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Latina recruitment for cancer prevention education via Community Based Participatory Research strategies

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ABSTRACT

Increasing minority participation in cancer research is an ethical and statistical necessity for gaining population-specific knowledge of cancer prevention, screening, and treatment. Locating and recruiting eligible and willing minority participants presents unique structural and cultural/linguistic challenges. Community Based Participatory Research provides a viable set of principles for facilitating recruitment in hard-to-recruit communities. We focus on the specific challenge of recruiting and engaging low-income and underinsured Latina women in cancer prevention education research, and present community-based strategies used to recruit women into a recently completed study in Arizona, *Juntos en la Salud* (Together in Health). Community representatives and *promotoras*' (Latino community health educators) involvement in site identification, individual recruitment, and development of strategies and materials for the interventions built engagement and trust. These strategies resulted in enrollment of an especially low-income, underinsured population. To emphasize the degree to which a particularly underserved population was recruited, we present data comparing demographic and screening profiles of enrollees to the general population of Latinos in Arizona.

1. Introduction

Increasing minority participation in cancer research has been cited as an ethical and statistical necessity for gaining population-specific knowledge of cancer prevention, screening, and treatment [1,2]; yet, locating and recruiting eligible and willing participants presents unique structural and cultural/linguistic challenges [3–5]. We focus on the specific challenge of recruiting and engaging Latina women in cancer prevention education research, and present community-based strategies used to recruit women into a recently completed study in Arizona, *Juntos en la Salud* (Together in Health). We suggest that these strategies resulted in enrollment of an especially low-income, underinsured population. To evidence this, we present data comparing demographic and screening profiles of enrollees to the general population of Latinos in Arizona.

Various studies underscore the difficulty of recruiting Latinos for cancer prevention education and intervention. Although growing numbers of Latinos are participating in cancer prevention and treatment trials, participation remains lower than the proportion expected based on percentage of the total population [6,7]. For instance, Latinos accounted for just 2–3% of the total participants in the National Surgical Adjuvant Breast and Bowel Project's Breast Cancer Prevention Trial [8] and 3% of participants in the Southwest Oncology Group's Prostate Cancer Prevention Trial [9].

Latinos have fewer resources and exposures to recruitment opportunities that might facilitate enrollment, principally healthcare access and socioeconomic issues. For instance, many, especially new immigrants in the Southwestern U.S.,

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work for very low wages, but fall into the "notch" group (i.e. people who make too much money to qualify for welfare coverage, and thus must pay out-of-pocket for health care), and consequently rarely use healthcare. Because most invitations to participate in research occur in clinical settings, underutilization of services limits clinical trial opportunities. Lack of transportation, need for childcare, lack of sick leave from work, scarcity of evening health care services, and competing family responsibilities are only a few of many structural limitations to healthcare use and participation in studies [10–12].

Compounding these major structural barriers, recruitment among this population is made more difficult by the disconnect between researchers and community members [13]. Factors modifiable in recruitment, and even in the design and implementation of studies, are important to address, including strategies that build trusting relationships in the community and adapting messages to the culture [14]. Factors most often reported as contributing to poor participation include violation of cultural norms such as *personalismo*, *familismo*, and *respeto*. It has been shown that respect and trust are important to building a personalized relationship [15,16], and are necessary for positive responses to referrals [17]. Moreover, the lower value and priority placed on clinical trials by Latino physicians [18] is a likely contributor to fewer referrals in this population. Finally, language barriers in patient–provider communication reduce the likelihood that Latinos preferring Spanish over English receive high quality care [12]. These barriers effectively reduce Latino participation in clinical trials.

In our recently completed study, we adopted the tenets of Community Based Participatory Research (CBPR) to address recruitment challenges arising from the schism between researchers and community. According to the Agency for Healthcare Research and Quality, CBPR is a collaborative process of research involving researchers and community representatives [19]. In the process and products of research, it:

- engages community members,
- employs local knowledge and culture in the understanding of health problems and the design of interventions, and
- invests community members in the research, and ultimately in the reduction of health disparities.

Advantages of CBPR for the marginalized population include a better fit of programs to the target community (naturalistically expressing cultural values and norms), outcomes that are consistent with community-identified needs, and perceived quality and acceptance that lead to greater benefits. Advantages of CBPR for researchers include enhanced recruitment to studies and greater external validity of results.

In this paper, we describe the use of CBPR principles in a cancer prevention education research project, and how these methods impacted the recruitment of and engagement with a very hard-to-reach cohort of low-income, underserved Latina women. Specifically, we describe those CBPR-based recruitment strategies that we found supported enrollment. We then support the claim that we recruited a particularly underserved population by characterizing the participants we reached, and contrasting them with the general Latino population in Arizona.

1.1. Juntos en la Salud project overview

The research project, *Juntos en la Salud* (Together in Health), was a randomized, controlled community trial conducted through the University of Arizona Cancer Center between January 2003 and December 2007. The American Cancer Society (ACS) awarded funding based on the investigators' and staff's strong previous grounding in the Latino community, as well as the plans for community involvement in the study implementation. The purpose of the study was to test the effects on participants' behavior of two different, theory-based methods of implementing a *promotora*-led cancer prevention/screening curriculum. Recruitment was conducted in the Phoenix, Arizona, metropolitan area. Latina women aged 18 and older were eligible to participate if they were due (based on American Cancer Society age-appropriate screening guidelines) for cervical, breast, or colorectal cancer screening.

Both intervention methods were delivered by *promotoras de salud* (Latina community health educators, see below), but with significant differences between the two arms of study. An individual, face-to-face intervention that included all aspects of the natural-helper and culturally-aligned teaching style that *promotoras* provide was compared to a *promotora*-led group intervention that emphasized participant interaction and social support (expected to endure beyond the term of the intervention). Both interventions used culturally-aligned, English and Spanish materials (written and videos) promoting screening messages (breast, cervical, and colon) and primary cancer prevention messages (diet, smoking, and physical activity). The cultural congruence of the program was built less upon including content incorporating pre-identified cultural values, but more upon building the curriculum and recruitment strategies informed directly by members of the culture, including *promotoras* and the advisory board. The intervention was delivered in seven sessions regardless of arm of study.

The primary outcome of the study is participant screening for any one procedure that was due at baseline; secondary outcomes include dietary and physical activity changes post-intervention. Participants received informed consent in the language of their choice, both in writing and via verbal discussion. Baseline interviews were conducted after the consenting procedure, and the same panel of questions were asked post-intervention. Data (including demographic data presented below) were collected in face-to-face interviews conducted by survey interviewers who were blinded to arm of study. All *Juntos* staff members were thoroughly trained in HIPAA and the Rochester Human Subjects Protection certifications.

Results from this study are still being compiled for later reporting. Our purpose in this report on recruitment is to focus on the intentional incorporation of CBPR methods in all phases of program development and recruitment, rather than the behavioral outcomes of the *Juntos* interventional study.

1.2. CBPR-congruent strategies to strengthen recruitment efforts

The CBPR process involves close communication between researchers and community representatives in every aspect of the research, from the conceptualization of specific aims, to the development of interventions, materials, measures and

methods of data collection, to name a few. CBPR-congruent strategies to create such interaction are to work with "… paraprofessionals, informal community leaders, ethnic or folk healers, *promotoras de salud*, and other community health workers in health promotion and disease prevention programming for underserved communities" [20].

Promotoras are members of their own communities who serve as health program recruiters and educators, using their natural ability to reach others with culturally sensitive approaches, tailoring their methods and messages to meet the special needs of their network of friends and neighbors [21–31]. Further, *promotoras* are more knowledgeable about community resources; they are seen as credible within their own communities; they are able to reach isolated, high risk individuals; and they have a vested interest in addressing local health and social issues, thus providing more integrated support than might outsiders [32,33]. It is this inherent cultural understanding and the face-to-face flexibility brought by the *promotoras* that allow them to promote health messages in ways that parallel the cultural norms. Specifically related to recruitment, *promotoras* are likely more able to reach a wide network of individuals in their communities, promoting innovative ideas and behaviors that fit cultural needs and expectations [34–37], a strategy that may be particularly effective to reach Latinos [25]. In our study, *promotoras* filled these roles, which became critical to the community-based implementation.

While *promotoras* diffuse cultural knowledge and access community connections on a daily basis, advisory boards work in a more concentrated manner to provide a voice for the community. We established a Hispanic community advisory board in the formative stages of the project to establish community connection and leadership in the program. At each step of the way, the Hispanic Advisory Board (HAB) assembled to support our project, contributing ideas and guidance, linkages and access to the community. *Promotora* and HAB involvement are addressed throughout the subsequent discussion of CBPR factors contributing to enrollment of a truly underserved population, detailing their contributions through the steps.

2. Methods

The CBPR-based recruitment strategies we used underscore several aspects of CBPR: a) community involvement in networking and recruitment of sites and b) participants, c) community involvement in project development and, as the program progressed, d) community feedback. (These areas of community involvement are interwoven; separating them into sections is simply a heuristic device to facilitate presentation.)

2.1. CBPR-based recruitment of sites

In the context of the *Juntos* study, a site is a specific place or community-based organization (CBO) that provides access to Latina women. The *Juntos* site recruitment strategy was based on valuable relationships previously built by some participating *promotoras* when they served on a previous project (*Las Mujeres Saludables*), as well as other relationships brought to the project by *promotoras* hired later in the process. Five full-time, bilingual, Latina *promotoras* and several community-familiar interviewers were actively involved in the recruitment of sites, often having had a past history of creating and nurturing key relationships with agencies and community members. For instance, one *Juntos promotora*, a migrant farm worker, had previously fostered community capacity-building by helping start a mobile clinic for migrant farm worker families. She brought networking relationships with clinics and medical staff from those clinics to the *Juntos* project. Another *promotora* had managed a non-profit children's musical program, and so was able to draw on long-standing relationships with schools and apartment communities.

Another major resource for identifying sites to engage in the study was the Hispanic Advisory Board (HAB). From its inception, the *Juntos* project aimed to foster community involvement and thereby ensure cultural sensitivity in every facet of the study, including site recruitment, curriculum, handouts/flyers, and pre- and post-questionnaires. To accomplish this, local professionals, lay community members, and *Juntos* staff converged to form the HAB. This group was comprised of representatives (especially those of Latino background) from various community-based and health organizations, including: staff from clinics serving low-income Hispanics; local project groups contracted to conduct tobacco cessation programs; physicians from the Arizona Latino Medical Association; members from participating churches; and public school personnel. Board members spanned a broad range of expertise, literacy, ages and acculturation levels. The group met monthly in Phoenix (Tucson participants traveled or teleconferenced) in the developmental phases of the project (first 6 months) and then quarterly. Food was provided at meetings to motivate participation and to align with Hispanic cultural norms of taking time to share food and to socialize before attending to tasks [43].

The HAB members either represented sites that could be included in the study, or had connections with other organizations that would be appropriate targets. This group continued to build and maintain relationships with participating community-based organizations, suggesting additional contacts, and gave advice on how to best reach community centers and who to contact.

Juntos recruitment began in January 2004 and continued for 31 months. Each *promotora* on the *Juntos* project served as a conduit for contacting one or more of an initial set of community sites (from their own list or HAB-recommended sites) and then forming connections with leaders and members of those sites. Face to face meetings with site contacts was chosen (after a few failed attempts using introductory letters) as the standard site recruitment strategy and produced brisk recruitment. Present at each site meeting was the health educator on the project and the *promotora* who made the initial contact. Specific recruitment tools included a project announcement and a recruitment packet, consisting of a site information form (used to gather demographic estimates of potential study participants), project summary, project flowchart, and memo of agreement. Key relationships were built with site contacts and these contacts were used in turn to obtain recommendations for new site leaders.

Most critical, then, to the recruitment process, was that the community organizations were engaged in all levels of involvement, so that recruitment was not perceived as an outside staff of recruiters coming in to talk to community

members about a study. Rather, local organizations were seen as directly advocating involvement in the study.

2.2. CBPR involvement in participant recruitment: challenges and responsive strategies

Participant recruitment presented far more difficulties than site recruitment. *Juntos* staff have proposed that one particularly challenging factor was the passing of Arizona Proposition 200 in 2004 [44] requiring that evidence of United States citizenship be presented in numerous contexts, such as prior to voting or receiving public benefits, and requiring officials to report violations. Although the initiative did not apply to study enrollment, it added an element of fear for future participants who were mostly undocumented. Prospective participants were fearful of signing official-looking forms (such as informed consent) and even more afraid to participate in a research project associated with a state university. *Juntos* staff overcame this challenge by training staff to affirm participants that proof of citizenship was not necessary and that our project was in no way affiliated with the state agencies required to report and refuse services to undocumented immigrants.

Despite this challenge, the study achieved recruitment goals through building relationships with women in the community, and adapting to needs. Once a site agreed to participate, the *promotoras* gathered interested Latinas onsite and gave a brief presentation (in Spanish) about participating in a research project to learn about healthy living. They collected contact information from interested women and *Juntos* team members conducted eligibility surveys. Direct involvement with recruitment allowed for immediacy and flexibility that contributed to building relationships. *Promotoras* carried cell phones, providing a valuable direct line of communication for participants who might otherwise have been hard-to-reach or reluctant to contact the project via standard institutional phone lines. *Juntos promotoras* were members of the community and could identify resources to fill community needs, such as low-income clinics in the area in which they could receive Pap smears or mammograms at low-cost. Direct involvement in eligibility screening resulted in opportunities to be flexible with immediate feedback, such as allowing family and friendship networks of women to enroll together. Most sites had non-eligible women (e.g., not due for cancer screening, or not within age limits) who also wanted to participate in *Juntos*. *Promotoras* recommended to allow non-eligible women to participate in small numbers so that friendship circles were not broken and community sites would continue to support the project enthusiastically.

The HAB also played a role in suggesting and refining participant recruitment strategies. For example, the board reviewed a cover letter that was part of the informational packet and suggested including *promotoras*' names and contact information. This was beneficial because it helped continue the community contact, rather than referring individuals to office staff that was disconnected to the community.

2.3. Community involvement in project development: promotora curriculum and training

The cancer prevention education curriculum was built primarily by *promotora* input (created previously by the same staff for *Las Mujeres Saludables*) [41,42]. Program Coordinators further refined training materials with assistance from investigators on the research team, from *promotoras* as representatives of their communities, and from a project-specific HAB. These curricula included training components on general cancer issues (breast, cervical and colorectal cancer risks factors, prevention, and screening), and on generic health promoter skills (such as how to be a good listener, how to provide emotional support). We assume that a quality curriculum aligned to cultural values built a positive reputation in the community for the program, ostensibly supporting site and participant recruitment.

Beyond involving community members in selecting and developing *promotora* training curricula, instruction also focused on increasing *promotoras*' community leadership skills. One of the important elements of CBPR is providing continuing education opportunities to empower community members to grow and develop their career goals. *Promotoras* learned basic leadership skills for building community support for the program, developing alliances with community-based organizations for bringing women into the study, scheduling and time management for their jobs, leadership skills and styles, and principles of research design and implementation. Such training enhanced *promotora* skills for recruitment while it also provided opportunities for personal career advancement, such as attendance at conferences. *Juntos promotoras* were selected to present at the 2005 National Promotora Conference on integrating *promotoras* into community research projects and to share the curriculum they helped to develop.

Promotoras commonly worked among the groups occupying the neighborhoods where they had lived a significant part of their lives (including several Latino regions). Therefore, *promotoras* were already connected to their surrounding resources, such as community centers, clinics, and schools. Indeed, they may have used many of these resources themselves, or have worked or volunteered on site. One result of these connections was a Community Resource Booklet written in both English and Spanish and compiled by *Juntos* staff and HAB members. This booklet contained information about screening and other preventive services available to women in the study areas, including lists of no cost and/or low-cost clinics and providers, as well as domestic violence hotline numbers and support groups for cancer patients should they (or family members) discover they had cancer while in the *Juntos* project.

2.4. Community involvement in feedback during the life of the project

As noted above, the HAB was established to provide concentrated input from community representatives in all aspects of the project to promote direct community involvement and cultural alignment of materials and methods. The HAB reviewed the content of all written materials, including questionnaire construction for critical data collection, educational handouts, teaching methods, and flyers representing the study. HAB members, interfacing with development activities of staff members, addressed translation, readability level, and cultural appropriateness of content throughout the development phases of the *Juntos* project. Materials were

pilot-tested by the HAB and by *promotoras* in their personal social networks. The HAB also evaluated content, as they considered the populations' health-related priorities, decisions, behaviors, and messages.

In terms of community involvement in feedback, *promotoras* and HAB members served as key catalysts in an ever-growing effort to engage community partners, all important voices in the participatory nature of CBPR. Their engagement in the process appeared to not only produce a program with materials that might resonate with participants, but also maintained their involvement and commitment over time such that they continued to build the network necessary for active recruitment.

2.5. Additional CBPR strategies embraced in the Juntos project

CBPR tenets specify that community members and community-based organizations play a direct role in research design and implementation. This project was true to the CBPR orientation in at least three ways that extend beyond those mentioned above. First, community members were brought into the study as partners, not just study participants. *Juntos* staff accomplished this by obtaining support of upper management as well as the majority of site coordinators. Many of the site coordinators were eligible to become participants and enrolled in the study.

Second, community members were connected directly with research strategies and impact. The *Juntos* project worked directly with site coordinators through all aspects of the project and educated them through the recruitment process and intervention. This close contact and education enabled *Juntos* to obtain letters of support from numerous sites. The letters stated that these sites would encourage and assist further work by *Juntos* staff and office representatives. Some letters were used to affirm community support in applying for future funding.

Third, the project provided immediate benefits to study participants (individuals and sites). For instance, in one of the *Juntos* sites, a senior center, the center coordinator embraced the goals of the *Juntos* project and observed healthy behaviors of center members. She informed the center managers about their involvement and benefits of involvement in research; together, they applied and were awarded national senior center accreditation. It is possible that not all of the CBPR-based practices directly supported recruitment, but many of the lasting benefits and relationships built through these methods probably indirectly improved recruitment opportunities.

3. Results

3.1. Site recruitment results

The preliminary list of 42 recruitment sites included elementary and middle schools, churches attended by *Juntos promotoras*, family resource centers, and social service agencies. During the years of recruitment, through continuously asking current contacts to recommend new sites, the site list grew to 110 sites and expanded to include senior centers, Head Start groups, health fairs, circles of friends who met at homes, trailer parks, and apartment complexes. Twenty of these sites participated in multiple waves of recruitment resulting in more than one group (2–3) participating from some sites. A total of 157 groups were recruited from the 110 sites, more than meeting the minimal goal of randomizing 144 groups into the study.

A few *Juntos* recruitment site types are unique to our program. Two of these sites are women's shelters and county and city housing projects. *Juntos* staff recruited at women's shelters through word-of-mouth and personal contact. These sites provide short-term, crisis intervention for women and children. *Juntos promotoras* helped prospective study participants with basic needs, informal counseling, and social support. Once enrolled, women who were no longer using shelter services, found ways (public transportation or taxi) to visit the shelter for the weekly educational intervention.

County and city housing projects represented another unique recruiting site. *Juntos* staff met, separately, with Maricopa County and City of Phoenix management to introduce the research project and to obtain authorization to implement the *Juntos* intervention at various housing establishments in these jurisdictions. The Maricopa County sites only agreed to distribute monthly flyers, which proved to be an ineffective strategy. City of Phoenix Housing administration, in contrast, invited *Juntos* staff to several block-watch meetings and crime-free events to introduce the study. At the meetings, the housing managers introduced *Juntos* staff to interested residents, making the initial meetings more personal and intimate. *Juntos* staff concluded that physical presence and support from the housing managers along with local involvement through community events made recruitment at these sites more productive.

Recruitment goals for the study were exceeded with a broad range of site types, many of which were unconventional sources of recruitment.

3.2. Participant enrollment results

The population reached through CBPR recruitment methods was impressive based both on substantial numbers and severity of disadvantage. In terms of sample size, rolling recruitment resulted in enrollment of 1035 Latina participants from 110 community-based organizations or alternative sites within the Phoenix, Arizona, metropolitan area, with mean age, 38.5 years.

In this section, we discuss the recruitment outcomes of the *Juntos* CBPR effort by characterizing the participants demographic and screening characteristics at baseline and contrasting them with the general Latino population in Arizona to underscore their status as underserved and poor. Table 1 (below) provides comparative data for a number of socioeconomic and screening patterns for Latinos in Arizona. Data were obtained from a variety of sources, sometimes with limitations for which years the data were gathered (e.g., Behavioral Risk Factor Surveillance Survey varies question clusters by state each year, such that endoscopy rates for Hispanics were last obtained in 2004, while other cancer screening rates are reported more recently). The information reported is designed to be examined for general comparative purposes within a similar timeframe, rather than for significance testing.

The majority of study participants were disadvantaged and underserved in terms of limited income, insurance, language,

Table 1
Comparisons of *Juntos* study participant profiles with Arizona Latino population

	Juntos study participants	AZ Latino population
	$n=1035$ [a]	$N=1{,}803{,}378$ (2006) [b]
Socioeconomic status indicators		
Median household income (Arizona)	$10,000–14,999	$40,762 (2003) [c]
% Income below poverty level (2004: <25,210) [d]	83% (<25,000)	44.3% (<$25,000) [e]
% Income below poverty level (2004: <15.670) [d]	57% (<15,000)	16.4% (<$15,000) [e]
%Uninsured	64.7%	43.3% (2006) [f]
Screening rate indicators		
% Pap rate within past 3 years	90.7%	79.7% (2006) [g]
Mammography rate within past 2 years	70.6%	76.8% (2006) [h]
CRC screening— Fecal Occult Blood in past 2 years	5.1%	18.3% (2006) [i]
CRC screening (flex sig or colonoscopy) ever	11.5%	35.4% (2004) [j]

[a] *Juntos en la Salud* baseline survey (data collected 2004–2006, $n=1035$).
[b] http://www.fedstats.gov/qf/states/04000.html (Arizona Latino population, 29.2% of total AZ population, 2006).
[c] http://www.nclr.org/files/31898_file_AZ_final.pdf.
[d] Behavioral Risk Surveillance, Arizona Data for Hispanics: http://apps.nccd.cdc.gov/brfss/race.asp?cat=DE&yr=2006&qkey=2976&state=AZ.
[e] http://apps.nccd.cdc.gov/brfss/race.asp?cat=HC&yr=2006&qkey=868&state=AZ.
[f] http://apps.nccd.cdc.gov/brfss/race.asp?cat=WH&yr=2006&qkey=4426&state=AZ.
[g] http://apps.nccd.cdc.gov/brfss/race.asp?cat=WH&yr=2006&qkey=4421&state=AZ.
[h] http://apps.nccd.cdc.gov/brfss/race.asp?cat=CC&yr=2006&qkey=4424&state=AZ.
[i] http://apps.nccd.cdc.gov/brfss/race.asp?cat=CC&yr=2004&qkey=4425&state=AZ.
[j] Federal Register, Department of Health and Human Services. http://aspe.hhs.gov/poverty/04poverty.shtml Note: $25,210 is 2004 poverty level for family of 6, $15,670, family of 3, for perspective on household incomes reported.

and English skills. U.S. Census data from 2003 estimated mean household income for Latino families in Arizona to be $40,762, while 57% of study participants reported household incomes of less than $15,000 and 83% earned less than $25,000. A preponderance of participants met the Federal Poverty Level (FPL) guidelines, as, in 2004, the federal poverty level established for a family of 6 was $25,210/year (or $15,670/year for a family of 3). While 60.8% of Hispanic Arizonans had health insurance in 2004, and 56.7% were covered in 2006, the majority of *Juntos* participants (64.7%) were uninsured (only 35.3% insured).

All classes in the intervention were delivered in Spanish because most of the women spoke Spanish as their first language; 67.0% reported that they spoke only Spanish and another 23.5% stated that they spoke mostly Spanish and very little English. One-third of *Juntos* participants (33.9%) reported education level of 6th grade or less; 71.3% had not completed high school. (Corresponding data from this time period for Hispanics was not found, so not included for comparison in the table).

Screening rates of this recruited population were lower than the general population of Latinas in Arizona, with the exception of Pap tests. *Juntos* recruits showed high rates of Pap tests, 90.7% ever completing, and 73% within past year. Many women, however, reported that they frequently traveled to Mexico where Pap tests are recommended every 6 months, and that the cost is covered by the national health system, possibly explaining the very high rates. Of women in the study who were 40 years or older, 70.6% had *ever* undergone mammographic screening. Data from the Arizona Behavioral Risk Factor Surveillance Survey for 2006 showed that 76.8% of Latinas in Arizona had received mammography within the past two years. Even more striking patterns are shown for colorectal cancer screening, with much lower rates of fecal occult blood testing and endoscopy among *Juntos* recruits aged 50 or older than among Hispanics of the same age in Arizona for the corresponding years.

4. Discussion

Recruitment of 110 sites, some yielding multiple groups of women eager to join our study, produced more than the goal of 144 randomized groups. A combination of existing social networks among *Promotoras* and HAB members, and continued efforts to identify new and unique places to recruit, produced a rich recruitment base. Even after the end of the recruitment period, several of our participating sites continued to ask for classes to continue or to make recommendations for other sites to tap. It is possible that the relationships developed were as much an effect of the existing networks, as of the efforts to build opportunities for input and ownership in the program among those involved in site recruitment.

Participant recruitment was accomplished within the sites after gaining support from site leaders. *Promotora's* direct involvement and communication with potential recruits allowed for relationship building in both practical and personal ways. Such as in the case of recruitment from women's shelters, *Juntos promotoras* were able to remain flexible, providing essential social support for individuals with limited resources due to poverty, isolation, and/or discrimination.

A testimony to the strength of such flexibility was the robust recruitment despite lack of compensation for study participation. Compensating individuals for their participation has proven successful in recruitment and retention [38–40]. Although the majority of the *Juntos* participants reported very low incomes, and monetary compensation might have logically boosted recruitment, this was not available. Regardless, project evaluations were administered to participants, post-intervention, and monetary payment was never mentioned as a way to improve the project. On the other hand, feedback from participants to our staff indicated that results achieved in *Juntos* participation is attributed to the trust, leadership, and communication skills of the *promotoras.*

Within the framework of community involvement in a number of aspects of the project, *promotoras* and HAB members actively participated in the development and midcourse correction of *promotora* curriculum and training, creation of bilingual local and regional resource guides, and identification of community partners for program implementation and recruitment. Further, the trainings strengthened and honed *promotoras*' ability to act as community leaders. These strategies effectively placed *promotoras* at the top of a cascade of community recruitment and education.

To evaluate the effectiveness of our recruitment strategies as measured against our goal of reaching poor and underserved Latinas, we compared profiles of enrollees to state and county level information available through federal census and state health data. As shown by the enrollee profiles of Latinas compared to the more general Latino population in Arizona, the CBPR methods allowed us to recruit women who were mostly below the federal poverty level and with incomes below the general Latino population in the state or the county. They were predominantly monolingual Spanish speakers, largely uninsured, and with very low levels of education.

This report is limited by the lack of a controlled method of determining the degree to which CBPR methods may have contributed to recruitment of the desired numbers and profile of participants. Further, there is no way to assess if the recruitment results could have been achieved as well through other methods. Nevertheless, we believe that the methods used that involve community and develop ownership is ethically important as well as a potentially useful method for outreach.

5. Conclusion

CBPR methods were applied to recruit and engage a large population of Latinos in our cancer prevention and screening study. *Promotoras* and an advisory board of local lay community members, professionals, and leaders played central roles in building upon established relationships and expanding the network of contacts for recruitment of sites and participants, and helped develop and modify the program to assure community and cultural fit.

The use of CBPR in program design and implementation is as much an ethical imperative, allowing for community members' voice in research and intervention, as it is a means of insuring study effectiveness. While we reported on a wide range of CBPR activities often related to recruitment, local involvement in all *Juntos* phases promoted deeper levels of trust and wider range of relationship building that ultimately supported recruitment goals.

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