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Feasibility, acceptability, and preliminary outcomes of the Fortalezas Familiares intervention for  
Latino families facing maternal depression

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RUNNING HEAD: FORTALEZAS FAMILIARES

### Abstract

This pilot study examined the feasibility, acceptability, and preliminary outcomes of a linguistically- and culturally-adapted intervention for immigrant Latina mothers with depression and their families. Fortalezas Familiares (Family Strengths) is a community-based, 12-week, multi-family group intervention that aims to increase communication about family processes leading up to and affected by the mother's depression, build child coping and efficacy, enhance parenting competence and skills, and promote cultural and social assets within the family. In terms of feasibility, of 16 families who enrolled and participated in the intervention, 13 families attended more than 90% of meetings and completed the intervention. Post-tests reported positive changes following the intervention, including improved psychological functioning, increased family and marital support, and enhanced family functioning, as reported by mothers and other caregivers. Mothers also reported decreased conduct and hyperactivity problems among their children. Children reported positive changes in their psychological functioning and coping, peer relations, parenting warmth and acceptance, and overall family functioning. Post-intervention focus groups and surveys measuring acceptability revealed families' satisfaction with the intervention and suggested areas of improvement. We discuss similarities and differences in outcomes between the adapted intervention, Fortalezas Familiares, and the original intervention, Keeping Families Strong, and propose future areas of intervention adaptation and development.

Keywords: maternal depression, Latino families, child and adolescent mental health, family intervention, resilience

Maternal depression can have deleterious consequences not only on the wellbeing of the mother with depression, but on the coping resources and functioning of the family (Riley et al., 2008). Negative changes in family communication, nurturance, activities and routines, and cohesion have been documented as both contributing to maternal depression and being exacerbated by it (Valdez, Abegglen, & Hauser, in press). These changes have been associated with long-term negative outcomes in children, including impairments in their mental health, physical health, and social and occupational functioning (Riley et al., 2008; Weissman et al., 2006).

Although researchers have made great strides in developing family interventions to address the needs of children and parents in the context of family stress and maternal depression, these interventions have primarily focused on White populations, thereby limiting their generalizability to ethnic minorities such as Latinos. Thus, researchers are called to develop accessible and culturally-sensitive interventions for Latino families that address the unique personal, family, and sociocultural pathways to children's outcomes when a mother has depression (Cardemil, Kim, Pinedo, & Miller, 2005). In a previous issue of this journal, we described the theoretical rationale and components of *Fortalezas Familiares* (Family Strengths), a community-based family intervention for low-income Latina immigrant mothers and their families (Valdez et al., in press). In the present article, we describe the feasibility, acceptability, and preliminary empirical support of the intervention.

Latinos have been understudied in the maternal depression literature, despite research showing that Latina immigrant women appear to experience stressful sociocultural processes such as significant interpersonal losses and coping difficulties due to family separation and absence of usual support systems, isolation, and acculturative stressors affecting marital and

parent-child relationships (Busch, Bohon, & Kim, 2010; Heilemann, Coffey-Love, & Frutos, 2004). Maternal depression, and associated sociocultural processes, in turn, may heighten family stress and negative family interactions, including decreased warmth and communication, increased conflict, and an inadequate understanding of family stress and maternal depression (Valdez et al., in press). This process is consistent with family systems theory, in which maternal depression is both exacerbated by and conducive to negative family relationships (Nichols & Schwartz, 2008). In addition, based on developmental psychopathology models (Bronfenbrenner & Morris, 2006; Cummings, Davies, & Campbell 2000), we posit that children's developmental adjustment to family disruptions is shaped by personal, family, and sociocultural risk and protective factors (see Valdez et al., in press, for complete theoretical description).

Although maternal depression has been shown to have negative consequences on children in the general population, the vulnerability for Latino immigrant youth is noteworthy. Latino youth are impacted by low socioeconomic status, acculturative stress, and an increasingly negative social discourse related to immigration status. Not surprisingly, low-income Latino youth experience high rates of suicide attempts, drug use and delinquency, early sexual involvement, and school dropout (Brook, Whiteman, Balka, Win, & Gursen, 1998; National Center for Education Statistics, 2000; Zayas, Lester, Cabassa, & Fortuna, 2005). Interventions designed to build resilience in Latino youth and families are essential in light of the multiple risks they face in U.S. society and in their home environments.

### **Fortalezas Familiares Intervention**

Fortalezas Familiares is a 12-week multi-family intervention for Latina immigrant mothers with depression, other family caregivers, and their children. Fortalezas Familiares aims to enhance the resources families have to cope with maternal depression by improving

communication and families' understanding of depression and negative family interactions, building parenting competence and confidence, and promoting children's positive coping strategies and efficacy.

Fortalezas Familiares was adapted from Keeping Families Strong, a clinic-based 10-week intervention for low-income families whose mothers are in treatment for depression (Valdez, Mills, Barrueco, Leis, & Riley, 2011). The intervention has been evaluated with White and African-American mothers and associated with positive changes in mothers' psychological functioning and social support, and the quality of family interactions and routines, as well as to increase maternal warmth and acceptance, and decrease stressful family events. Improved coping and decreased child behavior (i.e., hyperactivity, aggression, and conduct problems) and emotional problems (i.e., anxiety, depression, and somatization) also followed the intervention (Valdez et al., 2011).

Although in Fortalezas Familiares we retained the core elements of Keeping Families Strong, we introduced four new sociocultural concepts: (a) acculturative and immigration stressors, (b) parental involvement and monitoring of children's activities outside the home, (c) marital relationships in the context of acculturative stress and maternal depression, and (d) cultural assets, such as traditions, support from extended family, and ethnic socialization (i.e., cultural pride and coping with discrimination). These concepts were drawn from the literature (e.g., Busch et al., 2010; Heilemann et al., 2004) and our own qualitative research with immigrant families, and facilitated through group discussion, psychoeducation, and role plays.

All meeting goals, topics, and activities are detailed in a manual, and described in detail elsewhere (Valdez et al., in press). In addition to the 12 weekly meetings, there are 2 booster meetings scheduled one month apart from each other. The first four meetings focus on increasing

family members' awareness and understanding of family life, as it pertains to their concerns and goals, depression, family stress and dynamics, and sociocultural history and context. The next four meetings focus on improving family life by building family member's skills and agency through positive family interactions, communication, problem-solving, and family and marital conflict resolution. This focus includes the promotion of three types of family activities: family fun activities, parent-child bonding time, and family conversations. The final four meetings and the two boosters are aimed at family members applying their shared understanding and new skills through family meetings, where adult and youth participants come together privately to discuss their goals for the family, address barriers to meeting these goals, and review the skills they have learned in their groups. The final meeting and boosters allow participants to reflect on their resiliency and growth and to integrate experiences acquired through the intervention.

### **Research Questions**

This study aims to fill the gap in intervention research for Latino immigrant families by examining the feasibility, acceptability, and preliminary outcomes of Fortalezas Familiares, through the following hypotheses:

- H1. Participants can be successfully recruited from mental health clinics to participate in the intervention.
- H2. Participants will complete the requisite course of intervention, or at least 90% of meetings.
- H3. Participants will report satisfaction with the content and delivery of the intervention, through self-report questionnaires and focus group interviews.
- H4. Participants will report improvement in parent, child, and family functioning following the Fortalezas Familiares intervention, through ratings on self-report questionnaires.

## Methods

### Setting

To promote integration of the Fortalezas Familiares intervention into existing health services, we partnered with three community outpatient clinics in a midsize city in the Midwest: a mental health agency, a behavioral health clinic, and a faith-based community organization. Clinics were located in a low-income, predominantly Latino neighborhood. Clinicians in these community clinics referred women from their caseloads that were in treatment for depression, and provided input on intervention adaptation and engagement of families. We delivered the intervention in a community agency located in the same neighborhood as the clinics, to facilitate family members' comfort with and access to the intervention.

### Participants

Latina women were eligible to participate if they were engaged in treatment for depression, met criteria for major depressive disorder on a semi-structured clinical interview, and if they had primary, residential custody of at least one 9 to 18-year-old child. Conversely, they were ineligible if on a semi-structured interview they met criteria for (a) bipolar disorder, (b) psychosis, (c) active substance abuse problems, (d) a developmental disability, or (e) current physical or sexual abuse. Children were excluded if they were cognitively unable to engage in the intervention or if they exhibited ongoing criminal or antisocial behaviors, as reported by parents or clinicians at time of referral or enrollment. Additionally, other family caregivers and children under the age of 9 were all invited to participate.

Thirteen families completed the intervention and the post-intervention assessment. Mothers who completed the intervention ( $N = 13$ ) ranged in age from 29 to 45 years with an average age of 35.60 ( $SD = 4.3$ ). All mothers reported being born in Latin America, specifically



Mexico ( $n = 10$ ), Honduras ( $n = 1$ ), Guatemala ( $n = 1$ ), and Argentina ( $n = 1$ ). Over 76% of mothers reported living in the United States for a minimum of 10 years. Fifty-four percent of mothers were married and an additional 39% of mothers were living with a male partner. The majority (69%) of mothers worked, with 92% reporting a household annual income of less than \$29,000, and 70% reporting less than a high school education. On average, mothers had 2.6 ( $SD = 1.1$ ) children. Participating mothers were representative of the local Latino immigrant community from which they were recruited on all of these characteristics. Moreover, no significant differences were found between mothers who completed the intervention and mothers who did not. Out of 12 families with a father figure in the home, 10 (83%) had a father who participated, and 8 (80%) of these 10 fathers attended more than 90% of intervention meetings. One family had a grandmother who participated and completed the program. Between four and six youth 9-18 years of age ( $n = 17$ ) participated per cycle. A cycle was defined as an iteration of the program with a group of approximately five families.

## Measures

Measures in the current study were similar to those in the Keeping Families Strong study, which were selected based on their relevance to target outcomes and mechanisms of stress and resilience among families with a depressed mother (Valdez et al., 2011). Whenever necessary, measures were translated from English into Spanish, back translated independently by three bilingual team members, and reviewed by community clinicians to ensure linguistic and cultural equivalency (Peña, 2007). Whereas all adults requested to complete their assessments in Spanish, less than a third of youth, regardless of age, requested to complete assessments in Spanish.

**Mother and caregiver psychological functioning.** Diagnostic inclusionary and exclusionary criteria for mothers was assessed to establish clinical eligibility prior to enrollment

in the intervention, via the Structured Clinical Interview for DSM-IV-TR Disorders, I-Research Version (SCID-I-RV; First, Spitzer, Gibbon, & Williams, 2002). The SCID-I is a semi-structured interview administered by a trained clinician. For our study, we administered the Mood Episodes, Mood Disorders, and a psychotic screen. The SCID-I Major Depressive Disorder diagnosis based on DSM-IV criteria has fair ( $k = .66$ ) to good ( $k = .80$ ) inter-rater reliability (Lobbestael, Leurgans, & Arnt, 2010; Zanarini et al., 2000). For Latinos, the SCID-I depressive diagnosis has been shown to have high concordance with other diagnostic measures (Alegría et al., 2010; Cucciare, Gray, Azar, Jimenez, Gallagher-Thompson, 2010).

To assess change in psychological functioning from pre- to post-intervention, mothers and caregivers completed the 18-item version of the Brief Symptom Inventory (BSI-18; Derogatis & Melisaratos, 1983). The BSI-18 is comprised of four subscales. Three subscales, Depression, Anxiety, and Somatization, measure common psychiatric dimensions. The fourth subscale, Global Severity Index (GSI), measures overall functioning and is the sum of the three dimension scores. Dimension scores range from 0 to 24 and GSI score ranges from 0 to 72, with higher scores indicating higher levels of psychological distress (Derogatis, 2000). The BSI-18 has good internal consistency, with an alpha coefficient of .74 for SOM, .79 for ANX, .84 for DEP, and .89 for the GSI, and good concurrent validity (Derogatis, 2000). With Latinos, high scores on the BSI-18 have been associated with psychological stressors (Prelow, Weaver, Swenson, & Bowman, 2005).

**Child psychological functioning.** Child emotional and behavioral difficulties were measured at pre- and post-intervention through parent and child report on the Strengths and Difficulties Questionnaire (SDQ; Goodman & Goodman, 2009). The SDQ contains 25 items rated on a three-point Likert-type scale: “not true, partly true, or certainly true.” There are five

symptom and behavior subscales that cover symptoms present over the past 6 months: Emotional Symptoms, Hyperactivity/Inattention, Peer Problems, Conduct Problems, and Pro-Social Behavior. A sixth Total Difficulties scale measures overall functioning by summing each of the subscales, except Pro-Social Behavior. High subscale and total difficulty scores indicate higher psychiatric difficulties, with the exception of the Pro-Social scale, in which higher scores indicate increased functioning. The SDQ has good internal consistency (mean  $\alpha = .73$ ), good mean retest stability ( $\alpha = 0.62$ ; Goodman, 2001), and good predictive validity (Goodman & Goodman, 2009). In a predominantly Latino sample, the SDQ was sensitive to intervention (Lakes, Vargas, Riggs, Schmidt, & Baird, 2011).

With respect to coping measures, we administered at pre- and post-intervention the Avoidance Strategies subscale ( $\alpha = .65$ ) and the Support-Seeking Strategies subscale ( $\alpha = .86$ ) of the Children's Coping Strategies Checklist-Revision 1 (CCSC; Ayers, Sandler, West, & Roosa, 1996). The 7-item Coping Efficacy Scale (CES; Sandler, Tein, Mehta, Wolchik, & Ayers, 2000) was used to measure participant satisfaction with handling past and future problems. Responses on the CES are recorded on a four-point Likert scale ranging from "not at all good" to "very good," and higher scores indicate increased coping ability ( $\alpha = .74$ ). Psychometric properties of these coping scales are not available for Latino children.

**Family functioning.** To assess overall family functioning at pre- and post-intervention, mother and child participants responded to the general functioning scale of the McMaster Family Assessment Device (FAD; Epstein, Baldwin, & Bishop, 1983), comprised of 12 items rated on a four-point Likert-type scale ranging from "strongly agree" to "strongly disagree" ( $\alpha = .82$ ; Aarons, McDonald, Connelly, & Newton, 2007). Although one study showed lower reliabilities

for Latinos relative to Whites (Aarons et al., 2007), the FAD was found to be highly associated with psychological functioning among Latino youth in another study (Hovey & King, 1996).

In addition to assessing general family functioning, mothers and children were administered at both time points the Involvement and Monitoring sub-scales of the Alabama Parenting Questionnaire (APQ; Shelton, Frick, & Wootton, 1996), which totaled 13 items. The Parental Involvement scale has good internal consistency ( $\alpha = .80$  for the parent report,  $.72-.83$  for child report), and the Parental Monitoring scale has acceptable internal consistency ( $\alpha = .67$  for the parent report,  $.69$  for the child report; Shelton et al., 1996). With Latinos, the APQ is highly associated with acculturation (Haack, Gernes, Schneider, & Hurtado, 2010).

Mothers' and caregivers' perceptions of support from families, friends and significant others were measured via the 12-item Multidimensional Scale of Perceived Social Support (MSPSS; Procidano & Heller, 1983). Items are rated on a 7-point Likert scale ranging from "very strongly disagree" to "very strongly agree." The MSPSS has high to excellent internal consistency ( $\alpha = .81-.92$ ; Dahlem, Zimet, & Walker, 1991), and good test-retest reliability ( $\alpha = .72-.85$ ; Zimet, Powell, Farley, Wekman, & Berkoff, 1990). The MSPSS has been used with Latino adolescents and found to have high concordance with other social and family support measures (Edwards, 2004).

Mothers' responses on the Family Times and Routines Index (FTRI; McCubbin, McCubbin, & Thompson, 1987) were used to assess the types of activities or routines in which families participate and value. This 30-item scale, not previously used with Latinos, consists of eight sub-scales, including Couple's Togetherness, Family Togetherness, and Meals Together with good reliability ( $\alpha = .88$ ), and good concurrent validity as indicated by significant correlation with other family functioning measures (McCubbin et al., 1987).

Mothers, caregivers, and children provided information on mothers' parenting style via the Acceptance, Rejection and Consistent Discipline sub-scales of the Revised Child Report of Parenting Behavior Inventory (CRPBI; Schaefer, 1965). Not previously used with U.S. Latinos, the items on these subscales ask respondents to identify parenting behaviors as "like, somewhat like, or unlike" the mother. Subscales have a test-retest reliability of .79 to .93, and are sensitive to depression remission (Harper, 1984).

Conflict between parents and children was measured at pre- and post-intervention using 15 items from the Conflict Behavior Questionnaire (CBQ; Robin & Foster, 1989). These 15 dichotomous "yes" or "no" items range in score from 0 to 15, and inquire about children's description of both parents at the same time. High scores on the items indicate elevated perceptions of conflict and negative communication between the parents and children ( $\alpha = 0.91$ ). The CBQ is responsive to treatment and has high concordance with other measures of psychological functioning among Latinos (Gunlicks-Stoessel, Mufson, Jekal, & Turner, 2010).

**Intervention satisfaction.** Three measures, designed for the Keeping Families Strong study, were used to assess participant satisfaction with and perceived utility of Fortalezas Familiares. All participants completed the Satisfaction Questionnaire (SQ), which comprised of 6 items about the overall quality of the intervention and of various key components (e.g., group meetings, discussion). Items on the SQ were rated on a 5-point Likert scale ranging from "poor" to "excellent" for mothers and caregivers, and on a 3-point Likert scale ranging from "not helpful" to "very helpful," for youth (Valdez et al., 2011).

Mothers and youth completed two measures about the perceived utility of the intervention. On the first measure, participants were asked to indicate the degree of utility they ascribed to individual intervention components on a 5-point Likert scale ranging from "not

useful” to “extremely useful.” The parent measure consisted of 17 items, and the youth measure consisted of 23 items, reflecting differences in programming for the two participant groups. On the second measure, mothers and youth reported actual engagement in and frequency of family activities outside of the intervention (e.g., family meetings at home). Items were rated on a 5-point Likert scale ranging from “once per week” to “not yet, and I don’t think I will.”

Focus group questions included: “What did you find helpful about the program? What did you not find helpful? What did you think about the group process? How could the program be improved?” Probes were used as necessary to clarify or expand on participant responses.

### **Procedures**

All procedures were conducted in accordance with the safeguards established by the Institutional Review Board of the researchers’ university. Researchers provided verbal and written information to referring community clinicians regarding the intervention and client eligibility. Two months before each intervention cycle, community clinicians reviewed their Latino clientele for potential eligibility and discussed the study with those adult female clients in treatment for depression who had children in the target age range. If a client expressed interest in learning more about the intervention, the clinician would obtain written authorization and forward the client’s contact information to researchers.

After receiving the authorization and contact forms, researchers contacted the mother by phone to provide detailed information about the intervention and to conduct a semi-structured diagnostic clinical interview to confirm a diagnosis of major depressive disorder and to rule out exclusionary criteria. Mothers not eligible to participate in the intervention were provided with appropriate referrals in their clinic or elsewhere in the community. If mothers were eligible, one or two intervention facilitators conducted home visits to meet the mother and her family and

begin building rapport with the families. During the home visit, facilitators provided written consent forms to the parents in Spanish, and in English and Spanish to bilingual youth. Families began participation in Fortalezas Familiares one week later.

Fortalezas Familiares was conducted in three cycles of approximately five families each, with each cycle comprised of two concurrent but separate intervention groups: an adult group and a youth group. The adult group was for mothers with depression and other family caregivers, such as a father or grandparent, who play a significant role in the lives of children. The second group was for youth ages 9-18, an age range associated with elevated vulnerability to family and sociocultural stress and the emergence of internalizing symptoms (Busch et al., 2010; Costello, Mustillo, Erkanli, Keeler, & Angold, 2003). Roughly age matched groups were formed to maximize sharing of similar youth experiences, expectations, and emotional vocabulary.

The clinical facilitators in the adult groups were a faculty member (first author), who is a licensed professional psychologist, and a community mental health professional. Both were native Spanish-speakers and facilitated the adult groups in Spanish. Facilitators in the youth groups were trained graduate students in counseling psychology and social work that were bilingual in English and Spanish. Although youth requested the groups be delivered in English, facilitators translated concepts into Spanish, as necessary, and provided all written materials in both languages. The first three authors served as intervention clinicians.

We delivered the intervention in the evenings and in a centrally-located community agency to facilitate access. We also offered a culturally-representative meal at the beginning of every meeting to maintain attendance and build group cohesion. Finally, we provided child care to children 8 or younger while their older siblings and parents participated in the intervention.

Pre- and post-assessments were collected at the beginning of meeting 1 and one week after meeting 12. Focus groups were audio recorded and conducted three weeks after the post-assessments to allow for an optimal time to capture families' reflections about the intervention. Focus groups with parents were led in Spanish by the fourth author, who was not involved in the intervention delivery. Youth focus groups were led in English by bilingual graduate students, also not involved in delivering the intervention. Participants received a small financial incentive (\$20 parents, \$15 youth) for completing each assessment and participating in the focus group.

### **Data Analysis**

**Psychosocial outcomes.** Because of the limited sample size, rather than using significance test calculations, we calculated changes in scores from pre-intervention to post-intervention via Cohen's *d* standardized effect sizes. To account for the correlation between pre-intervention and post-intervention on the same group of individuals, we used a formula of Cohen's *d*, which uses the standard deviation of the difference between pre and post scores, and the correlation between pre and post scores (Cooper, Hedges, & Valentine, 2009). In line with recommendations provided by Cohen (1988), 0.20 was considered a small effect size, 0.50 moderate, and .80 large. We report only those effect sizes greater than 0.20.

**Intervention feasibility and satisfaction.** Intervention feasibility was estimated by counting the number of families who completed the intervention relative to the number of families who were enrolled, and the number of families who were referred and eligible to participate. As in Keeping Families Strong, the Fortalezas Familiares intervention was judged to be feasible if 50% of referred and eligible families participate, and if 75% of those families complete the intervention, or attend at least 90% of the meetings. Analysis of intervention satisfaction and utility involved generating the means and standard deviations, separately for



mothers, caregivers, and youth. We provide frequencies of families' continued engagement in family activities outside of the intervention.

The first author followed guidelines for content analysis by Krueger & Casey (2009) to analyze satisfaction with the intervention through post-intervention focus groups. Initially, she read focus group transcripts multiple times in their original language to gain familiarity with the content. Next, she coded each transcript in small units of analysis (i.e., single sentences summarizing participants' descriptions), which she wrote on the margins next to participants' descriptions. She later organized these units into larger categories, first within a transcript, and second across multiple transcripts. The result was a list of themes and subthemes for mothers, fathers/other caregivers, and youth, based on multiple respondent descriptions. These themes and subthemes were corroborated by an advanced graduate student, who coded the focus groups independently.

## **Results**

### **Feasibility**

Community clinicians referred 25 adult women with depression from their caseloads but 23 were eligible to participate based on inclusionary and exclusionary criteria. Of eligible women, 6 were excluded for the following reasons: conflict with intervention schedule ( $n = 3$ ), inability to contact ( $n = 2$ ), and refusal to participate in a group ( $n = 1$ ). Thus, 74% of eligible families enrolled in the intervention, supporting Hypothesis 1. Of the 17 families enrolled in the intervention, 16 (94%) attended the first meeting and completed the pre-intervention assessment. Thirteen (87%) families who attended the first meeting also attended more than 90% of the meetings, supporting Hypothesis 2. Further, caregiver participation was at 69%.

**Acceptability**

Acceptability and satisfaction were assessed via focus groups and questionnaires. Focus groups conducted with mothers and fathers revealed that the Fortalezas Familiares intervention was acceptable to Latino families. First, mothers and caregivers reported experiencing positive family change throughout the intervention. They described improved family communication, learning to discuss differences privately in order to provide a “united front” in their parenting decisions, and providing an enriched parenting style involving more emphasis on positive activities, and decreased emphasis on negative interactions with children. Participants reported that these changes in parenting resulted in a strengthened marital relationship and the belief that both partners were working as a team on behalf of the family.

In describing their experience of being part of a group, mothers and caregivers reflected on the importance of developing trust over time with other group members, and that sharing troubles can normalize and diminish the pain of difficult experiences. Inclusion of fathers and other caregivers was viewed as positive by mothers, who now felt more supported in their healing process. Moreover, participants expressed that the intervention’s focus on culture, immigration-related losses, and acculturative stressors, helped to deepen their understanding of their struggles and to help them connect as a family. Although participants primarily expressed satisfaction with Fortalezas Familiares, they also suggested areas for improvement. Participants stated an extended intervention would allow them to learn more about preventing risk behaviors in adolescence, and about raising teenagers in a culture different from the one parents grew up in. There were also requests to include information about how to deal with potential mental health or substance abuse issues of fathers and other family caregivers. A suggestion was made by some parents to extend the number of meetings focused on marital relationships and communication.

Youth in the focus groups also talked about how the intervention taught them ways to improve their daily lives, such as learning about their family's struggles and their mother's depression, coping with these problems, and engaging in more positive communication and family activities. They also described ways in which the intervention helped their parents, such as listening more to youth, demonstrating more warmth, and being more aware of their own feelings. A few youth wished they had more opportunities to have family meetings, and to practice the intervention skills. In terms of group process, youth described the intervention as fun and engaging, but reported initial difficulties in sharing about their family to the group. They acknowledged facilitators' support in helping them reach trust.

Questionnaire ratings of intervention satisfaction were highly favorable for all participants. On a 5-point scale, mothers and caregivers rated the overall quality of Fortalezas Familiares at 4.92 ( $n = 13$ ,  $SD = 0.28$ ) and 4.56 ( $n = 9$ ,  $SD = 0.73$ ), respectively. Mothers and caregivers rated the quality of key process- and content-oriented intervention components (e.g., group meetings, psychoeducation) at 4.75 ( $n = 13$ ,  $SD = 0.52$ ) and 4.49 ( $n = 9$ ,  $SD = 0.7$ ), respectively. On a 3-point scale, youth rated the intervention quality at 2.64 ( $n = 17$ ,  $SD = 0.48$ ), and the quality of the process- and content-oriented components at 2.61 ( $n = 17$ ,  $SD = 0.38$ ).

Although participant ratings of the perceived utility of Fortalezas Familiares were favorable on a 5-point scale, perceived utility was higher for parents ( $M = 4.67$ ,  $SD = 0.30$ ) than youth ( $M = 3.84$ ,  $SD = 0.92$ ). Both parents and youth found the three principal family home activities (i.e., family fun time, one-on-one time, and family meetings) to be particularly useful, with parents rating them at 4.85 ( $n = 13$ ,  $SD = .37$ ), and youth rating them at 3.90 ( $n = 17$ ,  $SD = 1.2$ ). This perceived utility was reflected in participants' report of their use of the three activities at home. Overall, 92% of mothers, and 67% of youth indicated participating in family fun time at

least once per month. Seventy-seven percent of mothers, and 80% of youth indicated participating in one-on-one time at least once per month. Finally, 77% of mothers and 60% of youth indicated participating in family meetings at least once per month. Of those participants not participating in the three activities at the time of the post-, 15% indicated planning to do so. Overall, these findings support hypothesis 3, that participants would report satisfaction with the content and delivery of the intervention.

### **Clinical Outcomes**

**Mother ratings.** Means, pooled standard deviations, and effect sizes for mothers' ratings are shown in Table 1. Mothers reported large improvements in their own health and functioning, indicating large decreases in depression, anxiety, somatization and global psychological functioning. Three of four mothers who scored in the clinical range at pre-intervention, no longer did at post-intervention. The mother who remained in the clinical range was struggling with her husband's substance abuse issues (who did not participate in the intervention), and was referred for continued treatment. Large improvements were also observed in mothers' perceived increased support from family, friends, and significant others. Mothers reported small effects in parental involvement, parental acceptance, consistency, and rejection.

Regarding mothers' perceptions of their children's psychological functioning, large improvement was reported for total psychological difficulties, child hyperactivity and inattention, and conduct problems. Moderate effects were reported for emotional symptoms and pro-social behavior. With regards to general family functioning, mothers reported moderate improvements in parent-child togetherness, couple togetherness, family connection, and child routines. Small effects were reported by mothers for family meal times, family management and family togetherness.

[INSERT TABLES 1, 2, AND 3 HERE]

**Caregiver ratings.** Caregivers reported various levels of improvement following the intervention, as illustrated in Table 2. In terms of their own health and functioning, they reported a moderate decrease in somatization, anxiety, and increase in global functioning. Caregivers also reported a small decrease in depression. For parenting behaviors, caregivers reported small increase in maternal acceptance and decrease in maternal rejection. Finally, caregivers reported improvement in their perceived social support from family and friends.

**Child ratings.** In terms of coping ability, children reported small improvements for support seeking behaviors (see Table 3). They reported a small decrease in total conflict behavior with their mothers. In addition, small improvements were reported in conduct problems, emotional symptoms, and pro-social behavior. Contrary to expectation, children reported an increase in peer problems from pre- to post-assessment. In terms of family functioning, moderate improvements were reported for children's perceptions of family functioning, and parental rejection. Small effects were observed for parental acceptance and consistency. In summary, Hypothesis 4, that participants would report improvement in parent, child, and family functioning was supported for mothers and caregivers, and partially supported for children.

### **Discussion**

Consistent with all of our hypotheses, Fortalezas Familiares shows promise as a feasible, acceptable, and effective intervention. Nearly all families who attended at least one meeting completed the intervention and attended over 90% of the meetings. Participating families reported positive changes following the intervention, including mother, father/other caregiver, and youth reports of improvements in psychological functioning, perception of family support and coping, as well as family functioning.

The caregivers included in the study were almost all male partners of the mothers, the majority of whom were biological fathers of the children who participated in the study. Our inclusion and engagement of fathers is noteworthy in light of a general lack of representation of fathers in intervention studies (Fabiano, 2007). Whereas fathers can play an important role in family adaptation (Crean, 2008), interventions have typically focused on mothers only, or mothers and their children.

Fortalezas Familiares aimed to overcome barriers to fathers' participation by delivering the intervention in the evening and in a community setting, conducting home visits prior to the intervention to establish trust and credibility with fathers, and by designing the intervention for the whole family. Indeed, fathers' comments about the intervention suggest that they found comfort in other fathers participating, experienced the clinicians as warm and personal, and valued the intervention's focus on the family and Latino culture. Moreover, fathers reported improvement in their psychological functioning, particularly somatization, a common expression of psychological distress among Latinos (Busch et al., 2010). Future research studies with immigrant families should consider the importance of fathers in intervention recruitment, and evaluate the relative benefits of father participation on family outcomes.

Whereas the majority of Latina mothers in Fortalezas Familiares had a male partner, the majority of low-income White and African American mothers in Keeping Families Strong were single parents (Valdez et al., 2011). This difference suggests there are distinct needs of low-income women from different ethnic backgrounds. Although many low-income Latina mothers may be subject to marital stressors, many low-income White and African American women may be subject to isolation from intimate relationships and extended family networks. These ethnic differences support the need for cultural adaptations of interventions and suggest that whereas

Keeping Families Strong works in part by building external social support, Fortalezas Familiares works in part by building healthy marital relationships.

The number of young children in our participating families marked another important distinction between the adapted and the original intervention. Whereas very few mothers participating in Keeping Families Strong had young children, every participating mother in Fortalezas Familiares had one or two children under the age of nine. This difference is consistent with national younger age trends in the Latino population, relative to the non-Latino population (U.S. Census Bureau, 2006), and offers future directions for Fortalezas Familiares and for family interventions in general. One such direction is to develop a young child component that would be delivered concurrently to the youth and the adult groups. This addition would maximize the potential impact of the intervention for Latino immigrant families. Another direction calls for greater prevention and early intervention efforts for Latina mothers and their young children. Early childhood programs, such as Head Start, could be a useful resource in identifying mothers with depression and their children (Beardslee, Avery, Ayoub, & Watts, 2009).

Contrary to expectation, youth reported an increase in peer problems following the Fortalezas Familiares intervention. This finding is unexpected in light of other areas of improved functioning reported by youth and parents, including increased social competence. However, this finding is consistent with the evaluation of Keeping Families Strong, in which youth at post-test reported an increase in school behavioral difficulties on a different measure of behavioral functioning (Valdez et al., 2011). These combined findings may be explained by a social ecological framework in which the child's psychological functioning is embedded within multiple contexts of influence (Bronfenbrenner & Morris, 2006). Youth living in a stressful family environment may also be experiencing a stressful school environment and both need to be

addressed side-by-side. Although we discussed community stressors in the intervention, our emphasis was on the family context. In addition, from a systems perspective (Nichols & Schwartz, 2008), it is possible that as children's relationships at home improve, their relationships at school may temporarily worsen in an attempt to maintain stability in functioning (Valdez et al., 2011). Continued quantitative and qualitative assessment would help to clarify this paradoxical phenomenon by examining whether improved maternal mood and family functioning subsequently increase parental monitoring and school involvement, and whether this involvement in turn improves peer relations at school. As peers are likely to play an important role in adaptation during adolescence, our findings highlight for practitioners and researchers the need to consider proximal and distal contexts in children's adaptation.

This pilot study involved a systematic, theory-driven, iterative process of culturally adapting a family intervention. Our adaptation was made in response to a large body of research showing the need for and benefits of culturally sensitive mental health services for minority populations, including Latinos (Griner & Smith, 2006; Rogler, Malgady, Constantino, & Blumenthal, 1987). Our adaptation study followed two frameworks, one for incorporating culturally centered elements into the implementation of interventions for Latinos, such as the importance of a warm therapeutic relationship (Bernal & Saez-Santiago, 2006); the second for establishing community partnerships in the design and implementation of culturally adapted interventions to facilitate their adoption and dissemination with Latinos (Domenech-Rodriguez & Wieling, 2004; Parra Cardona et al., 2012). We saw a need to revise and expand some of the content related to coping with depression, family life, and external stressors based on previous research showing cultural variations in these areas (e.g., Domenech-Rodriguez, Donovan, &



Crowley, 2009; Heilemann et al., 2004). In addition, we delivered the intervention in participants' preferred language to enhance acceptability.

In spite of a recent substantial growth in the science of cultural adaptations with Latinos, our intervention is one of two family-focused interventions adapted for Latino parents with clinical levels of depression and their families. The first adaptation was conducted and piloted by D'Angelo and colleagues (2009) and focused on mothers of Puerto Rican and Dominican descent, all of whom were U.S. citizens. Conversely, mothers in Fortalezas Familiares were predominantly of Mexican descent, all of whom were undocumented and recent immigrants. Although much theoretical commonality exists between the two interventions, there are important differences between the two interventions in response to families' social context. Thus, similar to Parra Cardona and colleague's parent training intervention with immigrant families in the Midwest (2012), we included two culturally-specific sessions, one focused on contextual stressors related to immigration status, such as separation from loved ones and grief related to transnational interpersonal losses associated with families' inability to travel to their country of origin; and the second one related to marital stress and adaptation of marital roles to a new culture. These aspects highlight the importance of considering often unacknowledged within-group differences among Latinos in the study and delivery of mental health services. Clinicians working with historically disadvantaged clients should consider the use of action oriented techniques, such as role plays and psychodrama, to facilitate clients' grasp of their social context (Smokowski & Bacallao, 2011).

Despite the strengths of our intervention and our mixed-methods approach to evaluation, some limitations are worth noting. First, the limited sample size was appropriate for a pilot study, but limited our ability to evaluate the intervention's efficacy. Another limitation is that we did

not have a comparison group. The majority of our participating families were of Mexican descent, with all parents having been born outside of the United States. Thus, we cannot say how Latino families of other countries of origin, or who were born in the United States would respond to the intervention.

An experimental study with a representative sample of Latino families would allow us to test the intervention's efficacy and to generalize across different Latino populations. In taking the intervention to scale, further exploratory research with community and professional stakeholders will be needed to inform the intervention's readiness for implementation, translation, and sustainability in community settings (Fixen, Naoom, Blase, Friedman, & Wallace, 2005). Limitations notwithstanding, our pilot study provides a first step in the development of promising interventions inclusive and engaging of vulnerable and difficult-to-reach families, such as immigrant Latina mothers with depression, other family caregivers, and their children.

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Table 1

*Parent Reported Pre-Intervention (Time 1) and Post-Intervention (Time 2) Outcomes.*

Measure	Subscale	<i>n</i>	Time 1 <i>M</i>	Time 2 <i>M</i>	Difference <i>M</i> ( <i>Sdiff</i> )	<i>r</i>	Effect size ( <i>d</i> )
<b>Psychosocial functioning</b>							
BSI-18	Anxiety	12	60.42	48.83	-11.58 (9.02)	0.38	1.43
	Depression	12	59.00	49.83	-9.17 (8.87)	0.48	1.06
	Total difficulties	12	59.83	48.33	-11.50 (9.60)	0.37	1.35
	Somatization	12	55.08	46.58	-8.50 (7.95)	0.67	0.86
MSPSS	Family <sup>a</sup>	13	4.65	6.10	1.44 (1.71)	0.31	0.99
	Friends <sup>a</sup>	13	4.37	5.85	1.47 (1.23)	0.50	1.21
	Significant others <sup>a</sup>	13	5.02	6.56	1.54 (1.79)	0.32	1.00
<b>Family functioning</b>							
FAD	Total family functioning	13	2.29	1.99	-0.30 (0.59)	0.05	0.70
FTRI	Couples togetherness <sup>a</sup>	13	6.31	7.77	1.46 (1.90)	0.79	0.50
	Chores <sup>a</sup>	13	3.62	3.85	0.23 (1.48)	0.44	0.16
	Family connection <sup>a</sup>	13	7.54	9.23	1.69 (2.32)	0.66	0.60
	Child routines <sup>a</sup>	13	9.54	10.31	0.77 (1.92)	0.16	0.52
	Family togetherness <sup>a</sup>	13	8.31	9.31	1.00 (2.61)	0.30	0.45
	Meals together <sup>a</sup>	13	3.62	4.54	0.92 (1.55)	0.68	0.47
	Family management <sup>a</sup>	13	9.92	11.15	1.23 (2.17)	0.62	0.49
	Parent-child togetherness <sup>a</sup>	13	8.77	10.85	2.08 (3.66)	0.35	0.65
<b>Maternal parenting behavior</b>							
APQ	Parental Involvement <sup>a</sup>	16	16.44	18.38	1.94 (2.84)	0.74	0.49
	Parental Monitoring <sup>a</sup>	16	14.25	14.13	-0.13 (4.63)	0.32	0.03
CRPBI	Parental Acceptance <sup>a</sup>	16	2.46	2.64	0.18 (0.65)	0.18	0.36
	Parental Consistency <sup>a</sup>	16	2.21	2.36	0.15 (0.33)	0.72	0.34
	Parental Rejection	16	1.86	1.73	-0.13 (0.41)	0.56	0.30
<b>Mother reported child psychosocial functioning</b>							
SDQ	Conduct problems	16	3.31	2.13	-1.19 (1.72)	0.49	0.70
	Emotional symptoms	16	3.88	2.56	-1.31 (2.77)	0.10	0.63
	Hyperactivity	16	4.19	2.5	-1.69 (1.85)	0.65	0.76
	Peer problems	16	2.38	2.19	-0.19 (1.80)	0.41	0.11
	Pro-social behavior <sup>a</sup>	16	7.81	8.69	0.88 (1.96)	0.27	0.54
	Total difficulties	16	13.75	9.38	-4.38 (4.98)	0.36	1.00

*Note.* BSI-18 = Brief Symptom Inventory-18; MSPSS = Multidimensional Scale of Perceived Social Support; FAD = Family Assessment Device; FTRI = Family Times and Routines Index; APQ = Alabama Parenting Questionnaire; CRPBI = Children's Report of Parenting Behavior Inventory; SDQ = Strengths and Difficulties Questionnaire.

<sup>a</sup>Higher score is more desirable/higher functioning.

Table 2

*Caregiver Reported Pre-Intervention (Time 1) and Post-Intervention (Time 2) Outcomes.*

Measure	Subscale	<i>n</i>	Time 1 <i>M</i>	Time 2 <i>M</i>	Difference <i>M</i> ( <i>Sdiff</i> )	<i>r</i>	Effect size ( <i>d</i> )
<b>Caregiver psychosocial functioning</b>							
BSI-18	Anxiety	9	51.78	45.89	-5.89 (7.39)	0.78	0.53
	Depression	9	54.67	50.00	-4.67 (9.31)	0.68	0.40
	Total difficulties	9	53.33	45.89	-7.44 (9.79)	0.67	0.62
	Somatization	9	51.33	44.89	-6.44 (7.99)	0.63	0.70
MSPSS	Family <sup>a</sup>	9	5.69	6.03	0.33 (1.91)	0.76	0.49
	Friends <sup>a</sup>	9	5.24	5.57	0.33 (0.84)	0.01	0.03
	Significant others <sup>a</sup>	9	6.31	6.31	0.00 (0.64)	0.83	0.26
<b>Caregiver reported mother's parenting behavior</b>							
CRPBI	Parental Acceptance <sup>a</sup>	11	2.43	2.70	0.27 (0.38)	0.76	0.49
	Parental Consistency <sup>a</sup>	11	2.16	2.17	0.01 (0.51)	0.01	0.03
	Parental Rejection	11	1.89	1.78	-0.10 (0.24)	0.83	0.26

*Note.* BSI-18 = Brief Symptom Inventory-18; MSPSS = Multidimensional Scale of Perceived Social Support; CRPBI = Children's Report of Parenting Behavior Inventory.

<sup>a</sup>Higher score is more desirable/higher functioning.

Table 3

*Child Reported Pre-Intervention (Time 1) and Post-Intervention (Time 2) Outcomes.*

Measure	Subscale	<i>n</i>	Time 1 <i>M</i>	Time 2 <i>M</i>	Difference <i>M</i> ( <i>Sdiff</i> )	<i>r</i>	Effect size ( <i>d</i> )
<b>Child psychosocial functioning</b>							
SDQ	Conduct problems	17	3.18	2.65	-0.53 (1.59)	0.31	0.39
	Emotional symptoms	17	4.53	3.59	-0.94 (2.59)	0.44	0.39
	Hyperactivity	17	3.65	3.94	0.29 (2.17)	0.56	0.13
	Peer problems	17	1.94	2.59	0.65 (1.50)	0.61	0.38
	Pro-social behavior <sup>a</sup>	17	7.24	7.94	0.71 (3.08)	-0.12	0.34
	Total difficulties	17	13.29	12.76	-0.53 (5.00)	0.52	0.10
CCSC	Avoidant Coping <sup>a</sup>	17	1.71	1.73	0.02 (0.49)	0.50	0.04
	Support seeking <sup>a</sup>	17	1.01	1.21	0.19 (0.94)	0.07	0.28
CES	Total Coping Efficacy <sup>a</sup>	17	1.87	1.95	0.08 (0.60)	0.33	0.16
<b>Family functioning</b>							
FAD	Total family functioning	17	2.28	1.96	-0.32 (0.38)	0.76	0.57
CBQ	Total Conflict Behavior	17	4.35	2.82	-1.53 (2.62)	0.79	0.33
<b>Parenting behavior</b>							
CRPBI	Parental Acceptance <sup>a</sup>	17	2.53	2.69	0.16 (0.33)	0.82	0.29
	Parental Consistency <sup>a</sup>	17	2.24	2.38	0.14 (0.29)	0.75	0.34
	Parental Rejection	17	1.74	1.53	-0.21 (0.37)	0.57	0.52

*Note.* SDQ = Strengths and Difficulties Questionnaire; CCSC = Child Coping Strategies

Checklist; CES = Coping Efficacy Scale; FAD = Family Assessment Device; CBQ = Conflict Behavior Questionnaire; CRPBI = Children's Report of Parenting Behavior Inventory.

<sup>a</sup>Higher score is more desirable/higher functioning.