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Parenting Behaviors of Anxious Mothers and Youth Internalizing Symptoms: A Preliminary Cross-Ethnic Investigation

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Abstract

This pilot study examined youth report (ages 7 to 15) of maternal parenting behaviors (Psychological Control and Acceptance) and their association with internalizing symptoms in the children of clinically anxious non-Hispanic white and Latina mothers ($N = 28$). Compared to non-Hispanic white mothers, Latina mothers were rated by their children as higher in Psychological Control; a significant group difference in maternal Acceptance was not detected. Across the entire sample, lower maternal Acceptance was associated with higher somatic symptoms, and unexpectedly, higher Psychological Control was associated with lower youth anxiety. Ethnic-specific associations also emerged: higher maternal Psychological Control was associated with increased somatic symptoms in Latino youths, and lower Acceptance was associated with higher anxiety and depressive symptoms in non-Hispanic white youths. Broadly, results suggest that the linkages between parenting behaviors of anxious mothers and youth emotional functioning may vary by cultural context. This exploratory study helps to generate hypotheses for larger studies; recommendations for further investigation of these phenomena are suggested.

Keywords

children; mothers; anxiety; parenting behavior; Latino; Hispanic; cross-cultural; maternal anxiety

Anxiety disorders are among the most common mental illnesses in the U.S. (Kessler, Chiu, Demler, & Walters, 2005) and are associated with current and future functional impairment. Anxiety is a highly relevant issue for Latino families; several studies have found higher levels of anxiety symptoms in Latino adults and youths than non-Hispanic white samples (Pina & Silverman, 2004; Roberts, Roberts, & Xing, 2006). Given high levels of anxiety among Latinos, identification of modifiable factors that contribute to the risk and onset of anxiety and related disorders in Latinos would have clear benefit for mental health preventative interventions. Numerous investigations have implicated parenting behaviors in the etiology, and maintenance of child anxiety (Ginsburg & Schlossberg, 2002; Rapee, 1997, for review). However, there are critical gaps in the research literature.

First, the majority of studies of parenting and anxiety have focused on behaviors of parents of children who are already anxious (for review, see McLeod et al., 2007) rather than on behaviors of anxious parents that may increase the risk of youth anxiety. The latter is considered a top-down approach and can illuminate behaviors that may contribute to the transmission of anxiety from parent to child. This is critical because children of clinically anxious parents are at significantly increased risk for anxiety compared to those of non-anxious parents (Lieb et al., 2000), which highlights the need to pinpoint modifiable environmental factors (i.e., parenting behaviors) that can be targeted to prevent and treat youth internalizing problems. Previous top-down research with primarily non-Latino samples has linked maternal anxiety to the use of critical and controlling behaviors (e.g., Ginsburg et al., 2005; Lieb et al., 2000; Moore, Whaley, & Sigman, 2004; Whaley, Pinto, & Sigman, 1999) which places youth at risk for emotional maladjustment.

Second, with few exceptions (e.g., Ginsburg, Grover, & Ialongo, 2005; Luis, Varela, & Moore, 2008; Varela, Sanchez-Sosa, Biggs, & Luis, 2009), research on parenting behaviors and youth anxiety has included predominantly non-Hispanic white samples. Research examining the specific relations between parenting behaviors and anxiety in Latino families is of critical need, as some parenting behaviors that have been associated with negative youth outcomes in non-Hispanic white families may be consistent with Latino values and beliefs about family roles in. For example, there is evidence to suggest that behaviors that characterize psychological control (e.g., withdrawing affection in response to misbehavior; Barber, 1996) may be viewed by Latino youths as consequences of love, caring, and obligation to family (e.g., Halgunseth, Ispa, & Rudy, 2006). Further, research suggests that the strength of the relationship between perceived maternal acceptance and youth psychological functioning may be weaker in Latino families than in non-Hispanic White families (Hill, Bush, & Roosa, 2003). These findings contrast previous research with predominantly White families and propose that current models explaining the relationships between parenting behaviors and youth internalizing symptoms may not extend to Latino families (Creveling, Varela, Weems, & Corey, 2010).

Third, data from clinical populations are particularly limited and previous research has focused on the specific link between parental and child anxiety with little attention to other clinically relevant outcomes, such as youth somatic and depressive symptoms. For instance, youth anxiety and depression co-occur at very high rates. Among youth with anxiety disorders, nearly 20% will have comorbid depression, and among youth with primary depression, up to 70% have comorbid clinical anxiety (e.g., Angold, Costello, & Erkanli, 1999). Further, there is evidence that Latino youths report increased somatic symptoms of anxiety (e.g., more likely to endorse headaches or stomachaches; score higher on anxiety subscales assessing physical symptoms; Pina & Silverman, 2004) compared to European-American counterparts. Somatization may be a more culturally sanctioned expression of distress in Latinos (for review, see Varela & Hensley-Maloney, 2009); accordingly, it is important to assess a broader range of outcomes in Latino youth who are at high risk of internalizing problems but may express them differently.

This pilot study aimed to address these gaps and generate hypotheses for larger studies examining cultural differences in familial risk for internalizing symptoms. Across the youth

internalizing literature, two parenting dimensions emerge as particularly relevant to the emergence of internalizing psychopathology and were the focus of this investigation. *Psychological Control* describes indirect methods of controlling the child's behaviors and emotions in such a way that hinders the child's autonomous psychological and emotional development; often achieved through parental behaviors that are intrusive, emotionally invalidating, or guilt-inducing (Barber, 1996; Wood et al., 2003). Psychological Control has been positively associated with internalizing behaviors (Barber & Harmon, 2001, for review). Next, *Acceptance* conveys warmth and support, and has been found to be associated with positive psychological adjustment. Its relation to youth anxiety disorders in youths is mixed, however, research indicates that levels of Acceptance may be lower in anxious mothers (for review, Wood et al., 2003). Together, these two dimensions of parenting behaviors represent parenting constructs that (a) have been previously linked to internalizing symptomatology (e.g., Barber, 1996; Creveling et al., 2010; Hudson & Rapee, 2001, Varela et al., 2009), (b) are of theoretical and practical relevance to Latino families given the potential for different cultural meaning of such behaviors (e.g., potential to interpret psychological control as displays of love and caring in Latinos), and/or (c) have been associated with level of maternal anxiety (e.g., lower acceptance, see Wood et al., 2003).

The objective of this exploratory study was to explore three broad questions: (1) Do parenting behaviors differ between anxious non-Hispanic White and Latina mothers? (2) Are parenting behaviors of anxious mothers associated with youth anxiety, depression, and somatic symptoms? and (3) Do the links between maternal behaviors and youth internalizing symptoms vary cross-ethnically? We anticipated that Latina mothers would be rated by youths as higher in Psychological Control, but that his behavioral dimension would be associated with elevated youth anxiety, depression, and somatic symptoms for non-Hispanic white, but not Latino, youth. We hypothesized that lower Acceptance would be associated with higher internalizing symptoms in both groups.

Method

Participants and Procedures

All methods and procedures in this study were approved by the institutional IRB. This sample included 28 anxious mothers (17 non-Hispanic White, 11 Latina) and their children ages 7–15. Within this age range, dyads were eligible for inclusion if the mother (a) met current DSM-IV diagnostic criteria for Generalized Anxiety Disorder, Social Phobia, or Panic Disorder with or without Agoraphobia, and (b) self-identified as either non-Hispanic White or Latina. In addition, all mothers were required to be the child's biological parent and reside in the same household with child for at least 50% time in the previous 6 months. Due to limited availability of psychometric data on Spanish-language versions of key measures, eligible participants completed study procedures in English. Eight Latina mothers identified as Mexican-American, one identified as Central-American, and two identified as Hispanic but did not specify country of origin. Six Latina mothers reported that they were more proficient in English or monolingual English speaking; two were bilingual native Spanish speakers but felt proficient in English; three stated that they felt equally proficient in both English and Spanish. Eight Latina mothers were born in the U.S.

Anxious mothers and their children were recruited from community advertisement and direct clinical referral. Specifically, mothers responded to ads and flyers seeking anxious mothers or anxious children as part of general recruitment efforts for our research program. Out of 74 completed telephone screens, one mother declined participation, seven mothers who met initial eligibility scheduled visits but did not attend (i.e., “no-showed” and we were unable to make later contact), and the remaining did not meet initial eligibility. Forty-two dyads met initial eligibility based on maternal endorsement of significant anxiety and completed the in-office assessment to determine final eligibility for this study based on diagnostic interview. Of these, five Latina mothers were ineligible (three did not meet full diagnostic criteria for an anxiety disorder, one met criteria for a primary depressive disorder, and one was the adoptive mother of her child) and nine white mothers were ineligible (seven did not meet full diagnostic criteria for an anxiety disorder, two met full criteria for anxiety disorders but had a primary diagnosis of depression or post-traumatic stress disorder). Dyads were not excluded for any other reason. Data were collected in one visit.

Measures

For each continuous measure, we report internal consistency within this sample, for each ethnic group, for descriptive purposes; values should be considered preliminary given small pilot sample. Demographic characteristics (e.g., gender, date of birth, ethnicity, country of origin, level of education) were collected via a *General Information Sheet* created by the authors. The *Structured Clinical Interview for DSM Disorders (SCID*; First, Spitzer, Gibbon, & Williams, 2002) assesses DSM-IV Axis I disorders and was used to determine current and lifetime presence of maternal anxiety diagnosis and to rule out other primary conditions. Diagnostic interviews were completed by trained graduate-level clinicians. Inter-rater reliability between interviewers was 100% and was calculated on a random sample of 18% of assessments. The *State-Trait Anxiety Inventory for Adults (STAI-T*; Spielberger, 1983) is a 20-item dimensional scale designed to measure a general, enduring “trait anxiety.” The STAI has been widely used and evaluated in a variety of ethnically diverse populations, and evidence supports acceptability in internal consistency and item performance in Latino populations (e.g., Novy, Nelson, Goodwin, & Rowzee, 1993; Novy, Nelson, Smith, Rogers, & Rowzee, 1995). In this sample, the STAI-Trait subscale was used to assess level of maternal anxiety in each ethnic group, and had a Cronbach’s alpha coefficient of $\alpha = .60$ for NHW and $\alpha = .73$ for Latina mothers. The *Beck Depression Inventory (BDI-II*; Beck, Steer, & Brown, 1996) is a widely used, 21-item (score range: 0 – 63) self-report measure of depressive symptoms in adults and was examined as a potential covariate in analyses. The BDI-II has been demonstrated as suitable for use with Mexican-American and Hispanic populations with respect to reliability and convergent validity in adult and youth samples (Suarez-Mendoza, Cardiel, Caballero-Urbe, Ortega-Soto, & Marquez-Marin, 1997; Wiebe & Penley, 2005; VanVoorhis & Blumentritt, 2007). Here, Cronbach’s $\alpha = .77$ and $\alpha = .88$ for NHW and Latina mothers, respectively. The *Short Acculturation Scale for Hispanics (SASH*; Marin, Sabogal, Marin, Otero-Sabogal, & Perez-Stable, 1987) is a 12-item measure completed by Latina mothers to assess level of acculturation to mainstream US culture. Each item is answered on a 1–5 scale, and items are averaged to get a Mean score. An average score of 2.99 or higher is interpreted as “More Acculturated.” The scale correlates highly

with length of residence in the U.S. and ethnic identification. Cronbach's $\alpha = .96$ for Latinas.

Maternal parenting behaviors were assessed using subscales from the *Children's Report of Parenting Behavior Inventory-Child Report* (CRPBI-C-30; Schludermann & Schludermann, 1988), which has been widely used to assess youth perception of parent behaviors along three major domains: psychological control-psychological autonomy (Psychological Control), firm control-lax control (Firm Control), and acceptance-rejection (Acceptance). These parenting domains were measured using (a) the 10-item Psychological Control subscale from the CRPBI-30 (e.g., My mother is a person who "...tells me of all the things she has done for me"; "...says, if I really cared for her, I would not do things that cause her to worry"), and (b) the 10-item Acceptance subscale from the CRPBI-30 (e.g., "...smiles at me very often," "...is easy to talk to"). Each item has three response options; each 10-item subscale has a possible score range of 10–30. The CRPBI-C-30 has been successfully used in child internalizing populations (e.g., Costa & Weems, 2005; Foster et al., 2007) and in populations of ethnic minority backgrounds (Knight, Virdin, & Roosa, 1994; Lyon, Henggeler, & Hall, 1992; Varela et al., 2009) within the 7 to 15 age range, with some evidence of poor internal consistency for the Firm Control subscale, which is not included in this pilot study. The Psychological Control subscale had $\alpha = .41$ (NHW) and $\alpha = .85$ (Latino), and Acceptance subscale had $\alpha = .84$ (NHW) and $\alpha = .95$ (Latino).

Youth internalizing symptoms were measured via parent report and child self-report. The *Screen for Child Anxiety Related Emotional Disorders (SCARED-P/C;* Birmaher et al., 1999) is a 41-item questionnaire of anxiety symptoms (score range = 0 – 82, with 25 representing clinical cutpoint). Evidence supports the reliability and validity of the measure in diverse ethnic groups, including non-Hispanic white and Latino youths (Dirks et al., 2014; Skriner & Chu, 2014). In this sample, the SCARED-P had a Cronbach's $\alpha = .94$ (NHW) and $\alpha = .93$ (Latino), and the SCARED-C had a Cronbach's $\alpha = .94$ (NHW) and $\alpha = .95$ (Latino). The *Children's Somatization Inventory (CSI-P/C;* Walker, Garber, & Greene, 1991) parent and child versions each contain 19 items (each item rated 0–4, possible total score range of 0 – 76) and were used to assess youth somatic symptoms in the previous two weeks. The CSI has demonstrated sound psychometric properties in the original and replication samples (Meesters, Muris, Ghys, Reumertman, & Rooijmans, 2003). Direct examination of psychometric properties in Latino youth population have not been published; however, studies using the CSI with large Latino samples have been conducted (e.g., Vasquez, Fritz, Kopel, Seifer, McQuaid, & Canino, 2009). Here, CSI-P had a Cronbach's $\alpha = .90$ (NHW) and $\alpha = .65$ (Latino), and the CSI-C had a Cronbach's $\alpha = .90$ (NHW) and $\alpha = .85$ (Latino). The *Mood and Feelings Questionnaire (MFQ-P/C;* Wood, Kroll, Moore, & Harrington, 1995) is a 33-item parent- and youth-report inventory (total score possible range of 0–66) of depressive symptomatology in children and adolescents with sound psychometric properties. The psychometric properties of the MFQ in a Latino sample have not been directly examined. MFQ-P had a Cronbach's $\alpha = .91$ (NHW) and $\alpha = .88$ (Latino), and the MFQ-C had a Cronbach's $\alpha = .92$ (NHW) and $\alpha = .93$ (Latino).

Data Analytic Plan

Youth age, gender, parent age, and maternal depression were not significantly correlated with any of the three parenting dimensions and there were no significant correlations between the two dimensions of parenting behaviors in the overall sample (all $ps > .05$). Accordingly, a univariate approach to test group differences was adopted. Multiple linear regression analyses were performed to examine the association between the three dimensions of parenting behaviors (independent variables) and youth internalizing symptoms (dependent variables). Separate models were run for each clinical measure, with all three parenting behaviors as predictors in each model. To test moderation, regression models using each parenting behavior, ethnicity, and their interaction as predictors of total scores on the clinical symptom measures were tested. All continuous independent variables and interaction terms were mean-centered. Due to the exploratory nature of interaction effects, and our goal to generate hypotheses for future research, Type I error control techniques were not employed.

Results

Participants and comparability of groups

The analyzed sample included 28 mothers and their children ages 7–15 (Mean age = 11.54 years, $SD = 2.37$; $n = 16$ girls, 57%). Mothers had a mean age of 42.60 ($SD = 6.92$, Range: 30–53 years). Ethnic groups did not differ in youth age ($t(27) = .53$, $p = .53$), gender ($\chi^2(1) = .20$, $p = .66$) or maternal age ($t(26) = 1.73$, $p = .10$). There were no significant ethnic differences in level of parent education ($\chi^2(4) = 5.84$, $p = .21$). Eleven mothers (39.3%) earned a standard college degree (e.g., Associate's or Bachelor's degree), nine mothers (32.1%) completed some college, three (10.7%) earned a graduate degree, three (10.7%) completed high school, and two (7.2%) completed some high school but did not graduate. There were no ethnic differences in marital status ($\chi^2(4) = 4.39$, $p = .36$), with 67.9% of the sample married, living with spouse. With respect to acculturation, Latina mothers had a Mean of 3.69 ($SD = 0.56$) on the SASH, reflecting an average score in the "More Acculturated" range. Level of acculturation was not significantly correlated with parenting behaviors or youth symptoms (all $ps > .05$). Overall, the two ethnic groups were well-matched on demographic characteristics.

Clinical characteristics of mothers and youths are displayed in Table 1. There were no ethnic group differences in maternal self-reported trait anxiety, maternal depressive symptoms, type of maternal primary anxiety disorder, or number of current or past depressive disorders. There were no significant ethnic group differences on any youth symptom measures. The two parenting dimensions were not significantly correlated with one another, nor with parental depressive symptoms, youth age, or youth gender in the overall sample. However, when examined separately by ethnic group for exploratory purposes, Psychological Control and Acceptance were positively and significantly correlated for the Latino group. Correlations by ethnicity are displayed in Table 2.

Ethnic Differences in Youth Perception of Parenting Behaviors

As hypothesized, Latina mothers were rated by their children as significantly higher in Psychological Control than non-Hispanic white mothers (non-Hispanic white Mean = 14.53, SD = 3.37; Latina Mean = 18.70, SD = 3.97; $t(25) = -.291$, $p = .01$) and we did not detect significant group differences in levels of maternal Acceptance (non-Hispanic white Mean = 25.87, SD = 3.71; Latina Mean = 25.00, SD = 6.17; $t(25) = .21$, $p = .65$).

Main Effect of Maternal Parenting Behaviors on Youth Symptomatology

Unexpectedly, higher levels of Psychological Control were associated with lower levels of parent- and youth-reported anxiety symptoms ($t(25) = -3.01$, $p = .006$, partial $r = -.53$, $B = -2.06$, 95% CI: $-3.47, -.64$; and $t(25) = -2.50$, $p = .02$, partial $r = -.46$, $B = -1.81$, 95% CI: $-3.31, -.32$, respectively). Consistent with our hypotheses, lower levels of maternal Acceptance were significantly associated with higher youth-reported somatic symptoms ($t(25) = -3.64$, $p = .001$, partial $r = -.60$, $B = -1.14$, 95% CI: $-1.78, -.49$) and higher parent-reported youth depressive symptoms ($t(25) = -2.66$, $p = .01$, partial $r = -.49$, $B = -1.11$, 95% CI: $-1.97, -.25$). Acceptance was not significantly associated with youth somatic symptoms, youth-reported anxiety, or parent-reported depressive symptoms ($p > .10$). As discussed below, the association between Acceptance and youth-reported depressive symptoms and parent-reported anxiety was associated with ethnicity.

Ethnicity as Moderator of Maternal Behaviors and Youth Symptomatology

Ethnicity was a marginally significant moderator of the relationship between Psychological Control and youth-reported somatic symptoms ($t(25) = 2.03$, $p = .055$, $B = 1.83$, 95% CI: $-.04, 3.71$). Due to the preliminary nature of this investigation, and because of our initial hypothesis that ethnicity would be moderator of the influence of Psychological Control, we proceeded with *post hoc* examination of simple regression equations. Results indicated that increased maternal Psychological Control was significantly associated with increased somatic symptoms as reported by Latino ($t(9) = 4.51$, $p = .002$, partial $r = .85$, $B = 1.73$, 95% CI: $.85, 2.62$), but not non-Hispanic white ($t(14) = -.15$, $p = .89$, partial $r = -.04$, $B = -.01$, 95% CI: $-1.59, 1.39$), youths, Figure 1. There was no significant interaction effect between Psychological Control and ethnicity on any other youth symptom measures.

There was a significant interaction between Acceptance and parent-reported youth anxiety ($t(25) = 2.62$, $p = .02$, $B = 3.09$, 95% CI: $.65, 5.54$) whereby lower levels of Acceptance were associated with higher levels of anxiety for non-Hispanic white ($t(16) = -2.73$, $p = .02$, partial $r = -.58$, $B = -2.30$, 95% CI: $-4.10, -.50$), but not Latino ($t(9) = .94$, $p = .37$, partial $r = .32$, $B = .80$, 95% CI: $-1.15, 2.74$), youth (Figure 2). Similarly, there was a significant interaction between ethnicity and Acceptance on youth-reported depressive symptoms ($t(25) = 2.62$, $p = .02$, $B = 2.13$, 95% CI: $.45, 3.82$). Examination of simple regression equations indicated that lower levels of maternal Acceptance were associated with higher levels of depressive symptoms for non-Hispanic white ($t(15) = -3.17$, $p = .007$, partial $r = -.63$, $B = -1.80$, 95% CI: $-3.01, -.58$), but not Latino ($t(9) = .57$, $p = .59$, partial $r = .20$, $B = .34$, 95% CI: $-1.04, 1.71$) (Figure 3), youth. There were no ethnic differences in the association between Acceptance and any other measures of youth internalizing symptomatology.

Discussion

The aim of this pilot investigation was to examine the potential for cultural variation in family-level risk for internalizing symptoms. This was done by probing relationships between parenting behaviors and youth symptoms in a sample of non-Hispanic white and Latino families, within the high-risk context of maternal anxiety. This preliminary study addressed existing research gaps by (a) taking a top-down approach to examine behaviors of anxious mothers (b) extending previous parental anxiety research to Latinos, and (c) examining links between behaviors of anxious parents and a range of internalizing youth outcomes (anxiety, depression, somatization). While support for specific hypotheses was mixed, results indicated that Latina mothers were rated by their children as engaging in higher levels of Psychological Control than non-Hispanic white mothers, and that Psychological Control was more strongly linked to somatic symptoms for Latino youths, whereas maternal Acceptance was linked more strongly to anxious and depressive symptoms for non-Hispanic white youths. Results demonstrated ethnic variation in the associations between maternal behaviors and youth internalizing symptoms, supporting previous evidence that cultural context may shape the meanings and mental health implications of parenting strategies.

Consistent with hypotheses, Latina mothers were rated by their children as higher in Psychological Control. While we did not measure cultural orientation, this finding is consistent with previous work in which mothers from collectivist groups scored higher in Psychological Control than mothers from individualist backgrounds (e.g., Rudy & Halgunseth, 2005). Although Latina mothers in this sample were highly acculturated, research suggests that even highly acculturated Latinos may endorse higher familism than non-Hispanic white individuals (Sabogal, Marin, Otero-Sabogal, Marin, & Perez-Stable, 1987).

Across the entire sample, however, Psychological Control had an unexpected negative association with anxiety. Higher maternal Psychological Control was associated with lower youth anxiety, which counters previous research indicating a positive link between Psychological Control and youth internalizing symptomatology. This may be a function of certain methodological limitations, including limited sampling or inadequate measurement of Psychological Control. Internal consistency of the Psychological Control subscale in this sample was relatively low, particularly in the non-Hispanic White group, which could be a reflection of poor construct validity within the context of an anxious sample, or ethnic differences in the construct of Psychological Control. For example, although groups did not differ on youth-reported maternal Acceptance, Psychological Control and Acceptance were significantly and positively correlated for the Latino group but not for the non-Hispanic White group. Potential ethnic differences in the construct of Psychological Control should be evaluated in larger cross-ethnic samples. Alternatively, it is possible that the counterintuitive direction of findings may reflect an interesting dynamic between parenting and individual child characteristics. Other researchers have found that the impact of parenting behaviors indicative of Psychological Control (e.g., intrusive parenting, overcontrol) may interact with youth temperament and attachment style to reduce internalizing symptoms in fearful and inhibited children (Kiff, Lengua, & Zalewski, 2011,

for review). Notably, the mean score for youth anxiety in this sample was within the clinical range per both parent and youth report. It is possible that in this sample of youth with elevated anxiety, maternal Psychological Control behaviors may serve to provide emotional guidance for the child, and in turn, regulate and ease anxiety for children with these traits. While Psychological Control had a protective main effect on broad youth anxiety symptoms, it is interesting that the association between maternal Psychological Control and youth somatic symptoms was *stronger* for Latino youths, not weaker as anticipated. It is possible that increased Psychological Control may indeed be associated with higher distress in Latino youths which may manifest as somatic symptoms rather than as overt anxiety or depression. While further research is certainly needed to flesh out these findings, results imply that the linkages between Psychological Control and distress are not universally positive or negative. Other cultural (e.g., familism) and individual (e.g., temperament) factors not measured here may play a role in youth sensitivity to maternal Psychological Control and warrant attention.

Consistent with hypotheses, non-Hispanic white and Latina mothers did not differ in youth perception of Acceptance. Across the entire sample, lower levels of Acceptance were associated with higher youth-reported somatic symptoms and higher parent-reported depressive symptoms. However, lower levels of maternal Acceptance was significantly associated with higher anxiety and depression symptoms for non-Hispanic white youths, but did not significantly predict level of self-reported anxiety and depression for Latino youth. These results are consistent with previous results using non-Hispanic white samples (Rapee, 1997) but contrasts previous findings by Varela and colleagues (2009) who found that maternal Acceptance was positively associated with youth anxiety for Latino-American and European American youth. As noted by Varela and colleagues (2009), in their sample, higher acceptance may have been associated with higher reassurance-giving or reinforcement of anxious child behaviors (Varela et al., 2009). Such behaviors may overlap with Psychological Control, which was not assessed in that study, making it difficult to disentangle the constructs of Psychological Control and Acceptance. We do not interpret present results as indicating no relationship between maternal Acceptance and Latino mental health; rather, we suspect cultural differences in the construct of Acceptance, and it is possible that some behaviors assessed on the CRPBI (e.g., smiling often, cheering youth up when sad) may not be as critical to the perception of maternal Acceptance for Latinos as are other behaviors, such as expressions of a parent feeling proud of her child.

Results must be viewed in light of study-specific limitations and interpreted with caution. The sample in this investigation was small and power to detect effects for correlational and regression analyses was limited. Larger studies are needed to replicate results, reconcile informant discrepancies, and utilize more sophisticated analysis. Internal consistency of the CRPBI Psychological Control subscale in the NHW group was unexpected given that this measure has been widely used with European American samples, and research with a larger sample is needed to determine whether our findings replicate in other NHW samples. Further, this pilot study was underpowered to conduct dyadic data analysis (e.g., nested data structures). Although youth age was not correlated with any of the parenting dimensions, future studies with larger samples or more narrow age ranges are needed to evaluate developmental differences in links between parenting and internalizing symptoms. It would also be informative to measure broader variables of family functioning (e.g., family

cohesion) that may be relevant to psychological distress levels in Latinos, as found in previous studies (Rivera et al., 2008). In addition, the use of observational methods to assess parent behaviors may shed light on whether actual and perceived parenting have similar implications on youth mental health functioning. Finally, longitudinal research is needed to determine the causal role of parent behaviors and to characterize developmental differences in the links between youth mental health functioning and parenting variables.

In addition, potential cultural differences in developmental psychopathology warrant attention across different cohorts of Latinos who may vary on level of acculturations and generational status. In this study, we obtained two ethnic groups that were well-matched on several demographic variables; thus, variability was reduced and may have facilitated detection of significant ethnic differences in this sample. Notably, the Latino families in this study were linguistically and socioeconomically representative of the majority of Hispanic families in the Southern California county in which this study was based (U.S. Census, 2010a,b) and may reflect the growing population of upwardly mobile Latinas in the U.S. (Vallejo, 2009) and represent the second and third generation Latinos who are seldom the focus of minority mental health research. Conversely, the exclusion of non-English-speaking families resulted in a highly acculturated sample, and it is possible that this may have attenuated group differences. In addition, this restricted range of acculturation may have limited our ability to detect significant correlation with other variables (e.g., parenting dimensions), and it is possible that present findings would not generalize to other Latino subgroups. In a large nationwide epidemiological study with a large proportion of Latinos, 48% of the participants indicated speaking only Spanish, or Spanish and some English (Alegría et al., 2006), and it is unclear if results from this pilot study would generalize to primarily Spanish-speaking individuals. Thus, due to limited generalizability of these data to Latino populations who are Spanish-speaking and who may have lower levels of education, results are considered preliminary pending further study with more heterogeneous Latino mothers.

The objective of this pilot study was to examine the potential for ethnic group differences in linkages between parenting behavior and youth internalizing mental health symptoms, which have typically been investigated in predominantly non-Hispanic white families. While this sample was small and specific findings require replication with more heterogeneous Latino samples, we note two patterns of results that warrant further research attention. First, for Latino youths, parenting behaviors were more strongly linked to somatic complaints than to broader symptoms of anxiety and depression, as was the case for both Psychological Control and Acceptance. This suggests cultural differences in the development, expression, and/or reporting of distress and underscores the importance of considering physical complaints when studying the development of internalizing symptomatology in Latinos. Second, results hint at potential cultural differences in the constructs of Psychological Control and Acceptance in terms of the behaviors that define them, their meaning to youths and consistency with cultural values, and their contribution to risk for psychological maladjustment in youths at different levels of anxiety. While preliminary, this pilot study may be used as a springboard for further research aimed at gaining a deeper understanding of specific factors that mitigate or exacerbate the impact of parenting behaviors on a variety of internalizing outcomes in Latino youth. Such work will not only facilitate a multicultural

understanding of developmental psychopathology, but may ultimately lead to better public health outcomes by informing effective, culturally-informed intervention strategies.

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Figure 1.

The association between maternal Psychological Control and youth reported symptoms, by ethnicity

Figure 2.
The association between maternal Acceptance and parent-reported youth anxiety symptoms, by ethnicity

Figure 3.
The association between maternal Acceptance and youth-reported depression symptoms, by ethnicity

Table 1

Clinical characteristics of mothers and youth

	Total N/ Mean (SD)	NHW n/ Mean (SD)	Latina/o n/ Mean (SD)	<i>p</i> -value
<i>Mothers</i>				
<i>Primary Anxiety Diagnosis</i>				.11
Generalized Anxiety Disorder	16	8	8	
Social Phobia	11	9	2	
Panic Disorder with Agoraphobia	1	0	1	
<i>Concurrent Depressive Disorder</i>				.57
No. with Current Diagnosis	6	3	3	
No. with Past Diagnosis	11	6	5	
STAI-T	46.29 (9.99)	48.65 (11.48)	42.64 (5.91)	.12
BDI-II	11.18 (8.01)	10.53 (8.66)	12.18 (7.17)	.60
<i>Youth</i>				
SCARED-C	29.04 (15.20)	29.41 (15.34)	28.45 (15.72)	.87
SCARED-P	29.04 (15.19)	32.24 (14.83)	24.09 (15.06)	.17
CSI-C	12.68 (8.99)	10.94 (9.16)	15.36 (8.44)	.21
CSI-P	8.04 (8.29)	7.88 (9.74)	8.27 (5.82)	.91
MFQ-C	14.89 (10.91)	13.06 (10.57)	17.73 (11.32)	.28
MFQ-P	15.61 (10.19)	15.35 (11.28)	16.00 (8.75)	.87

NHW = Non-Hispanic white; STAI-T = State-Trait Anxiety Inventory – Trait scale; BDI-II = Beck Depression Inventory; SCARED-C = Screen for Child Anxiety and Related Emotional Disorders – Child Report; SCARED-P = Screen for Child Anxiety and Related Emotional Disorders – Parent Report; CSI-C = Children's Somatization Inventory – Child Report; CSI-P = Children's Somatization Inventory – Parent Report; MFQ-C = Mood and Feelings Questionnaire – Child Report; MFQ-P = Mood and Feelings Questionnaire – Parent Report.

Table 2

Correlations between parenting dimensions and potential covariates for non-Hispanic White group (above diagonal) and Latino group (below diagonal)

	CRPBI-C PC	CRPBI-C AC	Youth Age	Maternal Age	Maternal STAI-T	Maternal BDI
CRPBI-C PC	1	.19	-.02	-.26	.35	.05
CRPBI-C AC	-.78*	1	-.51	-.06	.58	-.23
Youth Age	.55	-.11	1	.34	-.24	.16
Maternal Age	.23	-.24	.44	1	-.23	.04
Maternal STAI-T	.19	-.50	-.48	-.37	1	.68**
Maternal BDI-II	.55	-.55	.10	-.22	.71*	1

* $p < .05$,

** $p < .001$

CRPBI-PC = Childrens Report of Parent Behavior Inventory – Psychological Control subscale; CRPBI-AC = Childrens Report of Parent Behavior Inventory – Acceptance subscale; STAI-T = State-Trait Anxiety Inventory – Trait scale; BDI-II = Beck Depression Inventory.