Process Evaluation of a *Promotora de Salud* Intervention for Improving Hypertension Outcomes for Latinos Living in a Rural U.S.–Mexico Border Region

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What is This?
Hypertension is a growing public health problem for U.S.–Mexico border Latinos, who commonly experience low levels of awareness, treatment, and control. We report on a process evaluation that assessed the delivery of Corazón por la Vida, a 9-week promotora de salud–led curriculum to help Latinos manage and reduce hypertension risks in two rural/frontier counties in the New Mexico border region. Ninety-six adults participated in the program, delivered in three waves and in three communities. We assessed program delivery and quality, adherence, exposure, and participant responsiveness. Participant outcome measures included self-reported eating and physical activities and assessment of community resources. Findings suggest that the program was fully delivered (99%) and that most participants (81.7%) were very satisfied with the educational sessions. The average participant attendance for educational sessions was 77.47%. We found significant differences in self-reported behavioral changes depending on the number of sessions completed: The higher the dose of sessions, the better the self-reported outcomes. These findings suggest that a promotora-led curriculum may be useful for promoting self-management of chronic disease in rural/frontier border Latino populations. Future evaluation should focus on training and implementation adaptations within evidence-based chronic disease programs for diverse Latino communities.

**Keywords:** Latino; promotoras de salud; process evaluation; rural health; border health; hypertension

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INTRODUCTION

According to the Institute of Medicine (2010), nearly one in three adults in the United States has hypertension, making it a growing public health problem and societal burden. Hypertension is a strong independent risk factor for heart disease and stroke and a predictor of disability and premature death from cardiovascular complications.

National and local programs to increase hypertension awareness, treatment, and control have been well disseminated in the general population (Centers for Disease Control & Prevention, 2011). However, Latinos remain a neglected subgroup, even as we observe an upward trend in hypertension prevalence rates for Latino populations (Escarce, Morales, & Rumbaut, 2006). Between 1988 and 2008, hypertension rates in Latino adults aged older than 18 years increased from 5.2% to 13.5% (Egan, Zhao, & Axon, 2010).

Increased rates of hypertension in Latino populations (e.g., Mexican Americans, Puerto Ricans) is further characterized by low levels of awareness, treatment, and control compared to African Americans and non-Hispanic Whites (Hicks, Shaykevich, Bates, & Ayanian, 2005). Other factors associated with increased hypertension risks among Latino adults include gender, age, migration/acculturation, and socioeconomic position. For instance, research demonstrates that adult Latino women tend to suffer from hypertension at significantly younger ages and to have factors associated with a significant increase in risk for related health outcomes, such as heart failure, stroke, and diabetes (Cooper-DeHoff et al., 2007; Lisabeth, Smith, Sanchez, & Brown, 2008).

Latinos also face substantial socioeconomic adversity, have the highest rates of uninsurance, and experience inadequate access to health care (Taylor, Lopez, Velasco, & Motel, 2012). Given that Latinos are the fastest growing racial/ethnic minority group in the United States, overlooking their health profile will have an adverse population health impact.

These factors have stimulated interest in intervention research for diverse Latino populations. Health researchers have either adapted mainstream interventions by incorporating culturally relevant material or developed culturally specific interventions to meet minority populations needs (Balcazar, Alvarado, & Ortiz, 2011; Elder et al., 2005; Resnicow, Soler, Braithwaite, Ahiuwalia, & Butler, 2000; Rocha-Goldberg et al., 2010; Staten, Scheu, Bronson, Peña, & Elenes, 2005).

One such culturally centered program is Salud para su Corazón (SPSC), sponsored by the National Heart, Lung, and Blood Institute and the Office of Research on Minority Health at the National Institutes of Health. This evidence-based program relies on promotoras de salud, or community health workers, to provide Latino individuals, families, and communities with tools and strategies to promote heart health (Balcazar, Alvarado, Hollen, Gonzalez-Cruz, & Pedregón, 2005).

Promotoras play a central role in linking vulnerable populations with social and medical services and supports. The effectiveness of promotoras is attributed to their multiple roles: health educator, trusted advisor, advocate, and role model (Andrews, Felton, Wewers, & Heath, 2004). They are viewed as cultural brokers or intermediaries for marginalized or underserved communities experiencing barriers to resources (healthy food, medical services, health insurance, geographic accessibility, protection from environmental exposures; Rhodes, Foley, Zometa, & Bloom, 2007). Research shows that promotora interventions have been effective in reducing cardiovascular risk factors for Latino populations living along the U.S.–Mexico border (Balcazar, Alvarado, Cantu, Pedregon, & Fulwood, 2009; Balcazar et al., 2005; Balcazar et al., 2010).

In 2010, University of New Mexico researchers and a rural community health center (CHC) joined together to conduct a study to compare the effectiveness of primary care treatment alone with primary care plus promotora-based intervention for Latinos living with hypertension in two rural counties in the border region. The CHC has established trust with the Latino communities it serves and has a history of collaborating with the university. The University of New Mexico Human Review Research Committee, Health Sciences Center, approved the study.

We integrated the SPSC model (Balcazar, Alvarado, & Ortiz, 2011) into the promotora de salud educational component of our 18-month study. This article reports on the process evaluation component of our study, Corazón por la Vida (CPLV).

METHOD

Program Description

CPLV followed SPSC’s 9-week curriculum, Su Corazón, Su Vida (SCSV), a promotora-led educational intervention that uses various didactic and experiential approaches and culturally relevant materials, delivered in Spanish and English. The modules included the following: (a) Are You at Risk for Heart Disease? (b) Act in Time to Heart Attack Signs; (c) Say Yes to Physical Activity; (d) Help Your Heart: Control Your Blood Pressure; (e) Emotional Health and Well-Being; (f) Keep Your Heart in Mind: Aim for a Healthy Weight; Make Heart-Healthy Eating a Family Affair;
(g) Eat in a Heart-Healthy Way—Even When Time or Money Is Tight; (g) Medication Control/Management; (i) Review and Graduation.

The curriculum is designed to facilitate participants’ active engagement in managing hypertension. SCSV draws from social support and social cognitive theories (Bandura, 2004; Heaney & Israel, 2008). Promotoras working in pairs followed detailed lessons in the SCSV manual to conduct weekly group sessions and reviewed and emphasized the concepts during home visits. We renamed SCSV to CPLV when we added an evidence-based mental health session and a managing your medicines session to the initial hypertension curriculum (Lorig et al., 2012). The intervention was delivered to small groups of 10 to 15 individuals in three rural/frontier communities between January and August 2011.

The CHC identified and hired six female promotoras to work with CPLV. Because it was important that the promotoras be familiar with the diverse cultures of the New Mexico-Mexico border region, all were recruited from the surrounding areas. Three were Hispanic White and three were non-Hispanic White; three were bilingual in English and Spanish. None had prior community health worker or promotora experience. Two promotoras had been high school teachers, one had worked as a dental assistant with the CHC, one owned a business, and the last volunteered in a church and nearby schools.

Two promotoras and one CHC staff member were trained by two veteran promotoras who followed a 2-day Train-the-Trainer protocol, detailed in the SCSV manual (Balcazar, Byrd, Ortiz, Tondapu, & Chavez, 2009) and designed to increase promotora knowledge about risk factors for heart disease, strategies for adopting positive attitudes toward healthy behavioral and lifestyle changes, and procedures for taking basic clinical measures. The trainers also offered techniques for successfully engaging participants and overcoming resistance to behavior and lifestyle changes.

Given that the key tasks of the promotoras were to create a supportive learning environment and emphasize strengthening social relationships, social support strategies were reinforced throughout the 2-day training. These strategies were instrumental (helping participants access health services and navigate eligibility, benefits, and financing options), informational or educational, and appraisal related (helping individuals self-evaluate their behaviors related to diet and physical activity; Berkman, 1995; Heaney & Israel, 2008).

The first two promotoras and CHC staff trained four additional promotoras and oriented them to the educational material, activities, and group discussion from the SCSV curriculum. Over the course of the intervention, CHC staff held biweekly supervisory conference calls with the promotoras.

**Setting**

The study took place in three communities (in two counties) in a rural, sparsely populated area in southern New Mexico on the frontier of Mexico. Mountain Ville County has a population of 29,514 and 7.4 persons per square mile; neighboring Flatlands County has a population of 4,894, with 1.4 persons per square mile (U.S. Census Bureau, 2012). Unemployment in the region ranges from 8.3% in Mountain Ville County to 6.6% in Flatlands County to above 20% in neighboring counties. Gold City, the largest town in Mountain Ville County, has a population of 10,545 people and a median income of $25,881. Bravo and Leggtown, smaller frontier towns in Flatlands County, have 2,000 to 3,400 residents, are majority Latino (48.3% and 56.6%, respectively), and have a median household income of $21,036.

**Recruitment**

The CHC sent an invitation letter to 920 adult Hispanic patients who met eligibility criteria (hypertension, excluding comorbidities of substance abuse and diabetes). The promotoras sent a follow-up letter and made a follow-up telephone call. In all, 128 patients (64 female, 64 male) consented to participate in the promotora-led intervention. We recruited and enrolled participants in three waves: Wave 1 (January), Wave 2 (March), and Wave 3 (June). Data were collected over the three waves. A total of 115 participants enrolled in the education component. Of these, 96 completed at least one of the nine educational sessions and were included in the process evaluation.

**Process Measures**

Process evaluation is the assessment of the integrity of program implementation, or the extent to which the program was delivered as intended (Steckler & Linnan, 2002). Prior process evaluation of SPSC included tracking sessions and promotoras’ testimonials/diaries about their experiences (Balcazar et al., 2006). Although promotoras conducted home visits over the 9 weeks of class sessions, we only collected data on the number of home visits. Four questions guided instrument development to assess implementation of the group educational intervention:
1. Were the sessions implemented as designed?
2. Was the curriculum fully implemented?
3. What was the quality of delivery?
4. How many sessions did participants complete?

University researchers and CHC partners reviewed data collection protocols with the promotoras prior to implementation of the educational sessions. Participants completed forms in English or Spanish. We created and implemented four process evaluation measures for the study’s group education component.

Adherence was the number of sessions completed by each promotora. Each promotora completed a tracking form to record sessions taught; length (30-60 minutes, 61-90 minutes, 91 minutes) and portion of written curriculum covered (1 = none, 2 = some, 3 = most, 4 = all).

Quality of delivery measures included the following: (a) the promotoras’ evaluation of participant satisfaction after each session (1 = couldn’t tell, 2 = very dissatisfied, 3 = not satisfied, 4 = somewhat satisfied, 5 = very satisfied) and (b) observations conducted by research staff. Observers followed the core outline of the curriculum and rated the promotoras’ delivery of the curriculum (i.e., weekly pledge review and setting the session agenda and objectives (1 = no, 2 = sometimes, 3 = often, 4 = always). The weekly pledge, or personal objective, check-in was built into the curriculum as a way for the promotoras to help participants assess progress and maintain or reestablish their commitment to behavior change objectives. Observers used the same metrics as promotoras to note length of session and portion of curriculum covered.

Participant responsiveness was the participants’ satisfaction with the content and delivery of CPLV. Participants rated their level of satisfaction with each promotora’s delivery, how well the promotora explained concepts, and their confidence in using the information/skills taught in the session. Participants were also asked to comment on what was helpful and what would have helped them more.

Dosage was the number of sessions participants completed. Levels of dosage were defined as low (one to five sessions), medium (six to eight sessions), high (nine sessions). Participants signed in at each session.

Relationship of Dosage to Outcome Variables

We also examined the association of process measures to participant outcomes. We selected participant dosage to determine whether higher attendance was associated with better participant outcomes and used participant self-reported changes collected as part of the main research project.

The My Habits questionnaire was developed to evaluate short-term changes in participants completing the SCSV educational intervention (Balcazar et al., 2010). The questionnaire includes subscales of self-reported salt/sodium use, cholesterol and fat consumption, and weight control. Previous studies reported reliabilities of >.70 (Cronbach’s $\alpha$) for My Habits (Balcazar et al., 2010). We also asked participants to assess intention to change and identify their perceptions of personal and community resources that influenced their ability to manage their hypertension (e.g., cost of food, family caretaking, access to walking trails and gyms, safety concerns).

My Habits, intention to change, and community resource assessments were administered at four time points: prior to the educational sessions (baseline), immediately postintervention, and at 3- and 6-month follow-ups. For the present analysis, we used data from the baseline and 3-month follow-up to assess self-reported changes for participants across all three waves, allowing us to measure changes in nutrition, physical activity, and perceptions of community resources. We included personal and community resources because they are enabling factors for chronic disease management.

We conducted a factor analysis of the full survey to validate the My Habits questionnaire and to create indices of the questionnaire constructs (Blalock, 1970). The benefits of measured reliability of longer subscales were weighed against the respondent burden of the full questionnaire. The subscales of this questionnaire demonstrated reasonable internal consistency as measured by Cronbach’s $\alpha$ (Nunnally & Bernstein, 1994). Salt and sodium intake behaviors (10 items; Cronbach’s $\alpha$ = .693) were used to assess reductions in salt use and products with excess sodium. Cholesterol and fat intake (10 items; Cronbach’s $\alpha$ = .823) was used to evaluate changes in reported behaviors related to removing fat during food preparation and substituting low-fat foods. Weight control (5 items; Cronbach’s $\alpha$ = .618) was used to assess behavioral change for portion control and caloric intake. Total readiness to change (7 items; Cronbach’s $\alpha$ = .723) was a composite measure on dietary change and physical activity. Perceived availability of community resources (5 items; Cronbach’s $\alpha$ = .804) assessed attitudinal change around the food and built environments related to diet and exercise. Several of the 1- to 2-item scales within the total readiness to change category were separately evaluated. These readiness questions were specific to exercise, fruit and vegetable intake, fat consumption, and salt/sodium consumption. Although the current study reports on the process evaluation component, the larger study included participants’ clinical outcomes.
Participants

All participants were Latino. Ninety-six (66 female, or 68.75%; 30 male, or 31.25%) completed at least one of the nine promotora-led educational sessions and were included in the current analysis. Participants’ mean age was 58.9 years (range 25-75 years); 58% were married; and 69.79% reported an annual income of less than $30,000. All 115 participants completed the baseline survey. We did not include data from the 19 individuals who did not attend any classes.

CPLV was delivered in three communities across three waves. Seventy-six (79.17%) of the 96 participants self-identified as English speaking and 20 (20.83%) as Spanish speaking. Of the 11 groups across the three sites, 9 (82%) were taught in English.

Process Measures

Adherence. The promotoras reported teaching all sessions for each of the groups they led (11 groups × 9 sessions = 99 sessions). Of the 99 sessions, 76 (77%) were completed in 61 to 90 minutes, 17 (17%) in ≥91 minutes, and 6 (6%) in 31-60 minutes. They reported teaching 100% of the content for 95 of the 99 sessions.

Quality. The promotoras’ evaluation of participant satisfaction was uniformly high. Of the 99 sessions taught, promotoras reported that participants were very satisfied with 81 (81.82%) of the sessions and somewhat satisfied with 17 sessions (17.7%). There were no reports of dissatisfaction.

In addition to promotoras’ reports, university researchers observed and rated eight class sessions (one each in Waves 1 and 2, six in Wave 3). We compared these observations to promotoras’ ratings for the same sessions (Table 1). Observer/promotora reports were in agreement in two of the eight sessions observed. University observers also noted if promotoras completed key sections for each session (i.e., session introduction and agenda; pledge [behavioral objective] review). Observation data show that promotoras included introduction/agenda reviews for six of the eight sessions observed and pledge (weekly objective) reviews for three of the eight sessions.

RESULTS

Participants

All participants were Latino. Ninety-six (66 female, or 68.75%; 30 male, or 31.25%) completed at least one of the nine promotora-led educational sessions and were included in the current analysis. Participants’ mean age was 58.9 years (range 25-75 years); 58% were married; and 69.79% reported an annual income of less than $30,000. All 115 participants completed the baseline survey. We did not include data from the 19 individuals who did not attend any classes.

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Participant Responsiveness

Participant responsiveness data collection varied across waves. Response rates for Waves 1 and 2 were low, a total of 9 completed forms (3.57% and 0%, respectively). In Wave 3, we received 260 out of a possible 495 responses (52.53%). Of the “missing” 235 possible responses, 124 represented participants who attended sessions but for whom we did not receive data (25.05%) and 111 (22.42%) were due to absenteeism.

Of the total 260 participant responsiveness forms completed, scores for the CPLV educational sessions were uniformly high: 97% said they were satisfied/highly satisfied with the class sessions; 97.83% were satisfied/highly satisfied with the promotoras’ explanations of concepts; and 92.78% reported high confidence in their ability to use the information and skills.

Dosage. The average participant attendance for the CPLV educational sessions was 77.47%, with a range of 1 (11%) to 9 (100%). Average attendance for female participants was 78.77% and for males, 79.31%.

Relationship of Dosage to Outcome Variables. We selected dosage to measure effects of the intervention. We found significant differences in self-reported outcomes: The higher the dose, the better the self-reported outcomes. Tables 2, 3, and 4 present results of medium and high dosage with immediate self-reported outcomes. When compared to the reference group (low dosage; Table 2), there was a significant and increasing effect in moving from medium to high dosage, where both self-reported salt and sodium intake (0.432 and 0.552, \( p < .01 \)) and cholesterol and fat intake (0.431 and 0.720, \( p < .01 \)) decreased. When dosage increased, we observed an increase in total readiness for diet and exercise change (0.563 and 0.635, \( p < .01 \)). There were no statistically significant measurable changes in the

<table>
<thead>
<tr>
<th>TABLE 2</th>
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<tbody>
<tr>
<td>Correlation Between Dosage and Participants’ Self-Reported Behaviors</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dosage, Coefficient (Standard Error)</th>
<th>Salt and Sodium</th>
<th>Cholesterol and Fat</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Reference</td>
<td>Reference</td>
<td>Reference</td>
</tr>
<tr>
<td>Medium</td>
<td>.432** (.177)</td>
<td>.431** (.214)</td>
<td>.124 (.222)</td>
</tr>
<tr>
<td>High</td>
<td>.552*** (.190)</td>
<td>.720*** (.229)</td>
<td>.355 (.238)</td>
</tr>
<tr>
<td>( n )</td>
<td>79</td>
<td>79</td>
<td>79</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>.154</td>
<td>.234</td>
<td>.195</td>
</tr>
</tbody>
</table>

NOTE: Controlled for gender, age, language, insurance type, and wave.
** \( p < .05 \). *** \( p < .01 \).

<table>
<thead>
<tr>
<th>TABLE 3</th>
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<tbody>
<tr>
<td>Correlation Between Dosage and Participants’ Readiness to Change</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dosage, Coefficient (Standard Error)</th>
<th>Total Readiness</th>
<th>Exercise Readiness</th>
<th>Fruits and Vegetables Readiness</th>
<th>Intention to Reduce Fat in Diet</th>
<th>Salt and Sodium Readiness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Reference</td>
<td>Reference</td>
<td>Reference</td>
<td>Reference</td>
<td>Reference</td>
</tr>
<tr>
<td>Medium</td>
<td>.563** (.225)</td>
<td>−.338 (.270)</td>
<td>.400 (.328)</td>
<td>.874** (.360)</td>
<td>.582** (.244)</td>
</tr>
<tr>
<td>High</td>
<td>.635** (.242)</td>
<td>−.0524 (.290)</td>
<td>.452 (.349)</td>
<td>.832** (.386)</td>
<td>.606** (.240)</td>
</tr>
<tr>
<td>( n )</td>
<td>79</td>
<td>79</td>
<td>78</td>
<td>79</td>
<td>79</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>.158</td>
<td>.253</td>
<td>.110</td>
<td>.142</td>
<td>.172</td>
</tr>
</tbody>
</table>

NOTE: Controlled for gender, age, language, insurance type, and wave.
** \( p < .05 \). *** \( p < .01 \).
weight management measures. Questions on readiness for change were measures of agreement for intent to change behavior with respect to fruit and vegetable intake, fat consumption and dietary salt and sodium consumption. The results for total readiness (Table 3) were heavily influenced by the multiplicative effects of readiness to reduce fat, reduce salt and sodium, and make dietary changes. Total readiness to change showed improvement relative to dose (0.563 and 0.635, \( p < .01 \)), which appears to be largely driven by intents to improve fat and cholesterol intake (0.874 and 0.832, \( p < .01 \)) and salt and sodium (0.582 and 0.606, \( p < .01 \)).

Community resources measures (Table 4) include environmental challenges to improving health behaviors (e.g., food costs, no access to gyms). The measure for community resources represented an average agreement for the difficulty to manage due to community resources. For community resources, there was no significant effect at the medium dosage, but there was a strong effect (.486, \( p < .01 \)) at the high dosage.

### DISCUSSION

We used process measures to not only assess how well CPLV was implemented but also answer if greater implementation was associated with better participant outcomes. Although there were no significant findings in the exercise and fruit and vegetable readiness factors, we learned from participants of barriers to nutritious and affordable food and lack of recreational options. These barriers suggest that curriculum content be coupled with environmental support in future adaptations of CPLV.

The process data also indicate that CPLV was implemented as intended: Promotoras completed all sessions; participants were satisfied with the intervention; and higher dose was associated with better self-reported outcomes. Of the participant responsiveness forms completed, over 90% were uniformly positive; however, about a quarter were not completed in Wave 3, for unknown reasons.

The observation data showed differences between observer and promotoras’ ratings and prompted university partners to further explore with promotoras their reflections on their implementation of CPLV. We met with the promotoras postintervention to discuss what adaptations, if any, they had made in the CPLV process and content and why. Initially, promotoras reported that they had not made changes program delivery or content: They copied curriculum text directly onto PowerPoint slides and used these slides to lead sessions. However, during more in-depth discussions, the promotoras described four types of changes they made over the course of the intervention:

1. Changed session order (e.g., medication and diabetes sessions)
2. Combined sessions (e.g., salt and cholesterol sessions)
3. Augmented materials (e.g., DASH [dietary approaches to stop hypertension] diet information, Spanish web video on heart attacks, online sodium tracker)
4. Modified or deleted some activities (e.g., did not conduct grocery store tours uniformly)

The rationales given were that these changes could improve the curriculum structure and enhance the age appropriateness and cultural relevance of the sessions for the participants. The changes described represent more than surface changes to the intervention. Each is what others have described as “yellow or red light” changes, which can influence intervention fidelity and are highly discouraged when assessing program fidelity and participant outcomes (Hannah, McCarthy, & Chinman, 2011). Yet these changes did not appear to negatively influence outcomes. As demonstrated in this study, what may have been even more important in delivery and acceptance of the CPLV intervention was that the promotoras had lived in these communities for a long time and knew local cultural beliefs and practices. They had firsthand knowledge of the strengths and challenges that participants faced daily in managing their chronic conditions. In sum, as intervention researchers work with rural/frontier communities, it is

<table>
<thead>
<tr>
<th>Dosage, Coefficient (Standard Error)</th>
<th>Perceived Availability of Community Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Reference</td>
</tr>
<tr>
<td>Medium</td>
<td>.186 (.213)</td>
</tr>
<tr>
<td>High</td>
<td>.486** (.226)</td>
</tr>
<tr>
<td>( n )</td>
<td>78</td>
</tr>
<tr>
<td>( R^2 )</td>
<td>.271</td>
</tr>
</tbody>
</table>

NOTE: Controlled for gender, age, language, insurance type, and wave.

\(*p < .05. **p < .01. ***p < .001.\)
important to emphasize and value the strength and influence of community connections and personal relationships.

**Limitations**

The CPLV process evaluation had several limitations. University partners had little direct control over the collection of process data, given the distance between the university and the study site (a 4½-hour drive). In addition, the multiple study sites, with an hour-long travel time between them, posed challenges for the on-site research coordinator to collect process data; we thus relied on promotoras to collect process data, except for observation data. Data collection was an added burden to the promotoras’ multiple roles (educator/facilitator/social support/home visitor) and may have caused loss of participant responsiveness data (the response rate was less than 50% over the study). Given additional time and resources, we would increase the number of observations and conduct participant interviews to enhance the overall process evaluation beyond participant satisfaction. Additionally, we did not include data from the 19 individuals who did not attend any of the sessions. The promotoras reported that individuals’ shared reasons for not participating included transportation barriers, work conflicts, and family obligations. Although we were unable to directly observe home visits, the majority of participants (89.6%) completed at least three of four home visits. However, even with these limitations, participant outcomes trended in the positive direction. In addition, the study provided multiple opportunities to assess implementation quality and responsiveness, which can inform the next stages of our work in rural/frontier communities.

**CONCLUSION**

A national research agenda should examine community-centered approaches for ensuring effective interventions across heterogeneous Latino populations. Our study adds to the growing body of research about how and under what conditions public health interventions are effective in reaching remote rural/frontier Latino populations in the United States. Such research is necessary because of the rising prevalence rates of hypertension and related heart and chronic conditions, like diabetes and obesity. Further research is needed to understand if the negative impacts from “yellow or red light” changes in interventions are minimized if there is a strong cultural congruence between the promotoras and participants. Given the success of this study, further research should explore how promotoras can effectively be fully integrated into community-centered services, such as medical homes, for rural, undeserved, and racially diverse ethnic minority populations (Bolin, Gamm, Vest, Edwardson, & Miller, 2011). By integrating promotoras into the health team, rural and frontier health centers will be able to reach our nations’ most remote and medically underserved populations.

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