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A Prospective Randomized Controlled Trial of an Interpersonal Violence Prevention Program With a Mexican American Community

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Abstract

Using methods of community-based participatory research, a prospective randomized controlled trial of a violence prevention program based on Latino cultural values was implemented with elementary school children in a Mexican American community. Community members participated in intervention program selection, implementation, and data collection. High-risk students who participated in the program had greater nonviolent self-efficacy and demonstrated greater endorsement of program values than did high-risk students in the control group. This collaborative partnership was able to combine community-based participatory research with a rigorous study design and provide sustained benefit to community partners.

Keywords

community-based participatory research; Latino youth; primary prevention; violence prevention

EL JOVEN NOBLE

Interpersonal violence manifestsf itself in multiple forms, including physical assault, gang activities, dating violence, intimate partner abuse, sexual assault, and child abuse. Perpetrators, victims, their families, and the community suffer short- and long-term consequences of interpersonal violence. Historically, the healthcare system has responded to interpersonal violence with tertiary prevention programs that provide treatment for physical and mental health sequelae.[1,2] More recently, emphasis has been placed on secondary and primary prevention programs. Although secondary prevention programs screen and identify those at risk for interpersonal violence,[3,4] a general consensus exists that primary prevention programs that prevent a condition from occurring before risk behaviors are exhibited provide a more cost-effective alternative.[5] Of necessity, such programs occur not in clinical settings but in the community. Interventions in the community require skills in cultural

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competence, familiarity with community norms and resources, and an ability to consider nontraditional solutions to research problems.

Community-based participatory research (CBPR) provides a methodology to engage groups and communities in the design, implementation, and evaluation of their own primary prevention programs. CBPR emerged as an approach to address health disparities associated with social, political, and economic issues such as poverty, inadequate housing, unemployment, racism, and lack of access to resources necessary to maintain health.[6] CBPR projects unite academic researchers and communities in the common goal of addressing community-identified needs and health problems through a process of sharing power, establishing trust, fostering co-learning, enhancing strengths, and ultimately building community capacity.

VIOLENCE AND LATINO COMMUNITIES

Interpersonal violence disproportionately affects youth living in Latino communities in the United States.[7] Homicide is the leading cause of death among young Latino males and occurs at 6 times the rate for young non-Latino White males.[7] Young Latino males are also twice as likely to suffer a firearm-related injury and to be the victims of a violent crime in their own neighborhood than are non-Latino White males.[8,9]

Various risk factors for interpersonal violence have been documented, including community residence, poverty, victimization, the availability of firearms, substance use, and limited access to physical and mental health services.[10,11] A systematic review of the effectiveness of interventions to prevent youth violence identified 2 successful randomized control trials of primary prevention programs.[12] The 12-session “Responding in Peaceful and Positive Ways” program improved conflict resolution skills among seventh-grade students in ethnically diverse rural communities. Significant differences were also found on knowledge of the intervention material, attitudes about violence, and aggressive behaviors.[13] The 12-session “Aban Aya Youth Project” used a 4-year social development curriculum with 552 African American youth. Program effects were seen only for boys.[14] No programs were identified that incorporated values or conditions present in Latino communities or that used CBPR methods.

This article describes the student outcomes of *Familias en Accíon*, a CBPR project that scientifically tested a culturally specific violence prevention program with elementary school children and their families in a predominantly Mexican American community in South Texas.

HOW CBPR GUIDED *FAMILIAS EN ACCIóN*

Familias en Accíon was guided by CBPR principles that linked academic researchers and community members in a paradigm of collaboration and shared power. Considering CBPR as (1) an *approach* to social investigation, the investigators worked with the community using standard research techniques to evaluate processes and answer research questions; (2) a community *education* tool, academic researchers and community members worked together to design, implement, and evaluate a community intervention on the mutually

agreed upon topic of violence prevention; and (3) a way to take *action*, academics worked with community members to address health disparities and change social conditions that facilitate the perpetuation of health problems.

In October 2005, during the first *Familias en Accíon* meeting between academic researchers, community residents, and local school district representatives, the researchers immediately discovered that the community had already set violence as a priority issue. In 1996, the community and school district members had formed SUAVE (**S**outhside **U**nited **A**gainst a **V**iolent **E**nvironment). They had joined together after suffering the deaths of children from the wave of violence that was sweeping throughout the United States and that was affecting their local community. Community members were concerned with the growing influence of violent gangs in their neighborhoods. At this initial meeting, the community members quickly identified key stakeholders that should be included in the project.

To collaboratively design, implement, and evaluate the project in alignment with the principles of CBPR, a community advisory board, the *Familias en Accíon* Community Collaborative Council (CCC), was formed. The CCC included community members, representatives from local community-based organizations, local school district teachers, administrators, social workers, and the academic research team. The issue of how decisions were to be made became an early discussion item. The CCC chose to make decisions by consensus vote. The academic partners agreed to have voice but no vote. This contributed to creating a positive environment of respectful trust for the shared wisdom of the community.

The commitment to the funding agency, the National Institute of Nursing Research, included conducting a primary violence prevention research project with elementary school children. The curriculum was to be chosen by the community. The CCC developed the process for selecting the curriculum. A special meeting was held at which the CCC had presentations made about 3 curricula, with extensive discussion about the relevance of each for their community. Through this process, the CCC chose *El Joven Noble* as a primary prevention program for interpersonal violence. Reasons cited for selecting the program were that members felt it was the most novel program, the one most likely to be effective with “tougher” students, and culturally relevant to their Latino community.

El Joven Noble was originally developed and implemented with high-risk males in predominantly Latino settings in California (J. Tello, unpublished data, 2003). For this project and community, it was adapted for implementation by the American Indians in Texas at the Spanish Colonial Missions. Curriculum materials were expanded to include locally relevant history and teachings.

When it became evident that the initial proposal plan to have elementary school teachers implement the intervention program during school hours was not feasible, members of the CCC problem solved and decided to be trained to implement *El Joven Noble* in the district elementary school after-school programs. In the summer of 2006, 20 community members, school district administrators, and social workers were trained to implement the curriculum. During the fall of 2006 and spring of 2007, 5 community members co-facilitated the implementation of the program with experienced *El Joven Noble* facilitators.

Commitment to the funding agency also included conducting a series of community events as part of the intervention. After the CCC members had had a positive experience in their *El Joven Noble* training, they chose to use the parent companion curriculum, *Cara y Coraźon*, and conduct monthly family retreats as the community events.

THEORETICAL FRAMEWORK

Gendered social bond theory (GSBT) provides an explanatory model for the perpetration of interpersonal violence that is consistent with the philosophical underpinnings of CBPR in that both presuppose that interpersonal violence is a societal problem that is best solved by approaches that build on the strengths of communities. Traditional social bond theory frames youth violence as a form of delinquency in which teens fail to form a social bond to society.[15] Although drawing on traditional elements of social bond theory, GSBT takes a critical feminist perspective and suggests that the development of a social bond to conventional society actually promotes violence because many societal institutions in the United States "are patriarchal and part of rape culture" and support and reward "a hypermasculine culture" that encourages the use of coercion and force.[16] GSBT, unlike traditional social bond theory, does not presuppose that perpetrators of violence are deviant but rather that violent and abusive behaviors are learned. Children and youth who become violent have been raised in a social environment that teaches that violence and abuse are legitimate behaviors.[16] Individuals who are successful in developing strong bonds with conventional social institutions that directly or indirectly support attitudes of gender inequality and male privilege are thus influenced toward violence. Male privilege and hypermasculinity that lead to violence are supported by many American institutions. Children engage in violence because they have bonded to a society that teaches and reinforces disrespectful and violent ways of interacting.

El Joven Noble can be conceptualized as a GSBT-driven intervention that prevents violence by facilitating the development of a strong social bond to a gender-equitable and nonviolent cultural identity. It replaces violence-provoking norms and attitudes with a set of beliefs that support harmony, balance, and responsibility in all relationships. It serves as a violence prevention program because it challenges the current stereotypical violent gender norms and belief systems that youth are exposed to and are learning from their peers, their family, their community, and American society at large. *El Joven Noble* modifies the image of a stereotypical "macho" man to one that has more depth and various strategies to deal with conflict that exists in the world. The program creates an environment and opportunity for youth to realize that they are in relationships with interdependent responsibilities and that they must learn to engage each other in positive ways. To reinforce curriculum content and provide potential opportunities for involving elementary school children with their parents and other family members, monthly retreats using *Cara y Coraźon* program were organized. Emphasizing healing, this curriculum is based on the recognition that many pain-ridden youth are carrying not only their own injuries but also those of their parents, grandparents, and ancestors. If parents are not given the opportunity to heal and balance past pain, they will continue to unintentionally pass on their injuries to their children, their intimate partners, and their communities.

Both *El Joven Noble* and *Cara y Coraźon* include 4 program elements—*Conocimiento* (acknowledgment), *Entendimiento* (understanding), *Integracíon* (integration), and *Movimiento* (movement)—and are designed to include physical, emotional, mental, and spiritual aspects related to individual, family, and community facets of life. Intervention activities are informed by traditional indigenous teachings, based on culturally rooted concepts, and stress the values necessary to build and maintain harmonious and balanced relationships. The core relationship values are *respeto* (respect), *dignidad* (dignity), *confianza* (trust), and *cariño* (love). The facilitation is based on the use of an *espejo* (mirror) process of teaching the use of strategies such as storytelling, reflection, and guidance. The role of the facilitator is to be a teacher, guide, role model, and nurturer. Facilitators were trained to present material in light of personal experiences rather than dogmatic theory.

METHODS

Study design

A prospective randomized controlled design was used to examine the effects of participation in *El Joven Noble* on violence-related attitudes among third-, fourth-, and fifth-grade students at the 14 elementary schools of the participating school district. Randomization occurred at the school level. Students from the 7 intervention schools participated in *El Joven Noble* in year 1, and students from the 7 delayed-entry control group schools received the intervention in year 2. The 10-session *El Joven Noble* curriculum was implemented weekly during an existing district-wide afterschool program. Institutional review board (IRB) approval was obtained from the 2 academic institutions of the investigators. All intervention staff and community data collectors participated in IRB training.

Participant selection and recruitment

Because this was a longitudinal study design, we based our sample size on that suggested by Hedeker and colleagues,[17] using a small effect size. Participants were recruited by intervention staff and members of the CCC by speaking to parents about the program as they enrolled their children to the after-school program. Consent/assent forms, available in both English and Spanish, were signed by all parents and students who participated.

Data collection

Data was collected at baseline, immediate post and 3-months post intervention. Pre- and immediate postprogram data were collected through self-administered questionnaires proctored by program staff and community data collectors during the after-school program. Three-month postintervention data were collected by community data collectors at the participants' homes.

Measurements

The instruments used to measure the 4 program outcome variables and the criteria used to categorize a student as high risk are described as follows:

- *Attitude about gangs*—5 items (It is cool to be in a gang, You are safer if you are in a gang, You will probably get hurt or killed if you join a gang, You will probably

get into trouble if you join a gang, and I will probably join a gang), α = .87, and a true/false response option with possible scores of 5–10; higher scores indicated less positive attitudes about gangs.[18]

- *Nonviolence self-efficacy*—4 items adapted from Bosworth and Espelage (unpublished data, 1995) (I can stay out of fights, I can calm down when I am mad, I can understand another person's point of view, and I can learn to stay out of fights), α = .68, and a true/false response option with possible scores of 4–8; higher scores indicated greater self-efficacy.
- *Program values 1*—6 items developed from intervention content (It is important for a person to keep their word, take responsibility for their actions, not hurt others, be a positive example for others, be sensitive and understanding, and give support to others), α = .65, and 3-point Likert-scale responses with possible scores of 1–3; higher scores indicated more positive attitudes about program values.
- *Program values 2*—6 items developed from intervention content (A man who is really "macho" is always ready to fight, never admits that he is wrong, sets all the rules, is friendly, is sensitive, and is caring), α = .60, and 3–10 point Likert-scale responses with possible scores of 3–18; the first 3 items were reverse scored so that higher scores reflected a greater endorsement of positive aspects of being "macho."
- *High risk*—participantswere categorized as high risk if at baseline they reported any violent behavior either in school or out of school in the past week. The specific items were have you been in a fight; hit/punched or kicked someone; pushed, grabbed, or shoved someone; and teased someone to make them angry.[19]

Analysis plan

Descriptive statistics were computed to characterize the population. Differences between groups were assessed by Student t tests. The nested structure of the data set allowed possible variance between schools and between each participant's measurements across different time points. Therefore, a hierarchical random effect model that included both fixed and random effects was utilized for data analysis. Changes in values of outcome variables from baseline to each time interval were calculated and treated as dependent variables in the models. Separate hierarchical random effect models for each primary outcome were fitted to identify the impact of the intervention and the impact of the intervention on students considered to be high risk. Time, high-risk students, intervention by time, and the 3-way interaction of time, high risk students, and intervention by time were included as fixed effects, and both individual-specific and school-specific variables were included as random effects. Significant covariates that could have a potential biased effect on the relationship between predictors and the dependent variables were included in the final model; these included gender, grade, and ethnicity. All tests were 2 sided. Analyses were done using SAS software, version 9.1.

RESULTS

Complete data were obtained from 312 students (180 in the intervention group and 132 in the delayed-entry control group). Demographics of the study population are provided in Table 1. There were no statistically significant baseline differences between the 2 groups. Similar proportions of the participants in both the intervention group and the control group were high risk.

At baseline, students had very negative attitudes toward gangs and high nonviolence self-efficacy. There was minimal variation on these baseline scores. Students scored high on 1 scale of program values (2.9 out of 3) and in themiddle range on the second scale (11.4 out of 17), indicating some baseline knowledge about the program's cultural values. These results are shown in Table 2.

The results of the hierarchical random effect model showed no statistically significant differences overall between intervention and control group students on the 4 outcome variables. However, high-risk students in the intervention group showed statistically significant changes in their scores on nonviolence self-efficacy ($P < 0.05$) and program value 1 (Table 3).

DISCUSSION

High-risk students who participated in the *El Joven Noble* intervention had significantly greater nonviolent self-efficacy at time 2 and time 3 and demonstrated a strong trend to greater endorsement of program values at time 3 than did high-risk students who were in the control group. These program values included "It is important for a person to keep their word, take responsibility for their actions, not hurt others, be a positive example for others, be sensitive and understanding, and give support to others." Consistent with the fact that the *El Joven Noble* curriculum was originally developed for use among high-risk youth in Los Angeles, the program showed secondary violence prevention program effects. No primary violence prevention program effects, however, were detected.

Demonstrating a positive impact on behaviors and attitudes is especially challenging in a primary violence prevention program, where the goal is to prevent violent behaviors before they occur. This is especially true in prevention programs with elementary and middle school students when addressing topics such as violence, where the targeted behaviors may not manifest themselves for several years. The absence of negative attitudes and behaviors at baseline makes it difficult to demonstrate positive changes as a result of program participation. The ability to demonstrate effectiveness in this study was also limited by our data collection instruments. The majority of the scores on 3 of the 4 outcome variables remained at or near the maximum value throughout the course of the study, with a ceiling effect reducing the ability to detect program effects on students' attitudes.

Conducting CBPR is an important strategy to address health issues at the community level, especially those problems with health disparities among minority populations. To conduct CBPR, academic partners must be willing to engage in research in ways that may be unfamiliar or uncomfortable. Development of a successful partnership takes time and must

provide the community with clear benefits. Academic partners must be able to spend considerable time in the community, often during evenings and weekends. Over the course of the larger *Familias en Accíon* collaboration, we estimate that academic investigators spent a minimum of 20% of their time every week at trainings, community meetings, and events. Academic partners must also be willing to relinquish control of many decisions, using perhaps the consensus decision-making process that we employed in this study.

Planning for sustainability should begin early in the process, so that the turnaround time from proposal submission, review, perhaps resubmission, and actual funding does not result in a complete falling off of partnership activities. The partnership for this project has been sustained through the receipt of external funding so that the *Familias en Accíon* CCC is now able to scientifically test *El Joven Noble* and *Cara y Corazón* with a population of high-risk middle and high school students in an alternative school setting.

CONCLUSION

If a community's challenges are viewed without consideration of the historical context of the impact of oppression, discrimination, and intergenerational trauma, they may be misunderstood and therefore be addressed in ways that perpetuate the problems rather than producing lasting change. CBPR provides a methodology to engage groups and communities in the design, implementation, and evaluation of their own prevention programs. It is well suited for the inclusion of community values, cultural heritage, and historical perspective into both the research process and the product. CBPR also emphasizes the empowerment of individuals and communities through the research process.[20] *Familias en Accíon* serves as an example of successfully upholding the ideals of the CBPR methodology while implementing the rigorous methods of a prospective randomized controlled trial.

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Table 1

Demographic characteristics of study population

	n/%		
Characteristic	**Intervention (*n* = 180)**	**Control (*n* = 132)**	**Total (*N* = 312)**
Gender			
Male	84/47	56/44	140/46
Female	96/53	71/56	167/54
Race/ethnicity			
Mexican American	155/89	113/94	268/91
White	5/3	1/1	6/2
African American	3/2	1/1	4/1
Other	11/6	5/4	16/5
Grade			
Third grade	64/36	44/34	108/35
Fourth grade	53/29	40/31	93/30
Fifth grade	63/35	46/35	109/35
High risk	47/26	42/32	89/29

Table 2

Students' baseline scores

Variable	Mean (SD)		
	Total sample (*N* = 312)	**Intervention (*n* = 180)**	**Control (*n* = 132)**
Attitudes about gangs	9.85 (0.52)	9.84 (0.55)	9.84 (0.51)
Nonviolence self-efficacy	7.49 (0.83)	7.49 (0.84)	7.50 (0.83)
Program values 1	2.87 (0.23)	2.87 (0.25)	2.88 (0.19)
Program values 2	11.35 (2.67)	11.41 (2.54)	11.24 (2.77)

Table 3

Results of hierarchical random effect model

Attitudes about gangs	Estimate (SE)			
	Attitudes about gangs	Nonviolence self-efficacy	Program values 1	Program values 2[a]
Population (intercept)				
Time 2	−0.162 (0.09)	0.088 (0.11)	0.001 (0.03)	1.265 (1.04)
Time 3	−0.036 (0.08)	0.091 (0.10)	−0.032 (0.03)	0.504 (1.04)
High-risk students, Time 2	0.278 (0.16)	0.078 (0.20)	0.016 (0.05)	−0.485 (0.74)
High-risk students, Time 3	−0.058 (0.15)	0.033 (0.19)	0.011 (0.06)	−0.280 (0.67)
Intervention effects				
Time 2	0.148 (0.12)	−0.047 (0.14)	0.006 (0.04)	−0.280 (0.65)
Time 3	−0.063 (0.11)	0.019 (0.14)	0.021 (0.04)	0.560 (0.61)
High-risk students, Time 2	−0.332 (0.22)	0.690 (0.27)[b]	0.181 (0.07)[b]	0.814 (1.00)
High-risk students, Time 3	0.082 (0.20)	0.582 (0.26)[b]	0.154 (0.08)	−1.048 (0.91)

[a] Gender was a significant covariate only for this variable and was included in the final model to adjust for possible bias.

[b] $P < 0.05$.