

Striving to Provide Opportunities for Farm Worker Community Participation in Research

J. L. Crowe, M. C. Keifer, M. K. Salazar

ABSTRACT. *Hispanic farm workers and their families in the U.S. face a number of environmental and occupational health risks, yet they are rarely given the opportunity to choose the focus of the research and interventions that take place in their communities. Community-based participatory research (CBPR) can be one effective approach to changing this situation. CBPR is an approach to research that makes community members partners in research rather than subjects of research. This article describes the experience of El Proyecto Bienestar (The Well-Being Project), a CBPR project in the Yakima Valley, Washington, with the aim of facilitating the Hispanic community's involvement in the identification and prioritization of occupational and environmental health issues among farm workers. The project utilized three forms of data collection (key informant interviews, community surveys, and a town hall meeting) to create a list of environmental and occupational health issues of concern. Investigators strove to provide opportunities for community participation in the various stages of research: study concept and design, data collection, data analysis and interpretation, conclusions, and dissemination of results. This article describes the involvement that community members had at each stage of the three forms of data collection and outlines the basic findings that led the Community Advisory Board to prioritize four areas for future work. In addition, it describes the challenges the project faced from the researcher perspective. Using examples from this experience, we conclude that this model may be an effective way for farm workers and their families to have a voice in prioritizing health and safety issues for research and action in their communities.*

Keywords. *Agricultural, Community, Community-based participatory research, Environmental health, Environmental justice, Farm workers, Hispanic, Latino, Occupational health.*

The state of Washington is one of the top-ten crop producers in the U.S. Nearly a quarter of the jobs resulting from Washington's agricultural industry are in Yakima County (WSES, 2004). These jobs provide work for many permanent and migratory workers, the vast majority of whom are of Mexican origin (Larson, 2000; WSES, 2004). Nationwide, 30% of all farm workers have family incomes below the U.S. poverty guidelines, and only 8% of farm workers have employer-paid health insurance (U.S. DOL, 2005).

Farm workers in Washington State and elsewhere in the U.S. are at risk for a number of environmental and occupational health exposures, including falls, machinery-related hazards, pesticide overexposure, heat-related illness, and hazardous ergonomic conditions (Cohen et al., 2006; Hofmann et al., 2006; Salazar et al., 2005; SHARP, 2006;

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Bonauto et al., 2003). The proximity of work and living spaces increases the possibility that family members will also face exposures related to the agricultural industry (Simcox et al., 1995; Fenske et al., 2000; Fenske et al., 2002a; Thompson et al., 2003a; Curl et al., 2002; Lu et al., 2000; Coronado et al., 2006).

These and other risks are often related to environmental justice issues. There are many definitions of environmental justice. One often cited was developed by the U.S. Environmental Protection Agency (EPA, 2006), which states: “[Environmental justice] will be achieved when everyone, regardless of race, culture, or income, enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn, and work.” For many of those who form a part of the Hispanic farm working community, environmental justice has not been achieved. Environmental and occupational health research is needed to address these risks in the Yakima Valley Hispanic agricultural community.

Community-Based Participatory Research

There is increasing awareness of the need to involve communities in the research that takes place in their neighborhoods, homes, or workplaces. One way to achieve this goal is through community-based participatory research (CBPR), an approach that has proven successful in researching and improving the health of communities (Arcury et al., 1999; Srinivasan and Collman, 2005; Strickland, 2006; Minkler et al., 2006; Israel et al., 2001; O’Fallon and Dearry, 2002). Each CBPR project is different, but most projects aim to make community members partners in research, rather than subjects of research. The National Institute for Environmental Health Sciences (NIEHS) endorses the following six principles to guide CBPR work (O’Fallon and Dearry, 2002):

1. Promotes active collaboration and participation at every stage of research.
2. Fosters co-learning.
3. Ensures that projects are community-driven.
4. Disseminates results in useful terms.
5. Ensures that research and intervention strategies are culturally appropriate.
6. Defines community as a unit of identity.

The first principle of promoting “active collaboration and participation at every stage of research” is perhaps the most fundamental. The stages of research defined by NIEHS (2002) are: “conception, design, conduct, analysis, interpretation, conclusions, [and] communication of results.” The inclusion of community in the multiple stages of research has been documented to improve research and interventions (Flicker, 2006; Israel et al., 1998; Arcury et al., 2001). However, actually achieving successful participation is not easy, and multiple researchers have documented the challenges of achieving community participation while maintaining scientific rigor (Flicker, 2006; Strickland, 2006; Williams et al., 2005; Minkler, 2004).

Yakima Valley Farm Worker Environmental and Occupational Health Research

A number of studies have been conducted in and around the Yakima Valley, Washington, to address health and safety issues for workers and their families (Bonauto et al., 2003; Coronado et al., 2006; Curl et al., 2002; Doran et al., 2003; Engel et al., 2000; Fenske et al., 2002a; Fenske et al., 2003; Koday et al., 1990; Lu et al., 2000; Salazar et al., 2005; Snyder, 2004; Thompson et al., 2003a; Hofmann et al., 2006). Thompson et al. (2001) and Thompson et al. (2003a) conducted community-based research to examine practices that contribute to farm workers’ children’s take-home exposures to pesticides.

They determined that protective practices among farm workers were low, and that methods needed to be developed to protect children from exposure. This work has important implications in terms of the health of farm workers, but it is limited to pesticide-related issues. The Pacific Northwest Agricultural Safety and Health Center attempted to involve key stakeholders (producer groups, labor, health care, academia, and public agencies) in setting an occupational health research agenda (Fenske et al., 2002b). This attempt was important, but was limited in the number of participants and also limited to occupational exposures, leaving room for work in the environmental area.

While the many environmental and occupational health studies conducted have provided important information, their focus is often based on the interests of researchers rather than the needs articulated by the community. The purpose of this article is to demonstrate concrete examples of ways in which community members can be involved in all stages of research to prioritize issues of concern for environmental and occupational health research. First, we describe the project structure and the methodology used to collect data utilizing key informant interviews, community surveys, and a town hall meeting. Second, we outline the results of the town hall meeting and the process used to prioritize issues. We conclude with a candid discussion of challenges to the process and a brief outline of the reasons that this project's model maybe helpful to researchers hoping to base their work on the needs articulated by the community.

Methods

El Proyecto Bienestar: A New Approach

El Proyecto Bienestar (The Well-Being Project) was created in response to the lack of influence that community members have regarding the types of environmental and occupational health research conducted in their community. This CBPR project was designed to identify and prioritize the environmental and occupational health concerns of Hispanic farm workers and their families. The project was initiated in 2002 when a community activist notified researchers at the University of Washington about a grant opportunity from NIEHS and the National Institute of Occupational Safety and Health (NIOSH). After discussion with other community-based groups, the researchers decided that it was an ideal opportunity to change a dynamic that had frustrated them: the fact that environmental and occupational research in the Yakima Valley was rarely based on the needs articulated by the community.

Core Partnership

The "Core" group of partners that began the project consists of one academic partner at the University of Washington (UW) and three community partners. The University of Washington partner is the Pacific Northwest Agricultural Safety and Health Center (PNASH), a NIOSH-funded agricultural center that includes representation from the UW schools of public health and nursing. Community partners include: Heritage University, a four-year, independent, liberal-arts school and a recognized minority-serving institution with a commitment to providing higher education to the local community; the Northwest Community Education Center (NCEC)/Radio KDNA, a community-based, nonprofit organization and public Spanish-language radio station with over 25 years of service to the community; and The Yakima Valley Farm Worker Clinic (YVFWC), a community/migrant health center with a history of serving the community and a commitment to educating local youth interested in pursuing health careers. The Core partners maintain shared financial accountability for the project and are responsible for making sure the project attains its goals. They meet a minimum of once a month and correspond several times a week by email and phone. Each partner may have multiple

representatives (meetings usually include approximately eleven individuals), but for decision-making, each organization only gets one “voice.”

Community Advisory Board (CAB)

The Community Advisory Board (CAB) was formed to provide a formal way for representatives of different sectors of the community to have a voice in El Proyecto Bienestar. Although many CAB members have experience in multiple areas, each member was originally chosen because he or she could represent one of the following areas: church organizations, community-based organizations, dairy workers, farm worker organizations, field workers, grower organizations, health professionals, individual growers, mothers of children in agricultural homes or single mothers, Native Americans, researchers or adult educators, students, and warehouse workers. Three at-large positions were also created to accommodate other individuals with related background and expertise who did not necessarily fit into the established categories. CAB members review most of the data collection instruments, study designs, results, and communication efforts for the project. Meetings are held in Spanish with English translation for those who need it. CAB members are volunteers and receive a stipend for transportation and childcare. They meet between once a month and once every three months. The CAB started with 13 members and has a goal of having 16 to 17 members.

Project Design

El Proyecto Bienestar’s main objective was to create a prioritized list of environmental and occupational health issues as well as an action plan for addressing the community’s priorities. Three types of data collection were used to create the list of issues: key informant interviews, community surveys, and a town hall meeting. Figure 1 illustrates how these methodologies were used within the framework of El Proyecto Bienestar.

Key Informant Interviews

Key informant interviews were done in order to achieve a detailed “first look” at the environmental and occupational health issues faced by farm workers and their families. The goal of these interviews was to have an unprioritized list of issues as well as detailed qualitative information that could help guide future work. Participants were asked about their experience in agriculture, their experience in environmental and occupational health, the issues of most concern to them, the factors that lead to those issues, the severity of each issue, past attempts to study or intervene on those topics, and potential solutions for the problems mentioned.

Core and CAB members were involved in various stages of the key informant study, including brainstorming interview topics, reviewing draft versions of the interview guide, and commenting on the final analysis (table 1). Interviews were conducted by graduate students from the University of Washington as well as the community member who served as the project coordinator. Analyses were completed by graduate students from the University of Washington, and one graduate student invited a CAB member to serve on her thesis committee. In this way, the CAB member was able to bring a community perspective to the committee as well as monitor and influence data collection directly. The final analysis of the key informant interviews included commentary from the Core and CAB. Results of the interviews provided a basis for the development of the community surveys that followed.

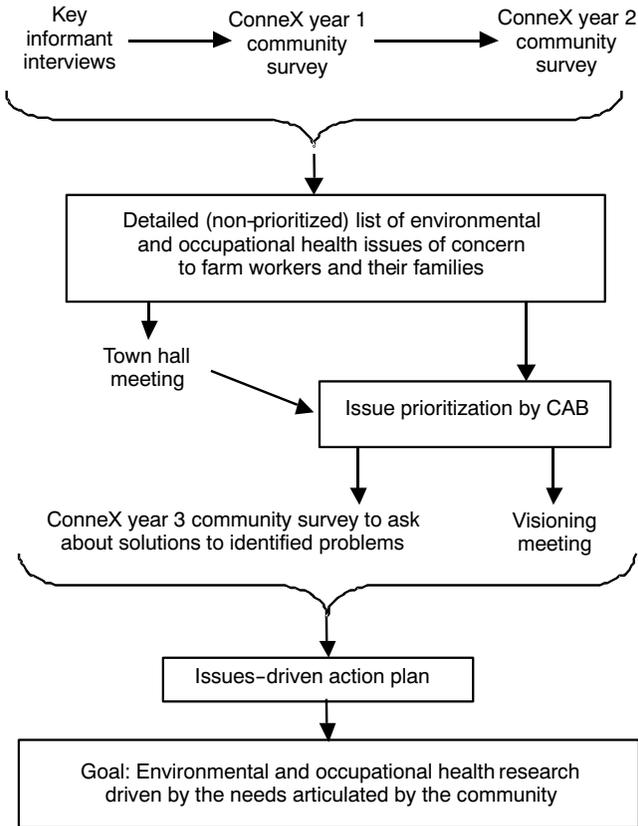


Figure 1. Diagram of El Proyecto Bienestar process.

ConneX Course and Surveys

El Proyecto Bienestar arranged to join a previously existing program run by the Yakima Valley Farm Worker Clinic/Northwest Community Action Center called “Connecting Students to Health Careers” (ConneX). This program is dedicated to supporting educationally and economically disadvantaged students who are interested in pursuing health careers. Most of the students come from farm working backgrounds and are usually the first in their families to pursue higher education. All of the students were enrolled in college or accepted into a college program for the following semester. Many of them are employed in farm work while they pursue their studies.

El Proyecto Bienestar developed a 3 or 4 credit course focusing on environmental health, occupational health, and field research with an emphasis on environmental justice issues for farm worker families. The curriculum was designed with Core and CAB input and taught by UW researchers. The final project of the summer course was the completion of a community survey that contributed to El Proyecto Bienestar data collection. The goal of these surveys was to provide quantitative data on community perception of environmental and occupational health risks.

The first year of the survey was based on information obtained from the first round of key informant interviews. The second year built on the findings of the first year and incorporated themes captured in the second round of the key informant interviews as well

Table 1. Community participation in the various stages of research.

Stage	Key Informant Interviews	ConneX Community Surveys	Town Hall Meeting
Study design	Core and CAB contributed to design of interview guide and chose the key informants.	CAB, Core, and ConneX students contributed to survey design and methodology.	Core and CAB contributed to the meeting design and voting methodology.
Data collection	Conducted by UW students and one community member (project coordinator).	Conducted by ConneX students under the supervision of UW researchers.	Voting process run by community leaders.
Analysis	UW researchers	ConneX students with guidance from course instructors.	UW researchers (tallying votes).
Interpretation and conclusions	Presented to Core and CAB; their comments were included in all future presentations. A CAB member served on the thesis committee of one student.	ConneX students with guidance from course instructors.	UW researchers presented the numbers; CAB drew conclusions about the importance of results, which were used in issue prioritization.
Communication of results	Presented by UW graduate students to Core and CAB before presentation in academic circles to obtain comments and suggestions.	Presented by ConneX students to CAB, Core, and interested public. Also presented by ConneX students, a community partner, and UW researchers at academic conferences.	Presented by UW researchers to CAB, presented through Spanish radio; letters with results sent to those who left addresses. Community member and a UW researcher presented at national conference.

as topics suggested by CAB members. During the second year, questions from year 1 were repeated, but “modules” were also included in order to obtain detailed information about the four topics of most concern in year 1: occupational conditions, pesticides, asthma, and pollution. Surveys were done in public locations commonly frequented by Hispanic farm workers, such as markets, parking lots of bread stores, and soccer fields. Every adult exiting the business or everyone who was in the general area was invited to participate regardless of his or her ethnic or work background. The year 3 survey followed the town hall meeting and focused on community-suggested solutions to the prioritized issues.

Community input for the surveys included suggesting content, suggesting wording for specific questions, providing input about methodology (particularly in the second year), and selecting survey locations (table 1). ConneX students were particularly involved in the multiple stages of research. In addition to the influence they had on study design, the ConneX students also participated in data analysis and interpretation in addition to the communication of results (table 1). Students were provided guidance to perform basic data analysis, which they presented to the Core, the CAB, and interested members of the public. (Many of the students invited their parents or significant others to the final presentation.) After completion of the course, students were invited to be involved in El Proyecto Bienestar research, events, and data dissemination.

Town Hall Meeting

A town hall meeting was held with three objectives. First, it was a venue to communicate results of the key informant interviews and the community surveys. In addition, the town hall meeting was designed to give community members a chance to rank the health issues. Finally, it allowed community members a forum to tell the project leaders whether the list of environmental and occupational health and safety issues was complete and voice opinions about the issues.

The Core and CAB worked together to design the meeting (table 1). First, the Core created a draft meeting plan. Since participants were expected to have a range of reading abilities in English and Spanish, it was essential to create a voting system that allowed illiterate or low-literacy participants to vote. Community members from the Core suggested a methodology for achieving this (described below). Next, the CAB members reviewed the plans, chose roles for themselves, decided what the meeting should be called in Spanish, and suggested changes in the program. For example, they recommended that a meal should be shared at the beginning of the meeting rather than the end, they advised on who would be the most appropriate people for each role, and they discussed the advantages of each day of the week before deciding which day would be most amenable to a good turnout and a successful meeting. The town hall meeting was a public event and was publicized via Spanish radio and newspapers. In addition, the project coordinator made phone calls to lists of farm workers and handed out flyers to everyone who visited the community center where the radio station is located. Finally, CAB and Core members personally invited individuals from the farm working community.

Participants were greeted upon entering the building and led to round tables designated as “Spanish” or “English.” A meal was shared by everyone and a formal welcome and brief overview of *El Proyecto Bienestar* were given by CAB members and Core members, respectively. The results of previous research (key informant interviews and *ConneX* surveys) were presented orally and via the overhead projector as lists of “exposures,” “outcomes,” and “contextual factors.”

Next, an open-microphone session was held for participants to give their opinions about the issues on the lists, either commenting on topics particularly important to them or addressing the completeness of the lists. The session was led by a Core member who is a well-respected leader in the Hispanic community. A CAB member, who is also a farm worker, managed the microphone. The principle investigator, instead of leading the session, took direction from the audience and kept notes on an overhead projector.

The voting system began by passing out color-coded ballots to everyone. Copies of the ballots were also projected on the wall. New data generated from the open-microphone session were written on the ballots in a process led by the moderator and assisted by the helper at each table. The principle investigator answered questions about the topics as they came up. Participants were told that they would be able to vote for two exposures, two outcomes, and two contextual factors. The leader directed the voting process by reading the lists out loud while using the projector to show participants where to mark the ballot if the issue being read aloud was the issue they wanted to vote for. In addition, there was an *El Proyecto Bienestar* member at every table to help participants who wanted assistance. Ballots were collected and counted after the event. The entire process took place in Spanish with simultaneous translation into English.

Over 100 people (not counting Core or CAB members) attended the town hall meeting, and 63 people voted. Following the advice of the CAB, the meeting was family-oriented, and many families came with children of all ages. Although it is possible that some people who participated in community surveys were also at the town hall meeting, there was no intentional overlap of participants.

Results

A full description of results for each form of data collection is beyond the scope of this article, but interested readers can access this information in other publications and presentations (Hofmann, et al., 2004; Crowe, 2005; Hom, 2006; Benavides et al., 2006). A basic outline of the major findings of each study is presented in table 2. The town hall meeting resulted in a preliminary ranking of issues, which is presented here.

Table 2. Summary of study demographics and outcomes.

	Key Informant Interviews	ConneX Community Surveys (3 total)	Town Hall Meeting
<i>N</i> of study	25	651	63 voters ^[a]
Gender	40% male, 60% female	326 males (50%), 325 females (50%)	N/A
Have worked in agriculture, <i>N</i> (%)	16 (64%) ^[b]	570 (88%)	N/A ^[c]
Hispanic, <i>N</i> (%)	12 (48%) ^[b]	543 (84%)	N/A ^[c]
Major findings	Family a central theme to understanding occupational and environmental health; conflicting viewpoints about health risks are prevalent; social and organizational situations have an important effect on physical and environmental problems.	Year 1: major areas of concern were occupational conditions, pesticides, asthma, and pollution. Year 2: reinforcement of year 2 data and details on specific concerns related to the four areas listed from year 1. Year 3: still being analyzed	Issues most frequently marked on ballots: Exposures Pesticides and chemicals Water contamination Extreme workplace temperatures Air contamination Outcomes Work-related illnesses and conditions Work-related injuries Cancer Dehydration or heat illness Contextual factors Abusive workplace conditions Low wages or job instability Lack of documentation Lack of access to medical care Problems with labor and industries (L&I claims)
Additional outcome	Provided baseline information for first round of ConneX surveys.	Each year's survey provided the basis for narrowing and specifying the next year's survey.	Voting provided an initial ranked list, which CAB used in conjunction with previous data to prioritize issues for future work

^[a] Over 100 people were in attendance (not counting those previously involved with El Proyecto Bienestar). Those who were at least 13 years old were allowed to vote.

^[b] The KI interviews were done in two sets (first the Core and then the CAB); 58% of the Core ($n = 7$) and 75% of the CAB members ($n = 9$) had agriculture experience, while 33% of the Core ($n = 4$) KI participants and 67% ($n = 8$) of the CAB participants were Hispanic.

^[c] Town hall meeting participants were not directly asked whether they were Hispanic or whether they were current farm workers, but the meeting was marketed to the Hispanic farm worker community, and it seems that almost 100% of those in attendance were Hispanic farm workers.

Products of the Town Hall Meeting

In addition to a ranking of the issues, the open-microphone session prior to voting added three new topics to the list of environmental and occupational health concerns: “being undocumented,” “the lack of free recreational activities,” and “the lack of enforcement of laws.” The final product of the town hall meeting was three ordered lists of exposures, outcomes, and contextual factors voted upon by the participants. The issues receiving the most votes in each category are listed in table 2. These results of the town hall meeting were shared with the broader community in two ways. First, a follow-up letter was sent to the participants who left their mailing addresses. The same results were also announced over educational community Spanish radio. Both forms of communication encouraged interested community members to call the project coordinator (located at the radio station) with questions or comments.

Prioritization of Issues Based on Data

Following the town hall meeting, the project still faced the task of prioritizing the issues for action. A university researcher compiled a spreadsheet of the issues with detailed data from each form of data collection. For each issue, the spreadsheet listed the percentage of votes it received in the town hall meeting, the rank it received from the ConneX year 1 survey, the rank from the ConneX year 2 survey, and a summary of related points from the key informant interviews. Although data were presented to the CAB and the general public as they were collected over three years, this spreadsheet was the first time all three data sets had been triangulated and presented together in detail.

A joint Core and CAB meeting was called in order to select two to four priority issues. At the beginning of the meeting, university researchers presented the triangulated data. After discussing the data, CAB members recommended that the top four “vote getters” from the town hall meeting be the top four priorities for the future work of El Proyecto Bienestar. CAB members stated that the town hall meeting took into account all of the data that had been previously collected and that it represented the *voz del pueblo* (voice of the people); therefore, it was the most appropriate guide for prioritization. Using this justification, the top four priorities for action recommended by the CAB were (in alphabetical order): “abusive workplace conditions,” “pesticides and chemicals,” “workplace illnesses,” and “workplace injuries.”

Discussion

While the specific results of data collection and the resulting prioritized issues are important products of El Proyecto Bienestar, the project also offers practical experiences that may be of use to other researchers. Here, we present the plans for formal evaluation, the biggest challenges from the researcher perspective, and a summary of the model that El Proyecto Bienestar offers to researchers doing similar work.

Project Evaluation

The primary evaluation designed for El Proyecto Bienestar was guided by a quality assessment model that consisted of three major components: structure, process, and outcome. This comprehensive evaluation was carried out throughout the four years of the project. Periodic reports of the evaluation provided a summary of project progress and commentaries on each of the three components; this information was then used to make recommendations for future work on the project. This summative evaluation was supplemented by other evaluative activities, including a process evaluation that consisted of an in-depth examination of the process components of El Proyecto Bienestar and a

survey evaluation of specific activities such as the town hall meeting. Data collection for the evaluations included anonymous written surveys of Core and CAB members, periodic interviews of members, and a review of written materials such as meeting minutes and documents developed for the project. The final evaluation report is currently being developed.

The evaluation of the town hall meeting consisted of structured interviews of some of the attendees and observations that were made by members of the research team. Additionally, anonymous comment cards were available for participants to write both positive and negative feedback about the town hall meeting or El Proyecto Bienestar in general.

Of particular note is the process evaluation that was conducted by a graduate student. This component of the evaluation focused on the conversations that occurred during the course of the project. This portion of the evaluation used discourse analysis to analyze meeting transcripts and individual interviews with Core and CAB members (Postma, 2007). It examined organizational governance and meeting management strategies, specifically focusing on how the group dynamics affected decision-making, and the extent that farm workers' opinions were integrated into CAB discussions and project negotiations and decisions.

Although not a formal evaluation, a clear judgment was made by the CAB with its unanimous endorsement of the priorities identified by the town hall meeting. While the CAB had the opportunity and decision-making ability to change, add to, rearrange, or reduce the ranked list of priorities that resulted from the town hall meeting, it endorsed the list en bloc, and reinforced the top four "vote getters" as the most important. This suggests that these very informed advisors to the project, representing varied interests from the community, found acceptable both the process and the product of the Proyecto Bienestar exercise. At the same time, some Core members expressed the opinion that two variables may have influenced the CAB's decision in a way not originally envisioned: first, the town hall meeting was an event with a higher emotional impact than the surveys or the interviews, and second, the CAB prioritization meeting was held relatively soon after the town hall meeting so that, although all data were re-presented to the CAB, the town hall meeting data were more present in their minds. An evaluation of how data comes to the attention of CAB members or how CAB members decide the importance of one data set over another might be important for future work.

Challenges from the Researcher Perspective

Challenges are common for CBPR projects and have been well documented (Israel et al., 1998; Quandt et al., 2001; Lantz et al., 2001; O'Fallon and Dearry, 2002; Minkler et al., 2003; Minkler, 2004; Shoultz et al., 2006, Strickland, 2006). As stated by Arcury et al. (2001), "the problems often encountered in community-scientist collaborations can appear insurmountable." One way to face these "insurmountable" challenges may be to know about the potential challenges ahead of time (Thompson, 2003b; Seifer, 2006).

The first major challenge was the timeframe required to do what the project set out to do. This was especially apparent in relation to the timeframe required by the UW Institutional Review Board (IRB). Other researchers have reported similar frustrations (Seifer, 2006). Input from community members (such as changes in Spanish word choice and locations for recruiting participants) that came at the last minute were not always included because the IRB required weeks or months to review modifications. Researchers found that taking the time to explain CBPR and the specifics of the project to IRB employees helped lead to systems that allowed for more "late-breaking" community-suggested changes.

A second challenge was deciding how much to guide the CAB in the beginning of the project. As reported by Seifer (2006), “successful partnerships are able to balance time spent on process, activities, and outcomes.” Many CBPR projects report that spending time on trust building and establishing relationships is crucial, yet many of the same projects report that both researchers and community members felt that too much time was spent on process (Seifer, 2006; Srinivasan and Collman, 2005). Flicker (2006) reported experience with a CBPR project in which inadequate investments in initial partnership development resulted in advisory committees that did not have “clear terms of reference.” El Proyecto Bienestar had a similar experience. Although adequate time was allowed for Core partnership development, the model described for the CAB in the grant proposal was one in which the CAB would develop its own rules and protocols for handling meetings and making decisions. This plan was created with good intentions: Researchers hoped to avoid over-managing the group and thereby ensure that CAB input was truly from the community. However, the decision to do this required that the CAB have more time to develop its leadership than was actually provided for in the grant. In retrospect, researchers should have planned for more time or provided more structure for the CAB leadership at the beginning of the project.

A third challenge was striking a balance between achieving meaningful participation of community members in all phases of research and simply asking too much of community members. As reported by other CBPR practitioners (Quandt et al., 2001; Israel et al., 2003; Williams et al., 2005), researchers in El Proyecto Bienestar found that recognizing the demands that community members have on their time is essential to setting realistic goals. There were several instances in which researchers incorrectly predicted which decisions CAB members would want to be involved in versus which decisions they felt were a waste of time. This remained a challenge throughout the four years of the project.

Finally, the project was challenged to include community members who are currently working in agriculture. As with any CBPR project, El Proyecto Bienestar had to define its community (Minkler, 2004). The definition of the farm working “community” was intentionally broad in order to include all those who would be potentially affected by the project’s work and to encourage the diversity in membership that has been shown to be successful in maintaining partnerships (Green and Mercer, 2001; Seifer, 2006). The majority of participants in the CAB, the Core, and the ConneX courses have worked in agriculture at some point. However, most of them no longer depend on agriculture as their current source of income. This is an obvious limitation and is one that El Proyecto Bienestar hopes to improve upon in its future work. Attaining and maintaining the ideal membership on boards and in partnerships are recognized challenges for CBPR projects (Seifer, 2006), and El Proyecto Bienestar is no exception.

A Potential Model for CBPR in Farm Working Communities

Arcury et al. (2001) identified a set of common features in successful CBPR projects with farm working communities: “taking time, using multiple approaches, understanding the goals of the different participants, appreciating each group’s strengths, valuing community knowledge, and being flexible and creative in conducting the research.” Both Arcury et al. (2001) and McCauley (2000) reviewed successful CBPR projects with farm working communities and concluded that “flexibility and creativity” are required on the part of researchers. While it is true that all CBPR projects are unique and specific to an individual community (Israel et al., 1998), specific examples of how other projects have attempted to achieve the CBPR principles in similar communities may be helpful to researchers.

Although the formal evaluations of the project will assess the degree to which El Proyecto Bienestar was or was not successful in achieving its aims, this article presents the model that was used and provides concrete examples of ways that community members can be involved at the different stages of research (conception, design, conduct, analysis, interpretation, conclusions, and communication of results). Specifically, it provides ways to include community members in planning and carrying out key informant interviews, community surveys, and a town hall meeting. In addition, it provides a model for prioritizing health concerns based on the needs articulated by the community.

Although there are an increasing number of examples in the literature of CBPR projects with farm workers, there are few examples of mechanisms for prioritizing issues for study based on the needs articulated by a farm working community. The model described in this article is one that begins a step before where most CBPR projects start. Whereas other farm worker CBPR projects start with an issue (such as pesticide exposure or skin disease) and then involve community members in the multiple stages of research to address the issue, this model provides a methodology for choosing issues for action in communities where they have not already been clearly prioritized.

Conclusion

El Proyecto Bienestar was created in response to the lack of influence that the Hispanic farm working community has in determining which environmental and occupational health issues are selected for research. Despite the challenges that the project has faced, El Proyecto Bienestar provides concrete examples of CBPR techniques that can be used with a Hispanic farm working community. El Proyecto Bienestar may be a good model for providing the Hispanic farm working community a voice in prioritizing environmental and occupational health issues for action in their communities.

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