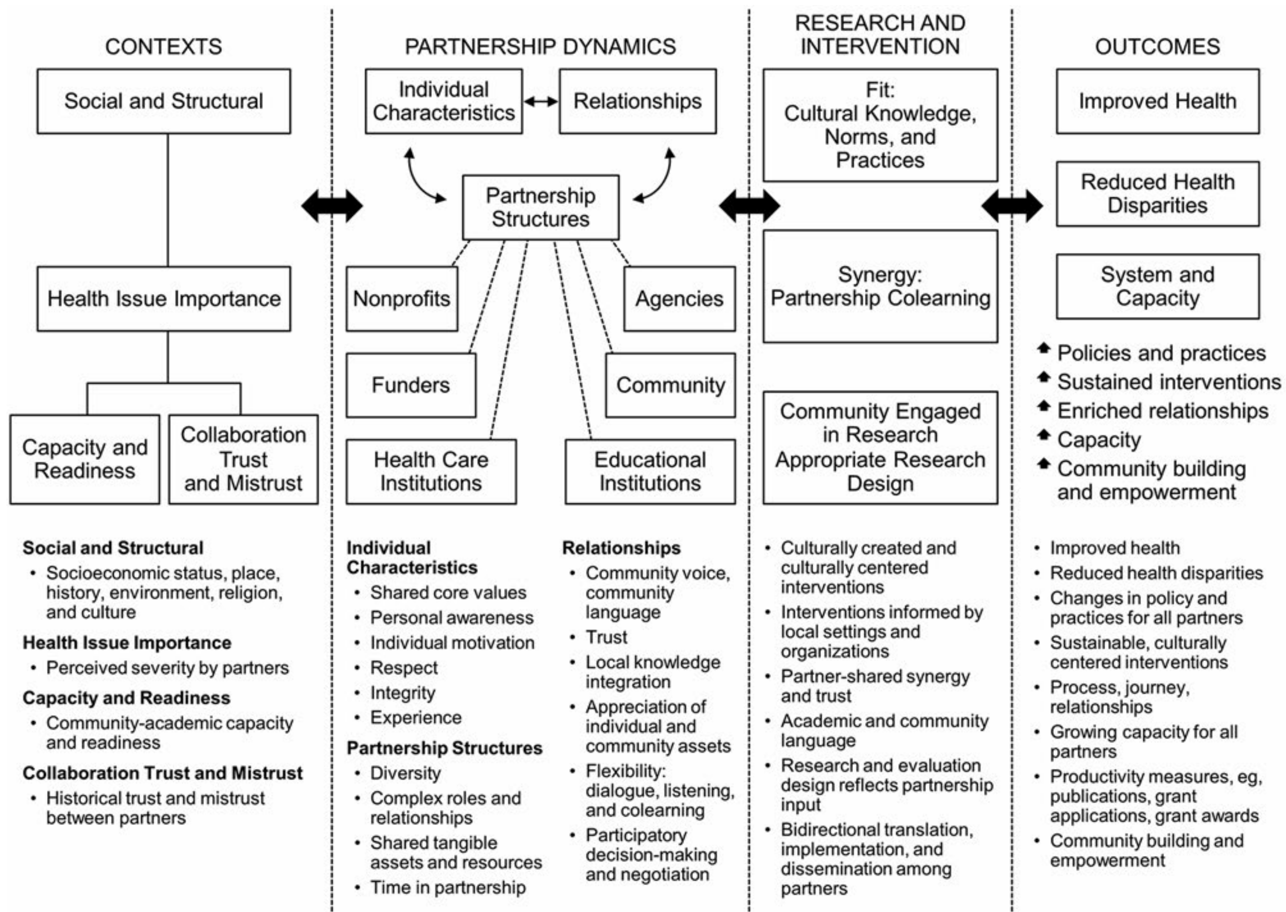

Figure 1. Conceptual model of CBPR used by the RHCP

DISCUSSION

We report a case-study evaluation of a mature CBPR partnership that engaged in a comprehensive self-evaluation at a critical juncture of growth in the group's history. This undertaking also provided the opportunity to apply validated tools for self-assessment of a CBPR partnership.[20,49] The instruments, tools, and processes used for self-evaluation reported here may be valuable to other partnerships undertaking similar self-evaluation efforts.

For RHCP, the process of participatory self-evaluation elucidated several valuable insights. Both academic and community partners acknowledged the value of the process itself, as an opportunity to revisit some of the core functions and processes within the partnership. Overall, we observed high levels of trust, and the degree of trust appeared to correspond to the individual's duration and level of participation in partnership activities. Community partners drove the research agenda, felt empowered throughout all phases of the research process, and were comfortable with existing decision-making norms. We saw evidence of beneficial RHCP outcomes at personal, program, community, and policy levels, and many of the partnership's processes were credited with contributing positively to outcomes in research and intervention. Partnership processes were also associated with broader outcomes such as community-building, empowerment, and capacity development.

Quantitative measures of partnership context and dynamics generally had stronger correlations with partnership synergy and weaker correlations with systems and capacity change. These findings are consistent with a conceptual framework of partnership synergy as a proximal output and with systems and capacity change as an intermediate outcome.[17]

We noted several challenges to conducting this self-evaluation. Partners acknowledged the substantial time and resources required throughout the evaluation process. RHCP and UNM-CPR partners engaged in multiple rounds of analysis, involving hundreds of hours of review. However, this time-consuming and laborious process enabled the group to conduct a highly detailed and critical analysis of qualitative and quantitative data, with each set of results being used to contextualize and inform further understanding of the other. The evaluation was conducted in a manner that was consistent with the partnership principles and processes.

Some groups may benefit from a more abbreviated version of self-evaluation, depending on the size and scope of the partnership. For example, partnerships may focus on one to three domains at a time as an impetus for shared reflection around salient or timely issues. Although the full partnership evaluation met the needs of RHCP, the opportunity for self-reflection itself was considered particularly valuable and could be achieved through a far less-intense process. The UNM-CPR has recognized this need with national partners and has embarked on a systematic process to shorten its psychometrically tested community-engaged survey[20] to an equally validated, more pragmatic instrument that consists of 25 to 30 items. Going forward, RHCP plans to implement a longitudinal evaluation that incorporates reflection on single-domain items and a shortened, annual partnership survey. Subsequent in-depth partnership evaluation will be conducted at less-frequent intervals, yet to be determined.

For RHCP, a major impetus for the evaluation was the need for meaningful insight on future directions. In particular, concerns about sustainability were evident throughout the analysis. After considering insights obtained from the evaluation and summit discussions, RHCP launched a campaign to gain infrastructure support. The results of the evaluation directly informed the content of the RHCP prospectus used in the campaign to influence decision makers. The partnership also committed to focus on policy and outcomes, to build in measures to assess agency and empowerment within research and intervention activities, and to implement ongoing, longitudinal evaluation to assess broader impact.

CONCLUSION

Although engaging in a comprehensive self-evaluation requires substantial investment from stakeholders, such an assessment has significant value. It enables partners to reflect on the mission and vision of the partnership, explore the history and context for its existence, identify factors that have contributed to outcomes, and plan strategically for the future.

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Appendix: Partner Organizations of the RHCP

Organization	Description[a]	Website
Alliance of Chicanos, Hispanics, and Latin Americans	Alliance of Chicanos, Hispanics, and Latin Americans is a nonprofit organization that serves Chicano, Hispanic, and Latin American families in Rochester, Minnesota. Their programs provide direct access to resources, information, and opportunities for the purpose of personal growth and empowerment.	https://www.achla-mn.com/
Boys & Girls Club of Rochester	Boys & Girls Club of Rochester offers programs designed to empower youth to excel in school and lead healthy, productive lives.	https://www.bgclubroch.org/
Community Health Service Inc	Community Health Service Inc is a federally qualified health care center. They strive to empower patients managing chronic conditions and to improve health literacy.	https://chsiclinics.org/
Hawthorne Education Center, Rochester Public Schools	Hawthorne Education Center provides a range of programs for the community, including adult basic education, citizenship courses, employment counseling, English as a second language (ESL) classes, computer literacy, and Graduate Equivalency Degree (GED) preparation and testing.	https://www.rochesterce.org/hawthorne
Intercultural Mutual Assistance Association	Intercultural Mutual Assistance Association fosters the well-being and independence of refugees and immigrants who have resettled in the Rochester and surrounding areas. Their programs include victim services, employment, community health worker, interpretation, and translation.	http://imaa.net/
Mayo Clinic	Mayo Clinic is a nonprofit, tertiary care academic medical institution.	https://www.mayoclinic.org/
Olmsted County Public Health Services	Olmsted County Public Health Services provides a broad range of services to individuals, families, and communities. They focus on promoting healthy families and communities; supporting independent living for disabled, mentally ill, and elderly persons; preventing and responding to emerging diseases and health threats; and identifying and preventing environmental health risks.	https://www.co.olmsted.mn.us/ocphs/Pages/default.aspx
Rochester Area Family YMCA	The Rochester Area Family YMCA offers personal training, group exercise classes, swim lessons, and other fitness and community-building programs.	https://www.ymcanorth.org/locations/rochester_ymca
Somali American Social Service Association	Somali American Social Service Association provides educational, recreational, cultural, health, and lifelong learning opportunities for the local Somali community.	https://sassamn.org/home-1
Winona State University	Winona State University is the oldest member of the Minnesota State System of colleges and universities. It serves students in 2 campuses (Winona and Rochester, Minnesota) and other locations in southeastern Minnesota and beyond.	https://www.winona.edu/

[a] Descriptions are adapted from the text on each organization's website.
Abbreviation: RHCP = Rochester Healthy Community Partnership.