ORIGINAL RESEARCH

Building and Sustaining Community Partnerships: An Organizational Network Analysis in a Low-resource Neighborhood

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ABSTRACT

Background: Launched in 2012, the Claremont Healthy Village Initiative (CHVI) is a partnership focused on fostering community collaboration, addressing the social determinants of health, and reducing health disparities. Partners include local community centers, schools, afterschool programs, health care providers, a health insurer, city agencies, tenant associations, resident leaders, elected officials, and other stakeholders.

Objectives: To understand the development and value of collaboration within the CHVI from the perspective of multiple partners.

Method: Utilizing the community-based participatory research (CBPR) apparoach, we worked collaboratively with the CHVI leaders, we utilized paper and web-based surveys grounded in social network theory were administered in 2017 and 2018. Questions focused on relationships between organizations that are part of the coalition. Our analysis included responses from organizations that participated in the survey at both points in time. Network measures such as density, degree centrality, and node characteristics were used to understand information sharing, referral, and collaboration among the participating organizations. Additional data included stakeholder interviews.

Results: Coalition partners increased connectedness with one another over the course of the study, with significantly greater density of relationship and bi-directional partnerships in the follow-up survey. Of the three types of interactions, referrals showed a trend for highest density change. Trust levels were highest among organizations with a local physical presence.

Conclusions: Social network analysis provided visual and quantitative information that helped reinforce relationships and identify opportunities to improve connectedness and collaboration among diverse community partners, helping to support the coalition's goals and objectives.

KEYWORDS: Community health partnerships, Organizational network analysis, Health disparities, Low-income neighborhood, Coalition, Evaluation

INTRODUCTION

Addressing health disparities in local communities—which arise as a result of many different social, historic, economic, and demographic factors—requires leadership and partnerships among residents, organizations, academics, and other stakeholders. To implement systematic and community level changes that are informed by evidence, these partnerships should involve participation from a range of institutions such as local and state health agencies, community-based organizations (CBOs) and faith-based organizations (FBOs), schools, researchers, and providers of social and health care services.[1] In large cities such as New York City (NYC), many organizations offer very focused programs to meet specific needs. The unintended consequence is that focused action may limit communication and interactions between organizations serving the same populations. Building collaborative networks is an important strategy to improve service delivery, to promote policy change, and to develop capacity to solve large public health problems.[2, 3] In addition, relationships between diverse organizations may lead to a better distribution of health resources across social boundaries in a community.[4, 5, 6]

Community-academic partnerships that aim to improve the health outcomes of low-income communities have increased in recent years. Such partnerships are beneficial because they offer unique opportunities for researchers and community partners to collaboratively develop programs and share knowledge and expertise that can improve health outcomes. Evidence indicates that successful community-academic partnerships require trust, communication, and long-term commitments between partners, as well as a desire to bridge the divide between academics and communities by providing a forum for mutual learning and education.[7] Often used in public health, community-based participatory research (CBPR) is based off these same

principles.[8] Furthermore, CBPR and other participatory research approaches, can aid in the development, implementation, and improvement of community programs.[7]

This study describes results from a community-academic partnership that developed within the Claremont Healthy Village Initiative (CHVI), which utilized several CBPR elements. Because a strong and effective network was considered essential to CHVI, the partners were interested in an evaluation of the coalition functioning. We used social network analysis to assess patterns of connection and collaboration among CHVI partners. While social network analysis is frequently conducted at the individual level, organizational network mapping and analyses that explore relationships between community organizations can advance our understanding of complex systems.[9,10,11,12] A social network analysis can create a snapshot of connections and identify strengths, gaps, and opportunities for improvement. The analysis can also facilitate understanding of a given network structure and the position of distinct organizations within that network (e.g., central vs. peripheral).[10] This information may be used to strengthen community-wide efforts and the organizations collaborating to implement them.[4]

Background

Community Setting

The present study was conducted in Claremont, a low-income, urban neighborhood in the Morrisania section of the South Bronx in NYC. Morrisania is home to approximately 91,600 people who are largely Hispanic (59%) and Black (38%). It is also one of the poorest neighborhoods in NYC; 44% of the population lives below the poverty line, 20% are unemployed, 38% do not have a high school degree, and 18% (approximately 20,000 people) live in public housing.[13] The incarceration rate in the community is the highest in all of NYC

(371 per 100,000).[14] Considering the relationship between low-resource settings and poor health, it is unsurprising that Claremont has some of the worst health outcomes in NYC. Its residents experience high rates of diabetes (16%) and avoidable diabetes-related hospitalizations (689 per 100,000), more than twice the citywide rate of 312 per 100,000.[15] The neighborhood also has the highest rate of drug and alcohol related hospitalizations in the city, and the infant mortality rate (7.7 per 1,000 live births) is significantly higher than those in the Bronx and NYC overall (5.7 and 4.7, respectively).

The Claremont Healthy Village Initiative

Initially called the Claremont Housing Healthy Village Initiative and founded in 2011 by the American Diabetes Association and Bronx-Lebanon Hospital (a local community hospital), the CHVI sought to address the high rates of diabetes in Claremont. Thus, the initiative focused on recruiting and training Claremont community members to help their neighbors adopt healthy lifestyles and targeted residents with the highest risk of developing complications from type 2 diabetes. However, the project had limited success. Community residents were reluctant to participate in a project that involved sharing their health information with other community residents. Also, the project was viewed as being too clinically focused with insufficient attention to the social determinants of health.[16]

To address the above challenges, in 2012, Bronx-Lebanon Hospital (which eventually became BronxCare Health System) partnered with Healthfirst, a not-for-profit managed care organization, with the intention of shifting the intervention to building and supporting community assets and resources that impact the broad determinants of health. The partners began to actively recruit representatives from local community centers, schools, afterschool programs,

health care providers, NYC government and its agencies, tenant associations, and other stakeholders to be part of the coalition.

At the time when this study was conducted, CHVI was still anchored by BronxCare Health System and Healthfirst and had over 30 active partners targeting diverse populations with programs focused on health promotion, health care access and coordination, health literacy, job training, access to affordable fresh produce, opportunities for physical activity, social engagement, and the arts, as well as capacity building and leadership development. CHVI partners met monthly to identify and address needs, and to build relationships between residents and organizational partners. Each partner organization provided programs and services consistent with their expertise and mission.

A Community-Academic Partnership to Evaluate the CHVI

CHVI was developed without an academic partner although multiple efforts were made to conduct relatively small-scale evaluation activities. In response to a call for proposals, *Evaluating High-Value Innovations from Low-Resource Communities*, issued by the Robert Wood Johnson Foundation, leadership of the coalition reached out to The New York Academy of Medicine (NYAM). The CHVI/NYAM proposal and a collaborative evaluation was conducted between 2017 and 2019. CHVI leadership and NYAM met regularly to design and implement the evaluation. NYAM staff also regularly attended meetings and other activities in the community to facilitate direct communication with community members. The evaluation protocol, including documents for the network survey, and interview guides were approved by the Institutional Review Board at NYAM.

METHODS

Data Collection

Network Survey - An organizational network survey instrument was designed in 2017 by the NYAM evaluators, working in collaboration with CHVI leadership. The survey drew upon validated and reliable questions from other network studies[2,4,12], and relevant questions developed by NYAM evaluators and CHVI leadership. In accordance with a CBPR approach, prior to administering the initial survey, the evaluation team worked collaboratively with the CHVI leadership to determine survey questions. The survey was administered using Qualtrics, a web-based survey creation and data collection platform. Paper copies of the survey were available for partners who were not able to complete the survey electronically. The network survey incorporated a relational matrix so that staff from participating organizations could indicate the presence or absence of relationships with every other partner organization. Similar to other network studies, relationships were characterized by the following three types of interactions: (1) shared information, (2) client or participant referrals, and (3) collaboration on projects. In addition, as a proxy for trust, each respondent was asked how confident they were that each partner organization was able to accomplish their goals, maintain a long-term commitment to the community, and meet the needs of the community. The network survey also included questions on the perceived impacts and accomplishments of the coalition.

When deciding which organizations should participate in the survey and who within each organization should be contacted, the evaluation team consulted with the CHVI leadership who provided a list of organizations to be included in the survey. Key staff familiar with the CHVI from each organization were asked to fill out the survey. Some organizations had more than one person fill out the survey and, in such cases, preference was given to the individual with the most

complete responses, or one who had more experience and knowledge of the CHVI as indicated by their job description (pertaining to the CHVI) and the number of years they had been involved with the CHVI.

Follow-up reminder emails were sent bi-weekly during the data collection period. Organizations were given approximately two months to complete the survey. To increase the sample size, the evaluation team also conducted phone surveys using the same instrument. Of the 17 organizations invited via email to take the survey in 2017, 12 completed it (response rate of 70.6%, although to minimize statistical analysis bias when more than 60% of data are missing,[26] we excluded 3 organizations). In 2018, 29 organizations were invited to participate in a follow-up survey and 18 organizations completed the survey. The response rate of the follow-up survey was 62.1%. To evaluate changes over time and stability in the types and quality of relationships among organizations, the analysis presented here includes only the same nine organizations that answered the survey both in 2017 and 2018.Most of these respondents were community-based organizations (n=6). In addition to the CBOs, other respondents included BronxCare Health Systems, Healthfirst, and one government agency.

Key Informant Interviews - In addition to the network survey, 25 stakeholder interviews were conducted in year one of the evaluation and six were conducted the following year. Interviewees represented a range of institutions and individuals involved with CHVI. Semi-structured interview guides were developed collaboratively with the CHVI leadership and included questions on perceptions of CHVI, impact on community members and institutions, engagement in CHVI programs and activities, strengths and challenges of CHVI, and recommendations for

the future. The second-round interviews also included questions on changes that had occurred during the evaluation period. Interviews were approximately one hour in length.

Data Analysis

Quantitative Data - Quantitative data from the network survey were managed in Excel and exported to UCINET 6.0 for analysis.[17, 18] Two centrality measures were calculated: (1) degree centrality (to identify the most central, active, and engaged organizations) and (2) betweenness centrality (to assess level of organizational influence within the network).[19]

The proportion of reciprocated ties among all possible ties (arc reciprocity) and the proportion of connections in the networks that were actual connections (density) versus potential connections were also calculated. Moreover, the Quadratic Assignment Procedure (QAP) correlation in UCINET was also used to test the statistical significance of correlations between pairs of matrices (shared information, referrals, and collaboration on projects) and organizational relationship formation (p-values are reported in the tables). Lastly, we also used SPSS to compare mean trust levels between 2017 and 2018 using the Wilcoxon Signed Rank test.

Key Stakeholder Interviews - All interviews were audio-recorded and professionally transcribed. Interview data were maintained and coded by the evaluation team for pre-identified and emergent themes using NVivo, a software package for qualitative analysis (NVivo 11, QSR International Pty Ltd, Doncaster, Victoria, Australia). Preliminary findings from both rounds of interviews were shared with CHVI members to inform the work of the coalition and the final analysis of the data.

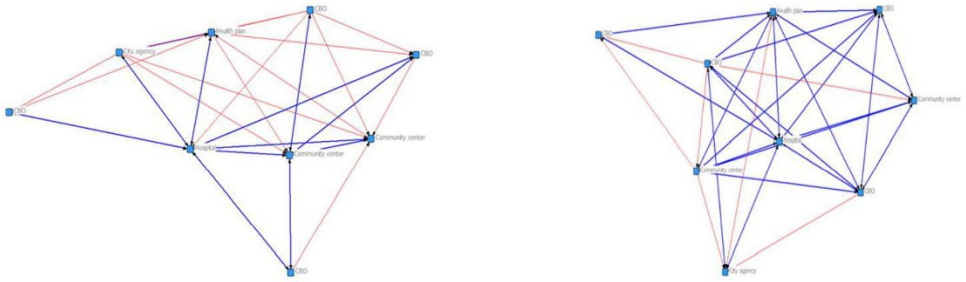
RESULTS

Network Survey Findings

Changes in the level of connectedness among organizations

Figure 1 displays the level of connectedness among the nine organizations responding to the survey in both 2017 and 2018. In 2017, the density of the network was 0.52 with an arc reciprocity of 0.63, meaning that a little over half of the network partners were connected to one another. Of these connections, 63% were bidirectional, indicating that both partners acknowledged the relationship. In 2018, these same organizations had a density of 0.74 and an arc reciprocity of 87%, suggesting the network had increased its connectivity.

FIGURE 1. Coalition Network, 2017 and 2018



2017 Network 2018 Network

Note : Red line indicates that the relationship between partners is one-way. Blue indicates the relationship is bi-directional

In 2017, the average number of connections among organizations was 4 which increased to 6 in 2018, with at least a quarter of the organizations doubling their network ties in year two (Table 1). In addition, although BronxCare Health System was the main intermediary for indirect connections between partners in 2017 and 2018, as it had the highest betweenness centrality in both years, several organizations increased their betweenness centrality from 2017 to 2018, suggesting a shift towards decentralization of the network (Table 1).

Changes in linkage types

Of the three types of interactions (information sharing, referrals, and collaboration), referrals showed a trend for highest statistically significant density change from 36% in 2017 to 67% in 2018 (Table 2), indicating that in 2018 there were increased referrals within the network. Similarly, referral sharing also showed the most statistical significant percent change in reciprocated relationships(from 54% in 2017 to 83%).

In terms of correlations, we found that information sharing, and collaboration were strongly correlated, with an increased Pearson correlation coefficient in 2018 (2017 r=0.54, p<.003; and 2018 r=0.77, p<.001, see table 3).

Trust within the network

Table 3 reports the results from three trust questions, which focused specifically on confidence in the abilities and intentions of other organizations in the network to (1) accomplish their goals, (2) meet the needs of the community, and (3) make long-term commitments. Although there was a positive trend towards increased trust among organizations on all three trust indicators, “ability to accomplish goals” was the most statistically significant (M= 2.1 in 2017 and M= 5.7 in 2018

($p<0.001$, see table 4). This observed level of trust was corroborated by an increase in reciprocity scores from 32% in 2017 to76% in 2018, indicating an increase in mutual feelings of trust.

Stakeholder Interview Findings

Collaboration among CVHI partners

Improved collaboration among partners was noted in the key stakeholder interviews. Interviewees remarked that CHVI had helped partner organizations to expand their networks.

> *I think a positive impact has been bringing all of these groups together from such diverse sectors. Because the Bronx is famous for organizations operating in a silo, and you not knowing who your neighbor is even if you provide the same exact services. And people are very territorial and stuff. So, I think that's been really positive. (Interviewee 8)*

> *The collaboration of the [partners], I mean it may have taken a whole lot longer, but the synopsis of this Claremont Healthy Village has done a lot with bringing us together to discuss the issues. I would say, it gives us a little more confidence in being able to speak to people about health issues. Okay. So then, we can title it Claremont Healthy Village through our different initiatives, whether it's addressing health concerns, community concerns, we've just, again, we've taken the silos and brought them together. (Interviewee 1)*

Several stakeholders mentioned that collaboration had led to expansion of the programs or services offered to community residents. Interviewees described various advantages of being part of the coalition:

> *We now know more services that's offered in the hospital as a result of being part of the partnership, and some of the benefits that were reaped from this partnership were the fact that now we have home visits for the elderly, and the sick, and infirm, and shut-in from [the hospital]. That was unheard of, but because of conversations, we were able to make that happen. (Interviewee 6)*

Trust in the CHVI

Consistent with the survey results, key stakeholders described increased trust among the coalition partners, and the trust between the community residents and CHVI partners.

> *I would say the greatest strength; the greatest strength is the trust that's been built. The trust that's been built among CHVI partners. Then there is the trust between the community, our community centers, the trust that's been built between the community and the hospital and the trust that's been built between the community and Healthfirst. (Interviewee 3)*

> *I think the community being more open and receptive towards BronxCare Health Systems and Healthfirst, this was not always the case before CHVI (Interview 5)*

Perceived impact of the CHVI on the community

Other than the organizational impacts of the CHVI, several stakeholders also mentioned communal benefits. The most consistent positive outcomes of the CHVI focused on healthcare, nutrition, and programs engaging the youth.

> *A lot of people are more aware of different health [issues affecting them] such as asthma, high blood pressure, or prostate, and breast cancer. You know, a lot of these*

organizations – they've been really helping these people out. Because a lot of them found out that they didn't know that they had [these diseases]. (Interviewee 1)

Finally our [Claremont youth] are getting exposure to so many different things because of some of the programs offered through the [CHVI]. These are kids that are born and raised in the Bronx, so the fact that [we have program where] they're outside of the Bronx, going somewhere where it's like kind of camping and getting exposed to the outdoors and nature. That's definitely impactful. Even a town hall, being able to speak in front of a large crowd, that's a huge impact. (Interviewee 4)

DISCUSSION

Addressing health disparities in low-resource communities requires strong collaborative partnerships. In historically disinvested communities such as Claremont, collaborative partnerships play a key role in community building, whereby partners aim to increase the civic and social infrastructure within a neighborhood. Successful and sustainable community building efforts should allow for a wide network of connectivity among partners, with strategic direction democratically decided upon, and decision-making power distributed.[6, 20] Partners should understand the types and quality of their relationships, to assess consistency with best practice, areas of strength, and areas needing improvement.[20]

As part of an evaluation of the CHVI which has collaboration at its core, we examined level of connectedness, linkage types, and trust between organizations, as well as changes therein. Our social network analysis showed that from 2017 to 2018 community organizations increased the number and reciprocity of links with other organizations in the network. This increase in connectedness occurred for core organizations and some of the peripheral organizations,

suggesting that a decentralization process could be occurring. This would be a positive step towards a more sustainable community building effort. More specifically, all types of interactions between groups (information sharing, referrals, and collaboration) increased from 2017 to 2018, with the frequency for each nearly doubling.

Also, in 2018, two of the seven CBOs notably increased their levels of cohesion (density). Increased density indicates more links between partners and, thus, more direct opportunities for connection such as information sharing and collaborative efforts. This is important as network density can also lead to significant relationships that may contribute to successful program outcomes.[21,22,23] Overall, there was increased collaborations among most of the organizations. This could be due to specific events that occurred between 2017 and 2018, including a greater focus on regular meetings and improved mechanisms for communications, or they could be the result of a more general maturation process. The evaluation itself may have influenced the process, as preliminary evaluation findings from year one may have influenced coalition activity (e.g., better communication around meetings and the need to actively engage those organizations identified as peripheral in the 2017 network analysis).

Levels of trust between organizations also increased, as demonstrated by the more than doubling of the rate of perceived ability of other organizations to accomplish their goals. It is difficult to ascertain whether this increased level of trust between organizations led to increased working relationships or vice-versa. Several scholars, nonetheless, note that trust is a key factor in successful inter-organizational collaborations,[24] specifically in the case of health-related organizations,[25] and is in many ways considered foundational to understanding network relationships.[26,27]

Limitations

There were a few challenges to conducting this evaluation, which are consistent with the literature on evaluations of coalitions.[10,14,21] Firstly, the reported network analysis represents only a snapshot of inter-organizational relationships within the larger CHVI network since we limited our analysis to 9 organizations that responded to the survey during both time points, even when the network grew from seventeen organizations in 2017 to twenty-nine in 2018. This we did for comparative purposes, and because we felt that the additional 12 organizations in year two were still fairly new to the coalition to have made any significant impact. However, to supplement this small sample size, we also report findings from 25 in-depth interviews with both CHVI members who responded to the network survey and those who did not. The interview protocol asked more in-depth questions on engagement in and perceptions of CHVI, CHVI impact on community members and institutions from the time the initiative was launched, strengths and challenges and changes that had occurred during the evaluation period.

Another limitation is that, although the evaluation team attempted to recruit respondents who had the best knowledge about their organization's participation in the coalition, some respondent's knowledge regarding community partnerships could be limited and inconsistent due to institutional change and job change. Answers to the survey are also self-reported and, therefore, subject to measurement error and bias. However, data quality is not a major concern given the high degree of reciprocity between organizations on some of the linkage type questions (information sharing, referrals, and collaboration). Lastly, the research work reported here began four years after CHVI was launched. This means that, even at our baseline, most of the network

relationships had already been established. We did, however, stress in the 2018 survey that the questions were a follow-up to the 2017 survey.

Lessons Learned

Evaluation of multi-component, community level interventions with multiple partners involved is difficult, as there are—by definition—many moving pieces. However, some of the key lessons we learned during the study design phase and our interactions with both the CHVI stakeholders and community residents are that relationship building and the development of trust are key for community-academic partnerships, for evaluation, and for needed connections to local leadership, residents, and key community partners. Early on during the evaluation process, we took several steps to build relationships within the community and to gain support for the evaluation by working closely with the CHVI leadership and having one of our evaluators participate in monthly CHVI community partner meetings. Given their knowledge and experience in Claremont, collaboration in the evaluation helped us to get up to speed quickly and to develop an evaluation that was more appropriate and useful for local stakeholders. It also helped us to build trust and ensured credibility for our study and greater acceptability by CHVI partners.

Another lesson learned is that while network analysis can be a useful tool for assessing organizational collaborations, the method required a limited group so everyone could reflect on their relationship to others—when in reality coalitions might be more fluid with partial and changing perspectives. Nonetheless, using social network analysis to map existing patterns and then sharing this information with coalition members can still help build strategic partnerships[4]. Thus, the social network map (figure 1) presented a comprehensible way to see (and then try to

address) the dominance of some organizations. The study also provided useful data regarding levels of trust and factors associated with trust.

Lastly, in contrast to efforts that prioritize deficit-based perspectives, we continued to recognize the importance of beginning with the priorities of community partners as well as building and supporting existing community assets and resources that impact the broad determinants of health. As noted earlier, CHVI transcends traditional clinical preventive care approaches, focusing not just on preventing disease but also addressing the socioeconomic factors that allow health-related challenges to persist. As a result, during the planning phase of the project, we learned that a key objective of CHVI is building connections between organizations in the community to create synergies. Therefore, our questions focused on assessing collaboration, interaction, and inter-organizational trust among partners.

Public Health Implications

The findings of our evaluation have several implications for public health practice. Specifically, the findings add to the body of knowledge on how social network analysis can be used as a tool for evaluating the effectiveness of community-based coalitions. While the practice of leveraging resources by engaging in partnerships has long been a predominant activity in public health,[28] understanding how these partnerships work is important. Social network analysis provides visual and quantitative evidence of how collaborative networks can improve service delivery, promote policy change, and develop capacity to solve large public health problems.[2,3]

The findings from this study suggest that attempts to build partnerships to eliminate health disparities within a low-resource community, although a complex task, may be beneficial to the partner organizations and the community itself. Promoting healthy lifestyles among populations

with limited resources necessitates strong partnerships between organizations within and beyond those communities. [29,30] Thus, CHVI is an example of a partnership that appears to have strengthened over time and benefited from the different resources shared by a diverse group of collaborators.

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TABLE 1. Level of Connectedness among Organizations

	No. of Ties		Arc. Reciprocity		Betweenness centrality	
Name of Organization	2017	2018	2017	2018	2017	2018
CBO 1	2	6	0.67	1.00	0.0	10.4
Hospital	8	8	0.88	1.00	7.7	17.2
City agency	3	5	0.33	0.40	0.2	1.3
Community center 1	7	6	0.71	0.63	1.2	0.4
CBO 2	4	5	0.40	0.63	3.7	0.3
Health plan	5	7	0.27	0.88	3.1	4.7
CBO 3	1	6	0.17	0.86	0.8	1.0
CBO 4	2	4	0.33	0.50	0.0	0.0
Organization G	6	6	0.29	0.833	0.0	1.3
Overall	**4.2**	**5.9**	**0.63**	**0.87**	**2.1**	**4.1**

Note 1: CBO 1 to CBO 6 refers to each anonymized community-based organization (CBO)
Note 2: Note reflected in the table is density which was 52% in 2017 and 74% in 2018.

TABLE 2. Linkage Types

	Average Ties		Overall Density		Overall Arc. Reciprocity	
	2017	**2018**	**2017**	**2018**	**2017**	**2018**
Exchanged/received information	3.9	6.3	0.49	0.79***	0.63	0.88
Received/made referrals	2.9	5.3	0.36	0.67**	0.54	0.83
Collaborated	3.2	5.6	0.40	0.69**	0.62	0.88

Note 1: Using the bootstrap paired sample t test in UCINET, we compared the mean densities of linkage types between 2017 and 2018, and used the average bootstrap difference with the 95% bootstrap confidence interval (CI) to determine statistical significance. There was a statistically significant trend toward increased network density for all the linkages. bootstrap difference = −0.06, 95% boot-strap CI (−0.10, −0.01).P < .05; **P < .01; ***P < .001, by the 2-tailed test.
Note 2:The Quadratic Assignment Procedure (QAP) correlation in UCINET was also used to test the statistical significance of correlations between pairs of matrices (shared information, referrals, and collaboration on projects) and organizational relationship formation.

Table 3. Correlations of Linkages

	1	2	3
Exchanged/received information	1		
Received/made referrals	.05	1	
Collaborated	0.54***	.13	1

Note 2:The Quadratic Assignment Procedure (QAP) correlation in UCINET was also used to test the statistical significance of correlations between pairs of matrices (shared information, referrals, and collaboration on projects) and organizational relationship formation. Information sharing and colloration were found to be statistically significant (2017 r=0.54, p<.003; and 2018 r=0.77, p<.001)

TABLE 4. Trust Measures

Trust	Mean Trust Scores		Reciprocated Trust	
	2017	**2018**	**2017**	**2018**
Long-term commitment to Claremont	4.7 (SD=2.71)	5.7 (SD=1.22)	57.1%	74.5%
Ability to accomplish goals	2.1 (SD=1.06)	5.7*** (SD=1.22)	31.6%	75.6%
Attentive to the Claremont community's needs.	4.4 (SD=2.61)	5.6 (SD=1.09)	55.0%	76.0%

Note 1: We used the Wilcoxon signed rank test to compare the mean trust scores of the three trust indicators above. *P < .05; **p < .01; ***p < .001, by the 2-tailed test.