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Lessons Learned from the Protección en Construcción Community Research Partnership

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Abstract

PenC seeks to build community-university-labor partnership in order to design, implement and evaluate an intervention aimed at preventing falls and silica exposure among Latino construction workers. This study evaluated the PenC partnership process. Semi-structured partner interviews and surveys were used. Thematic, univariate and bivariate analyses were conducted; results were presented back to partners who then provided data context. Although all partners report increased capacity including new connections and knowledge, resident researchers, here promotores, are much more likely to share information with their neighbors and other local residents. Engaging residents can lead to deeper community penetration.

Keywords

Community Based Participatory Research; Occupational Health Partnerships; Latino Health; Promotores

The contributions of community-based participatory research (CBPR) approaches to the development of sustainable public health interventions aimed a tackling health disparities have been well documented.[1–2] Essential to the CBPR process is collaboration between multiple stakeholders. However, the diverse interests and perspectives represented by CBPR collaborations require an intentional and continual attention to the partnership process. Evaluation of the various dimensions of collaboration, including communication, trust, and capacity building, are central to effective CBPR interventions.

CBPR strategies may be of particular utility in promoting occupational health and safety. Since CBPR partnerships require the participation of multiple sectors of community life including industry, labor, and government, CBPR interventions are uniquely positioned to address occupational morbidity and mortality. Additionally, as over a quarter of all construction workers in the United States (US) are of Latino heritage, effective CBPR

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interventions may reduce health disparities among Latino Americans in the construction trades.[3] Appropriately designed CBPR partnerships can integrate Latino-Americans and Latino immigrants into the design and implementation of effective health promotion interventions. However, few CBPR studies have examined the development processes of partnerships focused on promoting worker health and safety among the Latino population.[4]

The purpose of this study is to present a partnership evaluation of Protección en Construcción: The Lawrence Latino Safety Partnership (PenC), a CBPR partnership focused on promoting Latino construction worker health and safety. This external evaluation set out to 1) explore the ways in which employing a CBPR approach has contributed to participation, capacity building and empowerment among a multi-ethnic/multilingual group of partners [5] and 2) identify relationships between group dynamics and preliminary project outcomes.[6]

Background

Latinos are disproportionately impacted by occupational health disparities and experience more hazardous working conditions than their non-Hispanic peers; the fatality rate for Latinos is approximately 20% higher than that of Caucasians or African-Americans.[8,3] Particularly in the building trades, Latinos are concentrated in high risk job categories such as laborers, helpers, roofers, and, concrete workers; all positions where workers are likely to be exposed to hazards.

Occupational health and safety concerns among Latinos are a priority for the city of Lawrence, MA due to the large proportion of Latinos residents and in the construction trades.[7,8,9] In an attempt to tackle occupational health disparities among Latino construction workers in Lawrence, researchers from the University of Massachusetts Lowell, Department of Work Environment in partnership with the City of Lawrence Mayor's Health Task Force, the Laborers International Union of North America Local 175 and a team of community residents under the direction of John Snow Inc. formed Protección en Construcción (PenC): The Lawrence Latino Safety Partnership in 2006. Funded by the National Institute for Occupational Safety and Health (NIOSH), the group set out to build a community-university-labor partnership to design, implement and evaluate strategies to reduce falls and silica dust exposure among Latino construction workers in the City of Lawrence Massachusetts.

In keeping with a CBPR approach, PenC uses a committee structure that allows members from partner organizations to be integrated and take leadership roles in various aspects of the research planning, implementation, and dissemination processes. The work of PenC is guided by a steering committee or management team with representation from each of the four partner organizations. Additional teams include: 1) outreach (which focuses on local marketing); 2) dissemination; and 3) intervention planning, each with mixed representation. Finally, a networking committee that brings together members of the broader community such as small contractors, construction workers, residents and staff from non profit and governmental organizations, provides a mechanism by which researchers can share project developments and received feedback on the development and implementation of the

intervention. This project structure, anchored in the community, also allows partners to take the lead on different aspects of the research and ensures that diverse perspectives are represented each step of the way.

Although the partnership was formally established in 2006, the group coalesced as result of previous collaborations and pre-existing relationships. As seen in figure 1, *The Partnership Timeline*, initial collaborations began in 2003 when a University-Labor partnership led to an Occupational Safety and Health Administration (OSHA) training program for over 400 Latino construction workers.[10] Having the structure in place, and most importantly, the commitment to continue working with the Latino working community to address issues of importance to the community, the labor and the research group planned on sustaining efforts to on a major safety (falls from working at heights) and health (silica exposure) aspect of the Latino population they served.

The partnership evaluation set out to explore whether employing a CBPR approach contributes to participation, capacity building and empowerment among partners, [5] and to identify relationships between certain group dynamics processes and preliminary project outcomes. [6] Moving beyond traditional evaluation, the work described here was formative, in that research findings were reported back to partners and used to develop team-building activities aimed at enhancing relationships and fostering communication. This is significant as it is often the case that once a study is underway the focus shifts from the interactions between partners to the business of research. Using a formative approach to evaluating the process brought the focus back to the relationships, interactions and coordination among partners.

Methods

Overview

The evaluation process utilized a participatory approach. Participatory evaluation allows partners to take an active role in the evaluation process.[11] Research partners determined their goals for the evaluation, informed key research questions and methods, and identified the study sample. When initial data collection and analyses were completed, study findings were shared with participants to inform the partnership process. Throughout the evaluation, findings were reported back to project partners who then incorporated lessons learned to develop strategies aimed at strengthening the partnership.

Design

The study design was longitudinal and employed both qualitative and quantitative methods. Qualitative methods included a yearly a semi-structured partner interview, which captured CBPR outcomes including participation, capacity building and empowerment. Quantitative methods, meanwhile, involved yearly a partner survey based on the Eastside Village Health Worker Survey [12], which was designed to explore group dynamics.

Measures

Participation, capacity building and empowerment were examined. Participation was explored through self report on 1) how often partners attended and helped to plan meeting, programs and activities, 2) the number of committees partners reported serving on, and 3) by examining the extent to which partners provided information, expressed opinions, pulled ideas and opinions together and provided direction at meetings. Capacity building was assessed qualitatively by asking partners to describe the ways in which participation influenced their individual and organizational capacity. In addition, capacity building was explored by measuring 1) partner reports of increased knowledge about partner organizations and the role they serve in the community, 2) increased knowledge related to family and community health issues, and 3) the extent to which partners believed their organizations use information garnered via PenC. Finally, empowerment was conceptualized as the extent to which partners felt they had the ability to make change. Perceived influence over decision-making, sense of ownership, and the extent to which partners reported sharing project-related knowledge in the community were examined. In addition, partners were asked to describe ways in which participation in PenC has led to feelings of empowerment.

Group dynamics were examined as group dynamics may have a direct effect on partnership programs and interventions.[6] Working relationships, satisfaction with decision making, mutual respect, and power over the decision-making process were included as measures of group dynamics. Each was measured using a 5 point likert scale.

Sample

The sample was defined by the steering committee. All personnel, representing the partnership organizations and outreach team members, were included. As such the sample consisted of university researchers (n=5), union staff members (n=2), city representatives (n=2), and promotores (n=5).

Procedures

Prior to implementation, research protocols were approved by the University of Massachusetts Institutional Review Board (IRB). Qualitative interview respondents were contacted via telephone and invited to participate in the study. At the onset of the telephone conversation, the purpose of the evaluation, evaluation procedures, and the interview process were explained in detail. Respondents were given the option of scheduling a telephone or in person interview with the researcher that could be conducted in either English or Spanish. A total of 11 individuals were interviewed over the phone. Nine of the interviews were conducted in English and two were conducted in Spanish. Prior to the initiation of the survey, consent was verbally obtained from each respondent. Once consent was received, respondents were asked a series of semi-structured qualitative items. The average duration of the interviews was thirty minutes.

Quantitative partner surveys were announced during a PenC project meeting and the procedures were explained. Surveys were then sent to project partners (n=14) via U.S. mail. Three were sent in Spanish and eleven were sent in English. Respondents were also given the option to complete the survey electronically.

Analysis

Qualitative interview notes were recorded by hand and typed in a Microsoft word file. Qualitative data was then coded thematically. Quantitative data was entered into a Microsoft Excel 2007® file and then exported to SPSS. Respondents were categorized by partner type (university researcher, organizational researcher, or promotore) to explore variation in responses. Bivariate and univariate analyses were conducted. Once analyzed, all data were presented back to project partners. Key themes and initial findings were shared with steering committee members and feedback was elicited to help contextualize the data.

Results

Eleven of fourteen participants (79 %) completed the qualitative telephone interviews and thirteen (93 %) participated in the partner survey. The findings here are divided into two sections; the first section describes the CBPR outcomes while the second highlights the group dynamics.

CBPR Outcomes

Participation—Most of the participants (92%) attended more than nine project related events per year. Similarly, 85% of partners had participated in the planning of more than nine events. When asked to describe participation on one of the four established committees, all partners reported serving on a least one committee, while the mean number of committees served on was two. Beyond actual events attended and committees served on**,** partners were asked to describe their participation at meetings. Specifically, they were asked how often they provided information, expressed their opinions, pulled together ideas and opinions, and pointed out ways to proceed when the group was stuck. Responses were measured on a four point likert-type scale and were overwhelmingly skewed positive across the board. All participants consistently reported a high degree of participation. A relationship between partner type and committee service was not evident.

When asked to describe the factors that contributed to their participation, participants described that having clearly defined roles and responsibilities was essential. In addition, partners reported that the meeting structure, which involved rotating facilitation and structured opportunities for partners to share their expertise and experience, encouraged a higher degree of participation as it allowed them to provide direction to the group. It was stated that such leadership experiences “encouraged information sharing, and promoted ownership”. Ice breakers and group activities were also described as “encouraging partner participation” indirectly by strengthening relationships which was described as increasing one’s comfort in expressing opinions. Furthermore, the high level of co-learning that occurred at the various meetings was described as a contributor to active participation. Such learning was not only about occupational safety and health concerns but also each partner’s culture, environment, opportunities and struggles, and strategies for affecting change. Finally, a key activity that was cited by nearly all partners as improving their comfort participating was the “buddy system”. This system involved assigning individuals a “buddy”, which was generally a member of the UML research team, giving community partners a point person to go to if issues came up or if they had a specific idea to convey.

Capacity building—As seen in Table 1: Individual and organizational capacity, partners reported that participating in the collaboration increased their knowledge and understanding of partner organizations and the work each partner does in the community, as well as their general knowledge of "community health issues experienced by Latino construction workers". Furthermore, participants reported that their organizations utilized information generated by the PenC partnership. With respect to utilizing information there was a relationship between partner type and organizational use of new information.

Participants described the benefits of participation as "*Bettering their understanding of the Lawrence community and local resources available in the city"; "Strengthening their knowledge related to construction workers, their needs and rights"; and "Increasing their comfort in the community, working with diverse groups, and negotiating multiple interests*". Partners also described a number of activities aimed at building partner capacity. Such activities included trainings related to worker rights and occupational safety. Beyond increased knowledge, participants provided accounts of increased capacity which resulted from new connections made through partner organizations. Finally, partners shared that being part of PenC exposed them to diverse perspectives representing multiple sectors of the community and such exposure contributed to increasing their overall comfort in engaging with the community. In sum, participation in PenC was generally described in ways consistent with increasing human, social and cultural capital for of the partners and their members.

Empowerment—The extent to which participants felt they had influenced others had an increased sense of ownership over the project was also explored. 76% reported having been influenced by other participants and 92% reported a sense of ownership over the project. When examined by partner-type there were no differences among responses.

Finally, data indicated that partners were sharing the knowledge that they gained as a result of their participation in PenC with friends, family and neighbors. As illustrated in Table 2, partners were more likely to share information with friends and family than with neighbors. There was a relationship between partner-type and information sharing related to sharing information with friends and neighbors and to sharing information with family. Promotores were more likely to report sharing information with family, friends and neighbors.

In terms of activities that contributed to empowerment, participants described participation as well as opportunities for capacity building, specifically trainings as contributing to feelings of empowerment. Participants reported that the information they received at meetings and trainings gave them "more power to make change in the community"; while others reported feeling empowered "to collaborate and to share information". Participants further described feeling empowered "to share what they were learning by way of their participation with family, friends and the greater Lawrence community". Finally, partners reported that being part of PenC left them feeling empowered to "facilitate groups and to serve as a leader".

Group Dynamics

Initial data indicates that the PenC partnership has a positive group dynamic. Most respondents (92%) agreed that the partnership works well together, while 85% reported being satisfied with the decision making process. Improvement areas that were suggested for the group to work on included mutual respect and shared decision making. When asked about respect, 69% of respondents agreed that partner members expressed respect for one another's points.

Lessons Learned

This evaluation aimed to explore the PenC CBPR process as well as the group dynamics between partners. Using evaluation findings the partnership was able to assess successes and work through challenges as they emerged via a continuous improvement process that fed the results to the partnership. During the course of the program evaluation 3 key lessons emerged 1) there are benefits to engaging multiple levels of community, 2) engagement increases capacity, knowledge and cultural sensitivity, and 3) "community" is complex and poses a number of challenges.

Engaging community

The literature indicates that there are benefits to engaging residents in research.[13–15] PenC engages organization partners from the community as well as residents, who served as promotores. The residents involved with PenC are both monolingual Spanish and bilingual. In addition, half the residents involved are community elders. During the course of the project it became clear that engaging residents gave PenC the ability to penetrate deeper into the community reaching a population that was less likely to be connected to organizational partners. Evaluation findings indicate that both mono and bilingual promotores enjoyed taking on leadership roles, such as presenting at meetings and sharing their experiences in the community with other community organizations. Monolingual Spanish promotores were also were most likely to share information they were learning with friends and neighbors and reported feeling empowered to share new information and resources with others in the community. This finding has led the partnership to incorporate promotores across committees and finding places for them to take on leadership roles. For example, PenC now holds *Charlas* (community talks) where promotores along with other members of the outreach committee provide trainings and disseminate health and safety information for state and local organizations.

Building Capacity

Partners reported gaining knowledge by way of their participation. It is well documented that new ties (social capital) can produce new knowledge particularly in places where the ties are weak-such as those between promotores and university researchers.[16–17] Community partnerships can lead to new thinking by exposing team members to multiple perspectives. Findings here highlight how a CBPR approach can not only provide researchers with an understanding of contextual community level factors that influence occupational safety, but can also increase their comfort level engaging in intercultural exchanges with the community. This was facilitated by the committee structure, the personnel meetings, the use

of the buddy system, and ultimately, the continuous improvement derived from the evaluation process.

The Challenges of "Community"

The literature indicates that communities are complex, shaped by historical, economic and political events. Social ties, comprised of multiple sectors, are adaptive and constantly evolving both within and across sectors.[18–19] Furthermore, being sensitive to the cultural values of immigrant communities constitutes a challenge for partner members that are newly exposed to these populations. Working in partnership with communities also requires a level of flexibility that is not always innate to the academy. An early challenge in the PenC project represented this obstacle. A city of Lawrence was an important PenC partner; more specifically a member of the community development department was a named investigator representing the city. During the second year of the evaluation municipal leadership changed leading to a major reorganization which led to the "city investigator" no longer working for the city. This change was complicated in that it was important for the city as well as the investigator to remain partners discord. Communities are not static and there is always the possibility that organizations will change staffing or lose funding altogether. Thus partnerships need contingency plans. What happens if there is a change? Who is the partner the organization or the individual? These things need to be clearly delineated from the start. In the case of PenC, both the individual and the city were key players in the project and as such both remained, but this led to an interruption that involved time and additional planning and paperwork, on the part of the steering committee and principal investigator.

Beyond the evolving nature of community are historical relationships which can be both positive and negative. It can't be assumed that everyone gets along just because they are in the same community, are committed to improving the health of a given population, or share cultural or linguistic ties. During the course of the evaluation a history of conflict between partners community partners consistently emerged, which may account for why only 70 percent of partners reported that partners expressed respect for one another. In order to try to work through historical conflict between partners team building and communication starter activities aimed at improving communication and building relationships were implemented at all personnel meetings. Here research partners worked to ease historical conflicts in order to engage in collective action.

Also, it should be noted that the socio-cultural and economic background of the Latino immigrant population, the target group of this study, added another layer of complexity to the investigation. However, the process by which the project evolved generated a certain level of commitment among the partners that was unique in a sense that it led to additional activities conducive to the improvement of the quality of life and the provision of decent and safe conditions of work for all. Overall, a general feeling of being committed to a critical and current social justice issue and the belief in the research intervention as a mechanism to improve worker conditions became an attribute to the PenC partnership.

Conclusions

Process evaluation is an important component of CBPR in that it allows partners to both identify group dynamics that may serve to hinder or facilitate research outcomes and document factors that contribute to partnership goals. As reported here there are many benefits to partnership, however it is important to keep in mind the threat poor group dynamics can pose, all partners need to feel as though they have some level of power over the decision making process. Here process evaluation revealed a story about how engaging community resident leaders can result in deeper community penetration by university based researchers and grassroots advocates, the ways in which partnership builds capacity, and the challenges partnering with "community" can pose. This is significant as "community partners" are often one step removed from the "community" --organizational representatives serving as community gatekeepers. The PenC partnership provides a valuable model for engaging residents in public health research.

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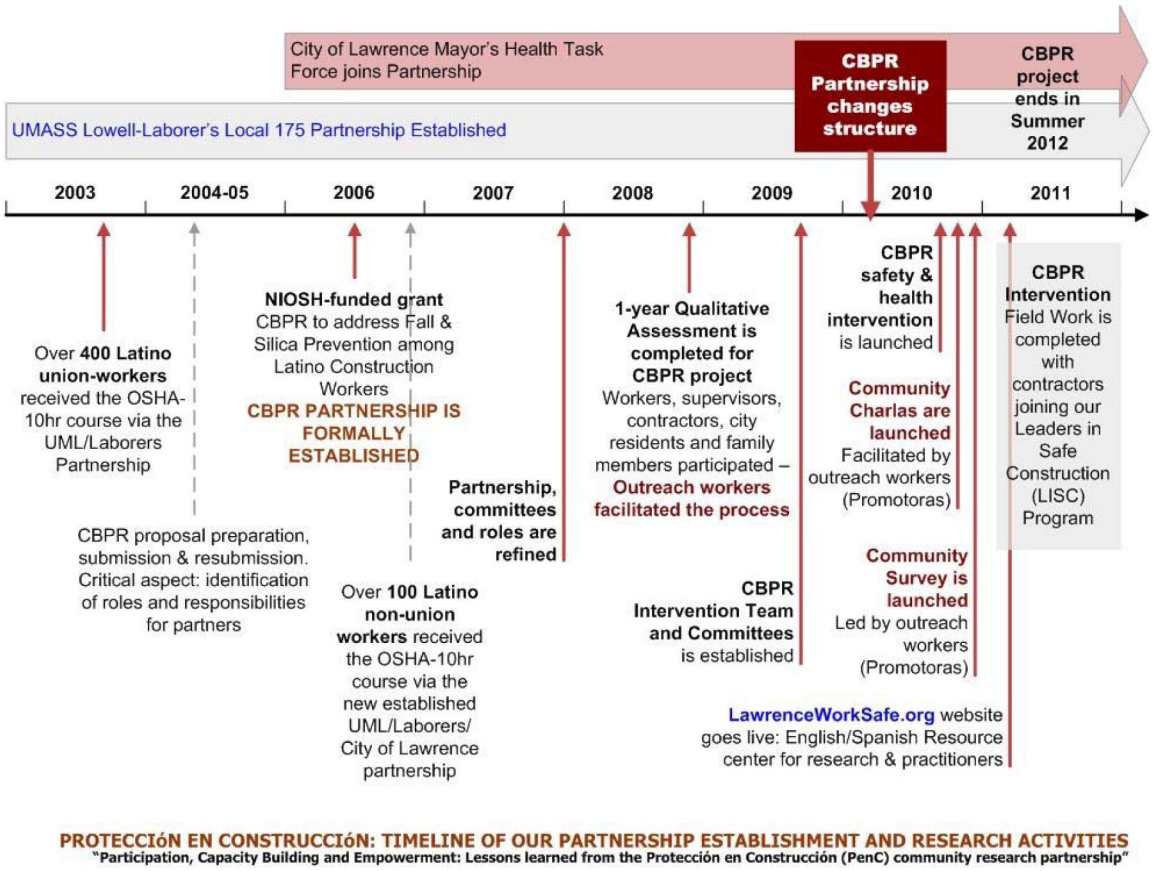

Figure 1.
Partnership Timeline

Table 1

Individual and organizational capacity

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Knowledge of partner organizations	70%,	15%	15%	0.0%	0.0%
Knowledge of family community health issues	46%	31%	23%	0.0%	0.0%
New information gained by organization	31%	38%,	31%	0.0%	0.0%

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Table 2

Information sharing

	Often	Sometimes	Rarely	Never
Friends	46 %	31%	0.0%	15%
Family	46%	23%	8%	8%
Neighbors	31%	8%	23%	23%