Effects of Culturally Adapted Parent Management Training on Latino Youth Behavioral Health Outcomes

Charles R. Martinez, Jr. and J. Mark Eddy
Oregon Social Learning Center

A randomized experimental test of the implementation feasibility and the efficacy of a culturally adapted Parent Management Training intervention was conducted with a sample of 73 Spanish-speaking Latino parents with middle-school-aged youth at risk for problem behaviors. Intervention feasibility was evaluated through weekly parent satisfaction ratings, intervention participation and attendance, and overall program satisfaction. Intervention effects were evaluated by examining changes in parenting and youth adjustment for the intervention and control groups between baseline and intervention termination approximately 5 months later. Findings provided strong evidence for the feasibility of delivering the intervention in a larger community context. The intervention produced benefits in both parenting outcomes (i.e., general parenting, skill encouragement, overall effective parenting) and youth outcomes (i.e., aggression, externalizing, likelihood of smoking and use of alcohol, marijuana, and other drugs). Differential effects of the intervention were based on youth nativity status.

Keywords: preventive intervention, cultural adaptation, Latino behavioral health, parenting

Parent Management Training (PMT), or the use of didactic instruction, modeling, role playing, and home practice to teach parenting skills in encouragement, monitoring, discipline, and problem solving, is considered one of the most efficacious outpatient treatments for childhood behavior problems (Breslan & Eyerberg, 1998). In a meta-analytic review of PMT studies, Serketich and Dumas (1996) estimated that the average child whose parents had received PMT exhibited fewer conduct problems than 80% of children whose parents had not. Encouraged by these findings, several researchers created versions of PMT designed to prevent the development of conduct problems and a variety of correlated and theoretically related youth problem behaviors, including academic difficulties, association with deviant peers, delinquency, early substance use, and early sexual behavior (e.g., Martinez & Forgatch, 2001; Reid, Eddy, Fetrow, & Stoolmiller, 1999; Sanders, 2000; Webster-Stratton, Reid, & Hammond, 2004). To date, PMT programs per se, as well as programs that include PMT, have been shown to reduce the likelihood of youth problems and related outcomes in several important areas, including police contacts, out-of-home placements, and number of days institutionalized (Chamberlain & Reid, 1998; Chamberlain, 1990; Eddy, Reid, Stoolmiller, & Fetrow, 2003); interfunctional difficulties with teachers or peers (Dishion & Andrews, 1995; Forgatch & DeGarmo, 1999; Reid et al., 1999); depression (Forgatch & DeGarmo, 1999); and substance use (Dishion & Andrews, 1995; Eddy et al., 2003).

Although PMT appears to be a promising clinical and preventive intervention, as with many cognitive–behavioral interventions, the knowledge base on PMT is surprisingly limited (Hayes, 1995). One of the most serious gaps is in the area of culture and its impact on intervention efficacy (Forehand & Kotchick, 1996). Very few researchers have examined the impact of PMT within specific cultural groups (e.g., Myers et al., 1992; Webster-Stratton, Reid, & Hammond, 2001), and far fewer, if any, have examined the effects of cultural modifications of PMT on child outcomes.1 Given the present and growing cultural diversity in the United States (U.S. Census Bureau, 2000), lack of knowledge about PMT effects within various cultural contexts presents a serious challenge to the generalizability of conclusions about the efficacy of PMT.

At a time when the use of “best practice” or “evidence based” programs is being strongly encouraged, this knowledge gap leaves key questions about the importance of cultural modifications in enhancing PMT efficacy largely unanswered. Some researchers suggest that community or culturally specific adaptations of empirically based intervention programs not only may increase the likelihood that families and individuals will participate and complete programs, but also may improve outcomes for those participating children and families (Castro, Barrera, & Martinez, 2004; Catalano et al., 1993; Gorman & Balter, 1997; Harachi, Catalano, 1

1 Although there are excellent examples on the use of PMT concepts and methods within culturally based interventions, such as Brief Strategic Family Therapy (Szapocznik & Williams, 2000), such programs encompass an array of therapeutic activities that go far beyond typical PMT.
Others note that there is little evidence of the superiority of culturally specific prevention programs (Kazdin, 1993) and suggest that community-specific adaptations may jeopardize the efficacy of evidence-based programs (Elliott & Mihalic, 2004). Unfortunately, there simply is not enough information available to support either conclusion, especially in terms of PMT. In the present study, we take a step toward filling this knowledge gap through the presentation of the results from a randomized trial of *Nuestras Familias: Andando Entre Culturas* (Our Families: Moving Between Cultures), a version of PMT designed for delivery to monolingual Spanish-speaking immigrant parents and intended to decrease the likelihood of youth substance use and related negative outcomes and promote healthy adjustment.

Examining PMT effects in the context of Latino families is critical for a variety of reasons. Chief among them is the rapid growth of the Latino population across the United States. While the total U.S. population increased 13% from 1990 to 2000, the Latino population increased 58% (U.S. Census Bureau, 2001). This growth has taken place in the context of social service systems that are unprepared to address the needs of a culturally pluralistic population. Given this context, it is not surprising that Latino adults and children are often overrepresented in samples of individuals at risk for poor behavioral health outcomes (e.g., Chavez & Roney, 1990; Vega et al., 1998; Vega & Rumbaut, 1991). Further, in several studies, Latinos have been found less likely to use social services, including mental health services, than members of other groups (Office of the Surgeon General, 2001; Hough et al., 1987; Vega, Kolody, Aguilar-Gaxiola, & Catalano, 1999). Youth behavioral health outcomes do not occur in isolation, and outcomes such as disruptive behavior, academic difficulties, association with deviant peers, delinquency, early substance use, and early sexual behavior covary, both within the general population (Hawkins, Catalano, & Miller, 1992; Kellam, Brown, Rubin, & Ensminger, 1983) and across ethnic groups (Apospori, Vega, Zimmerman, Warheit, & Gil, 1995; Newcomb, 1995; Vega, Zimmerman, Warheit, Apospori, & Gil, 1993). Of note, recent research has converged to suggest a developmental sequence for how these problem behaviors unfold across the life course, with less serious problems (such as childhood aggression and other externalizing behaviors) often preceding more serious problems (such as school failure, criminal activity, and substance use (see Reid & Eddy, 1997). Although the antecedent youth problem behaviors do not necessarily occur with greater frequency in Latino subgroups compared with nonminority groups, Latino youth appear to be at greater risk for serious outcomes that are related to such problems, such as school dropout, incarceration, and poor physical and mental health (Kandel, 1995; Martinez, DeGarmo, & Eddy, 2004; Martinez, Eddy, & DeGarmo, 2003; Pentz, 1995; Wallace, Bachman, O’Malley, & Johnston, 1995). Further, risk for certain youth problem behaviors, such as substance use initiation and abuse, grows substantially as Latino youth become more acculturated to U.S. society (Amaro, Whitarke, Coffman, & Heeren, 1990; Ortega, Rosenheck, Alegria, & Desai, 2000). A variety of interventions have been developed that target the antecedent problem behaviors that occur commonly in childhood and early adolescence; however, few interventions have been developed that focus on the culturally specific risk and protective factors that are related to Latino youth problem behaviors.

The *Nuestras Familias* intervention is grounded in a conceptual framework that integrates two related theories of development, social interaction learning theory (SLT; Reid, Patterson, & Snyder, 2002) and ecodevelopmental theory (Szapocznik & Coatsworth, 1999), and is further informed by recent studies on acculturation processes in Latino families. In SLT, the moment-to-moment behaviors that occur between parent and child are hypothesized to be the key mechanism through which children are trained in basic “overt” behavior problems, such as noncompliance and defiance. Behavioral repertoires marked by such behaviors are thought to be refined and expanded in interactions the child has outside the home, both at school and with peers, with adult-unsupervised peer interaction during early to mid adolescence hypothesized to be a particularly potent exacerbating factor for more severe problem behaviors.

Ecodevelopmental theory (Szapocznik & Coatsworth, 1999), grounded in the work of Bronfenbrenner (1979), expands on SLT and focuses on the interrelationship between four interacting systems and their relationship to youth problem behavior: (a) *macro-systems*, which are contexts that reflect the broad social and philosophical ideals that define a particular culture (e.g., cultural and societal values); (b) *exosystems*, which describe contexts in which the adolescent does not directly participate but that impact important members of the adolescent’s life (e.g., parents’ social support); (c) *mesosystems*, which are contexts comprising the interactions between important members of the different contexts in which the adolescent participates directly (e.g., parental monitoring of peers), and (d) *microsystems*, which are contexts in which the adolescent participates directly (e.g., family, school, and peers). For immigrant families in particular, acculturation is a key contextual factor that can influence youth behavior via several such systems.

Acculturation is a multidimensional construct that includes factors such as language use and proficiency, nativity, cultural behavioral preferences, and ethnic identity (Berry, 2003). Acculturation has been shown to account for considerable within-group variation for Latino youth problem behaviors, and greater acculturation has been shown to predict increased risk for a host of negative youth outcomes (e.g., Ortega et al., 2000; Amaro et al., 1990). Moreover, differences between parents and youth in their levels of acculturation and their rates of acculturation can create “acculturation gaps” that increase stress in a family and can then disrupt effective parenting and healthy youth adjustment (Santisteban, Muir-Malcolm, Mitrani, & Szapocznik, 2002; Szapocznik, Kurtines, & Fernandez, 1980). For example, unquestioned respect for parental authority, or *respeto*, is considered a core value in many Latino families (Marín & Marín, 1991). However, this value may be undermined as youth acculturate to the more individualistic and self-directed value system in the United States (Pantin et al., in press; Santisteban et al., 2002). When this acculturation occurs, normative parent–child problem-solving interactions that depend on the traditional value system can become strained by cultural value incompatibilities, which then become girt for further disagreement in the family. Furthermore, the more stressful the process of acculturation is for parents and adolescents, the more likely and frequently acculturation-related conflicts occur between parents and adolescents (Gil, Vega, & Dimas, 1994). As
Latino parents experience increasing frustration in their unsuccessful efforts to reestablish authority with their acculturated youths, they may begin to reduce their attempts to support, communicate with, and monitor their teens, thereby increasing the youths’ susceptibility to peer influences and problem behaviors (Kurtines & Szapocznik, 1996). Such findings suggest that for PMT to be maximally effective in this culturally specific context, it will need to be refined to address how parents manage the family environment in the context of differential acculturation.

From our integrative theoretical perspective (Martinez et al., 2003), social contexts, social support, and acculturation processes are hypothesized to influence the family environment (e.g., parent adjustment, including perceptions of acculturative stress; adherence to traditional values; parent-to-parent conflict). The family environment is hypothesized to influence parenting practices, specifically encouragement, monitoring, discipline, and problem solving, that are hypothesized to exert direct effects on youth adjustment, including the frequency and extent of youth problem behaviors. Nuestras Familias was designed to impact parenting practices most proximally and family environmental variables more distally. Even small improvements in parenting effectiveness and youth incipient behavior problems could be critical in preventing more serious deleterious outcomes for Latino youth who may already be at risk due to the stress that comes with navigating the demands of a culturally dystonic social environment. Although the intervention theory emphasizes this culturally specific environment, this study focused on examining changes in more culturally neutral parenting practices and youth behaviors because these are the outcomes most directly proximal to the intervention and because they provide a framework for comparisons of outcomes across PMT studies.

We were interested in three research questions related to the intervention. First, is it feasible to deliver Nuestras Familias to Spanish-speaking Latino parents in a community setting, as indicated by high intervention participation and retention rates, high ratings of session satisfaction, and high ratings of overall program satisfaction and perceived program success? Second, will Nuestras Familias improve parenting practices for mothers and fathers as indicated by improvements in positive parental involvement, monitoring, homework engagement, skill encouragement, appropriate discipline, general parenting, and overall effective parenting? Third, will Nuestras Familias benefit youth adjustment as indicated by decreases in externalizing and internalizing behaviors, including aggression and depression; decreases in the likelihood of using tobacco, alcohol, marijuana, and other drugs; and improvements in the areas of academics?

Method

Participants

Seventy-three mothers, fathers, and focal youth participated in the study. Families that were currently receiving parenting intervention or family counseling were excluded from the study, although 18 participating families indicated that they had received some form of parenting education in the past. The project manager of the study randomly assigned 50% of participating families to the PMT intervention condition and 50% to the control condition. The sample was blocked on nativity status as an independent variable (i.e., 50% of youth were U.S.-born and 50% were foreign-born). Eighty-two percent of participating families were from two-biological-parent families, and 18% were from families that included a biological mother and a stepfather. For the participating stepfamilies, study inclusion criteria required that they were in an established stepfamily (i.e., had been in a committed relationship and cohabiting for at least 2 years) and that each family member viewed the stepfather as having the sole fathering role in the family.

The study recruited families with boys or girls in middle school, and a sample matching procedure was used to ensure equal distribution of target youth gender across the study cells. Overall, 56% of the participating youth were boys, and 44% were girls. Youth’s average age at baseline was 12.74 years old (SD = 1.05). The youth who were foreign-born had lived in the United States an average of 6.56 years (SD = 4.56). Mothers’ average age was 36.38 years old (SD = 5.56), and fathers’ average age was 39.29 years old (SD = 7.47) at baseline. All participating mothers and all but one participating father were born outside the United States. For foreign-born parents, mothers had lived in the United States an average of 10.22 years (SD = 5.98) and fathers an average of 11.75 years (SD = 8.22). Not surprisingly, the two youth nativity groups differed significantly (p < .01) in terms of average parent years of U.S. residency, with the U.S.-born youth having parents that had lived in the United States approximately 6.5 years longer than the parents of foreign-born youth. Overall, 100% of families self-identified as Latino; 90% traced their origin to Mexico, with the remainder tracing their origins to Peru and Central America. Approximately 66% of mothers and 78% of fathers had an education level of ninth grade or less, and only about 20% of mothers and 13% of fathers had completed high school and/or received postsecondary education. At baseline, 64% of mothers and 83% of fathers were working outside the home. Mothers reported working outside the home an average of 29.66 hr (SD = 14.55), and fathers reported working outside the home an average of 41.44 hr (SD = 7.20). Parents reported an average annual household income of $21,681.04 (SD = $9,534.75). Parents also reported an average of 5.19 persons (SD = 1.17) in the household living on that income, leading to an estimated per capita yearly income of $4,177.53. These numbers do not include money that many parents reported was sent back to family members living in their countries of origin (about 50% of families reported sending between $90 and $147 per month).

Recruitment

Project staff identified 314 potential participant families during the recruitment phase. Recruitment efforts focused on word-of-mouth and direct person-to-person contacts, each of which has been shown to be particularly effective recruitment strategies for Latino families in other studies (Harachi et al., 1997), as well as paper recruitment methods (e.g., flyers, letters home from school). Project staff also attended and presented at school and community events where families were likely to gather (e.g., school orientations, parent–teacher conferences, Spanish-language church services, social service program meetings, and Latino community social events).

Of the 314 family contacts, 159 (51%) agreed to screening and were determined to be eligible for the study (i.e., parents were Spanish-speaking, had a youth in middle school, were in two-parent or established stepfamily households, and agreed to random assignment; both parents agreed to intervention if so assigned). Of the 155 families not included in the eligible pool, 65 (42%) were screened out as ineligible, 32 (21%) were not reachable at the provided telephone number or address, 23 (15%) were not eligible for other reasons (e.g., divorce after screening, family move, other changes of life circumstances), and 35 (22%) families were not reached until after enrollment in the study was closed. Of the 159 families in the eligible pool, 73 families were successfully recruited and participated in baseline assessments, yielding an overall study participation rate of 46%. Among those eligible families who chose not to participate, most (72%) declined because they were not interested in the study or intervention at that time, 24% declined actively or passively because of schedule conflicts,
and 3% had irresolvable transportation difficulties. In terms of recruitment source for the participating families, 22 (30%) were referred by schools or social service programs that serve the Latino community, 22 (30%) were recruited by staff attending Latino community events, 17 (23%) were referred by person-to-person contacts, 10 (13%) were referred through flyers, and 2 (4%) were recruited through presentations by staff at middle school classes. Figure 1 provides additional information about the flow of recruited families through each stage of the study.

Control Condition

The 36 families randomly assigned to the control condition received no project-related intervention services during the course of the study. Baseline analyses were conducted to determine if there were any significant differences between intervention and control families on a variety of variables that could operate as confounds in the study. Those analyses did not detect any significant differences between intervention and control families for these variables, including education level of the parents, age of the youngster, age of the parents, number of years the parents had resided in the United States, and English proficiency.

Intervention Condition

The intervention was developed over a 2-year period through a collaborative effort between the Oregon Social Learning Center (OSLC) project team, Centro LatinoAmericano (one of the state’s largest social service agency serving Latino clients), other community partners, and senior Latino family intervention researchers around the country. Intervention development and adaptation were conceptualized as involving a systematic balance between fidelity to the original intervention and community fit (Castro et al., 2004; Martinez & Eddy, 2004). As such, program development involved incorporating empirically supported core preventive intervention components from the OSLC’s basic PMT intervention (Forgatch & Martinez, 1999; Reid et al., 2002) as the foundation of the program, while simultaneously adapting those intervention components and developing new intervention elements that more specifically addressed culturally relevant experiences of Latino parents and families.

During the intervention development phase, five Latino family interventionists from the community were provided training in basic OSLC PMT. After training (which included applying PMT principles to real and fictional cases), project staff, together with community experts and trained interventionists, began the process of adapting the existing PMT intervention model. As part of this effort, intervention core components were identified (i.e., those elements that have shown improvements in parent and child outcomes across intervention studies involving different populations and settings). Working with specific family cases, past experiences of experts, and the existing literature regarding Latino family intervention models, the team considered the conceptual–theoretical relevance (e.g., “Is the concept of contingent positive reinforcement to encourage prosocial behavior relevant or appropriate within this particular cultural frame?”) as

![Flow diagram of participants through each stage of the randomized trial.](image-url)
well as the operational cultural relevance of each component (e.g., “Is the way that we teach parents to encourage success for their children culturally sensitive or relevant?”) and adapted the intervention components accordingly.

The team also identified new content areas to be developed to address the culturally specific risk and protective factors involved in adjustment outcomes for Latino parents and youth (e.g., family acculturation issues, structural barriers such as discrimination). Finally, before the initial efficacy evaluation, the adapted intervention content was presented to focus groups of Latino parents to determine the saliency and cultural validity of the intervention, to identify possible resistances, and to strategize about program delivery (e.g., group size, inclusion of both mothers and fathers in same groups, involvement of youth in the intervention, etc.). This focus group work and subsequent piloting led to ongoing minor refinement of the intervention during the course of the study.

The intervention was administered at OSLC in 12 weekly group sessions and included between 12 and 15 parents per group. Table 1 details the weekly session topics and indicates which sessions represented either adapted PMT or newly developed components. Intervention sessions were delivered entirely in Spanish, and each session lasted approximately 2.5 hr (including approximately 1 hr for a meal and social interaction time for families to build social support networks). The intervention focused on parent empowerment at a foundational level and attempted to increase parental self-efficacy. This is a particularly important element for recently immigrated Latino families in social contexts where parents’ sense of influence over their and their children’s lives has diminished during their adaptation to life in the United States (Santisteban et al., 2002). To strengthen this foundational element, interventionists who cofacilitated groups were known as entrenadores (coaches), rather than by titles that would reflect “parenting expert.” Each week, parents received new information about the session topic in their parent notebooks, along with the assigned home practice exercises for the week. The parent materials included both written and pictorial session information. Content for each session was delivered through minimal didactic presentations by entrenadores, through discussion of material in small group or couples, and through individual and group role-plays of parenting techniques. At the end of every session, entrenadores explained the home practice assignments and answered questions. During the week following the session, entrenadores contacted each parent by phone to review past session material, check on progress with the home assignment, offer support, and answer questions.

For fidelity purposes, all group sessions were videotaped and reviewed during supervision meetings. During each week, 2–3 hr of group supervision was provided to interventionists. During those sessions, the intervention team reviewed videotaped sessions to evaluate intervention adherence and to identify effective efforts as well as challenges in delivering the intervention to particular families. In addition to group supervision, the corresponding author met regularly in individual supervision meetings with interventionists to review cases and to address individual family issues or resistances that emerged during the intervention sessions. During each session, interventionists indicated the extent to which they were able to cover the planned material, and those data suggested that interventionists were able to cover 99% of the planned material.

### Assessment Procedures

Before the assessment, all parents provided written consent and youth provided written assent for study participation after a staff visit to their home. Participant families received extensive multiple-method and multiple-agent assessments twice during the study: baseline (i.e., before intervention) and intervention termination. The average lag between baseline and termination assessments was 5.61 months (SD = 1.46). Assessment procedures included interviews with each family participant, self-report questionnaires, and family observations by staff. The staff members responsible for the data collection and data entry were blind to the group assignment of the participants and were not involved in any aspect of the intervention delivery. To avoid problems related to literacy, we administered most assessment measures orally to participants. Assessment materials were available in both English and Spanish, but only one parent assessment was conducted in English. On the other hand, 67% of youth assessments were conducted in English. Ninety percent of families completed both assessments.

### Measures

#### Intervention feasibility

Intervention feasibility was indicated by participant intervention attendance records, completion rates, and perceived session and program satisfaction. Attendance records were collected by interventionists during each regular session and after make-up sessions. Individual attendance records were kept for mothers and fathers. Interventionists evaluated session content completion routinely. Interventionists listed the topics planned for discussion during a session and rated the extent to which the material was actually covered. Following each session, individual participants responded to a variety of questions about their perceived satisfaction with the session. Participants were questioned about the usefulness of the information, perceived support provided by group and interventionists, participation level, enjoyment of group, and completion of homework practice from previous sessions. Participants also completed overall program evaluations at the end of the intervention. Overall program evaluation questions assessed participants ratings in several areas, including the extent to which parents were now using skills learned in sessions, whether parents detected specific changes in the target youth’s behavior, the level of skill of the interventionists, the helpfulness of various program components, and the extent to which the program was designed in a way that addressed and understood issues specific to Latino families. Participants responded to session ratings and program evaluation questions on 5-point Likert scales with higher scores reflecting higher satisfaction ratings.

#### Parenting practices

Measures of parenting practices were taken from responses to questions from the parent interview. The interviews were completed separately for mothers and fathers, and subsequent parenting scores reflected average ratings across the two parent ratings. Consistent with the theoretical model, we examined six unique dimensions of parenting: positive parental involvement, monitoring, homework engagement, skill encouragement, appropriate discipline, and general parenting. Addi-

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### Table 1

**Nuestras Familias Intervention Topics**

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<thead>
<tr>
<th>Session</th>
<th>Topic</th>
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<tbody>
<tr>
<td>1</td>
<td>Strong Latino Roots&lt;sup&gt;a&lt;/sup&gt; b</td>
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<tr>
<td>2</td>
<td>Effective Family Communication&lt;sup&gt;a&lt;/sup&gt;</td>
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<tr>
<td>3</td>
<td>Our Many Roles in the Family&lt;sup&gt;b&lt;/sup&gt;</td>
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<tr>
<td>4</td>
<td>Family Problem Solving&lt;sup&gt;b&lt;/sup&gt;</td>
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<td>5</td>
<td>Bridging Cultures&lt;sup&gt;b&lt;/sup&gt;</td>
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<tr>
<td>6</td>
<td>Giving Good Directions&lt;sup&gt;a&lt;/sup&gt;</td>
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<tr>
<td>7</td>
<td>Being Positive and Encouraging Success&lt;sup&gt;a&lt;/sup&gt;</td>
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<tr>
<td>8</td>
<td>Teaching New Skills&lt;sup&gt;a&lt;/sup&gt;</td>
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<td>9</td>
<td>Discipline and Limit Setting&lt;sup&gt;a&lt;/sup&gt;</td>
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<tr>
<td>10</td>
<td>Balancing Discipline and Encouragement&lt;sup&gt;a&lt;/sup&gt;</td>
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<tr>
<td>11</td>
<td>Monitoring and Supervision for School Success&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>12</td>
<td>Dealing with Obstacles on the Road to Success&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>a</sup>Core Parent Management Training (PMT) component that was adapted.  
<sup>b</sup>Newly developed component of the PMT.

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2 The intervention manual and materials may be requested by contacting the corresponding author.
tionally, an overall effective parenting score was computed by averaging scores across these indicators.

Positive involvement was an average summative index of parent responses to 21 questions that reflected whether parents had engaged in a variety of positive activities with the target youth during the past week (e.g., gave him or her a hug or kiss, played a game with him or her, went for walk together, talked for at least 10 min about activities in his or her life, enjoyed music together, etc.). The scale demonstrated adequate internal consistency for mother and father scores (Cronbach’s alphas were .83 and .82, respectively).

Monitoring was an average scale score of 12 items from the parent interview that assessed parent supervision and tracking of the youth’s activities (e.g., “During a typical day, how much of the time do you know what your son or daughter is doing?”; “How much of the time do you know whom your son or daughter is with?”; “How much of the time does your son or daughter spend without adult supervision?”; “How well do you know the youth that your son or daughter spends time with?”). Items were rated on 5-point Likert scales and averaged for both parents. Scale alphas were .67 and .72 for mothers and fathers, respectively.

Homework engagement was a summative index of 16 items reflecting whether parents engaged in specific activities to help the focal youth complete homework (e.g., establishing a specific time and place for homework completion, helping youth when he or she is stuck, quizzing the youth, verifying homework completion, providing incentives for completion, providing sanctions for incompletion, etc.). Scale alphas were .78 and .83 for mothers and fathers, respectively.

Skill encouragement was an average parent scale score of eight items reflecting the frequency of specific contingent positive reinforcement responses when the youth engaged in prosocial behavior (e.g., giving extra privileges, praising the youth, spending special time together, offering small rewards, etc.). Individual items were rated on 5-point Likert scales, with higher values reflecting greater frequency of use for a particular encouragement strategy. Scale alphas were .78 and .75 for mothers and fathers, respectively.

Appropriate discipline was an average scale score of 12 items reflecting the frequency of using effective limit setting strategies in response to specific youth misbehavior (e.g., giving warnings of and follow through with consequences, restricting privileges, giving a time-out, giving extra chores, etc.). Scale alphas were .67 and .79 for mother and father scores, respectively.

General parenting was an average scale score of eight items reflecting general use of effective parenting strategies during the past month with the focal youth (e.g., communicating calmly and clearly with the youth when there was a disagreement, negotiating emotional conflicts and working toward solutions, being consistent with discipline, and following through with consequences). Items were rated on 5-point Likert scales, with higher scores reflecting more frequent use of effective parenting strategies. Scale alphas were .83 for both mothers and fathers.

Overall effective parenting was an average scale score that aggregated the monitoring, skill encouragement, appropriate discipline, and general parenting scales described above. Principal component factor loadings for these four indicators ranged from .57 to .69 for mothers and from .52 to .68 for fathers. Scale alphas were .58 and .60 for mothers and fathers, respectively.

Youth adjustment. Youth and parents reported on seven outcome domains for youth adjustment: aggression, externalizing behavior, academic success, depression, and likelihood of using tobacco, alcohol, and marijuana and other drugs.

Aggression and externalizing measures were taken from average parent ratings from the Child Behavior Checklist (Achenbach, 1992). For the purposes of this analysis, we used average raw sum scores rather than standardized t scores in order to capture greater variability in item responses to these questions. Scale alphas were .80 and .84 for mothers and .88 and .89 for fathers on the aggression and externalizing scores, respectively.

Academic success was an average scale score reflecting parent ratings of youth school subject performance (i.e., five items concerning performance in math, science, language arts, social studies, and other subjects) and youth homework diligence (i.e., three items concerning homework completion and quality and the youngster’s interest in homework assignments). Items were scored on 5-point Likert scales with higher values indicating greater academic success. Scale alphas for the combined academic success items were .89 for both mothers and fathers.

Depression was measured by youth responses to the Child Depression Inventory (Kovacs, 1985), which is a well-known standard measure of youth depression. The scale is a summative index of 27 items reflecting various dimensions of depression. The scale alpha was .85.

Likelihood of the youth using tobacco, alcohol, and marijuana and other drugs was indicated by the youth’s response to a substance use questionnaire. Items were scored initially on 5-point Likert scales but were truncated because of low variance and range restriction in the Likert scales. Final scores reflected whether the youth indicated that he or she was at least somewhat likely to use the target substance during the next year if offered by one of their best friends.

Results

Analytic Strategy

The study was designed to describe the feasibility of delivering the culturally specific intervention and examine the immediate efficacy of the intervention in improving parenting practices (most proximally) and youth adjustment (more distally). We first provide descriptive data to evaluate various aspects related to the feasibility of implementing the intervention on a larger scale. Second, we present findings that examine the Group (intervention vs. control) × Time (baseline vs. intervention termination) interaction effects of the intervention in a series of mixed factorial ANCOVAs. We also present findings that explore possible differential effects of the intervention based on youth nativity status (U.S.- vs. foreign-born) in a series of three-way interaction analyses involving group, time, and nativity status.

All models were tested, controlling for the effects of a number of theoretically derived covariates including youth gender, parent education, and parent years of U.S. residency, each of which have been shown to relate to parenting or youth adjustment outcomes for Latino families in previous studies. Also, the tests for intervention effects were set at the one-tailed alpha levels for directional hypotheses (see Aron & Aron, 1994). We used intent-to-treat analytic methods by including all participants with complete data in the analyses, regardless of their level of participation in the intervention (i.e., it was assumed that every family had a complete dose of the intervention). Such an approach is more conservative than a dose-sensitive strategy.

Intervention Feasibility Outcomes

Intervention participation. Of the 37 families randomly assigned to the intervention condition, all but three began the intervention. Of the families that began the intervention, 70% completed 10 or more sessions of the 12-week intervention, another 9% completed 7–9 sessions, and another 15% completed 4–6 sessions. Only two families (6%) who began the intervention completed 3 or fewer sessions, and three other families never
attended any sessions. Overall, 76% of all planned sessions (based on 12 sessions and 37 intervention families) were delivered to participating families. Most (87%) of those sessions were delivered to participants during regular group meetings. However, interventionists also made significant efforts to deliver content in make-up sessions if one or both parents could not attend a regular session. Seven percent of session content was delivered in make-up sessions with the couple, 3% was delivered in make-up group sessions, 2% was delivered in individual participant make-up sessions, and 1% was delivered in an alternate group meeting attended by the participants.

*Intervention satisfaction and perceived success.* Data from weekly ratings of mothers’ and fathers’ satisfaction with the intervention, which aggregated ratings for all parents across all sessions (n = 268), showed very strong indications of satisfaction for both mothers and fathers. Overall, the weekly ratings showed that 100% of both mothers and fathers found the parenting intervention information somewhat or very helpful. Parents also reported high levels of active participation (mothers’ $M = 3.67, SD = .78$, and fathers’ $M = 3.44, SD = .78$); strong support from the group (mothers’ $M = 3.96, SD = .68$, and fathers’ $M = 3.83, SD = .67$), high levels of home practice success (mothers’ $M = 3.90, SD = .56$, and fathers’ $M = 3.70, SD = .64$), and high levels of positive response from their children regarding the effects of the home practice (mothers’ $M = 3.92, SD = .58$, and fathers’ $M = 3.80, SD = .63$).

Similarly, the family postintervention program evaluations, which were completed by 30 of the 34 families who attended at least one session, indicated strong overall satisfaction with the program (mothers’ $M = 4.52, SD = .65$, and fathers’ $M = 4.32, SD = .69$), strong indications that families were using parenting strategies they learned (mothers’ $M = 4.13, SD = .74$, and fathers’ $M = 3.83, SD = .87$), and strong support that the intervention led to positive changes in their children’s behavior (mothers’ $M = 3.88, SD = .83$, and fathers’ $M = 3.60, SD = .96$).

Analyses were also conducted to determine whether parent weekly satisfaction ratings and overall program evaluation ratings varied on the basis of youth nativity status, youth gender, and youth age. No differences emerged, suggesting equal levels of satisfaction and program success ratings across these variables.

*Intervention Outcomes*

*Parenting practices.* For intervention effects on parenting practices, the ANCOVA findings are displayed in Table 2. Significant Group × Time intervention effects were detected for overall effective parenting, $F(1, 51) = 2.79, p < .05$; general parenting, $F(1, 51) = 3.53, p < .05$; and skill encouragement, $F(1, 51) = 3.83, p < .05$. In each of these Group × Time interactions, the results indicated that families assigned to the intervention group showed more improvement between baseline and termination assessments than did families assigned to the control condition. Except in the case of skill encouragement, these effects were not impacted by baseline differences between the groups. For skill encouragement, the control group evidenced somewhat higher scores at baseline than did the intervention group ($p < .05$). The observed effect sizes ($\eta^2$) for these three significant interactions ranged from .05 to .07 (i.e., small to medium effects; Cohen, 1988).

Two three-way interactions between group, time, and nativity status were also detected with these data. Specifically, for appropriate discipline and skill encouragement, intervention-related

### Table 2

**Intervention Effects on Change in Parenting Practices**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Youth nativity</th>
<th>Group</th>
<th>Means (SD)</th>
<th>G × T</th>
<th>G × N × T</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Baseline</td>
<td>Termination</td>
<td>Effect$^b$</td>
</tr>
<tr>
<td>Overall effective parenting</td>
<td>Overall C</td>
<td>I</td>
<td>3.15 (.36)</td>
<td>3.35 (.39)</td>
<td>$F = 2.79^*$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>3.29 (.41)</td>
<td>3.32 (.48)</td>
<td>$F = .04$</td>
</tr>
<tr>
<td>Positive involvement</td>
<td>U.S. I</td>
<td>I</td>
<td>11.26 (3.52)</td>
<td>11.44 (3.86)</td>
<td>$F = .38$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>12.73 (3.21)</td>
<td>12.67 (3.38)</td>
<td>$F = 3.53^*$</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Foreign I</td>
<td>I</td>
<td>4.05 (.48)</td>
<td>4.10 (.42)</td>
<td>$F = .04$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>4.08 (.39)</td>
<td>4.22 (.40)</td>
<td>$F = .00$</td>
</tr>
<tr>
<td>General parenting</td>
<td>Foreign C</td>
<td>I</td>
<td>3.38 (.78)</td>
<td>3.61 (.71)</td>
<td>$F = .00$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>3.69 (.82)</td>
<td>3.40 (1.02)</td>
<td>$F = 3.64^*$</td>
</tr>
<tr>
<td>Homework engagement</td>
<td>Foreign U.S. I</td>
<td>I</td>
<td>4.94 (2.98)</td>
<td>7.89 (3.02)</td>
<td>$F = .03$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>4.89 (2.53)</td>
<td>7.75 (3.16)</td>
<td>$F = .00$</td>
</tr>
<tr>
<td>Appropriate discipline</td>
<td>Foreign C</td>
<td>I</td>
<td>2.57 (.50)</td>
<td>2.82 (.40)</td>
<td>$F = .00$</td>
</tr>
<tr>
<td></td>
<td>U.S. I</td>
<td>I</td>
<td>2.75 (.27)</td>
<td>2.76 (.40)</td>
<td>$F = 3.64^*$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>2.60 (.44)</td>
<td>2.89 (.53)</td>
<td>$F = .03$</td>
</tr>
<tr>
<td>Skill encouragement</td>
<td>Foreign U.S. I</td>
<td>I</td>
<td>2.62 (.58)</td>
<td>2.94 (.42)</td>
<td>$F = .00$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>2.85 (.57)</td>
<td>2.68 (.52)</td>
<td>$F = .00$</td>
</tr>
<tr>
<td></td>
<td>Foreign C</td>
<td>I</td>
<td>2.52 (.31)</td>
<td>2.78 (.39)</td>
<td>$F = .03$</td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td>2.77 (.53)</td>
<td>3.01 (.62)</td>
<td>$F = .00$</td>
</tr>
</tbody>
</table>

I = Intervention; C = Control; G = Group; T = Time; N = Nativity status.

$^a$ df = (1, 51) for all analyses.

$^b$ All models include parent years in U.S. residency, parent education, youth age, and youth gender as covariates.

$^c$ Based on $\eta^2$ statistic.

* $p < .05$. 

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847SPECIAL SECTION: CULTURALLY ADAPTED INTERVENTION FOR LATINO FAMILIES
changes between baseline and termination depended on youth nativity status, $F(1, 51) = 5.04, p < .05$ and $F(1, 51) = 3.64, p < .05$, respectively. It is important to note that the intervention group showed similar baseline-to-termination improvements for each of these variables regardless of youth nativity status. However, for both skill encouragement and appropriate discipline, the control group evidenced less improvement for families with U.S.-born youth than families with foreign-born youth. The observed effect sizes for these three-way interactions were .07 for skill encouragement and .10 for appropriate discipline, respectively (i.e., medium effects).

**Youth adjustment.** As can be seen in Table 3, significant Group × Time effects of the intervention were found for change in youth aggression, $F(1, 50) = 5.40, p < .05$; externalizing, $F(1, 50) = 5.30, p < .05$; and likelihood of tobacco use, $F(1, 50) = 2.85, p < .05$. A marginal intervention effect was found for change in likelihood of marijuana and other drug use, $F(1, 50) = 2.04, p < .10$. For each of these outcomes, the findings showed that families assigned to the intervention showed more improvement than families assigned to the control group. A number of baseline differences between the intervention and control conditions emerged that further attenuated these findings. Specifically, parents in the intervention group reported higher ($p < .05$) youth aggression and externalizing scores ($M_s = 6.43$ and 8.27, respectively) at baseline compared with parents in the control group ($M_s = 4.54$ and 5.71, respectively). The observed effect sizes for the significant Group × Time interactions were .10 for aggression, .10 for externalizing, .06 for likelihood of tobacco use, and .04 for use of marijuana and other drugs. A significant three-way interaction between group, time, and youth nativity status was also detected for depression, $F(1, 50) = 8.32, p < .01$. In this case, the trends suggested that the intervention group showed more improvement than the control in families with U.S.-born youth. On the other hand, for families with foreign-born youth, the trends suggested that the intervention group showed slightly higher depression scores at termination compared with scores at baseline, but these scores were still lower than termination scores for the control group. The three-way interaction involving depression had a large effect size of .16.

**Discussion**

As intervention science per se and prevention science in particular continue to move toward implementation and effectiveness trials with empirically supported models such as PMT, many questions persist about the requirements for culturally sensitive adaptation of such programs. To begin to address such questions, we described the feasibility and the efficacy of a highly culturally specific family intervention based on PMT and designed to prevent Latino youth problem behaviors and to promote healthy adjustment.

In terms of feasibility, the findings provide strong evidence for the feasibility of implementing a culturally specified PMT intervention with a Spanish-speaking Latino population in a community setting. Specifically, we found that the majority of intervention components could be delivered to most participating families and that both mothers and fathers participated in the intervention at equally high rates. Parents reported high levels of satisfaction with the intervention both on a session-by-session and overall program evaluation basis. Such positive findings related to program delivery and satisfaction rates are important, given the suggestion by some authors that these are the critical outcomes that may be

<table>
<thead>
<tr>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intervention Outcomes on Change in Youth Adjustment</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variable</th>
<th>Youth nativity</th>
<th>Group</th>
<th>Means (SD)</th>
<th>$G \times T$</th>
<th>$G \times N \times T$</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-CBCL: aggression</td>
<td>I</td>
<td>6.43 (3.99)</td>
<td>4.48 (3.60)</td>
<td>$F = 5.40^*$</td>
<td>.10</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>4.54 (3.93)</td>
<td>4.23 (3.83)</td>
<td>$F = 5.30^*$</td>
<td>.10</td>
</tr>
<tr>
<td>P-CBCL: externalizing</td>
<td>I</td>
<td>8.27 (5.18)</td>
<td>5.94 (4.84)</td>
<td>$F = 2.85^*$</td>
<td>.06</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>5.71 (5.03)</td>
<td>5.40 (4.84)</td>
<td>$F = 2.04^+$</td>
<td>.04</td>
</tr>
<tr>
<td>Academic success</td>
<td>I</td>
<td>3.73 (.50)</td>
<td>3.76 (.54)</td>
<td>$F = .80$</td>
<td>.02</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>3.81 (.54)</td>
<td>3.73 (.52)</td>
<td>$F = .64$</td>
<td>.01</td>
</tr>
<tr>
<td>Likelihood of youth tobacco use</td>
<td>I</td>
<td>.21 (.56)</td>
<td>.07 (.30)</td>
<td>$F = 2.85^*$</td>
<td>.06</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>.01 (.00)</td>
<td>.08 (.26)</td>
<td>$F = .73$</td>
<td>.03</td>
</tr>
<tr>
<td>Likelihood of youth alcohol use</td>
<td>I</td>
<td>.08 (.40)</td>
<td>.15 (.60)</td>
<td>$F = .64$</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>.09 (.37)</td>
<td>.26 (.56)</td>
<td>$F = .68$</td>
<td>.01</td>
</tr>
<tr>
<td>Likelihood of marijuana and other drug use</td>
<td>I</td>
<td>.28 (.96)</td>
<td>.06 (.00)</td>
<td>$F = 2.04^+$</td>
<td>.04</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>.12 (.93)</td>
<td>.33 (1.48)</td>
<td>$F = .96$</td>
<td>.00</td>
</tr>
<tr>
<td>Depression</td>
<td>U.S.</td>
<td>7.99 (7.18)</td>
<td>5.83 (5.49)</td>
<td>$F = 8.32^{**}$</td>
<td>.16</td>
</tr>
<tr>
<td></td>
<td>Foreign</td>
<td>7.45 (5.88)</td>
<td>10.67 (9.07)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

I = Intervention; C = Control; G = Group; T = Time; N = Nativity status; P-CBCL = Parent-Child Behavior Checklist.

*a* All models include parent years in U.S. residency, parent education, youth age, and youth gender as covariates.

*b* Based on $\eta^2$ statistic.

† $p < .10$.

* $p < .05$.

** $p < .01$. 

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enhanced most directly by the cultural adaptation process (Castro et al., 2004; Catalano et al., 1993; Kumpfer & Alvarado, 1995). For example, Kumpfer and Alvarado (1995) showed recruitment and retention rates of intervention families was 41% higher in culturally adapted versions of their family intervention program compared with versions that were not adapted.

Of course, the present findings do not indicate whether intervention participation or retention rates and satisfaction would have been similarly high if families were exposed to a PMT program that was not culturally adapted. Nevertheless, these high ratings on implementation feasibility are particularly noteworthy given the well-documented barriers associated with accessing prevention and treatment services for many Latino families (e.g., stigma, language barriers, concerns about legal status, acute acculturative stress; Office of the Surgeon General, 2001). Intervention participation rates in this study, in which 70% of families attended at least 80% of the sessions, were similar to those in other community-based PMT studies conducted with predominately non-Latino samples. Comparatively, in the Linking the Interests of Families and Teachers (LIFT) study, which included PMT, 64% of families attended at least 80% of the sessions (Reid et al., 1999), whereas in the PMT-based Adolescent Transitions Program (ATP) 69% of parents attended sessions (Dishion & Andrews, 1995).

In terms of efficacy, we found numerous positive effects of the intervention on improving parenting practices and youth adjustment. Specifically, assignment to the intervention condition was associated with improvements in parents’ reports of general parenting practices, skill encouragement, and overall effective parenting. The role of youth nativity status in relation to intervention outcomes was more complicated. The presence of a three-way interaction between intervention condition, time, and youth nativity for skill encouragement and appropriate discipline suggests that nativity status may represent an important source of differential intervention effectiveness for these families (i.e., parents of U.S.-born youth benefited more from participation in the intervention, relative to control participants, than did parents of foreign-born youth). For youth externalizing problem and substance outcomes, participation in the intervention was associated with preintervention–postintervention improvements. In contrast, for depression, Group × Time effects of the intervention were dependent on youth nativity status, with trends toward stronger effects of the intervention for U.S.-born youth. Any positive intervention effects on youth outcomes are especially meaningful because parents, not youth, were direct participants in the intervention.

It is not surprising that youth nativity status may mark important aspects of differential effects of the intervention. The literature is replete with findings suggesting that U.S. nativity for Latino youth is directly linked to parenting variables as well as negative youth outcomes, including mental health problems, antisocial behavior, and substance use (Amaro et al., 1990; Gil, Wagner, & Vega, 2000; Ortega et al., 2000). Although the relationship between U.S. nativity and negative adjustment for Latinos is well documented, the reasons for the relationship are not well understood. There is no question, however, that parenting in the context of youth who are U.S. citizens versus those who are immigrants is unique in many ways, and navigating parent–youth differential acculturation is very different within these two contexts (Sanisteban et al., 2002; Szapocznik & Kurtines, 1993). Furthermore, Latino youth born in the U.S. experience different socialization processes related to culture than those who are immigrants, and those different experiences may expose U.S.-born youths to unique vulnerabilities. Such questions must be examined in future studies in order to determine the extent to which targeted interventions must be developed to address the unique contexts of immigrant families.

Effect sizes in this study were well within the range of effect sizes in other prevention studies that included PMT. For example, in their study of an OSLC PMT program, DeGarmo, Patterson, and Forgatch (2004) found a Cohen’s d effect size of 0 for child externalizing behavior at 6 months after baseline (i.e., several weeks after intervention was complete, which is similar to the time frame in our study). It was not until 12 months after baseline that the positive effects of the intervention on child behavior became clear (effect size of .20). LeMarquand, Tremblay, and Vitaro (2001) computed effect sizes for all prevention studies targeting child antisocial behavior and reported on four that included PMT. The range in Cohen’s d effect sizes for parent and teacher reported externalizing behavior was from −.04 to .45, or from none to small effects to medium effects. This is a similar range to that covered in the effect sizes in the present study.

Although promising, these findings have a number of important limitations. First, the findings are constrained by low power, especially for analyses involving three-way interactions. In this case, with replication in a larger sample, it would be possible to more accurately determine potential differential effects of the intervention across outcomes on the basis of youth nativity. A larger sample would provide additional power to detect potential mediation of intervention effects on youth outcomes through intervention-related changes in parenting practices. Second, the limited lag between baseline and termination constrained our ability to detect intervention effects that could unfold over time or to examine the waxing or waning of effects. Previous research has suggested that the ability to more precisely describe changes in effects is important. For example, in one study, we initially detected what appeared to be trends toward possible negative intervention effects at the termination assessment but later found strong improving linear trajectories across the next 2.5 years (Martinez & Forgatch, 2001), a finding that was consistent with the “struggle and working through” hypothesis about change during family therapy (Chamberlain, 1994). Third, this study did not provide a direct test of the incremental efficacy of the culturally adapted PMT intervention relative to a nonadapted intervention. Such a test, along with measures that capture intervention adaptation processes, will be necessary to determine whether culturally adapted prevention programs are more effective than those that are not adapted.

In this study, the underlying conceptual framework and the intervention components themselves were designed to reflect culturally specific factors in many ways. For example, the model suggests that families who experience stress in the face of differential acculturation between parents and youngsters may be at risk for disrupted family environments and declines in effective parenting. Unfortunately, the present study design is insufficient to examine such complex changes in multidimensional and nonbehavioral variables. Indeed, it is not surprising that we were able to detect intervention-related changes in reported parenting behaviors because these were target-directed and highly malleable; however, it would be very difficult to test for changes in more multidimensional variables that involve family interactional patterns and cognitive processes. At minimum, examining such potential distal
intervention outcomes necessitates a longitudinal design. The need for such a study is clearly warranted.

As prevention and treatment efforts move toward implementing empirically supported parent training interventions in the community context, issues of cultural adaptation will need to be addressed. Here, we used a stepwise approach to adapting intervention models for cultural relevance, and the resulting intervention targeted both general and specific parenting issues relevant to social learning and ecodevelopmental theories. In the context of a randomized trial, we found evidence that the adapted intervention was feasible to deliver in a community context and that the intervention led to short-term improvements on a variety of parenting and youth outcomes. The findings are particularly important given that even modest positive effects of the intervention on less-serious youth behavioral outcomes can alter trajectories toward some of the more serious problems for which Latino youth are at increased risk. Further studies are needed on the efficacy and effectiveness of culturally adapted versions of PMT as well as other family-based interventions, including studies that attempt to determine the minimum adaptation requirements to establish and maintain efficacy for such interventions.

References