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Recruiting and retaining indigenous farmworker participants

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Abstract

There is limited information on the specific practices used to successfully recruit and retain indigenous and Latino farmworkers in research studies. This article describes the strategies used in a community-based participatory research project with indigenous agricultural workers.

Participants were recruited through consulting with indigenous relatives and friends, identifying and meeting with indigenous leaders from hometown associations in countries of origin, and asking current participants to recruit fellow farmworkers. Adjustments were initiated to the second year protocol to enhance recruitment and retention. The difference in attrition rates between years one and two was statistically significant, a difference partially attributed to modifications to recruitment and retention protocol. Findings confirmed that active recruitment techniques and word-of-mouth recruitment were more effective than passive methods. Trust among academic, organization, and community partners, and shared language and culture between those doing the recruitment and the participants, contributed to sustained farmworker participation.

Introduction

There is great interest in conducting research to reduce disparities among poor immigrants and communities of color. Yet, there are often barriers to sustained participation among communities who experience the disparities. Specifically, there are distinct challenges when recruiting Latino and indigenous farmworkers due to language barriers, cultural differences among groups [1], legal status, long work hours, and limited transportation [2]. While a few studies have documented successful strategies for recruiting Latino participants, there is limited information on the specific practices used to successfully recruit and retain *indigenous* farmworkers. This discussion shares strategies and lessons learned from a community-based participatory research project with indigenous and Latino agricultural workers in Oregon.

Researchers generally employ a combination of active and passive recruitment methods. Active recruitment refers to directly contacting potential participants. Passive methods inform the community about the study through public announcements, and participants initiate the first contact with project staff.

A review of the literature on practices for recruiting Latinos and farmworkers established that popular passive strategies include placing ads in Spanish newspapers [2–4], posting fliers in businesses with Latino clientele [1, 3, 5], making announcements on Spanish-language television, radio programming [2, 3, 5], at local schools and churches [1–3], and receiving referrals from enrolled participants [1, 2, 5].

Active recruitment methods as reported in the reviewed studies included face-to-face recruitment at Latino-focused events at churches, schools, and fairs [5]. Other studies partnered with local businesses, schools, or agencies that then provided contact information on potential participants [2, 4–6]. For example, Martinez and colleagues collaborated with local school districts that provided lists of families who self-identified as Latino or Hispanic [5].

In addition to participant recruitment issues, the retention of study participants may pose challenges. Farmworkers are often transient, reducing study retention [2]. Common strategies for preventing participant attrition include monetary compensation [1, 4, 5], regular contact between study sessions, and providing meals, transportation, and child care [1, 2, 4, 5, 7].

This article describes how one Oregon project identified and implemented effective recruitment and retention strategies to provide pesticide safety information and measure pesticide-related oxidative stress among workers.

Prevent and Reduce Adverse Health Effects of Pesticides on Indigenous Farmworkers

The Prevent and Reduce Adverse Health Effects of Pesticides on Indigenous Farmworkers project focuses on the occupational health and safety priorities of indigenous farmworkers. The specific aims of this community-based participatory research project are to: 1) co-develop, implement, and evaluate educational pesticide safety materials with indigenous farmworkers, and 2) develop and implement a bio-monitoring protocol to determine whether improved pesticide safety education reduces pesticide-induced oxidative stress and its attendant risk of disease.

The long-standing partnership includes bilingual staff and multilingual Community Educators (indigenous and former farmworkers) from the Oregon Law Center (OLC), Farmworker Justice, Pineros and Campesinos Unidos del Noroeste (PCUN), indigenous farmworkers, and academic partners. OLC provides legal services to low income people in Oregon, and staff visit labor camps and other locations where workers assemble to provide information regarding basic rights and services. Farmworker Justice educates farmworkers, clinicians and policymakers concerning environmental health hazards and advocates for improvements in workplace protections. PCUN is Oregon's union of farmworkers, nursery

and reforestation workers and its mission is to empower farmworkers to achieve better working and living conditions.

Indigenous Farmworkers

An estimated 174,000 migrant and seasonal farmworkers and their families live in Oregon. Approximately 90% of farm laborers are from Latin America; most are from Mexico. Indigenous farmworkers represent an estimated 40% of the total farmworker population in Oregon, and have migrated steadily from Mexico to Oregon since the 1980s. Mixtecs and Zapotecos are among the groups with the highest number of migrants [8].

Indigenous farmworkers in the United States and in their native countries often experience discrimination from Latinos who speak Spanish. Typically, workers whose native language is an indigenous language speak rudimentary Spanish and have distinct cultural traditions. Many indigenous languages lack a uniform written format, and indigenous workers may be unable to read and write in any language. Cultural and linguistic barriers make these workers especially vulnerable to employers, and they are often unfamiliar with services available where they live and work.

Methods

Three Community Educators (CEs) (two men and one woman) who speak an indigenous language and are former farmworkers took the lead recruiting individuals who self-identified as indigenous from Mexico or Central America and who were current nursery workers. Eligible participants must have worked at least 30 hours per week in a nursery or vineyard in the United States in the previous month, been between the ages of 18 and 55, had at least six months of nursery or vineyard experience in their lifetime and be free of chronic disease. Participants were recruited in the Northern Willamette Valley in Oregon, and were asked to complete a set of surveys at pre- and post-assessment to assess health beliefs, pesticides knowledge, and safety practices related to pesticides exposure. Farmworkers provided urine, blood, and saliva samples at pre- and post-assessments to measure oxidative stress damage that has been associated with exposure to pesticides. The ethics review committees of the participating universities approved the research protocol and intervention activities.

Between the pre- and post-assessments (a period of six weeks), participants were randomly assigned to the intervention group (e.g., received pesticides safety crop booklet or visits from *promotores*, or peer educators) or to the control group (viewed a Spanish-language video approved by the Environmental Protection Agency (EPA) and received no additional intervention materials). The length of intervention depended on the intervention delivery mode. The crop booklet and the sociodrama CD were sent home with participants who received training from peer educators after they completed the pre-assessment. The intervention group that had contact with the *promotores* was contacted in the six-week interval between the pre- and the post-assessment. The standard 30-minute EPA video was shown to the control group at the pre-assessment site and received no additional follow-up. The project restricted the time between the pre- and post-assessment to six weeks in an effort to reduce attrition as the seasons for individual crops are relatively short in Oregon.

The CEs documented in writing their experiences with various recruitment and retention protocol; verbatim excerpts are included in the next section.

Results

Participant Recruitment

At the completion of recruitment for both Years 1 and 2, OLC staff discussed and documented with the CEs the recruitment methods that were most successful. From this documentation, it became apparent that the most successful recruitment technique was word-of-mouth, including: 1) consulting with indigenous relatives and friends about potentially eligible workers that they knew, 2) consulting with members of the Community Advisory Committees (CACs), committees that were formed in the three participating communities as a way to gather farmworker input, 3) meeting with indigenous leaders from hometown associations in countries of origin, 4) talking with community partners, interpreter training participants, and former participants in other projects, and 5) contacting current participants to see if they knew additional eligible workers. One of the CEs described the importance of building upon personal connections: “I believe that connections with friends, relatives, and (advisory committee) members played a vital role in getting workers to participate in sample collection.” Another CE documented: “I called every single one of my contacts including my family members...(they helped me) get a few names and phone numbers of key people who ended up participating and bringing in other people.”

CEs also documented the techniques that did not yield many participants. For example, a 30-second radio ad recorded in Mixteco Bajo was played on a local Spanish-language station, but the ad only recruited in two individuals, and CEs reported that door-to-door knocking was time consuming and not very effective. As one CE described: “It took me a lot of time going from door to door in those (apartment) complexes hoping that someone who will open the door will be someone who is working in the nursery. At the end, I ended up recruiting very few folks through this method.”

The CEs faced many recruitment challenges. Especially notable in Year 1, most indigenous farmworkers were not familiar with the study and had never participated in a research project. Much time was spent informing the potential participant about the study. Another key challenge was that indigenous nursery workers were dispersed making contact more difficult. Indigenous nursery workers live in apartment complexes, private housing, and mobile home parks instead of in one central location like a labor camp. Several factors make it difficult to report specific recruitment rates for each method, including the potentially volatile and unpredictable work environment, the need to slowly develop trust with this unique population of workers, and the multiple recruitment sites and strategies. One CE noted: “People are so spread now. It is not like 10 years ago where it was easier to identify a concentration of indigenous people. Now people live in private houses, apartment complexes, trailer parks and it makes it harder to recruit.”

With these barriers to recruitment, the project did not meet its goal of 100 participants in 2010. In 2011, the CEs and project staff made several adjustments to the recruitment strategy and enrolled 102 participants. Farmworker recruitment can be affected by a number

of external factors – including the local economy, the political environment regarding immigration, and the crop yields. Yet, adjustments to the second year recruitment protocol based on CE and farmworker experiences warrant some credit for the increased recruitment rates. For example, the project developed a detailed CE recruitment work plan and a tracking sheet to record contacts and site visits. CEs used the categories listed in Figure 1 to track the type of methods used each week in their recruitment efforts.

Additionally, to address the challenge of recruiting among a physically dispersed population, the project instituted a mapping process to tour the areas and identify locations with concentrated indigenous workers such as apartment buildings, stores, and laundry mats. CEs adjusted their schedules and spent more time recruiting during evenings and weekends. Whenever possible, the same CEs were paired with the same participant to establish rapport and trust. One CE described the method he used to connect with a potential participant through shared language, shared experiences, and repeat visits: “I tried to get them to know me by talking about my background and asking them about their native town. Once we find a common ground I would explain about the project...I would try to make a second call to reinforce the message.” CEs also reported consciously working on trust-building by participating at community events, seeking introductions from mutual acquaintances, and socializing with a potential recruit before inviting their participation.

Participant Retention

In 2010, 49 of 62 participants completed both the pre and post-intervention surveys and biomonitoring sampling, producing a 20.9% attrition rate. Participant attrition in Year 1 included two participants who were out of state at the time of post-assessment, 10 participants who gave no explanation for not returning, and one worker who offered other reasons (e.g. illness or he was working late). In 2011, 91 of the 102 participants completed the post-assessment activities. The attrition rate for Year 2 fell to 10.7%, with a significant difference between 2010 and 2011 ($X^2 = 9.19$, $p = .002$). Reasons for participant attrition in Year 2 included five participants who were out of state at the time of post-assessment, four participants who gave no explanation, and two workers who offered other reasons (e.g. illness or they were working late).

Several important changes to participant retention efforts were initiated in 2011. In Year 2, each participant received an appointment slip noting the date, time, and location of the post-assessment. One CE described the significance of the reminders: “A lot of the credit (for high retention rates) goes to the idea of giving people a paper slip with the date of their return date. I wrongly assumed people were going to throw them away but it wasn’t the case.” CEs altered testing schedules to accommodate more workers and refrained from scheduling post-assessments on Mondays, a day that was difficult for farmworkers to get to the testing sites. The CEs visited participants to remind them about their appointment and made reminder phone calls one week and 1–2 days before their return visit. Most participants mentioned that they remembered the date for their follow-up assessment because they still had their appointment slip. And, during Year 2, if transportation was a barrier, project partners administered the surveys and collected biomonitoring samples at participants’ homes with their permission. Providing biosamples, including blood, saliva,

and urine, did not seem to be a barrier to participation and retention. One of the CEs documented that, “If people were very interested (in participating), giving urine and blood samples wasn’t an issue to them because they wanted to learn about pesticide exposure to farmworkers, or wanted to receive a training, or wanted to receive a gift card or just a combination of all three. I did not see any facial reactions that would show they were really afraid.”

Discussion

This study confirms that active recruitment methods and word-of-mouth are generally more effective than passive recruitment. In a study comparing various recruitment methods among minority groups, Gillis et al. found the most successful strategy among Mexican American women was face-to-face recruitment [3]. Similarly, another study found the most effective recruitment method among Hispanics was referral from a friend, and that outreach workers from the study population helped to build trust and remove barriers to participation [7]. As reinforced in our study findings, public announcements are generally less effective, and fliers as the only means of contact were not effective at all [1, 5].

The Year 2 attrition rate of 10.7% was very low compared to similar studies. A longitudinal study of agricultural injury among migrant farmworkers experienced 30% attrition [9], and 34% were lost to follow-up in a pesticide risk reduction program [10]. The CEs recognized that assessment scheduling around work and family demands increased participant retention. Other studies have found that retention rates improve when scheduling is flexible [2, 7] and take into consideration work schedules and the farming season [4]. Aligned with our results, one study in Wisconsin with Spanish-speaking Latino men and women also found that attrition rates were lower among those recruited face-to-face rather than for those recruited by passive means [11]. The same project noted that messages framed with values of collectivism and altruism may strengthen recruitment and retention efforts. Where our study differs from the other studies cited in the literature, however, is that our protocol was carried out with indigenous farmworkers who largely do not speak Spanish. Le et al. [12] acknowledge that Latino immigrant communities in the U.S. have diverse origins and this diversity in culture and language increases the need for multiple and tailored recruitment strategies.

Community educators shared important demographic characteristics with the study population. The literature consistently demonstrates that staff hired from the community who share similar demographics with the participants based on age, race, ethnicity, and/or culture [1, 3, 5, 7] are more likely to increase recruitment and retention success. In addition to the shared culture between project staff and participants, the project partners have decades of experience working with farmworkers in Oregon. The consequence of this shared history and the deep level of trust among staff and participants clearly contributed to the overall success of the project.

There are several limitations to the study, including the inability to wholly attribute the improved recruitment and retention rates to modifications in Year 2 protocol. It is possible, for example, that lower retention rates in Year 1 were partially influenced by the state’s

economic recession because workers were forced to look for work outside of Oregon. Other influencing factors could be that the farmworkers became more familiar with the study, and hence more comfortable with being a part of a research project, in the second year. Another limitation is the complexity of tracking specific rates for each type of recruitment among this population. Our ability to name the most successful recruitment and retention strategies could have been strengthened with a more rigorous tracking system. For future efforts, we will develop a system to more consistently monitor specific recruitment methods and outcomes.

The community-based and participatory nature of this study emphasized the importance of farmworker input and participation. Other studies have also found that engaging participants as co-researchers was especially helpful for building rapport with potential participants [1, 5]. Both the community educators and the farmworker participants were viewed as full partners and co-developed all aspects of recruitment and retention strategies that created a robust project developed to improve farmworker health.

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To help recruit participants, I did the following this week (check all that apply):

- ☐ Spoke to promotora
- ☐ Home visit
- ☐ Interpreter training participant
- ☐ Presentation at _____
- ☐ Went door to door
- ☐ Went to store
- ☐ Went to laundry mat
- ☐ Went to housing sites
- ☐ Other

Figure 1.
Sample categories for Community Educator (CE) recruitment methods