

UC San Diego

UC San Diego Electronic Theses and Dissertations

Title

Cross-ethnic examination of parenting behaviors in clinically anxious mothers and their relation to youth mental health status

Permalink

<https://escholarship.org/uc/item/6577f2rn>

Author

Gonzalez, Araceli

Publication Date

2012

Peer reviewed|Thesis/dissertation

UNIVERSITY OF CALIFORNIA, SAN DIEGO

SAN DIEGO STATE UNIVERSITY

Cross-Ethnic Examination of Parenting Behaviors in Clinically Anxious Mothers and
their Relation to Youth Mental Health Status

A dissertation submitted in partial satisfaction of the
requirements for the degree of Doctor of Philosophy

in

Clinical Psychology

by

Araceli Gonzalez

Committee in charge:

University of California, San Diego

Professor Denise Chavira
Professor Ann Garland

San Diego State University

Professor V. Robin Weersing, Chair
Professor Nader Amir
Professor May Yeh

2012

The Dissertation of Araceli Gonzalez is approved, and it is acceptable
in quality and form for publication on microfilm and electronically:

Chair

University of California, San Diego

San Diego State University

2012

DEDICATION

To my family: I am so proud to be the daughter and sister to the most amazing, loving, supportive individuals. Mom and dad, you have taught me everything I know about hard work, dedication, loyalty, and unconditional love. My success would mean nothing to me if I could not share it with you. Thank you for everything.

To Scott: PhD, Wildlife, Starlite, a wedding, and the Stanley Cup – wow, what an epic year. But each day with you feels like a victory. I cannot imagine getting through this without someone so patient, understanding, and dedicated. You are my best friend, my rock, my life partner. You really are my better half.

To Robin: The greatest mentor I could have ever hoped for. We both took a leap of faith, and it was the best decision I ever made. You have taught me not only how to be a good scientist, but how to be a great thinker. I cannot thank you enough for your guidance, wisdom, and support. When I think of people who have had the greatest influence on me, you are front and center on my life's Jumbotron =)

TABLE OF CONTENTS

Signature Page.....	iii
Dedication.....	iv
Table of Contents.....	v
List of Figures.....	vi
List of Tables.....	vii
Vita.....	viii
Abstract.....	ix
Introduction.....	1
Background.....	5
Methods.....	24
Results.....	36
Discussion.....	70
Appendix.....	88
References.....	89

LIST OF FIGURES

Figure 1. Hypothesized relationships between parenting behaviors, ethnicity, and youth mental health.....	21
Figure 2. The association between maternal psychological control and youth-reported somatic symptoms, by ethnicity.....	56
Figure 3. The association between maternal acceptance and parent-reported youth anxiety symptoms, by ethnicity.....	65
Figure 4. The association between maternal acceptance and youth-reported depression symptoms, by ethnicity.....	69

LIST OF TABLES

Table 1. Clinical characteristics of mothers.....	38
Table 2. Diagnostic characteristics of youths.....	40
Table 3. Means and standard deviations for youth clinical scales.....	41
Table 4. Means and standard deviations for maternal parenting behaviors.....	43
Table 5. Bivariate correlations among parenting behavior variables and potential covariates.....	44
Table 6. Parenting behaviors as predictors of youth anxiety symptoms.....	47
Table 7. Parenting behaviors as predictors of youth somatic symptoms.....	49
Table 8. Parenting behaviors as predictors of youth depression symptoms.....	51
Table 9. Interaction between maternal psychological control and ethnicity as predictors of youth anxiety symptoms.....	53
Table 10. Interaction between maternal psychological control and ethnicity as predictors of youth somatic symptoms.....	55
Table 11. Interaction between maternal psychological control and ethnicity as predictors of youth depression symptoms.....	57
Table 12. Interaction between maternal firm control and ethnicity as predictors of youth anxiety symptoms.....	59
Table 13. Interaction between maternal firm control and ethnicity as predictors of youth somatic symptoms.....	61
Table 14. Interaction between maternal firm control and ethnicity as predictors of youth depression symptoms.....	62
Table 15. Interaction between maternal acceptance and ethnicity as predictors of youth anxiety symptoms.....	64
Table 16. Interaction between maternal acceptance and ethnicity as predictors of youth somatic symptoms.....	66
Table 17. Interaction between maternal acceptance and ethnicity as predictors of youth depression symptoms.....	68

VITA

- 2004 Bachelor of Arts, Stanford University
- 2004-2006 Research Coordinator, University of California, Los Angeles
- 2009 Master of Science, San Diego State University
- 2009-2012 NICHD Ruth L. Kirschstein National Research Service Award Predoctoral Fellow
- 2011-2012 Psychology Intern, UCLA Semel Institute for Neuroscience and Human Behavior
- 2012 Doctor of Philosophy, San Diego State University and University of California, San Diego, Joint Doctoral Program in Clinical Psychology

PUBLICATIONS

Gonzalez, A., Weersing, V. R., & Warnick, E. M. (2012). Assessing the cultural equivalence of the SCARED in African-American and non-Hispanic White youths. *Journal of Clinical Child & Adolescent Psychology, 0(0)*, 1-9.

Gonzalez, A., Weersing, V. R., Warnick, E. M., Scahill, L., & Woolston, J. (2011). Predictors of treatment attrition among an outpatient clinic sample of youths with clinically significant anxiety. *Administration and Policy in Mental Health and Mental Health Services Research, 38*, 356-367.

Gonzalez, A., Moore, P. S., Garcia, A. M., Thienemann, M., & Huffman, L. (2011). Activation during observed parent-child interactions with anxious youths: A pilot study. *Journal of Psychopathology and Behavioral Assessment, 33*, 159-170.

Warnick, E.M., Gonzalez, A., Weersing, V.R., Scahill, L., & Woolston, J.L. (2012). Defining dropout: How definitions shape the prevalence and predictors of attrition. *Child and Adolescent Mental Health, 17(2)*, 76-85.

Weersing, V. R., Rozenman, M., & Gonzalez, A. (2009). Core components of therapy in youth: Do we know what to disseminate?, *Behavior Modification, 33*, 24-47.

Weersing, V. R., Gonzalez, A., Campo, J. V., & Lucas, A. N. (2008). Brief behavioral therapy for pediatric anxiety and depression: Piloting an integrated treatment approach. *Cognitive and Behavioral Practice, 15*, 126-139.

ABSTRACT OF THE DISSERTATION

Cross-Ethnic Examination of Parenting Behaviors in Clinically Anxious Mothers and
their Relation to Youth Mental Health Status

by

Araceli Gonzalez

Doctor of Philosophy in Clinical Psychology

University of California, San Diego, 2012
San Diego State University, 2012

Professor V. Robin Weersing, Chair

Youth anxiety is highly prevalent, distressing, and impairing. Parenting behaviors, including high control (psychological and behavioral) and low acceptance, have been implicated as risk factors for the development and maintenance of youth anxiety. Little is known about parenting and anxiety in Latino families. Given cultural differences in family orientation, it is plausible that the influence of parenting behaviors on youth mental health

functioning may be culture-specific. The goal of this dissertation was to illuminate psychosocial processes that may serve to transmit anxiety from mother to child and to assess the potential of nonequivalent pathways in non-Hispanic White (NHW) and Latino (LA) youths. Three broad questions were probed: (1) Do parenting behaviors differ between anxious NHW and LA mothers? (2) Are parenting behaviors of anxious mothers associated with youth anxiety, depression, or somatic symptoms? (3) Does the influence of maternal behaviors on youth internalizing symptoms vary by ethnicity?

To evaluate these questions, this dissertation examined youth report on three dimensions of maternal parenting behaviors (psychological control [PC], firm control [FC], and acceptance [AC]) and their association to youth internalizing symptoms in the children (ages 7 to 15) of clinically anxious NHW and LA mothers (N = 28 dyads; 17 NHW and 11 LA). In this sample, LA mothers were rated by their children as higher in PC. Significant group differences in maternal FC and AC did not emerge. Across groups, increased PC was associated with decreased anxiety per parent and youth reports, and decreased AC was associated with increased somatic and depressive symptoms by some reports. The associations between PC and AC and youth internalizing symptoms were moderated by ethnicity. Specifically, a) maternal PC was positively associated with youth-reported somatic symptoms for LA, but not NHW, youths, b) AC was negatively associated with parent-reported youth anxiety symptoms in NHW, but not LA, youths, and (c) AC was negatively associated with youth-reported depressive symptoms for NHW, but not LA, youths.

Broadly, results suggests that, as predicted, ethnic groups differ in parenting strategies and the influence of parenting behaviors on youth emotional functioning may vary by cultural context. Clinical and research implications of findings are discussed.

INTRODUCTION

Anxiety in youth is highly prevalent, distressing, and impairing. Prevalence rates are estimated to be as high as 10-20% among youth (Bell-Dolan, Last, & Strauss, 1990; Cartwright-Hatton, McNicol, & Doubleday, 2006; Essau, Conradt, & Petermann, 2000; Merikangas & Avenevoli, 2002) and anxiety is associated with current and future functional impairment. If left untreated, early-onset anxiety often persists over time, predicts the development of other psychiatric problems, and is associated with negative long-term outcomes such as social isolation and academic underachievement (Bittner et al., 2007; Dadds et al., 1999; Keller et al., 1992; Woodward & Fergusson, 2001). Anxiety tends to “run” in families, and a strong risk factor for the development of youth anxiety is having a parent with an anxiety disorder (Capps, Sigman, Sena, & Henker, 1996; Hirshfeld-Becker, Micco, Simoes, & Henin, 2008; Lieb et al., 2000). While genetics certainly play a role, parenting behaviors have been implicated as contextual risk factors for the development of internalizing problems in youths (e.g., Chorpita, Brown, & Barlow, 1998; Dadds, Barrett, Rapee, & Ryan, 1996; Ginsburg & Schlossberg, 2002; Hudson & Rapee, 2001; Manassis & Bradley, 1994; Rapee, 1997; Rubin & Mills, 1991; Wood, McLeod, Sigman, Wei-Chin, & Chu, 2003). Previous work has linked maternal anxiety to the use of critical and controlling behaviors (e.g., Ginsburg, Grover, Cord, & Ialongo, 2006; Lieb et al., 2000; Whaley, Pinto, & Sigman, 1999). However, results have been inconsistent across studies and may vary according to a number of methodological and sample factors (e.g., diagnosed vs. undiagnosed parent or youth) (Ginsburg, Grover, & Ialongo, 2004; Wood et al., 2003). Additional research is needed to clarify the role of parenting behaviors in the expression of youth internalizing symptoms in order to inform

the development of family-focused interventions aimed at reducing anxiety-enhancing parental behaviors. In doing so, it is important to examine all segments of the population, particularly given that youths of some ethnic minority youths living in the U.S. are at higher risk for psychological maladjustment (USDHHS, 2001). Relatively little is known about parenting and youth mental health outcomes in families of ethnic minority background, as extant studies of parenting behaviors in anxiety-affected families have included predominantly Caucasian samples (Moore, Whaley, & Sigman, 2004; Whaley et al., 1999). Given cultural differences in family orientation, values, and parenting practices, it is possible that current models explaining the relationships between parenting behaviors and youth mental health symptoms may not extend to all cultural groups (Creveling, Varela, Weems, & Corey, 2010).

Latinos represent the fastest-growing minority group in the U.S. (U.S. Census Bureau, 2010a) but are underrepresented in research and community mental health settings alike (Garland et al., 2005). This is problematic given that Latino youths are at high risk for anxiety and near-neighbor problems, such as depression and somatic complaints. Indeed, some studies have found higher prevalence rates of anxiety symptoms in Latino youths than NHW samples (Burnam, Hough, Karno, & Escobar, 1987; Roberts & Sobhan, 1992; Varela et al., 2009). Research regarding parenting behaviors and anxiety in Latino families is scarce. It is reasonable to suspect that similar parenting practices may have different implications for NHW and LA youths, however, little is known about how the linkages between parenting practices and youth psychological adjustment may vary in magnitude or direction in different these two cultural contexts. Some parenting behaviors that have been

associated with negative youth outcomes in NHW families may be consistent with cultural values and beliefs about family roles in Latinos. For example, there is evidence that some types of controlling behaviors may be viewed as acts of love and caring in Latino families, and that authoritarian parenting styles may predict negative outcomes in Caucasian, but not Hispanic, youths (Driscoll, Russell, & Crockett, 2008; Halgunseth, Ispa, & Rudy, 2006). This stands in contrast to decades of research with predominantly White populations. Alternatively, a strong family orientation and desire to preserve group harmony in Latino culture may place youths at greater vulnerability to internalizing problems in the face of negative interactions with parents.

This dissertation aimed to provide knowledge about the interplay of parenting behaviors, ethnicity, and youth internalizing symptoms that is basic but necessary to understanding the contexts that may place youths at risk for negative mental health outcomes. Examination of ethnic differences and similarities in parenting behaviors (psychological control, firm control and acceptance) and their associations with youth internalizing symptoms may enhance our knowledge about culture-specific versus universal processes. In addition, such work may serve as a foundation for the development of culturally appropriate family-focused interventions aimed at reducing anxiety-enhancing behaviors. As a first step toward this long-term goal, the immediate goal of the proposed project was to examine the links between parenting, ethnicity, and a range of youth internalizing symptoms (anxiety, depression, and somatic complaints). Broadly, this dissertation sought to examine if there are ethnic differences in parenting practices, and if so, how may they differ in their relation to youth emotional functioning. The specific aims of this study were as follows:

Aim 1: To examine cross-ethnic differences in youth-reported parenting behaviors of clinically anxious mothers.

Aim 2: To specify associations between youth-reported parenting behaviors and youth internalizing symptomatology (i.e., anxiety, depression, and somatic symptom severity).

Aim 3: To explore whether the relationship between parenting behaviors and youth internalizing symptoms differs by ethnicity.

Findings from this dissertation may provide a rich arena for hypothesis generation regarding a) parenting behaviors and youth psychopathology, b) the generalizability of findings to families of different cultures, and b) specific behavioral targets for culturally appropriate family-focused interventions for youth internalizing problems.

BACKGROUND

Association between parental anxiety and youth anxiety

The public health consequences of anxiety have been clearly established; anxiety disorders are among the most common mental illness in the U.S. (Kessler, Chiu, Demler, & Walters, 2005) and cost the U.S. more than \$42 billion a year (Greenberg et al., 1999). Furthermore, anxiety is problematic because it rarely occurs in isolation; when a parent is anxious, the anxiety is often propagated forward to subsequent generations. Indeed, having a parent with an anxiety disorder is one of the strongest risk factors for the development of youth anxiety, and rates of familial aggregation of anxiety are striking. Up to 68% of children of clinically anxious parents meet criteria for an anxiety disorder (Capps et al., 1996; Mancini, Van Ameringen, Szatmari, Fugere, & Boyle, 1996; Whaley et al., 1999; for review, see Hirshfeld-Becker et al., 2008), and it has been estimated that children of anxious parents are five to seven times more likely to be diagnosed with an anxiety disorder themselves compared to children of non-anxious parents (Lieb et al., 2000; Turner, Beidel, & Costello, 1987). Further, as many as 83% of mothers of anxious youth have a lifetime history of an anxiety disorder (Last, Hersen, Kazdin, Francis, & Grubb, 1987).

There is evidence of a substantial genetic component to anxiety, however, genes have accounted for approximately 50% or less of the variance in twin studies in youth (Legrand, McGue, & Iacono; 1999; Warren, Schmitz, & Emde, 1999). Results from a recent study indicate that a *current* diagnosis of parental anxiety nearly doubles the odds of current child anxiety disorder compared to a *lifetime* diagnosis of parental anxiety (van Gastel, Legerstee, & Ferdinand, 2009). This suggests a key role of the proximal family

environment. In addition, some have found that maternal psychopathology is more closely related to child internalizing problems and treatment outcome than paternal psychopathology (e.g., Connell & Goodman, 2002; Kendall et al., 2008; Legerstee et al., 2008; McClure et al., 2001; van Gastel et al., 2009), further suggesting the presence of contextual risk factors. Thus, while father psychopathology and parenting behaviors are highly important and warrant research attention (e.g., Bögels & Phares, 2008), there is evidence that maternal anxiety specifically may infer risk for youth anxiety and a focus on anxious mothers appears a logical starting point for additional research. A high environmental influence underscores the key role of parenting and family context in the development of youth anxiety, and fortunately, makes anxiety disorders particularly amenable to psychosocial interventions.

Rationale for examining maternal anxiety (top-down approach)

Investigations of parenting behaviors within the context of anxiety have taken two approaches. Bottom-up studies examine behaviors of parents of anxious children, whereas top-down studies investigate behaviors of anxious parents toward their children, who may or may not be anxious. Given the broad aims of this dissertation to (a) understand contextual factors that contribute to the transmission of anxiety from parent to child, and (b) identify modifiable risk factors for the transmission of anxiety, a top-down approach is more consistent with these study goals.

Maternal anxiety and depression, as well as maternal control, in early childhood have been positively associated with development of anxiety and depression symptoms during adolescence (Feng, Shaw, & Silk, 2008; Spence, Najman, Bor, O'Callaghan, & Williams, 2002). According to several developmental models, anxiety may lead to

parenting behaviors (e.g., controlling, critical) that increase youth vulnerability to fear and worry by inadvertently discouraging the exploration of new experiences, leading to withdrawal, fearful approach, poor regulation of negative affect, an underdeveloped sense of security, and limited social development (e.g., Chorpita, Brown, & Barlow, 1998; Dadds, Barrett, Rapee, & Ryan, 1996; Manassis & Bradley, 1994). Indeed, there is evidence that maladaptive parenting behaviors may precede later development of elevated youth anxiety symptoms. One longitudinal study found that maternal controlling behaviors early in life (e.g., age 2) were associated with increasing levels of anxiety during later childhood (e.g., ages 9-11) (Feng et al., 2008). A different investigation found that parental overprotection positively predicted child anxiety one year later (Edwards, Rapee, & Kennedy, 2010). Several additional longitudinal studies provide evidence that maternal anxiety often predates youth mental health problems and that particular parenting behaviors may infer higher risk *within the context of maternal anxiety*. For example, high levels of parental criticism and low autonomy-granting were associated with child anxiety symptoms six years later, but only if the mother was anxious (Ginsburg et al., 2004). Likewise, there is evidence that child behavioral inhibition may evoke parenting styles among mothers that are conducive to the development of anxiety only if the mother is anxious (Hirshfeld, Biederman, Brody, Faraone, & Rosenbaum, 1997). Murray and colleagues (2008) found that while non-anxious mothers responded to an inhibited child by encouraging positive engagement, anxious mothers responded to their inhibited children by facilitating the avoidance of potential threat. These findings indicate that the interaction of child vulnerability and parental negative responses, which may be heightened in anxious mothers, may shape the child's future anxious symptoms

and behaviors. Thus, given a) the interaction between parental anxiety and child vulnerabilities and b) the heightened risk of anxiety disorders among children of anxious mothers, an enhanced understanding of potential mechanisms for this “passing along” of problems from parent to child is of high importance.

On the other side of the coin, some researchers posit that the behavior of anxious children may elicit dysfunctional parenting behaviors (DiBartolo & Helt, 2007; Eley, Napolitano, Lau, & Gregory, 2010; Hudson, Doyle, & Gar, 2009). While there is certainly evidence for reciprocal effects, the relevance of conclusions drawn from bottom-up studies to the etiology of anxiety remains ambiguous (Ginsburg, Siqueland, Masia-Warner, & Hedtke, 2004). To better understand how risk is propagated across generations, further work is needed to characterize behaviors of anxious parents. If, as evidence suggests, the links between parenting behavior and youth mental health symptoms varies with level of maternal anxiety, then it seems particularly important to focus on this clinical population. While the precise mechanisms of transmission have yet to be fully understood, in the meantime, an understanding of the parenting-youth symptoms link would inform intervention – interventions designed to modify anxiety-enhancing behaviors of parents of children who are genetically at-risk for anxiety (or conversely, parents of anxious children who may be “at-risk” of engaging in anxiety-enhancing parenting behaviors) may be effective.

Finally, top-down examination of family process may not only be useful for understanding child anxiety but may also provide information regarding closely related youth mental health problems, such as depression and medically unexplained somatic complaints. Anxiety and depressive disorders co-occur with great frequency, and

longitudinal evidence reveals that development of one of these disorders typically precedes development of the other (Moffit et al., 2007). Similarly, youths with somatic complaints often meet criteria for anxiety and depressive disorders, and there is evidence that anxiety often precedes the onset of clinically significant somatic complaints (Campo et al., 2004). While the order of symptoms varies across individuals, there is ample evidence that individuals who experience anxiety would likely experience depressive or somatic symptoms at some point across development. Investigation of all three domains of symptoms in children of anxious mothers would provide a more comprehensive snapshot of the clinical correlates of maternal anxiety in their offspring.

Although this dissertation employed a top-down methodology, results of both top-down and bottom-up studies will be summarized in this literature review in order to provide a full picture of the potential relationships between parenting and youth anxiety and related symptoms.

The role of parenting behaviors

Specific findings regarding the impact of parenting behaviors on youth clinical outcomes have been mixed across investigations. Inconsistencies in the literature may in part be due to differences in how parenting behaviors are measured across studies. With regard to self- or youth-report of parenting behaviors, numerous questionnaires exist that vary in terms of specific categories of behaviors assessed, number of items, format of the questions (e.g., scale vs. true/false). As will be discussed below, there are also significant differences in how particular parenting constructs are defined across research groups (e.g., control). Such differences in the measurement of parenting behaviors contribute to a lack of clarity regarding linkages between parenting behaviors and youth outcomes.

Despite methodological inconsistencies, previous studies have broadly demonstrated a relationship between particular types of parenting behaviors and youth anxiety (see reviews by Wood et al., 2003; McLeod, Wood, & Weisz, 2007), and these links are stronger in diagnosed samples (McLeod et al., 2007). Bottom-up studies demonstrate that parenting behaviors, including intrusiveness, control, low autonomy-granting, criticism, and modeling of avoidant behaviors (Chorpita, Albano, & Barlow, 1996; Hudson & Rapee, 2001; Siqueland, Kendall, & Steinberg, 1996; Whaley, et al., 1999) are positively associated with child anxiety. A recent meta-analysis reported that even individual dimensions of parenting behavior may account for as much as 18% of the variance in childhood anxiety severity (i.e., autonomy-granting; McLeod et al., 2007). Another recent meta-analysis reported a strong association between parental control and child anxiety (van der Bruggen et al., 2008), though the association between parental anxiety level and parental control was non-significant. Data from the few top-down studies suggest that anxious mothers are more critical (Ginsburg et al., 2006), more catastrophizing about negative outcomes (Moore et al., 2004), less engaged, and more withdrawn (Woodruff-Borden, Morrow, Bourland, & Cambron, 2002) during interactions with their child compared to non-anxious mothers. Moreover, youths of anxious parents report higher parental rejection and overprotection (Lieb et al., 2000).

Due to the broad range of parenting behaviors that have been investigated, this study focused on the parenting dimensions of psychological control, firm control, and acceptance, which encompass many of the more specific behaviors that have been previously studied and each of which have been associated with youth internalizing symptoms. Specific parenting dimensions and associated parenting behaviors are

described below.

Control

Parental control is a broadly defined construct and generally describes the pressure that parents put on a child to think, feel, or behave in certain ways (van der Bruggen, Stams, & Bögels, 2008). However, the specific definition and conceptualization of control varies across research groups. Some have studied control as a single higher-ordered construct (e.g., Costa & Weems, 2005; McLeod et al., 2007; Varela et al. 2009; Wood et al., 2003), while others have argued that control and autonomy-granting are two distinct parenting constructs (Silk, Morris, Kanaya, & Steinberg, 2003), or that control can further be delineated into psychological and behavioral control (Barber, 1996; Barber, Olsen, & Shagle, 2001; Steinberg, 2005). As will be described below, a variety of parenting behaviors are associated with each dimension of control, and there is evidence that aspects of control may have different meanings in different ethnic groups (Halgunseth, Ispa, & Rudy, 2006). Accordingly, for the purposes of this dissertation, we will focus on two dimensions of control – psychological and firm (i.e., behavioral).

Psychological control. Psychological control (PC) is differentiated from behavioral control in that PC describes indirect methods of controlling the child's behaviors and emotions in such a way that hinders the child's ability to develop emotionally and psychologically as an individual separate from the parent (Schaefer, 1965). As described by Barber (1996), this is achieved through parental behaviors that are intrusive and emotionally manipulative, which impede youth developmental processes such as self-expression and individuation. Intrusiveness involves excessive personal control, including overprotectiveness, treating the child as immature doing or

taking over tasks for the child that the child can likely do independently, providing unnecessary assistance to their child, or invading the child's privacy (Barber, 1996; Wood et al., 2003). Control through manipulation of the parent-child bond involves behaviors such as guilt induction, giving the "cold shoulder" and other methods of love withdrawal, and expressing disappointment or shame in response to the child's actions or disagreements with the parent. PC parenting behaviors may be inconsistently implemented and appear to serve the emotional needs of the parent. In this sense, PC may be viewed as conditional acceptance that may decrease a youth's sense of confidence and security (Barber, 1996). On the other end of the control spectrum, psychological autonomy may manifest through parental behaviors such as soliciting the child's opinion, tolerating differences of opinion, acknowledging and demonstrating respect for child's views, avoiding judgmental or dismissive reactions to child's views, and encouraging the child to think independently (Wood et al., 2003). Results of studies that have evaluated the association between PC and youth anxiety have been mixed (e.g., Bögels & van Melick, 2004; Siqueland, Kendall, & Steinberg, 1996); however, PC has broadly been associated with increased internalizing symptoms (e.g., Loukas, Paulos, & Robinson, 2005; Wijsbroek, Hale, Raaijmakers, & Meeus, 2011), including depressive symptoms (Barber, 1996). Previous research that specifically and directly compares levels of PC in Latina and NHW mothers remains minimal (e.g., Durrett, O'Bryant, & Pennebaker, 1975; see Halgunseth et al., 2006); findings will be described in a later section.

Firm control. Firm control (FC) may be conceptualized as behavioral or assertive control in which a parent attempts to guide and regulate their child's behavior (e.g., parental monitoring and limit-setting). FC describes a general pattern of unilateral parental

decision-making, providing unsolicited opinions or commands, excessive regulation of child behavior and strict enforcement of rules, or *explicit* direction on how to think, feel, and behave. On the other end of the dimension, low levels of FC (i.e., lax control) provide low levels of structure and parental monitoring and high permissiveness. Generally, FC behaviors are consistent with those described by an authoritarian parenting style. This parenting dimension may be more associated with externalizing behaviors than internalizing behaviors (e.g., Barber, 1996; Wijsbroek et al., 2011), particularly in relation to PC. Findings regarding the links between FC and youth internalizing outcomes have been mixed across studies. Some researchers have examined associations between parenting styles and anxiety symptoms in non-clinical samples and found that maternal hostile control (which overlaps with FC) was positively associated with childhood anxiety symptoms in European American, Latin American, and Mexican (living in Mexico) youth (Creveling et al., 2010; Varela et al., 2009). By contrast, Finkelstein and colleagues (2001) did not find an association between FC and youth depressive symptoms in NHW or Latina adolescents.

Acceptance

Acceptance (AC) is a dimension of parenting associated with warm, supportive, affectionate parenting behaviors on one end, and unsupportive, critical, or rejecting behaviors on the other. This dimension of parenting has been associated with anxiety and depression symptoms in youth according to both bottom-up (Hudson & Rapee, 2001, Varela et al., 2009; Whaley et al., 1999) and top-down studies (Ginsburg et al., 2004). As with other parenting behaviors, results regarding AC have been mixed across studies. Rork and Morris (2009) did not find an association between parental warmth and youth

anxiety. Varela and colleagues (2009) examined associations between parenting styles and anxiety symptoms in non-clinical samples and unexpectedly found that maternal AC was associated with increased anxiety for some youths and speculated that increased AC may be related to inadvertent reinforcement of child anxiety symptoms. A greater number of studies have demonstrated negative associations between maternal AC and youth depression, and lower levels of maternal AC have been linked to lower levels of self-worth in adolescents (Garber & Flynn, 2001). As will be discussed later, the role of maternal AC in the experience of youth mental health symptoms in different ethnic groups requires further exploration.

Cross-ethnic comparison to Latino families

It is clear that parenting is a critical aspect of youth psychological development. There is considerable evidence supporting different parenting practices across cultures; however, little is known regarding cultural variations in the specific linkages between parenting behaviors and youth mental health symptoms. It is plausible that the influence of parenting behaviors on youth mental health functioning may not be universal. The value placed on close, interdependent relationships, in combination with a high prevalence of anxiety, depression, and somatic complaints, makes the Latino culture a theoretically interesting context for the study of the family environment and its role in development of anxiety in varying cultures.

Public health relevance. Investigations of minority mental health are a public health priority (USDHHS, 2001). Overall, in the U.S., a small portion of youths who need mental health services receive them, and services are utilized even less by youths of ethnic minority groups (Garland et al., 2005). This is worrisome, particularly given that living in

the U.S may place Hispanic youths and adults at elevated risk for mental health problems (Burnam et al., 1997). Hispanics represent the fastest-growing minority group in the U.S.; between the years 2000 and 2010, Hispanics accounted for more than half of the population's growth, and the growth rate was more than four times that of the total population (43% vs. 10%) (U.S. Census Bureau, 2010a). It is expected that Hispanics will represent a quarter of the U.S. population by the year 2050. Notably, population growth for individuals of Mexican origin was 54% between 2000-2010. High population and unmet mental health need emphasize the public health importance of targeting this group to reduce health disparity. A better of understanding of proximal psychosocial risk factors may inform areas for intervention, and development of culturally sensitive interventions may encourage participation in mental health services for minority populations. As stated in the Surgeon General's Report, "*Special attention should be directed to the study of Latino youth, as they may be both the most vulnerable and the most amenable to prevention and intervention*" (USDHHS, 2001, p. 135).

Anxiety in Latinos. Anxiety is a highly relevant issue for Latino populations. Latino youths have reported more anxiety symptoms and anxiety-related problems than Caucasian youths (Glover, Pumariega, Holzer, Wise, & Rodriguez, 1999; Varela et al., 2009). Investigators have reported ethnic differences in youth anxiety with regard to content of fear and level of somatic symptoms (Ingman, Ollendick, & Akande, 1999; Pina & Silverman, 2004). Specifically, Latino adults (Novy, Stanley, Averill, & Daza, 2001) and youths have reported increased somatic symptoms of anxiety compared to European-American counterparts (Pina & Silverman, 2004; Varela, Weems, Berman, Hensley, & de Bernal, 2007). Although the reasons for these findings are not fully understood, one

explanation is that expression of somatic symptoms may be viewed as a more acceptable form of distress than the expression of personal emotions, which may disrupt family harmony (Varela et al., 2004, 2009). From a public health perspective, somatic symptoms, such as headaches and abdominal pain, often prompt the use of medical services (Campo, Jansen-McWilliams, Comer, & Kelleher, 1999), thus incurring higher societal costs for health systems. On a personal level, a focus on somatic symptoms may prevent or delay the receipt of appropriate mental health focused services. Given high levels of physical symptoms of anxiety in this population, examination of modifiable psychosocial factors that contribute to the etiology and developmental trajectory of both anxiety and somatic symptoms would have clear public health and personal benefit.

The role of family. The constructs of individualism and collectivism provide a useful framework for understanding different cultural values and conceptualizing interpersonal relationships (Markus & Kitayama, 1991; Triandis, 1996). NHW families traditionally have an individualistic orientation, which emphasizes personal achievement and independence. Thus, a healthy development task may be to individuate from parents and a parental goal may be to promote autonomy. LAs tend to have an interdependent orientation that stresses interpersonal harmony (e.g., Raeff, Greenfield, & Quiroz, 2000; Varela et al., 2004) and *familismo*, which emphasizes the importance of family ties, commitment to family needs over personal needs and desires, and a reliance on the family for emotional support (e.g., Halgunseth et al., 2006; Negy & Woods, 1992). Broadly, LAs report higher family cohesion than European-Americans that persists across level of acculturation (Rueschenberg & Buriel, 1989).

Differences in family orientation likely relate to differences in parenting practices.

LAs living in the U.S. generally use more authoritarian parenting styles (Baumrind, 1991) and firm control than NHWs (Finkelstein, Donenberg, & Martinovich, 2001; Varela et al., 2004). Beyond mean differences in parenting behaviors, cultural differences in family orientation, normative parenting practices, and cultural meaning of such practices suggest that family factors may be variably associated with mental health outcome in different cultural contexts (Gonzales, Deardoff, Formoso, Barr, & Barrerra, 2006; Halgunseth et al., 2006). It is reasonable to suspect that similar parenting behaviors may have different mental health implications for NHW and Latino youths; however, *how* these implications might differ is less clear.

On one hand, cultural differences in family orientation may weaken the associations between “maladaptive” parenting behaviors and poor youth emotional functioning. Cultural ideals such as *respeto* (i.e., respect for family roles, Valdés, 1996), suggest that certain dimensions of parenting behaviors (e.g., psychological and firm control) may be linked to positive cultural values and familism and therefore may not predict negative outcomes. Indeed, overcontrolling (e.g., authoritarian) parenting behaviors were not related to youth psychological well-being (e.g., depression, anxiety) in Latino youth (Finkelstein et al., 2001; Luis, Varela, & Moore, 2008; Ruiz, Roosa, & Gonzales, 2002) or across multiple generations of Mexican families (Driscoll et al., 2008). This stands in contrast to decades of research within predominantly Caucasian samples that document negative associations between authoritarian parenting and youth outcomes (e.g., Weiss & Schwarz, 1996). Within the LA cultural context, collectivistic family values may shape the motivation underlying parenting behaviors. There is evidence to suggest that PC behaviors may be viewed positively by LA youths as consequences of love, caring, and obligation to family

(e.g., Halgunseth et al., 2006; Mason, Walker-Barnes, Tu, Simons, & Martinez-Arre, 2004). Given the possible multi-dimensional structure of control and the integral role of control in NHW and LA families (Halgunseth et al., 2006), the relation between specific aspects of control and parent and youth psychological functioning warrant further investigation. There is also evidence that the strength of the relationship between perceived maternal AC and youth psychological functioning may be weaker in LA families than in NHW families (Bean, Barber, & Crane, 2006; Hill, Bush, & Roosa, 2003; Nadeem, Romo, Sigman, Lefkowitz, & Au, 2007). Overall, because such parenting behaviors may have difference meanings in LA families, they may not bear the same adverse influences, at least not at the same magnitude, as they do in other cultural contexts.

Alternatively, it is also reasonable to hypothesize that close family ties may strengthen the association between parent behaviors and youth mental illness such that parenting behaviors may play a particularly important role in the etiology of youth mental health problems in Latino families. High levels of collectivism have been associated with increased shyness and anxiety symptoms in children, possibly as a result of the values on personal restraint and preservation of group harmony (Gudiño & Lau, 2010). Along these lines, harsh parenting was associated with more depression among Mexican youth (Manongdo & Ramírez Garcia, 2007), and higher levels of internalizing symptoms were observed in Latina adolescents with highly conflictive maternal interactions (Crean, 2008). As previously mentioned, one study found that retrospective perception of parenting styles among Mexican adolescents indicated that harsh parenting and low maternal affection were associated with higher cognitive and somatic symptoms of anxiety (Hernandez-Guzman & Sanchez-Sosa, 1996). Further, some studies of Hispanic youths

have found that lower levels of parental PC were associated with better adolescent adjustment (Bean & Northrup, 2009).

Thus, there are two plausible alternatives regarding the influence of culture on the role of parenting behaviors in youth mental health functioning. These lend themselves to competing hypotheses regarding how ethnicity may moderate the relationship between anxious parenting behaviors and youth outcomes across a range of psychopathological domains; the magnitude and direction of these relationships remain open questions. It is also possible that the the impact of parenting behaviors may vary as a function of youth level of acculturation (Sher-Censor, Parke, & Coltrane, 2011). For example, Varela and colleagues (2009) examined associations between parenting styles and anxiety symptoms in non-clinical samples of European American (EA), Latin American (LA), and Mexican (living in Mexico) youth and unexpectedly found that maternal AC was associated with increased anxiety for the EA and LA children but not for the Mexican children.

Developmental window for disorder

It may be particularly important to investigate parenting and youth mental health during a developmental window in which youths are at highest risk for experiencing clinically significant internalizing symptoms. The mean age of onset for an anxiety disorder is approximately 11 years (Kessler et al., 2005), suggesting that events occurring during pre- and early adolescence may place youths at risk for the onset of mental health problems. Late childhood to early adolescence marks a crucial period in youth social, physical, cognitive, and emotional development, and some developmental scientists posit that transitions during this period may uniquely place youths at greater risk for maladjustment (Eccles et al., 1993). Changes occur in school context (e.g., start of middle

school), bodily and hormonal processes, and family interactions. Research on the developmental course of family relationship suggests an increase in parent-child conflict during early adolescence (Paikoff & Brooks-Gunn, 1991). For ethnic minority youths, early adolescence is when many youths begin to express confusion about ethnic identity (Vigil & Long, 1981). Not surprisingly, early adolescence corresponds with the average age of onset for a variety of other emotional and behavioral problems, including depression and aggression (Broidy et al., 2003; Last et al., 1992). Because this represents a period of maladjustment, it is important to examine the context of the individual youth in order to understand factors that contribute to the development of problems. Equally important to study are the few years prior to adolescence so that we may better understand the context that precedes potential maladjustment.

Current study

Within this broad research context, the goal of this dissertation study was to examine cross-ethnic differences in parenting behaviors within a sample of anxious mothers in an effort to, in the long-term, (a) elucidate potential sources of transmission of anxiety from parent to child, and (b) identify potential behavioral targets for culturally sensitive family-focused interventions for youth internalizing symptoms. Whether previous findings of parent behaviors associated with youth anxiety and depression generalize across cultures is relatively unknown, and this study is the first to examine similarities and differences in parenting between NHW and LA mothers.

Within an anxious mother sample, this study provides a preliminary investigation of ethnic differences in parenting behaviors, associations between parenting behaviors and youth symptoms, and the potential moderating effect of ethnicity on the association

between maternal behavior and youth symptoms. The hypothesized model to be evaluated in this dissertation is depicted below (Figure 1).

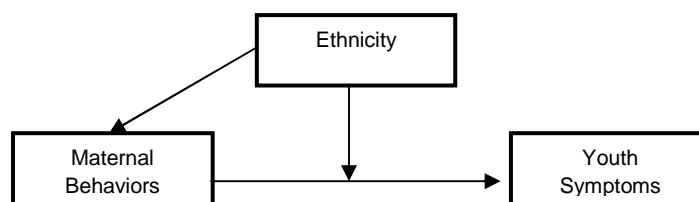


Figure 1. Hypothesized relationships between maternal behaviors, ethnicity, and youth mental health

Few studies have directly compared the two ethnic groups on PC, FC, and AC, and those that have often focused on single aspects of internalizing outcomes (i.e., anxiety or depression). Due to high levels of concurrent and lifetime comorbidity of anxiety and depression, and the frequent manifestation of these conditions through somatic symptoms, investigation of the links between parenting behaviors and various domains of internalizing psychopathology would contribute to a more comprehensive understanding of the impact of parenting behaviors across groups. In addition, this study focused specifically on youth report of parenting behaviors. Questionnaire measures of parenting behaviors are subjective by nature; while this is often a limitation in research, youth *perceptions* of parenting behaviors are likely to shape the meaning and psychological impact of parental behaviors. This subjectivity is important in examining how the implications of parenting behaviors may vary depending on the cultural lens through which they are experienced. This dissertation aimed to address these gaps in the clinical and cultural psychology literature. Specifically, this study had the following aims:

Aim 1: *To examine cross-ethnic differences in parenting behaviors of clinically anxious mothers.*

Specific hypotheses: We hypothesized that children of anxious Latina mothers would report increased psychological control (PC) and firm control (FC) behaviors compared to children of anxious NHW mothers. A priori, we did not expect to detect significant ethnic differences in levels of acceptance (AC).

Aim 2: *To specify associations between youth-reported parenting behaviors and youth internalizing symptomatology (i.e., anxiety, depression, and somatic symptom severity).*

Specific hypotheses: We hypothesized that youth-reported PC and FC would be positively associated with internalizing symptoms across ethnic groups and that maternal AC would be negatively associated with youth internalizing symptoms.

Aim 3: *To assess whether the relationship between parenting behaviors and youth internalizing symptoms differs by ethnicity.*

Specific hypotheses: We hypothesized that ethnicity would moderate the relationship between maternal controlling behaviors and youth internalizing symptoms. As previously discussed, hypotheses that close family ties might strengthen *or* weaken these associations can both be reasonably asserted. Based on previous findings that Latino parents use controlling parenting tactics more so than NHW parents and that these parenting behaviors may be viewed as consistent with a strong family orientation, we hypothesized that youth perceptions of PC and FC would be more *weakly* associated with youth internalizing symptoms (anxiety, depression, somatic symptoms) in LA than NHW families. Given previous findings linking lower AC to poorer youth adjustment in both

NHWs and LAs, we did not expect to detect ethnic differences in the association between AC and youth internalizing symptoms.

METHODS

This cross-sectional study examined three dimensions of parenting behaviors (psychological control, firm control, and acceptance) of clinically anxious mothers and the association of these behaviors with youth internalizing symptomatology. In addition, this study examined cross-ethnic differences in maternal behaviors and their association to youth symptoms. The sample included 28 dyads (17 non-Hispanic White, 11 Latina) of anxious mothers and their children (ages 7-15). Parenting behaviors included youth-report of parenting behavioral dimensions. Data were collected September 2008 through February 2012. All methods and procedures in this study were approved by the IRBs of San Diego State University, University of California, San Diego, and University of California, Los Angeles.

Participants

Inclusion criteria. Dyads were eligible for inclusion if, at time of assessment, (a) the mother met current DSM-IV diagnostic criteria for at least one of the following anxiety disorders: Generalized Anxiety Disorder [GAD], Social Phobia [SoP], and Panic Disorder with or without Agoraphobia [PD]), (b) the youth was aged 7 to 15, inclusive, (c) the mother self-identified as either NHW or LA, (d) mother was the biological parent, (e) mother lived in the same household as the participating child for at least 50% time in last 6 months, and (f) mother and child were able to complete assessments interviews and questionnaires in English. The decision to include mothers with GAD, SoP, and PD was made due to similarities in etiology (e.g., Axelson & Birmaher, 2001) and high rates of comorbidity among the anxiety disorders (Kessler et al., 2005). In addition, mothers with PD were included in order to capture individuals who might express high levels of

somatic symptoms as idioms of distress. The decision to include families who could complete study procedures in English was primarily based on the need for accurate assessment of participants, given that many standardized measures of our key constructs have only been normed in English.

Exclusion criteria. Dyads were excluded from the study if, at time of assessment, (a) mother did not meet DSM-IV criteria for current diagnosis of a primary GAD, SoP, or PD, (b) mother had concurrent diagnosis of bipolar disorder, psychosis, or substance dependence, (c) youth had mental retardation or a developmental disability that interfered with his/her ability to complete assessment procedures, or (d) a dyad member was unable to complete study assessments and procedures in English. In addition, only one youth per household was included in this study; if more than one child in a family was within range and was eligible, the family decided which child to include.

Recruitment. Anxious mothers and their children were recruited through a variety of sources, including direct clinical referral (adult anxiety and general mental health clinics), community advertisement, including flyers posted throughout the community (e.g., libraries, grocery stores, youth recreation centers), internet ads (e.g., SD Reader, Craigslist, Clear Channel online radio streaming ads) and print ads (e.g., *San Diego Family Magazine*, *El Latino* and *La Prensa Chicano* newspapers). Dyads responded to ads and flyers seeking anxious mothers or anxious children as part of a larger assessment study in the Child and Adolescent Anxiety and Mood Program at San Diego State University, and dyads were included in this study if they met inclusion criteria. Approval was obtained by the University of California, Los Angeles IRB in November 2011 to continue recruitment for this study in Los Angeles using similar avenues of recruitment. In addition, all necessary

approvals were obtained to contact former research participants in a San Diego study of adolescents receiving clinic- and school-based services and to invite eligible families to participate (note: only one participant was recruited through this method and the youth was a non-service-seeking sibling).

Screening. All parents who indicated interest in this study were invited to participate in telephone screening. The goal of telephone screens were to (a) describe the study purpose and procedures, (b) briefly assess current maternal anxiety symptoms, and (c) determine if families met preliminary inclusion (e.g., mother endorsed anxiety symptoms in past month) or exclusion criteria (e.g., youth out of age range). Final eligibility was determined upon completion of the full in-office assessment protocol. Out of 74 completed telephone screens of mothers who met preliminary inclusion, 42 dyads completed the in-person assessment to determine final eligibility for this study. Of these, four LA mothers were ineligible (two 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 NHW 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 another non-anxiety disorder). Dyads were not excluded for any other reason.

Study Procedures

Data for this dissertation was collected in one visit (approximately four hours), though families had the option of dividing the assessment into two visits. Informed consent from the parent and informed assent from the youth was obtained by the Investigator prior to commencing any assessment procedures. To minimize participant

burden, one trained clinical interviewer completed the adult diagnostic interview with the parent while another trained graduate student completed the youth interview. Youths completed self-report forms with the assistance of a research assistant if necessary.

Compensation. Dyads received \$25 or \$40 for their participation, depending on the age of the target child. Dyads with a child between the ages of 9 to 15 ($n = 35$) were eligible for funding through San Diego State University Minority Research Infrastructure Support Program (MRISP; PI: T. Cronan, V. R. Weersing) and received \$40 for their participation. Dyads with children ages 7 and 8 ($n = 5$), who were not eligible for funding through MRISP, received funding from the William T. Grant Foundation (PI: V. R. Weersing) and were compensated \$25 for their participation.

Feedback and referral. Upon completion of assessments, interviewers provided feedback to participants regarding their clinical impressions of both the mother and the youth. Unless the mother specifically requested diagnostic information, results were provided individually to the mother in general terms regarding her “experience of significant worry and anxiety.” Mothers were asked about their current involvement in mental health services; if mothers were not currently receiving treatment, recommendations for services were provided, with direct referrals to an adult anxiety treatment study or to a general outpatient clinic. If mothers were currently receiving treatment, they were given the option of receiving additional treatment referrals. For youths, feedback was provided to the mother and child simultaneously. In cases where the child endorsed clinically significant internalizing symptoms, recommendations were

made to seek services to help the youth manage his/her symptoms, and clinical referrals were provided.

Measures

Demographic information and acculturation. The General Information Sheet (GIS) was developed by the investigators and includes age, parent and child ethnicity, gender, number of children, and data relevant to socioeconomic status (occupation, parent level of education, employment status), as well as questions to capture the cultural context of participants, including parent and youth country of birth and primary language spoken in home. The Short Acculturation Scale for Hispanics (SASH) (Marin, Sabogal, Marin, Otero-Sabogal, & Perez-Stable, 1987) was administered to mothers. The SASH is a 12-item scale for Hispanics that contains three factors: Language Use, Media, and Ethnic Social Relations. The scale correlates highly with length of residence in the U.S. and ethnic identification. Validity and reliability of this scale are comparable to those of other published scales. An average score of below 2.99 corresponds to a “Less Acculturated” sample, whereas an average score of 2.99 or higher is interpreted as “More Acculturated.” As noted by the authors, the SASH assesses level of acculturation to mainstream US culture, not affiliation to an alternate culture. As such, a mid-range score of 2.99 is not indicative of biculturalism but rather represents merely a mid-point in level of acculturation to the dominant US culture. In this sample, the SASH had a Cronbach’s alpha coefficient of $\alpha = .96$.

Measures of maternal psychopathology. The Structured Clinical Interview for DSM Disorders (SCID) (First, Spitzer, Gibbon, & Williams, 2002) was used to determine current and lifetime presence of maternal anxiety and/or depression diagnoses. The SCID is widely

used and was designed to assess DSM criteria for Axis I disorders. Only Anxiety and Mood modules were fully administered unless parent endorsed symptoms of another disorder during the SCID screening section. Results of this interview determined final study inclusion. During administration, we obtained age of first onset, and offset age if applicable, of each disorder to assess the presence of disorder during the target youth's lifetime and to determine whether maternal symptoms predated youth symptoms. Diagnostic interviews were completed by trained graduate-level clinicians under the supervision of clinical psychologists (Drs. Weersing and Amir). Reliability between raters on primary diagnosis was 100% on 18% of tapes.

Parent self-report questionnaires were also administered. The State-Trait Anxiety Inventory for Adults (STAI; Spielberger, 1983) includes two 20-item scales designed to measure the temporary, current condition of "state anxiety" and a more general, enduring "trait anxiety." This instrument has been widely used and has strong psychometric properties. In this study, the STAI-Trait subscale was used to assess maternal dimensional anxiety symptoms in order to capture variability in anxiety symptoms over a longer time period (rather than in-the-moment 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 had a Cronbach's alpha coefficient of $\alpha = .60$. The Beck Depression Inventory (BDI-II; Beck, Steer, & Brown, 1996) is a widely used, brief self-report measure of depressive symptoms with sound psychometric properties that successfully discriminates depression and anxiety. The 21 items have a scale ranging from

0-3 with a maximum of 63 points. The BDI was used to assess maternal depression symptoms, to describe the clinical characteristics of mothers in this study, and was examined as a potential covariate in analyses. The BDI 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-Uribe, Ortega-Soto, & Marquez-Marin, 1997; Wiebe & Penley, 2005; VanVoorhis & Blumentritt, 2007). In this sample, the BDI had a Cronbach's alpha coefficient of $\alpha = .80$.

Measures of parenting and family functioning. The Children's Report of Parenting Behavior Inventory-Child Report (CRPBI-C; Schludermann & Schludermann, 1970; 1988) questionnaire has been widely used to assess youth perception of parent behaviors along three major domains: psychological control-psychological autonomy (PC), firm control-lax control (FC), and acceptance-rejection (AC). Initially, a 78-item version of the CRPBI was used. A shorter version of the CRPBI was subsequently adopted due to participant burden. Accordingly, the three parenting domains were indexed in this sample using (a) the 10-item PC subscale from the CRPBI-30, (b) a one-item indicator of the FC subscale ("My mother is a person who... believes in having a lot of rules and sticking with them"), and (c) the 10-item AC subscale from the CRPBI-30. The CRPBI-C has been successfully used in child internalizing populations (e.g., Costa & Weems, 2005; Foster et al., 2007; McClure et al., 2001; Siqueland et al., 1996; Yeganeh, Beidel, & Turner, 2006) and in populations of ethnic minority backgrounds (Knight, Virdin, & Roosa, 1994; Lyon, Henggeler, & Hall, 1992; Varela et al., 2009; Wu & Chao, 2005) within the 7 to 15 year old age range, with some some evidence of poorer internal consistency in the firm control subscale. In this sample, the PC and AC subscales had Cronbach's alpha coefficients of $\alpha = .60$ and $\alpha = .91$,

respectively. The items of the CRPBI-C used in this dissertation can be viewed in Appendix I.

Measures of youth psychopathology. The Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version (K-SADS-PL; Kaufman et al., 1997) was used to assess current and lifetime histories of anxiety and depression as well as other DSM-IV Axis I disorders in youth. This measure is a widely used diagnostic interview with well-established psychometric properties. All interviews were administered by trained advanced graduate students. This measure was used describe the clinical characteristics of the youths. For this study, the two interviewers were 100% reliable on diagnoses of five tapes (18%).

Two measures were used to assess youth anxiety symptom severity. The Pediatric Anxiety Rating Scale (PARS; RUPP, 2002) provides an interviewer-rated measure of anxiety that integrates youth and parent report of youth anxiety. The PARS includes a 50-item symptom checklist and seven global severity/impairment items that are summed to a continuous total score of 0-35. The PARS has high inter-rater reliability, adequate internal consistency, and fair test-retest reliability. While its properties in Latinos have not been directly evaluated, it has been used in large clinical trials of ethnically diverse youths (Walkup et al., 2008). Approximately 15% of PARS interviews were rated for reliability; inter-rater reliability for the PARS was $r = .83$. In this sample, the PARS had a Cronbach's alpha coefficient of $\alpha = .92$. The Screen for Child Anxiety Related Emotional Disorders (SCARED; Birmaher et al., 1999) is a 41-item questionnaire measure of anxiety symptoms with youth- (SCARED-C) and parent-report (SCARED-P) versions. There is evidence that a total score ≥ 25 may indicate the presence of a DSM-IV anxiety disorder

(Birmaher et al., 1997; Bailey, Chavira, Stein, & Stein, 2006). Evidence supports similar reliability characteristics and factor structure and Latino youths and their parents (Gonzalez et al., 2009); however, there is also evidence of ethnic differences in the structure of the somatic subscale (Wren et al., 2007). In this sample, the SCARED-C and SCARED-P each had a Cronbach's alpha coefficient of $\alpha = .94$.

Given the prominence of somatic complaints in internalizing youths and potential ethnic differences in the SCARED somatic subscale, the 19-item Children's Somatization Inventory Child- and Parent-Reports (CSI-C/CSI-P; Walker, Garber, & Greene, 1991) were used to assess youth somatic symptoms over the previous two weeks. The CSI has demonstrated sound psychometric properties in the original and replication samples (Meesters, Muris, Ghys, Reumerman, & Rooijmans, 2003). This instrument has been commonly used to assess somatic symptoms in youths with medically unexplained physical complaints. Direct examination of psychometric properties in Latino youth population have not been published; however, studies using the CSI with large Latino populations have been conducted (e.g., Vasquez, Fritz, Kopel, Seifer, McQuaid, & Canino, 2009). In this sample, the CSI-C and CSI-P had Cronbach's alpha coefficients of $\alpha = .90$ and $\alpha = .85$, respectively.

Two measures were used to assess depressive symptom severity in youths. The Children's Depression Rating Scale – Revised (CDRS; Poznanski, & Mokros; 1996) was used as the primary measure of youth depressive symptomatology. The CDRS is an interviewer-rated measure of depression that integrates youth and parent report to assess the presence and severity of depression in youths. The CDRS is composed of 17 items tapping the major features of depression; scores of 40 and above are considered reflective

of a depressive diagnosis. The CDRS-R has demonstrated good interrater reliability, internal consistency, and convergent validity with other measures of youth depression. Approximately 15% of CDRS interviews were rated for reliability; inter-rater reliability for the CDRS was $r = .86$. In this sample, the CDRS had a Cronbach's alpha coefficient of $\alpha = .99$. The Mood and Feelings Questionnaire Child- and Parent-reports (MFQ-C/MFQ-P; Wood, Kroll, Moore, & Harrington, 1995) were used to further assess youth depressive symptoms. The MFQ is a 33-item youth- and parent-report inventory of depressive symptomatology in children and adolescents with sound psychometric properties. A total score ≥ 11 is the clinical cutoff. The psychometrics properties of the MFQ in a Latino sample have not been directly examined. In this sample, the MFQ-C and MFQ-P had Cronbach's alpha coefficients of $\alpha = .92$ and $\alpha = .90$, respectively.

Data analytic strategy

Data screening. Prior to analysis, data were screened to test statistical assumptions (e.g., normality). Standardized z-scores on all continuous data were examined, and a criterion of $z \geq \pm 2.5$ was used to identify outliers. Skewness and kurtosis were also examined. Data screening also focused on identifying potential covariates for analyses and understanding the comparability of the two ethnic groups in this sample. T-tests and χ^2 tests were performed to examine potential group differences in demographic and clinical variables. In addition, correlations between dependent variables and independent variables that represented related constructs were examined.

Evaluation of a priori hypotheses by aim

Hypothesis 1: Anxious LA mothers would be perceived by their children as more psychologically and behaviorally (i.e., firm) controlling compared to anxious NHW

mothers. There would be no significant ethnic differences in maternal AC. A one-way multivariate analyses of covariance (MANCOVA) was planned to evaluate differences in youth-reported parent behaviors (DVs = PC, FC, and AC) between dyads with LA and NHW mothers (IV = ethnic group). A partial eta squared (η^2) was used as a measure of effect size the omnibus model, where values of 0.04 = small effect, 0.25 = medium effect, and 0.64 = large effect (Ferguson, 2009).

Hypothesis 2: Across all dyads, youth-reported maternal PC and FC would be positively associated with youth internalizing symptoms, and maternal AC would be negatively associated with youth internalizing symptoms. Multiple linear regression analyses were performed to examine the association between the three dimensions of parenting behaviors (IVs = PC, FC, and AC on the CRPBI-C) and youth mental health symptoms (DVs = PARS, CDRS, CSI-P/C, SCARED-P/C, and MFQ-P/C). Separate models were run for each DV, with all three dimensions of parenting behaviors as predictors in each model (a total of eight regression models).

Hypothesis 3: Ethnicity would moderate the associations between youth-reported parenting behaviors and youth symptoms. Specifically, PC and FC would be positively associated with youth internalizing symptoms in both ethnic groups, but these relationships would be weaker in LA families. Significant moderation effects of ethnicity on the association between AC and youth symptoms were not predicted. Multiple linear regression analyses were performed to test potential moderation of parenting behaviors by ethnicity. To test moderation, regression models including the interaction of (1) ethnicity and PC (IVs = ethnicity, PC, and ethnicity \times PC), (2) ethnicity and FC (IVs = ethnicity, FC, and ethnicity \times FC), and (3) ethnicity and AC (IVs = ethnicity, AC, and ethnicity \times AC) were

tested to predict total scores on the eight clinical symptom measures. Specifically, the significance of the beta weights for the interaction term in each model were examined to assess moderation.

For multiple linear regression analyses (Aims 2 and 3), the F statistic is reported for omnibus models and an Adjusted R^2 was used to describe the variance accounted for by each model; Adjusted R^2 is a more appropriate index of model fit to these data than R^2 given the size of the current sample, as Adjusted R^2 takes sample size into account (note: adjusted R^2 may be negative in poorly fitted models). For individual predictors, confidence intervals around B (unstandardized coefficient) and the partial correlation statistic (partial r ; .2 = small effect, .5 = medium effect, .8 = large effect) are reported as indices of the magnitude of association between predictor and outcome. For significant interaction terms (Aim 3), simple regression slopes for ethnic groups are illustrated using graphs of simple regression equations. Because of the preliminary nature of this study, we retained a significant α level of .05 in analyses. Results of regression analyses are organized by domain of psychopathology (i.e., grouped by anxiety, somatic, and depression symptoms).

RESULTS

Preliminary data screening

There were no significant outliers on any questionnaires. Skewness and kurtosis were also examined and were not violated on any measures. Only eight of the 10 CRPBI-C-30 AC subscale items were available for nine youths. These eight items were highly and significantly correlated with the 10-item AC subscale on the CRPBIC-30 in the subsample of 19 youths for whom the full 10-item AC subscale was available ($r = .98, p < .001$). Given this strong correlation, the last two items of the AC subscale were imputed using Expectation Maximization (EM) missing data imputation procedures in SPSS 20 for the nine youths who completed the CRPBI-C-78. For all other variables, data values were imputed for variables containing less than 10% missing data. For example, if a case was missing three of 41 items on the SCARED-C, then those three missing data values were imputed using EM method in order to compute a more accurate total score. This was performed in six total instances.

Participants and comparability of groups

The final sample included 28 mothers (17 NHW, 11 LA) and their children (ages 7-15, Mean = 11.54, SD = 2.37). Ethnic groups did not differ in youth age ($t(27) = .53, p = .53$), gender ($\chi^2(1) = .20, p = .66$), or parent age (Mean mother age = 42.6 years, SD = 6.92, age range = 30-53; $t(26) = 1.73, p = .10$) at time of assessment.

Socioeconomic status. Socioeconomic status was determined using the Hollingshead (1975) index of social status, obtained using highest level of education and occupation for head of household and spouse/partner. There were no significant ethnic differences in social status or highest level of education ($\chi^2(4) = 5.84, p = .21$). In this

sample, 11 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 three (10.7%) completed some high school. In terms of marital status, 19 mothers were Married, Living with Spouse (67.9%), four mothers were Single, Never Married (14.8%), three were Separated (11.1%), one was Divorced (3.7%), and one was Widowed (3.7%). There were no significant ethnic differences in marital status ($\chi^2(4) = 4.39, p = .36$).

Clinical characteristics of mothers. Clinical characteristics of mothers are displayed in Table 1. Generalized Anxiety Disorder (GAD) was the most frequent primary diagnosis in the total sample of mothers ($n = 16, 57.1\%$). There were no significant differences between NHW and LA mothers in the type of primary anxiety disorder ($\chi^2(2) = 4.37, p = .11$). Twenty-one mothers (75.0%) met criteria for more than one anxiety disorder, with the majority of mothers meeting criteria for two current anxiety disorders ($n = 16, 57.1\%$). NHW and LA mothers did not differ significantly in the mean number of current anxiety disorders ($t(26) = 1.31, p = .20$) or number of current or past depressive disorders ($\chi^2(2) = 1.13, p = .57$) (see Table 1). NHW and LA mothers also did not significantly differ on self-reported state anxiety ($t(26) = .92, p = .36$), trait anxiety ($t(26) = 1.60, p = .12$), or depression (BDI: $t(26) = -.53, p = .60$) symptoms.

Table 1. Clinical characteristics of mothers

	Total	NHW	LA	p-value
	No./	No./	No./	
	Mean (SD)	Mean (SD)	Mean (SD)	
No. of Current Anxiety Disorders	1.93 (.66)	2.06(.66)	1.73(.65)	.20
No. of Lifetime Anxiety Disorders	2.11 (.79)	2.29 (.77)	1.82 (.75)	.12
No. of Current Diagnoses (any)	2.21 (.99)	2.41 (1.00)	1.90 (.94)	.19
<i>Primary Anxiety Diagnosis</i>				.11
No. with GAD	16	8	8	
No. with SoP	11	9	2	
No. with PD 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	
<i>Symptom Measures</i>				
STAI-State	39.22 (11.71)	40.82 (13.34)	36.50 (8.17)	.36
STAI-Trait	46.29 (10.00)	48.65 (11.48)	42.64 (5.90)	.12
BDI	11.18 (8.01)	10.53 (8.66)	12.18 (7.17)	.60

NHW = Non-Hispanic White; LA = Latina; GAD = Generalized Anxiety Disorder; SoP = Social Phobia; PD = Panic Disorder; STAI = State-Trait Anxiety Inventory; BDI = Beck Depression Inventory

Mothers provided an estimate of their age of first onset of anxiety disorder. Thirteen mothers (10 NHW and 3 LA) were unable to identify a specific age of onset, stating that they had been anxious for most of their lives (e.g., “For as long as I can remember”). For purposes of data analysis, we provided an early childhood onset age of five for these mothers. Using this approach, the average age of onset of primary anxiety disorder in this sample was 10.57 years ($SD = 8.69$). There was a significant difference in the age of onset of anxiety disorder between NHW and LA mothers ($t(26) = -2.97$, $p = .006$), with NHW mothers reporting earlier ages of onset (NHW: $M = 7.12$ years, $SD = 4.44$; LA = 15.91, $SD = 10.99$). A variable in the dataset was created to document whether the age of onset of an anxiety disorder occurred before the birth of the target child. All but one mother ($n = 27$, 96.4%) reported an anxiety disorder onset that predated the birth of the target child (one NHW mother reported age of onset of anxiety within the year prior to study participation).

Clinical characteristics of youth. Diagnostic characteristics of youths are displayed in Table 2. A total of 16 (57.1%) youths met criteria for a current primary anxiety disorder (7 GAD, 6 SoP, 3 SAD) and one met criteria for primary Attention Deficit-Hyperactivity Disorder Combined type. There were no significant ethnic differences in number and type of anxiety diagnoses ($\chi^2(4) = 6.14$, $p = .52$). Eleven youths (75%) met criteria for more than one anxiety disorder, with the majority of these youths meeting criteria for two current anxiety disorders ($n = 9$). None of the youths in this sample met diagnostic criteria for a current depressive disorder. Three youths met criteria for a Probable diagnosis for GAD, SoP, and Obsessive-Compulsive Disorder (i.e., meeting criteria for all but one core symptom, e.g., time or impairment criteria) but did

not meet full diagnostic criteria for any disorder. Table 3 displays the group means and standard deviations for youth clinical scales. There were no significant ethnic differences in clinician-, youth-, or parent-reported youth internalizing symptoms ($p = .17-.91$).

Table 2. Diagnostic characteristics of youths

	Total	NHW	LA	
	Mean (SD)/	Mean (SD)/	Mean (SD)/	
	No.	No.	No.	p-value
No. of Current Anxiety Disorders	1.04 (1.04)	1.12 (1.11)	.91 (.94)	.61
No. of Current Diagnoses (any)	1.11 (1.03)	1.24 (1.09)	.91 (.94)	.42
<i>Primary Diagnosis</i>				.52
No. with GAD	7	4	3	
No. with SoP	6	5	1	
No. with SAD	3	1	2	
No. with ADHD-Combined	1	0	1	
Type				

NHW = Non-Hispanic White; LA = Latina; GAD = Generalized Anxiety Disorder; SoP = Social Phobia; SAD = Separation Anxiety Disorder; ADHD – Attention Deficit/Hyperactivity Disorder.

Table 3. Youth means and standard deviations for clinical scales

	Total M (SD)	NHW M (SD)	LA M (SD)	t	p- value
PARS	17.11 (8.18)	17.59 (8.15)	16.36 (8.56)	.38	.71
CDRS	27.74 (7.90)	27.16 (7.50)	28.63 (8.77)	-.48	.69
SCARED-C	29.04 (15.20)	29.41 (15.34)	28.45 (15.72)	.16	.87
SCARED-P	29.04 (15.19)	32.24 (14.83)	24.09 (15.06)	1.41	.17
CSI-C	12.68 (8.99)	10.94 (9.16)	15.36 (8.44)	-1.29	.21
CSI-P	8.04 (8.29)	7.88 (9.74)	8.27 (5.82)	-.12	.91
MFQ-C	14.89 (10.91)	13.06 (10.57)	17.73 (11.32)	-1.11	.28
MFQ-P	15.61 (10.19)	15.35 (11.28)	16.00 (8.75)	-.16	.87

NHW = Non-Hispanic White; LA = Latina; t = t-test statistic; PARS = Pediatric Anxiety Rating Scale; CDRS = Children's Depression Rating Scale – Revised; 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

Service-seeking characteristics. At time of the assessment, mothers were asked a brief set of questions regarding service-seeking behavior. Specifically, they were asked if they were currently in services or seeking services for themselves or for their child.

Treatment and service seeking characteristics were examined to assess potential associations with parent and youth symptoms or ethnic differences in service use. In this sample, five mothers were currently taking medication for their anxiety, eight had taken medications in the past but not currently, and 12 had never received medication treatment; three declined to answer. There were no significant ethnic differences in current or past medication use by mothers ($\chi^2(2) = 5.29, p = .07$). Only one child in the

sample was currently taking psychiatric medication (NHW youth; antidepressant for anxiety).

Four mothers (14.3%; $n = 3$ NHW, $n = 1$ LA) indicated that they were currently seeking services for their own anxiety, and 16 mothers (57.1%; $n = 10$ NHW, $n = 6$ LA) indicated that they were currently seeking services for their child's anxiety. There were no ethnic group differences in service-seeking status ($\chi^2(1) = .05$, $p = .83$). Youths whose mothers were currently seeking youth mental health services for them were rated as having higher anxiety levels by clinicians and by mothers, compared to youths whose mothers were not seeking youth services (PARS: $t(26) = -2.71$, $p = .01$; SCARED-P: $t(26) = -2.48$, $p = .02$). Service seeking status was not significantly associated with any other maternal or youth clinical characteristics. Service seeking status was not significantly associated with any parenting behaviors ($p = .13-.92$).

Level of acculturation. LA mothers completed the SASH as a measure of acculturation. In this sample, LA mothers had a Mean score of 3.69 ($SD = 0.56$), which corresponded with scores in the "More Acculturated" range of the measure. Maternal level of acculturation was not significantly associated with parenting behaviors.

Aim 1: Ethnic differences in youth perception of parenting behaviors

Means and standard deviations of youth-reported parenting behaviors are displayed in Table 4. Notably, total sample means for PC and AC were comparable to those reported in the original validation sample (Schluderman & Schluderman, 1988; Mean PC = 16.19, $SD = 5.08$; Mean AC = 24.62, $SD = 4.82$) and to samples reported in various studies of youths with elevated anxiety symptoms (e.g., Bogels & van Melick,

2004; Costa, Weems, & Pina, 2009; Yegeneh, Beidel, & Turner, 2006). Given our single-item indicator of FC, we were unable to compare FC to other samples.

Table 4. Means and standard deviations for maternal parenting behaviors

	Total M (SD)	NHW M (SD)	LA M (SD)	t	p- value
CRPBIC-PC	16.07 (4.08)	14.53 (3.37)	18.70 (3.97)	-2.91	.008*
CRPBIC-FC	1.71 (.85)	1.71 (.85)	1.73 (.90)	-.06	.95
CRPBIC-AC	25.54 (4.67)	25.87 (3.71)	25.00 (6.17)	.46	.65

Note: * = $p < .05$

NHW = Non-Hispanic White; LA = Latina; t = t-test statistic; CRPBIC-PC = Children's Report of Parental Behavior Inventory – Child Report – Psychological Control Subscale; CRPBIC-FC = Children's Report of Parental Behavior Inventory – Child Report – Firm Control; CRPBIC-AC = Children's Report of Parental Behavior Inventory – Child Report – Acceptance Subscale.

Several demographic and clinical variables were examined as potential covariates in a planned multivariate analysis of ethnic group differences in parenting behaviors. A *priori* covariates (youth age, youth gender, parent age, maternal trait anxiety, and maternal depression) were not significantly correlated with any of the three parenting dimensions (see Table 5). Likewise, there were no significant correlations among any of the three dimensions of parenting behaviors. Accordingly, rather than performing a multivariate analysis of covariance, a univariate approach to compare group differences was adopted. Three t-tests were conducted to examine group differences in PC, FC, and AC, and a significance criterion of $\alpha = .017$ was used. Means of maternal parenting behaviors are displayed in Table 4.

Table 5. Bivariate correlations among parenting behavior variables and potential covariates

	CRPBIC-PC	CRPBIC-FC	CRPBIC-AC	Youth Age	Maternal Age	Maternal STAI-T	Maternal BDI
CRPBIC-PC	1	.14	-.30	.14	-.18	.08	.21
CRPBIC-FC		1	-.18	-.16	.05	.13	.17
CRPBIC-AC			1	-.23	-.15	.16	-.13
Youth Age				1	.42*	-.23	.12
Maternal Age					1	-.14	-.07
Maternal STAI-T						1	.61**
Maternal BDI							1

Note: * = $p < .05$; ** = $p \leq .001$

CRPBIC-PC = Children's Report of Parental Behavior Inventory – Child Report – Psychological Control Subscale; CRPBIC-FC = Children's Report of Parental Behavior Inventory – Child Report – Firm Control; CRPBIC-AC = Children's Report of Parental Behavior Inventory – Child Report – Acceptance Subscale; STAI-T = State-Trait Anxiety Inventory – Trait Subscale; BDI = Beck Depression Inventory

As expected, LA mothers were rated by their children as significantly higher in PC than NHWs mothers ($t(25) = -.291, p = .008$), and we did not detect significant ethnic group differences in levels of youth-reported maternal AC ($t(25) = .21, p = .65$). Contrary to hypotheses, there were no significant ethnic differences in youth-reported maternal FC ($t(26) = .004, p = .95$).

Exploratory post-hoc analyses were performed to test whether parenting behaviors differed by primary anxiety disorder (GAD or SoP). Mothers with primary

GAD did not significantly differ from those with primary SoP on PC ($t(24) = .42, p = .68$), FC ($t(25) = .98, p = .34$), or AC ($t(24) = .13, p = .90$).

Aim 2: Maternal parenting behaviors as predictors of youth internalizing symptoms

Multiple linear regression analyses were performed to assess the association between the three dimensions of parenting behaviors (predictors) and youth internalizing symptoms. All three parenting behaviors were included in each model as predictors of each clinical outcome measure (dependent variables = PARS, SCARED-P/C, CSI-P/C, CDRS, MFQ-P/C; eight models total).

Maternal parenting behaviors as predictors of youth anxiety symptoms. Across all informants, the specific hypotheses that PC and FC would be positively associated with youth anxiety symptoms and that AC would be negatively associated with youth symptoms were not supported. FC and AC were not significantly associated with youth anxiety symptoms on any measure. Contrary to hypothesis, PC was *negatively* associated with youth anxiety by youth and parent report. The omnibus model with three parenting dimensions as predictors of parent-reported youth anxiety symptoms was significant at $\alpha = .05$ level ($F(3,23) = 3.65, p = .03, \text{Adjusted } R^2 = 23.4\%$), and there was a significant main effect of maternal PC such that, holding FC and AC constant, higher levels of PC were associated with lower levels of parent-reported anxiety symptoms ($t(25) = -3.01, p = .006, \text{partial } r = -.53, B = -2.06, 95\% \text{ CI: } -3.47, -.64$). A one-point increase in PC was associated with a 2.06 decrease in parent-reported youth anxiety (see Table 6). Similarly, while the omnibus model examining parenting behaviors as predictors of youth-reported anxiety symptoms was not statistically significant (SCARED-C: $F(3,23) = 2.31, p = .10, \text{Adjusted } R^2 = 13.2\%$), PC emerged as an individual predictor of youth-reported anxiety

($t(25) = -2.50$, $p = .02$, partial $r = -.46$, $B = -1.81$, 95% CI: $-3.31, -.32$) such that a one-point increase in PC was associated with a 1.81-point decrease in SCARED-C. The omnibus model examining associations between parenting behaviors and clinician-rated anxiety symptoms was not significant (PARS: $F(3,23) = 1.18$, $p = .94$, Adjusted $R^2 = 2.0\%$) was not significant.

Table 6. Parenting behaviors as predictors of youth anxiety symptoms

	B	β	t	p-value	Partial r	95% CI for B
<u>DV: PARS</u>						
CRPBIC-PC	-.76	-.38	-1.85	.08	-.36	-1.61, .09
CRPBIC-FC	.72	.08	.38	.71	.08	-3.20, 4.64
CRPBIC-AC	-.26	-.14	-.71	.49	-.15	-1.00, .49
<u>DV: SCARED-C</u>						
CRPBIC-PC	-1.81	-.48	-2.50	.02*	-.46	-3.31, -.32
CRPBIC-FC	-.30	-.02	-.09	.93	-.02	-7.19, 6.60
CRPBIC-AC	-.94	-.29	-1.48	.15	-.30	-2.26, .37
<u>DV: SCARED-P</u>						
CRPBIC-PC	-2.06	-.54	-3.01	.006*	-.53	-3.47, -.64
CRPBIC-FC	-3.07	-.17	-.98	.34	-.20	-9.59, 3.43
CRPBIC-AC	-.97	-.29	-1.61	.12	-.32	-2.21, .27

Note: * = $p < .05$; Partial r: .2 = small effect, .5 = medium effect, .8 = large effect. DV = Dependent variable; PARS = Pediatric Rating Scale; SCARED-C = Screen for Child Anxiety and Related Emotional Disorders – Child Report; SCARED-P = Screen for Child Anxiety and Related Emotional Disorders – Parent Report; CRPBIC-PC = Children’s Report of Parental Behavior Inventory – Child Report – Psychological Control Subscale; CRPBIC-FC = Children’s Report of Parental Behavior Inventory – Child Report – Firm Control; CRPBIC-AC = Children’s Report of Parental Behavior Inventory – Child Report – Acceptance Subscale; B = Unstandardized beta coefficient; β = Standardized beta coefficient; t = t-test statistic; R^2 = Adjusted R Square; Partial r = Partial correlation coefficient; CI = Confidence Interval

Maternal parenting behaviors as predictors of youth somatic symptoms. The hypothesis that PC and FC would be positively associated with youth somatic symptoms was not supported by either informant. However, the hypothesis that AC would be negatively associated with youth somatic symptoms was partially supported per youth

report. The omnibus model with three parenting dimensions as predictors of youth-reported somatic symptoms was significant at $\alpha = .05$ level ($F(3,23) = 6.65$, $p = .002$, Adjusted $R^2 = 39.5\%$). There was a significant main effect of maternal AC such that AC was negatively associated youth-reported somatic symptoms ($t(25) = -3.64$, $p = .001$, partial $r = -.60$, $B = -1.14$, 95% CI: $-1.78, -.49$). Holding PC and FC constant, a one-unit increase in AC was associated with a 1.14 decrease in CSI-C (Table 7). The omnibus model with three parenting dimensions as predictors of parent-reported somatic symptoms was not significant at $\alpha = .05$ level ($F(3,23) = .37$, $p = .78$, Adjusted $R^2 = -7.9\%$). Results are displayed in Table 7.

Table 7. Parenting behaviors as predictors of youth somatic symptoms

	B	β	t	p-value	Partial r	95% CI for B
<u>DV: CSI-C</u>						
CRPBIC-PC	.46	.21	1.29	.21	.26	-.28, 1.20
CRPBIC-FC	.06	.01	.04	.97	.01	-3.33, 3.45
CRPBIC-AC	-1.14	-.59	-3.64	.001**	-.60	-1.78, -.49
<u>DV: CSI-P</u>						
CRPBIC-PC	-.27	-.13	-.61	.55	-.13	-1.19, .65
CRPBIC-FC	.31	.03	.15	.88	.03	-3.90, 4.53
CRPBIC-AC	-.37	-.21	-.96	.35	-.20	-1.18, .43

Note: ** = $p \leq .001$; Partial r: .2 = small effect, .5 = medium effect, .8 = large effect. DV = Dependent variable; CSI-C = Children's Somatization Inventory – Child Report; CSI-P = Children's Somatization Inventory – Parent Report; CRPBIC-PC = Children's Report of Parental Behavior Inventory – Child Report – Psychological Control Subscale; CRPBIC-FC = Children's Report of Parental Behavior Inventory – Child Report – Firm Control; CRPBIC-AC = Children's Report of Parental Behavior Inventory – Child Report – Acceptance Subscale; B = Unstandardized beta coefficient; β = Standardized beta coefficient; t = t-test statistic; R^2 = Adjusted R Square; Partial r = Partial correlation coefficient; CI = Confidence Interval.

Maternal parenting behaviors as predictors of youth depression symptoms.

Across all measures, the hypothesis that PC and FC would be positively associated with youth depressive symptoms was not supported. The hypothesis that maternal AC would be negatively associated with youth depressive symptoms was partially supported using clinician-rated and parent-reported symptoms of youth depression. The omnibus model with three parenting behaviors as predictors of parent-reported youth depression symptoms was marginally significant at $\alpha = .05$ level ($F(3,23) = 2.98$, $p = .05$, Adjusted

$R^2 = 18.6\%$); however, there was a significant association between maternal AC and parent-reported youth depressive symptoms ($t(25) = -2.66$, $p = .01$, partial $r = -.49$, $B = -1.11$, 95% CI: $-1.97, -.25$). Holding PC and FC constant, a one-unit increase in maternal AC was associated with a 1.11-point decrease in parent-reported youth depressive symptoms. While the omnibus model examining the association between the three parenting behaviors and clinician-rated youth depression symptoms was not significant (CDRS: $F(3,23) = 1.53$, $p = .23$, Adjusted $R^2 = 5.8\%$), maternal AC was a significant individual predictor of youth depressive symptoms by clinician report ($t(25) = -2.11$, $p = .046$, partial $r = -.40$, $B = -.73$, 95% CI: $-1.45, -.01$) (see Table 8). Parenting behaviors were not significantly associated with youth-reported depression symptoms at $\alpha = .05$ level (MFQ-C: $F(3,23) = 1.10$, $p = .37$. Adjusted $R^2 = 1.1\%$).

Table 8. Parenting behaviors as predictors of youth depression symptoms

	B	β	t	p-value	Partial r	95% CI for B
<u>DV: CDRS</u>						
CRPBIC-PC	-.38	-.19	-.96	.34	-.20	-1.20, .44
CRPBIC-FC	-.61	-.07	-.24	.74	-.07	-4.37, 3.15
CRPBIC-AC	-.73	-.43	-2.11	.05 ^{a*}	-.40	-1.45, -.01
<u>DV: MFQ-C</u>						
CRPBIC-PC	-.27	-.10	-.50	.62	-.10	-1.39, .86
CRPBIC-FC	-2.99	-.24	-1.19	.25	-.24	-8.16, 2.19
CRPBIC-AC	-.72	-.31	-1.51	.14	-.30	-1.71, .27
<u>DV: MFQ-P</u>						
CRPBIC-PC	-.58	-.23	-1.22	.23	-.25	-1.56, -.40
CRPBIC-FC	-3.42	-.28	-1.57	.13	-.31	-7.93, 1.09
CRPBIC-AC	-1.11	-.50	-2.66	.01*	-.49	-1.97, -.25

Note: * = $p < .05$; ^a = p-value of .046.

Partial r: .2 = small effect, .5 = medium effect, .8 = large effect.

DV = Dependent variable; CDRS = Children's Depression Scale - Revised; MFQ-C = Mood and Feelings Questionnaire – Child Report; MFQ-P = Mood and Feelings Questionnaire – Parent Report; CRPBIC-PC = Children's Report of Parental Behavior Inventory – Child Report – Psychological Control Subscale; CRPBIC-FC = Children's Report of Parental Behavior Inventory – Child Report – Firm Control; CRPBIC-AC = Children's Report of Parental Behavior Inventory – Child Report – Acceptance Subscale; B = Unstandardized beta coefficient; β = Standardized beta coefficient; t = t-test statistic; R^2 = Adjusted R Square; Partial r = Partial correlation coefficient; CI = Confidence Interval.

Aim 3: Interaction between ethnicity and maternal behavior as predictors of youth internalizing symptoms

Multiple linear regression analyses were performed to test the moderating effect of ethnicity on the associations between parenting and youth internalizing symptoms. Each regression model included three predictors: Ethnicity, specific parenting dimension, and their interaction. Only interaction terms are interpreted.

Interactions between ethnicity and Psychological Control.

Ethnicity as moderator of maternal PC and youth anxiety symptoms. Across all measures of youth anxiety, the hypothesis that ethnicity would moderate the association between PC and youth anxiety was not supported. Results are displayed in Table 9. The omnibus models with PC, maternal ethnicity, and the interaction term as predictors of clinician-rated, youth-reported, and parent-reported anxiety were not significant at $\alpha = .05$ level (PARS: $F(3,23) = 1.32$, $p = .29$, Adjusted $R^2 = 3.6\%$); SCARED-C: $F(3,23) = 2.06$, $p = .13$, Adjusted $R^2 = 10.9\%$; SCARED-P: $F(3,23) = 2.44$, $p = .09$, Adjusted $R^2 = 14.3\%$).

Table 9. Interaction between maternal psychological control and ethnicity as predictors of youth anxiety symptoms

	B	β	t	p-value	Partial r	95% CI for B
<u>DV: PARS</u>						
Ethnicity	-14.65	-.88	-.93	.36	-.19	-47.10, 17.19
CRPBIC-PC	-1.12	-.56	-1.87	.07	-.36	-2.35, .12
EthnicityxPC	.93	1.07	1.03	.32	.21	2.79, -.13
<u>DV: SCARED-C</u>						
Ethnicity	4.24	.14	.15	.88	.03	-54.06, 62.54
CRPBIC-PC	-2.11	-.56	-1.96	.06	-.38	-4.33, .12
EthnicityxPC	.24	.15	.14	.88	.03	-3.12, 3.60
<u>DV: SCARED-P</u>						
Ethnicity	11.74	.37	.42	.68	.09	-45.78, 69.25
CRPBIC-PC	-1.32	-.35	-1.25	.22	-.25	-3.52, .87
EthnicityxPC	-.82	-.51	-.51	.61	-.11	-4.13, 2.49

Note: Partial r: .2 = small effect, .5 = medium effect, .8 = large effect.

DV = Dependent variable; PARS = Pediatric Anxiety Rating Scale; SCARED-C = Screen for Child Anxiety and Related Emotional Disorders – Child Report; SCARED-P = Screen for Child Anxiety and Related Emotional Disorders – Parent Report; CRPBIC-PC = Children’s Report of Parental Behavior Inventory – Child Report – Psychological Control Subscale; B = Unstandardized beta coefficient; β = Standardized beta coefficient; t = t-test statistic; R^2 = Adjusted R Square; Partial r = Partial correlation coefficient; CI = Confidence Interval.

Ethnicity as moderator of maternal PC and youth somatic symptoms. The specific hypothesis that the association between PC and somatic symptoms would be weaker for LA youths than NHW youths was not supported. However, ethnicity was a marginally

significant moderator of the relationship between PC and youth-reported somatic symptoms. The overall interaction model with PC, maternal ethnicity, and the interaction term as predictors of youth-reported somatic symptoms (CSI-C) was statistically significant at $\alpha = .05$ level ($F(3,23) = 3.13, p = .045, \text{Adjusted } R^2 = 19.8\%$). The interaction between ethnicity and PC was marginally significant ($t(25) = 2.03, p = .055, B = 1.83, 95\% \text{ CI of } B: -.04, 3.71$) (see Table 10). The omnibus model predicting somatic symptoms was not significant by parent report ($F(3,23) = .38, p = .77, \text{Adjusted } R^2 = 7.7\%$) (Table 10).

Table 10. Interaction between maternal psychological control and ethnicity as predictors of youth somatic symptoms

	B	β	t	p-value	Partial r	95% CI for B
<u>CSI-C</u>						
Ethnicity	-28.41	-1.55	-1.81	.08	-.35	-60.96, 4.13
CRPBIC-PC	-.10	-.05	-.17	.87	-.04	-1.34, 1.14
EthnicityxPC	1.83	1.93	2.03	.06	.39	-.04, 3.71
<u>CSI-P</u>						
Ethnicity	-15.65	-.91	-.92	.37	-.18	-50.82, 19.52
CRPBIC-PC	-.61	-.30	-.95	.35	-.19	-1.96, .73
EthnicityxPC	.98	1.10	1.00	.33	.20	-1.04, 3.01

Note: Partial r: .2 = small effect, .5 = medium effect, .8 = large effect.

CSI-C = Children's Somatization Inventory – Child Report; CSI-P = Children's Somatization Inventory – Parent Report; CRPBIC-PC = Children's Report of Parental Behavior Inventory – Child Report – Psychological Control Subscale; B = Unstandardized beta coefficient; β = Standardized beta coefficient; t = t-test statistic; R^2 = Adjusted R Square; Partial r = Partial correlation coefficient; CI = Confidence Interval.

Due to the hypothesis-generation nature of these analyses, the interaction effect of ethnicity and PC on youth-reported somatic symptoms was further explored. Examination of simple regression equations revealed that for LAs, maternal PC was significantly and positively associated with youth-reported somatic symptoms such that a one-unit increase in maternal PC was associated with a 1.73 increase in CSI-C score ($t(9) = 4.51$, $p = .002$, partial $r = .85$, $B = 1.73$, 95% CI: .85, 2.62). Conversely, for NHWs, the association

between maternal PC and youth-reported somatic symptoms was not significant ($t(14) = -.15, p = .89, \text{partial } r = -.04, B = -.01, 95\% \text{ CI: } -1.59, 1.39$). Thus, contrary to expectations, the association between somatic symptoms and maternal PC was *stronger* for LA youths, not weaker. The associations are displayed in Figure 2.

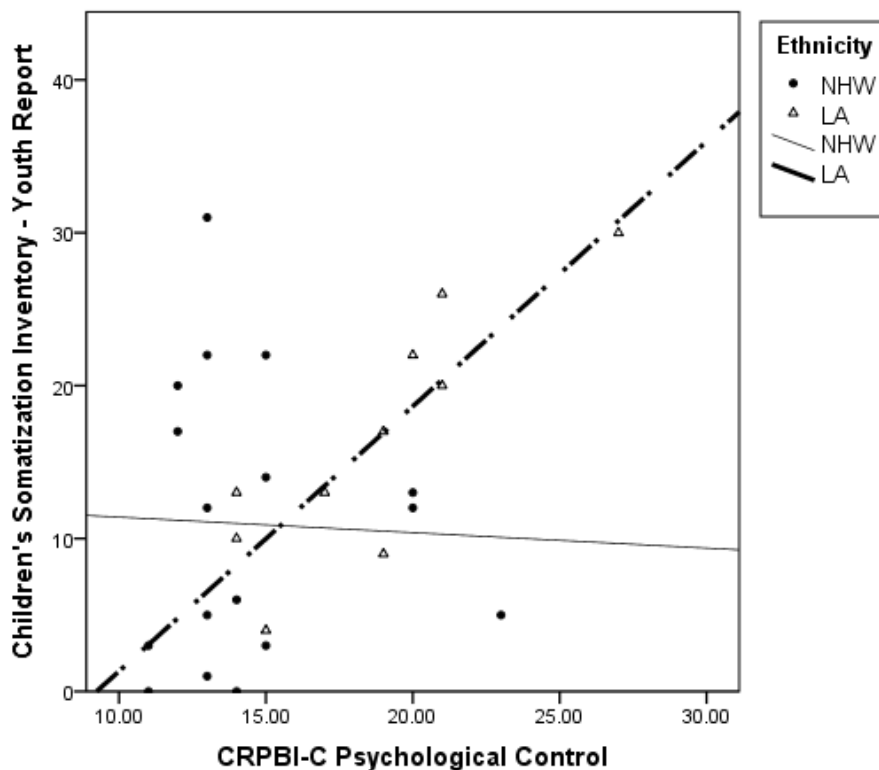


Figure 2. The association between maternal psychological control and youth-reported somatic symptoms, by ethnicity

Ethnicity as moderator of maternal PC and youth depression symptoms. Across all measures, the hypothesis that ethnicity would moderate the association between PC and youth depressive symptoms was not supported. The omnibus model with PC, maternal ethnicity, and the interaction term as predictors of clinician-rated, youth-

reported, and parent-reported depression symptoms were not significant at $\alpha = .05$ level (CDRS: $F(3,23) = 0.32$, $p = .81$, Adjusted $R^2 = -8.5\%$; MFQ-C: $F(3,23) = 1.12$, $p = .36$, Adjusted $R^2 = 1.3\%$; MFQ-P: $F(3,23) = 0.37$, $p = .80$, Adjusted $R^2 = -8.3\%$) (Table 11.)

Table 11. Interaction between maternal psychological control and ethnicity as predictors of youth depression symptoms

	B	β	t	p-value	Partial r	95% CI for B
<u>CDRS</u>						
Ethnicity	-3.45	-.21	-.21	.83	-.04	-37.12, 30.22
CRPBIC-PC	-.51	-.26	-.81	.42	-.17	-1.79, .78
EthnicityxPC	.39	.46	.42	.68	.09	-1.54, 2.33
<u>MFQ-C</u>						
Ethnicity	13.43	.61	.64	.53	.13	-29.75, 56.60
CRPBIC-PC	-.53	-.20	-.67	.51	-.14	-2.18, 1.12
EthnicityxPC	-.27	-.23	.22	.83	-.05	-2.75, 2.22
<u>MFQ-P</u>						
Ethnicity	-10.39	-.49	-.49	.63	-.10	-53.83, 33.05
CRPBIC-PC	-.79	-.31	-.99	.33	-.20	-2.45, .86
EthnicityxPC	.77	.71	.64	.53	.13	-1.73, 3.27

Note: Partial r: .2 = small effect, .5 = medium effect, .8 = large effect.

CDRS = Children's Depression Scale - Revised; MFQ-C = Mood and Feelings Questionnaire – Child Report; MFQ-P = Mood and Feelings Questionnaire – Parent Report; CRPBIC-PC = Children's Report of Parental Behavior Inventory – Child Report – Psychological Control Subscale; B = Unstandardized beta coefficient; β = Standardized beta coefficient; t = t-test statistic; R^2 = Adjusted R Square; Partial r = Partial correlation coefficient; CI = Confidence Interval.

Ethnicity as moderator of maternal Firm Control (FC) and youth symptoms.

Ethnicity as moderator of maternal FC and youth anxiety symptoms. The hypothesis that ethnicity would moderate the association between FC and youth anxiety symptoms was not supported by any informant. The omnibus model with FC, maternal ethnicity, and the interaction term as predictors of clinician-reported youth anxiety symptoms, youth-reported anxiety symptoms, and parent-reported youth anxiety symptoms were not significant at $\alpha = .05$ level ($F(3,24) = 0.35, p = .79, \text{Adjusted } R^2 = -7.8\%$; SCARED-C: $F(3,24) = .04, p = .99, \text{Adjusted } R^2 = -11.9\%$; SCARED-P: $F(3,24) = 1.63, p = .21, \text{Adjusted } R^2 = 6.5\%$). Results are displayed in Table 12.

Table 12. Interaction between maternal firm control and ethnicity as predictors of youth anxiety symptoms

	B	β	t	p-value	Partial r	95% CI for B
<u>PARS</u>						
Ethnicity	5.07	.31	.68	.36	.50	-10.28, 20.41
CRPBIC-FC	1.72	.18	.70	.07	.50	-3.44, 6.88
EthnicityxFC	-3.67	-.46	-.95	.32	.35	-11.68, 4.34
<u>SCARED-C</u>						
Ethnicity	3.05	.10	.22	.83	.04	-26.02, 32.12
CRPBIC-FC	.79	.04	.17	.87	.03	-8.99, 10.56
EthnicityxFC	-2.33	-.16	-.32	.75	-.07	-17.50, 12.84
<u>SCARED-P</u>						
Ethnicity	6.96	.23	.54	.59	.11	-19.58, 33.50
CRPBIC-FC	.10	.01	.02	.98	.01	-8.82, 9.03
EthnicityxFC	-8.75	-.59	-1.30	.21	-.26	-22.60, 5.11

Note: Partial r: .2 = small effect, .5 = medium effect, .8 = large effect.

PARS = Pediatric Anxiety Rating Scale; SCARED-C = Screen for Child Anxiety and Related Emotional Disorders – Child Report; SCARED-P = Screen for Child Anxiety and Related Emotional Disorders – Parent Report; CRPBIC-FC = Children’s Report of Parental Behavior Inventory – Child Report – Firm Control; B = Unstandardized beta coefficient; β = Standardized beta coefficient; t = t-test statistic; R^2 = Adjusted R Square; Partial r = Partial correlation coefficient; CI = Confidence Interval.

Ethnicity as moderator of maternal FC and youth somatic symptoms. The hypothesis that ethnicity would moderate the association between FC and youth somatic

symptoms was not supported by either informant. The omnibus model with FC, maternal ethnicity, and the interaction term as predictors of youth- and parent-reported somatic symptoms was not significant at $\alpha = .05$ level (CSI-C: $F(3,24) = 1.90$, $p = .16$, Adjusted $R^2 = 9.1\%$; CSI-P: $F(3,24) = .02$, $p = .996$, Adjusted $R^2 = -12.2\%$). Results are displayed in Table 13.

Table 13. Interaction between maternal firm control and ethnicity as predictors of youth somatic symptoms

	B	β	t	p-value	Partial r	95% CI for B
<u>CSI-C</u>						
Ethnicity	-7.63	-.42	-1.02	.32	-.20	-23.13, 7.86
CRPBIC-FC	-1.24	-.12	-.49	.63	-.10	-6.45, 3.97
EthnicityxFC	6.70	.79	1.79	.09	.34	-1.10, 15.09
<u>CSI-P</u>						
Ethnicity	1.17	.07	.15	.88	.03	-14.71, 17.04
CRPBIC-FC	.57	.06	.22	.83	.04	-4.78, 5.90
EthnicityxFC	-.46	-.06	-.11	.91	-.02	-8.74, 7.83

Note: Partial r: .2 = small effect, .5 = medium effect, .8 = large effect.

CSI-C = Children's Somatization Inventory – Child Report; CSI-P = Children's Somatization Inventory – Parent Report; CRPBIC-FC = Children's Report of Parental Behavior Inventory – Child Report – Firm Control; B = Unstandardized beta coefficient; β = Standardized beta coefficient; t = t-test statistic; R^2 = Adjusted R Square; Partial r = Partial correlation coefficient; CI = Confidence Interval.

Ethnicity as moderator of maternal FC and youth depressive symptoms. Across all measures, the hypothesis that ethnicity would moderate the association between FC and youth depressive symptoms was not supported. The omnibus model with FC, maternal ethnicity, and the interaction term as predictors of clinician-rated, youth-reported, or parent-reported depressive symptoms were not significant at $\alpha = .05$ level (CDRS: $F(3,24) = 0.74$, $p = .54$, Adjusted $R^2 = -3.0\%$; MFQ-C: $F(3,24) = 0.67$, $p = .58$,

Adjusted $R^2 = -3.8\%$; MFQ-P: $F(3,24) = 0.50$, $p = .69$, Adjusted $R^2 = -5.9\%$). Results are displayed in Table 14.

Table 14. Interactions between maternal firm control and ethnicity as predictors of youth depression symptoms

	B	β	t	p-value	Partial r	95% CI for B
<u>CDRS</u>						
Ethnicity	-7.41	-.47	-1.06	.30	-.21	-21.89, 7.07
CRPBIC-FC	-2.25	-.24	-.95	.35	-.19	-7.12, 2.62
EthnicityxFC	5.17	.67	1.41	.17	.28	-1.54, 2.33
<u>MFQ-C</u>						
Ethnicity	.70	.03	.07	.94	.02	-19.39, 20.78
CRPBIC-FC	-2.92	-.23	-.89	.38	-.18	-9.68, 3.83
EthnicityxFC	2.34	.22	.46	.65	.09	-8.15, 12.82
<u>MFQ-P</u>						
Ethnicity	-3.13	-.15	-.34	.74	-.07	-22.08, 15.81
CRPBIC-FC	-3.58	-.30	-1.16	.26	-.23	-9.95, 2.80
EthnicityxFC	2.23	.22	.47	.65	.10	-7.66, 12.12

Note: Partial r: .2 = small effect, .5 = medium effect, .8 = large effect.

CDRS = Children's Depression Scale - Revised; MFQ-C = Mood and Feelings Questionnaire – Child Report; MFQ-P = Mood and Feelings Questionnaire – Parent Report; CRPBIC-FC = Children's Report of Parental Behavior Inventory – Child Report – Firm Control; B = Unstandardized beta coefficient; β = Standardized beta coefficient; t = t-test statistic; R^2 = Adjusted R Square; Partial r = Partial correlation coefficient; CI = Confidence Interval.

Ethnicity as moderator of maternal acceptance (AC) and youth symptoms.

Ethnicity as moderator of maternal AC and youth anxiety symptoms. Support for the hypothesis that there would be no ethnic group differences in the association between AC and youth anxiety was mixed. Contrary to expectations, the omnibus model with AC, maternal ethnicity, and the interaction term as predictors of parent-reported anxiety (SCARED-P) was statistically significant at $\alpha = .05$ level (SCARED-P: $F(3,23) = 3.41$, $p = .04$, Adjusted $R^2 = 21.7\%$). There was a significant interaction between ethnicity and AC ($t(25) = 2.62$, $p = .02$, $B = 3.09$, 95% CI: .65, 5.54) in predicting parent-reported youth anxiety symptoms (note: although all parameters in this model were statistically significant, only the interaction effect is interpretable). Consistent with expectations, the omnibus models with AC, maternal ethnicity, and the interaction term as predictors of clinician-rated and youth-reported youth anxiety were not significant at $\alpha = .05$ level (PARS: $F(3,23) = 0.14$, $p = .93$, Adjusted $R^2 = -11.0\%$; SCARED-C: $F(3,23) = 1.18$, $p = .34$, Adjusted $R^2 = 2.0\%$). Results are displayed in Table 15.

Table 15. Interaction between maternal acceptance and ethnicity as predictors of youth anxiety symptoms

	B	β	t	p-value	Partial r	95% CI for B
<u>PARS</u>						
Ethnicity	-5.30	-.32	-.27	.79	-.06	-45.40, 34.80
CRPBIC-AC	-.17	-.10	-.30	.77	-.06	-1.38, 1.03
EthnicityxAC	.13	.20	.17	.87	.04	-1.42, 1.67
<u>SCARED-C</u>						
Ethnicity	-58.79	-1.88	-1.73	.10	-.34	-129.23, 11.65
CRPBIC-AC	-1.85	-.56	-1.81	.08	-.35	-3.97, .27
EthnicityxAC	2.29	1.91	1.74	.10	.34	-.43, 5.00
<u>SCARED-P</u>						
Ethnicity	-88.47	-2.82	-2.89	.008*	-.52	-151.79, -25.16
CRPBIC-AC	-2.30	-.70	-2.50	.02*	-.46	-4.20, -.40
EthnicityxAC	3.09	2.57	-2.62	.02*	.48	.65, 5.54

Note: * = $p < .05$; Partial r: .2 = small effect, .5 = medium effect, .8 = large effect. PARS = Pediatric Anxiety Rating Scale; SCARED-C = Screen for Child Anxiety and Related Emotional Disorders – Child Report; SCARED-P = Screen for Child Anxiety and Related Emotional Disorders – Parent Report; CRPBIC-AC = Children’s Report of Parental Behavior Inventory – Child Report – Acceptance Subscale; B = Unstandardized beta coefficient; β = Standardized beta coefficient; t = t-test statistic; R^2 = Adjusted R Square; Partial r = Partial correlation coefficient; CI = Confidence Interval.

Simple regression equations were examined in order to understand the nature of the interaction effect between ethnicity and AC on parent report of youth anxiety

symptoms. For NHWs, maternal AC was significantly and negatively associated with parent-reported youth anxiety symptoms ($t(16) = -2.73$, $p = .02$, partial $r = -.58$, $B = -2.30$, 95% CI: -4.10, -.50), such that a one-point increase in maternal AC was associated with a 2.30-point decrease in SCARED-P. Conversely, for LAs, this association not significant ($t(9) = .94$, $p = .37$, partial $r = .32$, $B = .80$, 95% CI: -1.15, 2.74). The associations are displayed in Figure 3.

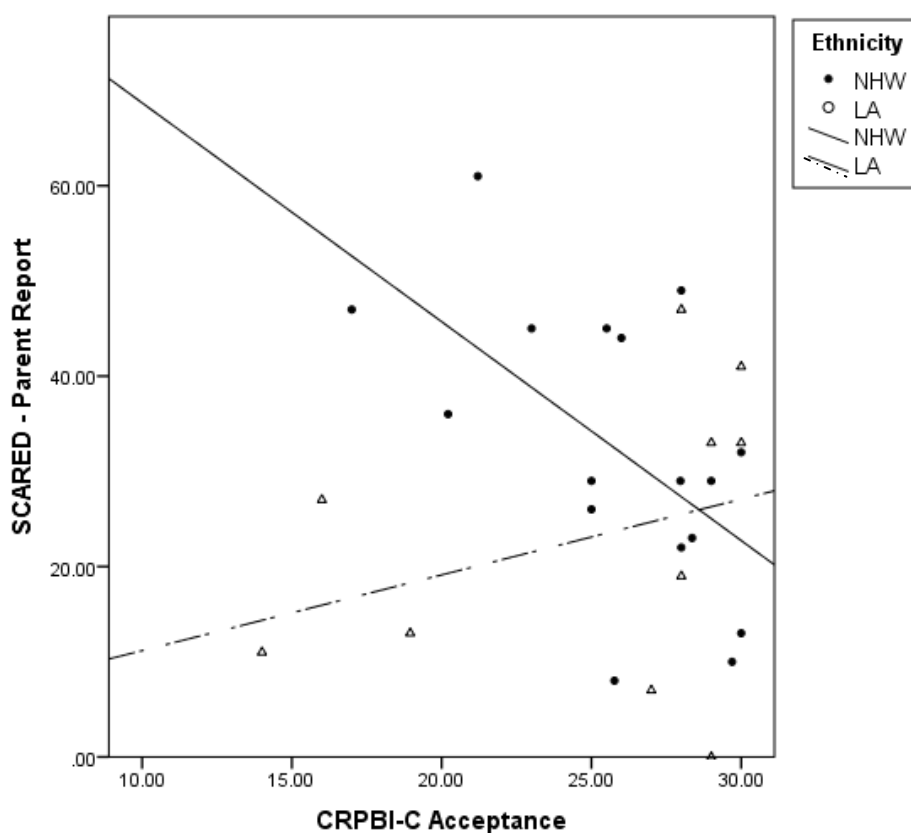


Figure 3. The association between maternal acceptance and parent-reported youth anxiety symptoms, by ethnicity

Ethnicity as moderator of maternal AC and youth somatic symptoms. As

expected, there were no significant ethnic differences in the association between maternal

AC and youth somatic symptoms by youth or parent report. The omnibus model with AC, maternal ethnicity, and the interaction term as predictors of youth-reported somatic symptoms was significant at the $\alpha = .05$ level ($F(3,23) = 7.49$, $p = .001$, Adjusted $R^2 = 42.8\%$), however, this was due to the main effect of AC and the interaction term was not significant (see Table 16). The omnibus model predicting parent-reported youth somatic symptoms was not significant ($F(3,23) = .24$, $p = .87$, Adjusted $R^2 = -9.7\%$).

Table 16. Interaction between maternal acceptance and ethnicity as predictors of youth somatic symptoms

	B	β	t	p-value	Partial r	95% CI for B
<u>CSI-C</u>						
Ethnicity	-6.86	-.37	-.45	.66	-.09	-38.51, 24.80
CRPBIC-AC	-1.49	-.77	-3.23	.004*	-.56	-2.44, -.54
EthnicityxAC	.44	.63	.75	.46	.15	-.78, 1.66
<u>CSI-P</u>						
Ethnicity	-.37	-.02	-.02	.99	-.004	-40.23, 40.53
CRPBIC-AC	-.32	-.18	-.54	.60	-.11	-1.55, .91
EthnicityxAC	.008	.01	.01	.99	.002	-.1.57, 1.59

Note: * = $p < .05$; Partial r: .2 = small effect, .5 = medium effect, .8 = large effect.

CSI-C = Children's Somatization Inventory – Child Report; CSI-P = Children's Somatization Inventory – Parent Report; CRPBIC-AC = Children's Report of Parental Behavior Inventory – Child Report – Acceptance Subscale; B = Unstandardized beta coefficient; β = Standardized beta coefficient; t = t-test statistic; R^2 = Adjusted R Square; Partial r = Partial correlation coefficient; CI = Confidence Interval.

Ethnicity as moderator of maternal AC and youth depression symptoms. Support for the hypothesis that ethnicity would moderate the link between AC and youth depressive symptoms was mixed. Contrary to hypotheses, there were significant ethnic group differences in the association between maternal AC and youth depressive symptoms per youth report. The omnibus model with AC, maternal ethnicity, and the interaction term as predictors of youth-reported depression symptoms was significant at $\alpha = .05$ level (MFQ-C: $F(3,23) = 3.74$, $p = .03$, Adjusted $R^2 = 24.0\%$) and there was a significant interaction between ethnicity and AC ($t(25) = 2.62$, $p = .02$, $B = 2.13$, 95% CI: .45, 3.82). However, as predicted, the omnibus models with AC, maternal ethnicity, and the interaction term as predictors of clinician-rated and parent-reported youth depression symptoms were not significant at $\alpha = .05$ level (CDRS: $F(3,23) = 1.86$, $p = .16$, Adjusted $R^2 = 9.0\%$; MFQ-P: $F(3,23) = 2.45$, $p = .09$, Adjusted $R^2 = 14.4\%$), Results are displayed in Table 17.

Table 17. Interaction between maternal acceptance and ethnicity as predictors of youth depression symptoms

	B	β	t	p-value	Partial r	95% CI for B
<u>CDRS</u>						
Ethnicity	-21.59	-1.32	-1.26	.22	-.25	-57.10, 13.93
CRPBIC-AC	-1.14	-.66	-2.21	.04*	-.42	-2.21, -.08
EthnicityxAC	.89	1.43	1.35	.19	.27	-.46, 2.26
<u>MFQ-C</u>						
Ethnicity	-48.63	-2.21	-2.30	.03*	-.43	-92.29, -4.97
CRPBIC-AC	-1.80	-.78	-2.83	.009*	-.51	-3.11, -.48
EthnicityxAC	2.13	2.53	2.62	.02*	.48	.45, 3.82
<u>MFQ-P</u>						
Ethnicity	-36.49	-1.73	-1.70	.10	-.33	-81.00, 8.02
CRPBIC-AC	-1.71	-.77	-2.65	.01*	-.48	-3.05, -.38
EthnicityxAC	1.43	1.77	1.72	.10	.34	-.29, 3.15

Note: * = $p < .05$; Partial r: .2 = small effect, .5 = medium effect, .8 = large effect.

CDRS = Children's Depression Scale - Revised; MFQ-C = Mood and Feelings Questionnaire – Child Report; MFQ-P = Mood and Feelings Questionnaire – Parent Report; CRPBIC-AC = Children's Report of Parental Behavior Inventory – Child Report – Acceptance Subscale; B = Unstandardized beta coefficient; β = Standardized beta coefficient; t = t-test statistic; R^2 = Adjusted R Square; Partial r = Partial correlation coefficient; CI = Confidence Interval.

The significant interaction effect of ethnicity and AC on youth reported depressive symptoms was examined using simple regression equations. For NHWs, maternal AC was significantly negatively associated with youth-reported depressive symptoms such that a one-point decrease in maternal AC was associated with a 1.80-

point increase in MFQ-C ($t(15) = -3.17, p = .007, \text{partial } r = -.63, B = -1.80, 95\% \text{ CI: } -3.01, -.58$). Conversely, for LAs, this association was non-significant ($t(9) = .57, p = .59, \text{partial } r = .20, B = .34, 95\% \text{ CI: } -1.04, 1.71$). The associations are displayed in Figure 4.

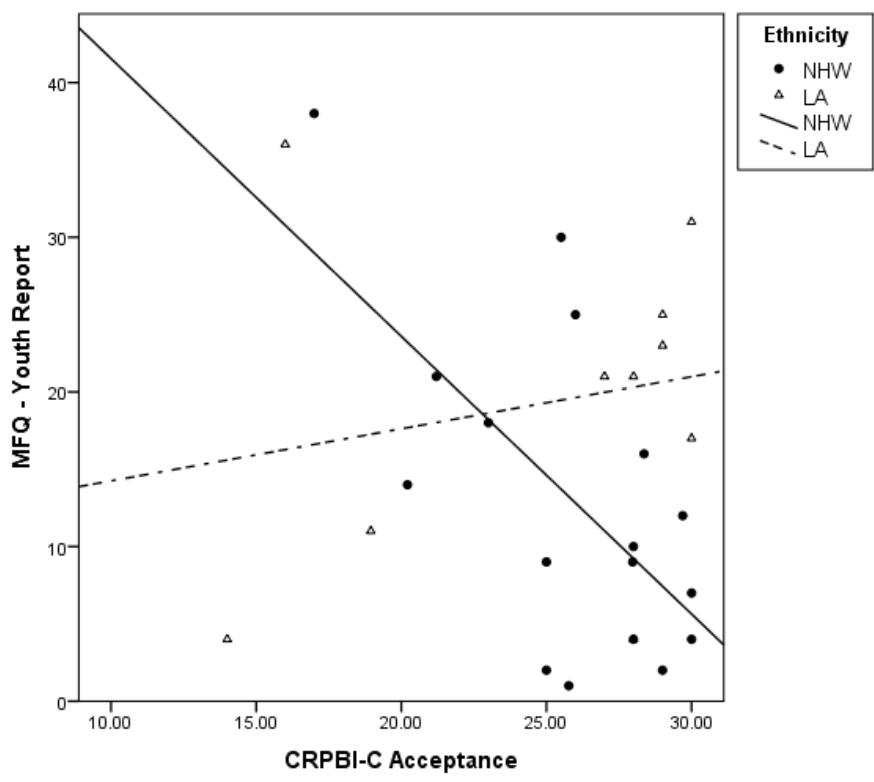


Figure 4. The association between maternal acceptance and youth-reported depression symptoms, by ethnicity

DISCUSSION

The broad focus of this this dissertation was to examine whether the impact of maternal parenting behaviors on youth mental health symptoms is universal or culture-specific. This central aim was probed in a population of youths at high-risk for negative outcomes, namely children of Latina (LA) and Non-Hispanic White (NHW) mothers who met criteria for a current DSM-IV anxiety disorder. Specifically, this dissertation addressed three broad questions: (1) Do parenting behaviors differ between anxious NHW and LA mothers? (2) Are parenting behaviors of anxious mothers associated with youth internalizing symptoms? (3) Does the influence of maternal behaviors on youth internalizing symptoms depend on the cultural context? To evaluate these questions, this dissertation examined youth report on three dimensions of maternal parenting behaviors (psychological control, firm control, and acceptance) and clinician, youth, and parent report of internalizing symptoms in the children of anxious mothers. Given a broad literature on cultural differences between NHWs and LAs in parenting values and family orientation, we anticipated ethnic differences in parenting, negative relationships between parenting behaviors and youth symptomatology, and a moderating influence of ethnicity on these associations (i.e., that psychological control and firm control would be more weakly linked to youth mental health in Latino youth). While support for specific hypotheses was mixed, broadly, the association of parenting behaviors with youth anxiety, depression, and somatic symptoms did vary by ethnicity. Findings are discussed below by theoretical aim.

Are there ethnic differences in parenting?

Results of this dissertation provide evidence that parenting practices differ across ethnic groups, and this is in line with previous findings regarding cross-cultural parenting. In this sample, significant differences in FC and AC did not emerge. However, as hypothesized, LA children in this sample rated their mothers as higher in PC than did children of NHW mothers. As noted previously, research that specifically and directly compares levels of PC in Latina and NHW mothers has been minimal (e.g., Durrett et al., 1975; see Halgunseth et al., 2006). Nevertheless, this finding is consistent with previous work in which mothers from collectivist groups scored higher in PC than mothers from individualist backgrounds (e.g., Rudy & Halgunseth, 2005). In an integrative review by Halgunseth and colleagues (2006), it was noted that PC behaviors within a Latino family context may be motivated by intentions to be loving and caring and to educate children in moral values. In this sample, mean PC for NHW and LA mothers was 14.53 and 18.70, respectively. In previous studies that have examined anxiety symptoms, mean ratings for PC have typically been somewhere in between these values (e.g., 15.5-17.8; Bögels & van Melick, 2004; Costa et al., 2009; McClure et al., 2001; Yegeneh et al., 2006). It is unclear if either NHW mothers would score significantly lower than previous samples, or if LA mothers would score significantly higher than previous samples; it also unclear if this difference is unique within the context of maternal anxiety.

Unexpectedly, NHW and LA mothers did not differ in firm control. This diverges from previous studies in which LA parents were rated as more controlling than NHW parents (e.g., Finkelstein et al., 2001; Varela et al., 2004). It is unclear if this difference is attenuated within an anxious mother sample (i.e., anxiety may influence levels of FC

equally or more so than ethnicity) or whether a more acculturated sample of mothers may exert less FC (Buriel, 1993; Hill, Bush, & Roosa, 2003). While level of acculturation was not associated with any parenting behavior in this sample, the range of acculturation was narrow. Further, as will be discussed later, it is also possible that our index of FC may not have been adequate to detect a group difference.

As anticipated, there were no significant ethnic group differences in levels of youth reported maternal AC. Across groups, levels of maternal AC were comparable to those in previous examinations, suggesting that maternal anxiety did not significantly influence maternal warmth or rejection. Of note, non-significant ethnic differences should not be interpreted as ethnic equivalence, and limited sample size precludes formal equivalence analyses.

There is ample evidence suggesting that parenting strategies are linked to cultural values, however other contextual factors may also play a role (e.g., neighborhood quality, marital distress) and may have influenced present findings. Overall, however, results of this study are consistent with the broader literature suggesting that parenting varies by cultural context.

Is parenting associated with youth internalizing outcomes?

Broadly, results of this dissertation indicate that parenting behaviors are significantly related to youth internalizing symptoms. In this sample, significant associations were found between PC and AC and youth internalizing symptoms. However, specific findings varied by domain of psychopathology and informant, and associations were not all in the expected direction.

Across informants, PC was not associated with youth depressive symptoms, and there was no significant main effect of PC on somatic symptoms. Unexpectedly, increased maternal PC was associated with *decreased* parent- and child- reported youth anxiety symptoms across all youths (note: this finding differed by ethnicity and will be discussed further below). These findings conflict with previous work indicating that maternal PC was associated with negative youth outcomes, including increased depressive symptoms (Barber, 1996; Garber, Robinson, & Valentiner, 1997; Garber & Flynn, 2001, Sher-Censor et al., 2011). Results, however, must be interpreted within the clinical context of the sample. Within this sample of anxious mother-child dyads, many youths also experienced clinically significant anxiety symptoms. It is possible that anxious youths are more likely than youths in the general population to rely on their mothers for emotional guidance and to therefore perceive maternal PC behaviors as protective or necessary to ensure their own safety and well-being. For example, anxious youths may experience short-term relief in response to their mothers making decisions for them. Further, because of the subtleties of PC behaviors, youths may not readily recognize their occurrence (Bogels & van Melick, 2004; Siqueland, Kendall, & Steinberg, 1996). Alternatively, while youths may report decreased anxiety in response to increased PC, youths may experience distress but express it differently (e.g., as somatic symptoms or disruptive behaviors). This finding requires further investigation to verify its robustness in larger samples.

Associations between FC and youth internalizing symptomatology were not detected; this is consistent with a previous study in which FC was not associated with depressive symptoms in Caucasian or Latina adolescents (Finkelstein et al., 2001).

Further, youth anxiety symptoms have been more strongly linked to PC than to behavioral control (Wijsbroek et al., 2011). Further, extant literature indicates that FC may be more strongly associated with externalizing behaviors (e.g., Barber, 1996) or other types of functional outcomes (e.g., academic achievement, Halgunseth et al., 2006) that were not directly assessed in this study. Due to level of participant burden, a shortened version of the CRPBI was used; the index of FC was highly correlated with the full FC subscale in a subset of youths and thus appeared to be a reasonable measure; however, a single-item indicator may not have been adequate to detect group differences in this sample.

As expected, lower levels of AC were generally associated with less favorable outcomes. The specific findings vary depending on informant and domain of psychopathology. In the entire youth sample, lower levels of AC were associated with increased youth-reported somatic symptoms. In addition, lower levels of AC were associated with increased depressive symptoms per clinician and parent ratings (note: ethnicity moderated this relationship per youth report; this will be discussed further below). These findings are consistent with previous research demonstrating that maternal AC predicted low levels of self-worth in adolescents (Garber & Flynn, 2001). Previous findings regarding the relationship between AC and internalizing symptoms in ethnic minority youths has been mixed. In a sample of African-American youths, maternal support was not significantly associated with depression (Bean et al., 2006). In contrast, Varela and colleagues (2009) found an ethnicity \times AC interaction. For Latino-American youths, maternal AC was positively associated with youth anxiety, whereas AC was not significantly associated with anxiety for European American or Mexican (living in

Mexico) youth. In this dissertation sample, significant associations between AC and youth anxiety were not detected for either ethnic group.

In sum, results of this dissertation indicate that parenting behaviors may play a significant role in youth mental health functioning in both cultural contexts. Maternal anxiety appears to confer youth risk for negative mental health outcomes, and further investigation is needed to determine whether present findings are robust to all youths of if they are specific to this high-risk context.

Does ethnicity moderate the influence of parenting behaviors on youth mental health symptoms?

This dissertation provides further evidence that cultural context may shape the meanings and influences of specific parenting behaviors. In particular, the association between both PC and AC and youth internalizing symptoms varied across NHW and LA families. As previously mentioned, it is unclear whether perceptions of parenting from a collectivist viewpoint would buffer the impact of certain behaviors (e.g., control behaviors may be consistent with family ideals; parenting behaviors maybe viewed as motivated by love and caring) or make youths more vulnerable to the effects of parenting behaviors (e.g., higher need to maintain group harmony associated with higher sensitivity to parental disapproval). We predicted the former; however, whether ethnicity mitigated or strengthened the associations between parenting and youth symptoms varied by parenting behavior. Results in this sample indicate that PC was more strongly linked to somatic symptoms for LA youths, whereas AC appeared to have a stronger relationship to anxious and depressive symptoms for NHW youths.

In this sample, ethnicity moderated the association between PC and youth somatic symptoms. However, findings were not as predicted – increased maternal PC was significantly associated with increased somatic symptoms as reported by LA youths. This association was non-significant for NHW youths. Due to previous findings that maternal PC behaviors may be viewed as consequences of love, caring, and obligation to family (e.g., Halgunseth et al., 2006), it was initially predicted that associations between PC and youth internalizing symptoms would be weaker in LA dyads. However, this same evidence can be used to assert that due to the high value of familial bonds, LA youths may be more vulnerable to the negative sequelae of maternal PC.

In interpreting these results, it is useful to consider the potential relevance of an interdependent family orientation and the expression of somatic symptoms as idioms of distress. First, Latinos generally possess a collectivist family background. In collectivist cultures, individuals frequently define their identity and worth in reference to valued group members (Markus & Kitayama, 2001; Varela et al., 2009). A strong family orientation may place youths at heightened sensitivity to parental manipulation of the emotional relationship, and Latino youths may be more likely than individualistic youths to experience distress in response to causing parents feelings of disappointment, shame, or worry. Next, distress in this sample of Latino youths may have manifested as somatic symptoms rather than as overt anxiety or depression. Notably, previous studies examining the impact of PC on LA youth outcomes did not assess somatic symptoms. As discussed by Varela and colleagues (2004; 2009), the importance of preserving group/family harmony may lead youths to believe that they should not bother family members with personal emotions. Consequently, in combination with elevated PC

behaviors (which often focus on parental emotions), Latino youths may suppress their negative emotions and express their distress through somatic symptoms.

Contrary to hypotheses, ethnicity did not moderate the association between FC and youth internalizing symptoms. As previously mentioned, a one-item indicator may not have provided sufficient variance to detect ethnic differences despite the high correlation of this item with total scales and acceptable variability in response to this item across the sample. Increased parental monitoring, rules, and limit-setting have been associated with more favorable outcomes in some ethnic minority populations (e.g., less depression in African American youths; Finkelstein et al., 2001), and it is possible that differences may have emerged on measures of different psychological and functional domains. Interestingly, there is evidence that control-related parenting constructs may differ in LA and non-LA parents such that LA parents' control-related behaviors may be more domain specific (e.g., strict rules for behaviors outside the home and more permissive rules within the home) (see Halgunseth et al., 2006). Thus, it is possible that the implications of FC may vary as a function of where it is asserted.

Interestingly, there was a significant interaction between ethnicity and AC on *youth* reported depression symptoms. Consistent with previous studies of predominantly NHW samples, lower levels of maternal AC were associated with increased depressive symptoms for NHW youth in this sample; however, the association between maternal AC and youth reported depressive symptoms was not significant for LA youths. As a brief reminder, AC was negatively associated with somatic symptoms in both NHW and LA youths in this sample, indicating that low levels of AC play an adverse role in youth mental health functioning. However, it is interesting that its association with youth

depressive symptoms varies by ethnicity. Because of the value on hierarchical structure and interdependence of family relationships in LA families, some behaviors assessed on the CRPBI (e.g., smiling often, showing affection, cheering youth up when sad) may not be as critical to the perception of parental AC as other feelings, such as a parent feeling proud of her child. It is possible that attitude and behaviors not captured on the CRPBI may play a large role in some aspects of psychological well-being of LA youths. In addition, AC has been described by some as a form of support (e.g., Barber, 1996); it is possible that LA youth also receive substantial emotional support from other family members (e.g., siblings, extended family members) and that these other relationships are protective against non-physiological symptoms of depression.

Limitations

Results of this dissertation must be viewed in light of study-specific limitations. Due to difficulties in recruiting our target populations, the sample was smaller than anticipated and power to detect effects was low to moderate. In addition, the exclusion of monolingual Spanish-speaking families resulted in the collection of a more acculturated sample and may have attenuated group differences. On the other hand, we were able to obtain two different ethnic samples that were similar in several regards, and reduced variability in level of acculturation and external stressors (e.g., immigration stress) may have aided in the detection of significant associations in this sample. In addition, 80% of Hispanics in San Diego County self-identify as fluent or good English-speakers (U.S. Census, 2010c), and nearly two-thirds of Hispanics in San Diego County have an average household income of over \$35,000, suggesting that LA mothers and youths in this sample were socioeconomically similar to the majority of Latinos in San Diego County (U.S.

Census, 2010b). Future work with families at different levels of acculturation is needed to determine whether present results were attenuated or unique to a more acculturated sample. Overall, it is promising that significant associations, group differences, and moderation effects emerged despite a small sample size; this suggests that the associations between parenting behaviors, and ethnic differences in these associations, may be robust and warrant research and clinical attention.

Next, as with any cross-sectional design, we were unable to perform true mediation analyses or make inferences regarding the causal direction of the associations between parenting behaviors and youth symptomatology. Nevertheless, this work may help to generate hypotheses about mechanisms of transmission of psychopathology from parent to child and how these pathways may vary across ethnic groups. Future work aimed at unpacking the influence of culture by directly examining family factors such as cultural values and beliefs is needed.

A strength of this study was the collection of mothers' clinical histories, including age of onset of maternal anxiety disorder. In all but one dyad, mothers' onset of clinically significant anxiety predated the birth of her participating child. As noted earlier, some researchers debate the directionality of parenting effects, suggesting that anxious children may elicit or exacerbate maladaptive parenting behaviors. While the temporal occurrence of specific parenting behaviors cannot be determined in this study, data from this study indicates that youth resided in a high-risk context (i.e., maternal anxiety) for most, if not all, of their lives. A more thorough, longitudinal understanding of the behavioral correlates of this context is needed in order to identify points of intervention and inform efforts to interrupt the dynamic, reciprocal cycle of maladaptive parent and youth behaviors. This

understanding may be vital in treating and preventing youth mental health problems. Relatedly, an interesting finding of this study is that on average, LA mothers reported later age of first onset of an anxiety disorder than NHW mothers. This warrants further investigation. While it is possible that retrospective reports may reduce reliability in reporting, investigation of other environmental factors that might contribute to this finding would be informative. Further, continued research should examine the hypothesis that other forms of distress, such as somatic or depressive symptoms, may precede anxiety in LA mothers.

Perhaps one of the most important aspects of parenting behaviors is the youth's perception and attribution of those behaviors. Accordingly, this study aimed to assess the associations between youth-perceived maternal behaviors and youth mental health outcomes. As mentioned in the Background section, an explicit goal of this dissertation was to assess youth perception of behaviors and the clinical implications of those perceptions. While this makes theoretical sense, it is important to note for many youths in this sample, parenting behaviors were perceived by youths with high levels of anxiety. It is well-known that anxious youths may be biased in their perceptions of their environment. Therefore, it is important to highlight that these biases may have influenced youth perception and reporting of maternal behaviors. The use of observational methods to assess parent behaviors in the future would facilitate comparison of both actual and perceived parent behaviors. Blind investigator ratings of observed behavior may be less subject to bias than youth reports, which can be influenced by anxiety-related distortions (Krain & Kendall, 2000). Further, assessment of physiological correlates of parenting behaviors may provide a basic and objective means to assess stress response in anxious youths given evidence that physiology

is the aspect of emotion that is least susceptible to cultural influence (Soto, Levenson, & Ebling, 2005). This may help to disentangle the effects of true biological differences in the manifestation of distress versus differences in interpretation and reporting of distress. For example, if LAs report higher levels of somatic symptoms in the absence of increased physiological stress response, this also has clear implications on treatment components that may be most acceptable and relevant to LAs (e.g., more behavioral and relaxation techniques, strategies to reduce the impact of perception of physiological symptoms).

As described in the Results section, a large portion of mothers in this sample were seeking services for themselves or for their child. It is possible that maternal treatment of anxiety may have attenuated the effects of maternal behaviors for some mothers, and that the rates of youth anxiety in this sample were elevated. We do not view this as likely given that rates of youth anxiety disorders in this sample (57%) were comparable to those of children of anxious parents cited in previous research (up to 68%; for review, see Hirshfeld-Becker et al., 2008). Finally, fathers were not included in this study for conceptual clarity; there is reason to suspect that, while both play an important role, childrearing practices of mothers and fathers may uniquely influence child development (Bögels & Phares, 2008; Crean, 2008; McClure et al., 2001).

This dissertation study involved direct comparison of parenting behaviors in anxious mothers within two cultural contexts and provided evidence for potentially divergent top-down pathways for the development of anxiety. While some of the present findings were consistent with hypotheses, some results were not anticipated, and the majority of our analyses did not emerge as statistically significant. Some of the non-significant findings may be attributed to low sample power, however, there remain many

open questions regarding the relationships between parenting behaviors and youth clinical outcomes. This dissertation study illustrates the need for future work to further understand which associations between parenting behaviors and youth outcomes are equivalent across groups versus culture specific. For example, future work examining potential cultural differences in the construct of acceptance, factors that influence the impact of psychological control, and the linkages between behavioral control and youth mental health would shed light on the role of parenting behaviors in youth development. In light of noted limitation, as will be discussed further below, results of this dissertation suggest novel ways to include parents in youth interventions by targeting specific parenting characteristics. This work may guide the development and evaluation of family-oriented treatment models that teach parents skills to modify specific parenting behaviors based on empirical findings.

Clinical and Research Implications

This dissertation study was intended to be the first step toward a long-term goals of (a) understanding environmental pathways of the intergenerational transmission of anxiety and related internalizing symptoms, and (b) guiding development of culturally appropriate interventions aimed at interrupting these pathways. Whether psychosocial treatment of child anxiety should head in a familial direction is currently a contentious issue due to mixed efficacy of extant family-focused therapy protocols (see Silverman, Pina, & Viswesvaran, 2008). Within the context of maternal anxiety, ostensibly psychopathology-enhancing types of parenting behaviors were found to be associated with negative youth internalizing outcomes, and present findings lend themselves to testable hypotheses regarding behavioral targets for intervention.

Results suggest that interventions designed to directly address parenting behaviors associated with youth anxiety, depression, and/or somatic symptoms may be valuable in preventing and treating youth internalizing symptoms. Surprisingly, relatively few family-focused treatments have directly targeted the parenting behaviors that have been linked to child anxiety (for exception, see Wood et al., 2006). For many existing family-focused treatments for child anxiety, the primary goals of parental involvement are to teach parents to play the role of a coach or co-therapist by (a) helping the child acquire and practice a set of skills, (b) modeling a set of skills specifically for the purpose of teaching the child new skills, or (c) reinforcing the lessons during the child-focused portion of treatment. Similarly, transfer-of-control approaches, which involve the transfer of knowledge and skills from therapist to parent to child (Ginsburg, Silverman, & Kurtines, 1995), are often used. Results of this dissertation, albeit preliminary, contend that there is a need for a different approach to family involvement – an approach in which a primary goal is direct modification of parenting behaviors that have been linked to youth symptoms. Specific targets should be grounded on empirical findings regarding parental behavior correlates of youth symptomatology. Results of this study suggest that goals of such an intervention may be to a) increase acceptance and support, and b) decrease intrusiveness, overprotectiveness, manipulation of the parent-child bond, and rejection. Future work can evaluate the efficacy of such an intervention. It would be critical to include pre-, during, and post-treatment assessment of parenting behaviors to such intervention studies in order to evaluate a) whether intervention produced changes in target behaviors, and b), whether these changes precede changes in youth symptoms.

In this dissertation study, decreased maternal AC was associated with adverse youth outcomes across multiple domains of psychopathology, including somatic and depressive symptoms, for both NHW and Latino youth. However, the adverse influence of maternal PC may be particularly problematic for LA youths. Results may guide pilot projects aimed at developing culturally-sensitive interventions targeting familial processes as a prevention and early intervention strategy for Latino youths. Increased familial involvement has been shown to be an effective adaptation to the treatment of depression in LA adolescents (Rosselló, Bernal, & Rivera-Medina, 2008), and findings of this project suggest that parental involvement may provide additional benefits for treatment of anxiety and somatic symptoms as well. As previously discussed, LA youths living in the U.S. may be at unique risk for experiencing distress due to conflicting desires to both respect family traditions and gain autonomy. For this particular population, strategies designed to increase the youth's perceptions of their mother's a) acceptance of youth personal and emotional autonomy, and b) unconditional pride and love (e.g., reducing affective punishment for undesirable behavior) may be critical to reducing youth's internalizing symptoms.

Results of this dissertation study were obtained within the context of maternal anxiety, and different but complementary approach to intervention is the direct treatment of maternal anxiety (e.g., direct application of evidence-based treatments to clinically anxious mothers). In the depression literature, there is evidence that treatment of maternal depression, without youth receipt of treatment, can reduce or impede the onset of youth depressive symptoms (Weissman et al., 2006). Likewise, it is plausible that successful treatment of maternal anxiety (i.e., modification of the parenting context) may indirectly

and positively influence youth symptomatology. One study examined the use of specific parent training techniques in a family-focused cognitive behavior therapy study for anxious youths (Kendall et al., 2008) and found a moderate to large effect for parent anxiety management (PAM) techniques in reducing youth anxiety symptoms ($f^2 = .43$, moderate to large effect). In this study, PAM was only used for an average of 7.8 minutes ($SD=11.6$) of coded family sessions (Khanna & Kendall, 2009), leaving the full potential effects of PAM largely unknown. It is possible that an adequate, successful dose of maternal anxiety treatment would lead mothers to alter their behaviors, or that a reduction in maternal anxiety would correspond with broader changes, such as decreased family functioning or decreased modeling of anxiety. These are testable hypotheses that warrant investigation.

Results of this dissertation may also have a number of broader implications. Present findings are consistent with a wealth of literature indicating that anxious youths, and LA youths in particular, may identify with the experience of somatic symptoms rather than anxiety or depression. At a screening level, identification of somatic symptoms as a potential manifestation of distress is critical in matching youths to appropriate mental health services. From a treatment development perspective, results broadly suggest that effective interventions may utilize transdiagnostic approaches designed to simultaneously target anxious, depressive, and/or somatic symptoms (e.g., Weersing, Rozenman, Maher-Bridge, & Campo, 2012). Given that some families may have difficulty identifying somatic symptoms as mental health problems, research is needed to examine whether implementation of mental health services in alternative settings (e.g., primary care, schools) might increase youth access to services. In addition, packaging interventions as classes to

enhance mind-body health and wellness, as opposed to treating anxiety and depression, may provide a better fit to their goals and perspectives of diverse families.

Summary and Conclusions

This dissertation represents one of the first studies to investigate the links between parenting, youth mental health, and ethnicity within the context of maternal anxiety. Results suggest that culture influences parenting, parenting is significantly linked to youth mental health adjustment, and culture influences the strength and direction of these links. While some researchers have posited that the broad dimensions of PC and AC have little impact on youth anxiety (e.g., McLeod, Wood, & Avney, 2011), results of this study may be used to support the benefits of moving away from a main effects approach and towards a deeper understanding of specific factors that influence the meaning and impact of parenting approaches in youth mental health development. There is evidence that the relationships between parenting and child mental health functioning are alike in some ways across ethnic groups but diverge in others. The potential of nonequivalent pathways for the development of anxiety in varying ethnic groups and underscores the importance of understanding psychosocial processes that may serve to propagate the occurrence of internalizing problems from parent to child in diverse families. Conclusions drawn from ethnically heterogeneous research samples may not extend to other populations, and this applies both to extant knowledge regarding the links between parenting behaviors and youth anxiety, and to previous studies of family-focused psychosocial treatment for youth anxiety. Future research should aim to extend the work of this dissertation and further explore which pathways are universal and which are culture-specific. Such work will not only enhance our theoretical understanding of the influence of culture on youth mental

health, but may lead to better public health outcomes by informing effective interventions and reducing mental health disparities.

APPENDIX I:

Children's Report of Parenting Behavior Inventory – Youth Report on Mother

My mother is a person who...

Psychological Control:

2. ...tells me of all the things she had done for me.
5. ...says, if I really cared for her, I would not do things that cause her to worry.
8. ...is always telling me how I should behave.
11. ... would like to be able to tell me what to do all of the time.
14. ...wants to control whatever I do.
17. ... is always trying to change me.
20. ...only keeps rules when it suits her.
23. ...is less friendly with me, if I do not see things her way.
26. ...will avoid looking at me when I have disappointed her.
29. ...if I have hurt her feelings, stops talking to me until I please her again.

Firm Control:

3. ...believes in having a lot of rules and sticking to them

Acceptance:

1. ...makes me feel better after talking over my worries with her.
4. ...smiles at me very often.
7. ...is able to make me feel better when I am upset.
10. ...enjoys doing things with me.
13. ...cheers me up when I am sad.
16. ...gives me a lot of care and attention.
19. ...makes me feel like the most important person in her life.
22. ...believes in showing her love for me.
25. ...often praises me.
28. ...is easy to talk to.

REFERENCES

- Axelson, D. A., & Birmaher, B. (2001). Relations between anxiety and depressive disorders in childhood and adolescence. *Depression and Anxiety, 14*, 67-78.
- Barber, B. K. (1996). Parental psychological control: Revisiting a neglected construct. *Child Development, 67*, 3296-3319.
- Barber, B. K., Olsen, J. E., & Shagle, S. C. (1994). Associations between parental psychological and behavioral control and youth internal and externalized behaviors. *Child Development, 65*, 1120-1136.
- Bailey, K. A., Chavira, D. A., Stein, M. T., & Stein, M. B. (2006). Brief measures to screen for social phobia in primary care pediatrics. *Journal of Pediatric Psychology, 31*, 513-521.
- Baumrind, D. (1991). Parenting styles and adolescent development. In Brooks-Dunn J, Lerner R, Peterson AC, (Eds). *The encyclopedia of adolescence*. New York: Garland.
- Bean, R. A., Barber, B. K., & Crane, D. R. (2006). Parental support, behavioral control, and psychological control among African-American youth: The relationships to academic grades, delinquency, and depression. *Journal of Family Issues, 27*, 1335-1355.
- Bean, R. A., & Northrup, J. C. (2009). Parental psychological control, psychological autonomy, and acceptance and predictors of self-esteem in Latino adolescents. *Journal of Family Issues, 30*, 1486-1504.
- Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Manual for the Beck Depression Inventory-II*. San Antonio, TX: Psychological Corporation.
- Bell-Dolan, D. J., Last, C. G., & Strauss, C. C. (1990). Symptoms of anxiety disorders in normal children. *Journal of the American Academy of Child and Adolescent Psychiatry, 29*, 759-765.
- Birmaher, B., Brent, D. A., Chiappetta, L., Bridge, J., Monga, S., & Baugher, M. (1999). Psychometric properties of the Screen for Child Anxiety Related Emotional Disorders scale (SCARED): A replication study. *Journal of the American Academy of Child and Adolescent Psychiatry, 38*, 1230-1236.
- Birmaher, B., Khetarpal, S., Brent, D., & Cully, M. (1997). The Screen for Child Anxiety Related Emotional Disorders (SCARED): Scale construction and psychometric characteristics. *Journal of the American Academy of Child & Adolescent Psychiatry, 36*, 545-553.

- Bittner, A., Egger, H. L., Erkanli, A., Costello, E. J., Foley, D. L., & Angold, A. (2007). What do childhood anxiety disorders predict? *Journal of Child Psychology and Psychiatry*, *48*, 1174-1183.
- Bögels, S., & Phares, V. (2008). Fathers' role in the etiology, prevention and treatment of child anxiety: A review and new model. *Clinical Psychology Review*, *28*, 539-558.
- Bögels, S. M., & van Melick, M. (2004). The relationship between child-report, parent self-report, and partner report of perceived parental rearing behaviors and anxiety in children and parents. *Personality and Individual Differences*, *37*, 1583-1596.
- Broidy, L. M., Nagin, D. S., Tremblay, R.W., Bates, J. E., Brame, B., & Dodge, K. A. (2003). Developmental trajectories of childhood disruptive behaviors and adolescent delinquency: A six-site, cross-national study. *Developmental Psychology*, *39*, 222-245.
- Burnam, M. A., Hough, R. L., Karno, M., & Escobar, J. I. (1987). Acculturation and lifetime prevalence of psychiatric disorders among Mexican Americans in Los Angeles. *Journal of Health and Social Behavior*, *28*, 89-102.
- Campo, J. V., Bridge, J., Ehmann, M., Altman, S., Lucas, A., Birmaher, B., et al. (2004). Recurrent abdominal pain, anxiety, and depression in primary care. *Pediatrics*, *113*, 817-824.
- Campo, J. V., Jansen-McWilliams, L., Comer, D. M., & Kelleher, K. J. (1999). Somatization in pediatric primary care: Association with psychopathology, functional impairment, and use of services. *Journal of the American Academy of Child and Adolescent Psychiatry*, *38*, 1093-1101.
- Capps, L., Sigman, M., Sena, R., Henker, B., & Whalen, C. (1996). Fear, anxiety, and perceived control in children of agoraphobic parents. *Journal of Child Psychology and Psychiatry*, *37*, 445-452.
- Cartwright-Hatton, S. McNicol. K., & Doubleday, E. (2006). Anxiety in a neglected population: Prevalence of anxiety disorders in pre-adolescent children. *Clinical Psychology Review*, *26*, 817-833.
- Chao, R. K. (1994). Beyond parental control and authoritarian parenting style: Understanding Chinese parenting through the cultural notion of training. *Child Development*, *65*, 1111-1120.
- Chorpita, B. F., Albano, A. M., & Barlow, D. H., (1996). Cognitive processing in children: Relation to anxiety and family influences. *Journal of Clinical Child Psychology*, *25*, 170-176.

- Chorpita, B. F., Brown, T. A., & Barlow, D. H. (1998). Perceived control as a mediator of family environment in etiological models of childhood anxiety. *Behavior Therapy, 29*, 457-476.
- Connell, A. M., & Goodman, S. H. (2002). The association between psychopathology in fathers versus mothers and children's internalizing and externalizing behavior problems: A meta-analysis. *Psychological Bulletin, 128*, 746-773.
- Costa, N. M., & Weems, C. F. (2005). Maternal and child anxiety: Do attachment beliefs or children's perceptions of maternal control mediate their association? *Social Development, 14*, 574-590.
- Costa, N. M., Weems, C. F., & Pina, A. A. (2009). Hurricane Katrina and youth anxiety: The role of perceived attachment beliefs and parenting behaviors. *Journal of Anxiety Disorders, 23*, 935-941.
- Crean, H. F. (2008). Conflict in the Latino parent-youth dyad: The role of emotional support from the opposite parent. *Journal of Family Psychology, 22*, 484-493.
- Creveling, C. C. Varela, R. E., Weems, C. F., & Corey, D. M. (2010). Maternal control, cognitive style, and childhood anxiety: A test of a theoretical model in a multi-ethnic sample. *Journal of Family Psychology, 24*(4), 439-448.
- Dadds, M. R., Barrett, P. M., Rapee, R. M., & Ryan, S. (1996). Family process and child anxiety and aggression: An observational analysis. *Journal of Abnormal Child Psychology, 24*, 715-734.
- Dadds, M., R., Holland, D. E., Laurens, K. R., Mullins, M., Barrett, P. M., & Spence, S. H. (1999). Early intervention and prevention of anxiety disorders in children: Results at 2-year follow-up. *Journal of Consulting and Clinical Psychology, 67*, 145-150.
- DiBartolo, P. M., & Helt, M. (2007). Theoretical models of affectionate versus affectionless control in anxious families: A critical examination based on observations in parent-child interactions. *Clinical Child and Family Psychology, 10*, 253-274.
- Driscoll, A. K., Russell, S. T., & Crockett, L. J. (2008). Parenting styles and youth well-being across immigrant generations. *Journal of Family Issues, 29*, 185-209.
- Durrett, M. E., O'Bryant, S., & Pennebaker, J. W. (1975). Child-rearing reports of White, Black, and Mexican-American families. *Developmental Psychology, 11*, 871.
- Eccles, J. S., Midgley, C., Wigfield, A., Buchanan, C. M., Reuman, D., Flanagan, C., et al. (1993). Development during adolescence: The impact of stage-environment fit on young adolescents' experiences in schools and in families. *American Psychologist, 48*, 910-921.

48, 90-101.

- Edwards, S. L., Rapee, R. M., & Kennedy, S. (2010). Prediction of anxiety symptoms in preschool-aged children: Examination of maternal and paternal perspectives. *Journal of Child Psychology and Psychiatry, 51*, 313-321.
- Eley, T. C., Napolitano, M., Lau, J. Y. F., Gregory, A. M. (2010). Does childhood anxiety evoke maternal control? A genetically informed study. *Journal of Child Psychology and Psychiatry, 51*, 772-779.
- Essau, C. A., Conradt, J., & Petermann, F. (2000). Frequency, comorbidity, and psychosocial impairment of anxiety disorders in German adolescents. *Journal of Anxiety Disorders, 14*, 263-279.
- Feng, X., Shaw, D. S., & Silk, J. S. (2008). Developmental trajectories of anxiety symptoms among boys across early and middle childhood. *Journal of Abnormal Psychology, 117*, 32-47.
- Ferguson, C. J. (2009). An effect size primer: A guide for clinicians and researchers. *Professional Psychology: Research and Practice, 40*, 532-538.
- Finkelstein, J. S., Donenberg, J. R., & Martinovich, Z. (2001). Maternal control and adolescent depression: Ethnic differences among clinically referred girls. *Journal of Youth and Adolescence, 30*, 155-171.
- First, M. B., Spitzer, R. L., Gibbon, M., & Williams, J. B.W. (2002). *Structured Clinical Interview for DSM-IV-TR Axis I Disorders, Research Version, Patient Edition*. (SCID-I/P). New York: Biometrics Research, New York State Psychiatric Institute.
- Foster, C. E., Webster, M. C., Weissman, M. M., Pilowsky, D. J., Wickramaratne, P. J., Rush, A. J., et al. (2007). Course and severity of maternal depression: Associations with family functioning and child adjustment. *Journal of Youth and Adolescence, 37*, 906-916.
- Fulgini, A. J. (1998). Authority, autonomy, and parent-adolescent conflict and cohesion: A study of adolescents from Mexican, Chinese, Filipino, and European backgrounds. *Developmental Psychology, 34*, 782-792.
- Garber, J., & Flynn, C. (2001). Predictors of depressive cognitions in young adolescents. *Cognitive Therapy and Research, 25*, 353-376.
- Garber, J., Robinson, N. S., & Valentiner, D. (1997). The relation between parenting and adolescent depression: Self-worth as a mediator. *Journal of Adolescent Research, 12*, 12-33.

- Garland, A. F., Lau, A. S., Yeh, M., McCabe, K. M., Hough, R. L., & Landsverk, J. A. (2005). Racial and ethnic differences in utilization of mental health services among high-risk youths. *American Journal of Psychiatry*, *162*, 1336-1343.
- Ginsburg, G. S., Grover, R. L., Cord, J. J., & Ialongo, N. (2006). Observational measures of parenting in anxious and non-anxious mothers: Does type of task matter? *Journal of Clinical Child and Adolescent Psychology*, *35*, 323-328.
- Ginsburg, G. S., Grover, R. L., & Ialongo, N. (2004). Parenting behaviors among anxious and non-anxious mothers: Relation with concurrent and long-term child outcomes. *Child & Family Behavior Therapy*, *26*, 23-41.
- Ginsburg, G. S., & Schlossberg, M. C. (2002). Family-based treatment of childhood anxiety disorders. *International Review of Psychiatry*, *14*, 143-154.
- Ginsburg, G. S., Siqueland, L., Masia-Warner, C., & Hedtke, K. A. (2004). Anxiety disorders in children: Family matters. *Cognitive and Behavioral Practice*, *11*, 28-43.
- Glover, S. H., Pumariega, A. J., Holzer, C. E., Wise, B. K., & Rodriguez, M. (1999). Anxiety symptomatology in Mexican American adolescents. *Journal of Child and Family Studies*, *8*, 47-57.
- Gonzales, N. A., Dearnorff, J., Formoso, D., Barr, A., & Barrera, M. J. (2006). Family mediators in the relation between acculturation and adolescent mental health. *Family Relations*, *55*, 318-330.
- Gonzalez, A., Weersing, V. R., Warnick, E. M., Walker, P. N., Woolston, J. L., & Scahill, L. D. (2009, November). *Cultural equivalence of English- and Spanish-language SCARED for Latino youth*. Poster presented at the annual meeting of the Association for Behavioral and Cognitive Therapies, New York, NY.
- Greenberg, P. E., Sisitsky, T., Kessler, R. C., Finkelstein, S. N., Berndt, E. R., Davidson, J. R. T., et al. (1999). The economic burden of anxiety disorders in the 1990s. *Journal of Clinical Psychiatry*, *60*, 427-435.
- Gudiño, O. G., & Lau, A. S. (2010). Parental cultural orientation, shyness, and anxiety in Hispanic children: An exploratory study. *Journal of Applied Developmental Psychology*, *31*, 202-210.
- Halgunseth, L. C., Ispa, J. M., & Rudy, D. (2006). Parental control in Latino families: An integrated review of the literature. *Child Development*, *77*, 1282-1297.

- Hernandez-Guzman, L., & Sanchez-Sosa, J. J. (1996). Parent-child interactions predict anxiety in Mexican adolescents. *Adolescence, 31*, 955-964.
- Hill, N. E., Bush, K. R., & Roosa, M. W. (2003). Parenting and family socialization strategies and children's mental health: Low-income, Mexican-American and Euro-American mothers and children. *Child Development, 74*, 189-204.
- Hirshfeld, D. R., Biederman, J., Brody, L., Faraone, S. V., & Rosenbaum, J. F. (1997). Expressed emotion toward children with behavioral inhibition: Associations with maternal anxiety disorder. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 910-917.
- Hirshfeld-Becker, D. R., Micco, J., Simoes, N. A., & Henin, A. (2008). High risk studies and developmental antecedents of anxiety disorders. *American Journal of Medical Genetics Part C (Seminars in Medical Genetics), 148c*, 99-117.
- Hudson, J. L., & Rapee, R. M. (2001). Parent-child interactions and anxiety disorders: An observational study. *Behaviour Research and Therapy, 39*, 1411-1427.
- Hudson, J. L., Doyle, A. M., & Gar, N. (2009). Child and maternal influence on parenting behavior in clinically anxious children. *Journal of Clinical Child and Adolescent Psychology, 38*(2), 256-262.
- Ingman, K. A., Ollendick, T. H., & Akande, A. (1999). Cross-cultural aspects of fears in African children and adolescents. *Behavior Research and Therapy, 37*, 337-345.
- Kaufman, J., Birmaher, B., Brent, D., & Rao, U., Flynn, C., Moreci, P., et al. (1997). Schedule for Affective Disorders and Schizophrenia for School-Age Children – Present and Lifetime version (K-SADS-PL): Initial reliability and validity data. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 980-988.
- Keller, M. B., Lavori, P. W., Wunder, J., Beardslee, W. R., Schwartz, C. E., & Roth, J. (1992). Chronic course of anxiety disorders in children and adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 31*, 595-599.
- Kendall, P. C., Hudson, J. L., Gosch, E., Flannery-Schroeder, E., & Suveg, C. (2008). Cognitive-behavioral therapy for anxiety disordered youth: A randomized clinical trial evaluating child and family modalities. *Journal of Consulting and Clinical Psychology, 76*, 282-297.
- Kessler, R. C., Chiu, W. T., Demler, O., & Walters, E. E. (2005). Prevalence, severity, and comorbidity and 12-month DSM-IV disorders in the National Comorbidity Survey replication. *Archives of General Psychiatry, 62*, 617-627.

- Khanna, M. S., & Kendall, P. C. (2009). Exploring the role of parent training in the treatment of childhood anxiety. *Journal of Consulting and Clinical Psychology, 77*, 981-986.
- Knight, G. P., Virdin, L. M., & Roosa, M. (1994). Socialization and family correlated of mental health outcomes among Hispanic and Anglo American children: Consideration of cross-ethnic scalar equivalence. *Child Development, 65*, 212-224.
- Krain, A. L., & Kendall, P. C. (2000). The role of parental emotional distress in parent report of child anxiety. *Journal of Clinical Child Psychology, 29*, 328-335.
- Last, C. G., Hersen, M., Kazdin, A. E., & Francis, G. (1987). Psychiatric illness in the mothers of anxious children. *American Journal of Psychiatry, 144*, 1580-1583.
- Lau, A. S., McCabe, K. M., Yeh, M., Garland, A. F., Wood, P. A. & Hough, R. L. (2005). The acculturation gap-distress hypothesis among high-risk Mexican American families. *Journal of Family Psychology, 19*, 367-375.
- Legerstee, J. S., Huizink, A. C., van Gastel, W., Liber, J. M., Treffers, P. D. A., Vernhulst, F. C. et al. (2008). Maternal anxiety predicts favourable treatment outcome in anxiety-disordered adolescents. *Acta Psychiatrica Scandinavica, 117*, 289-298.
- Legrand, L. N., McGue, M., Iacono, W. G. (1999). A twin study of state and trait anxiety in childhood and adolescence. *Journal of Child Psychology and Psychiatry, 40*, 953-958.
- Lieb, R., Whittchen, H. U., Höfler, M., Fuetsch, M., Stein, M. B., & Merikangas, K. R. (2000). Parental psychopathology, parenting styles, and the risk of social phobia in offspring. *Archives of General Psychiatry, 57*, 859-866.
- Loukas, A., Paulos, S. K., & Robinson, S. (2005). Early adolescent social and overt aggression: Examining the roles of social anxiety and maternal psychological control. *Journal of Youth and Adolescence, 34*, 335-345.
- Luis, T. M., Varela, R. E., & Moore, K. W. (2008). Parenting practices and childhood anxiety reporting in Mexican, Mexican American, and European American families. *Journal of Anxiety Disorders, 22*, 1011-1020.
- Lyon, J., Henggeler, S. W., & Hall, J. A. (1992). The family relations, peer relations, and criminal activities of Caucasian and Hispanic-American gang members. *Journal of Abnormal Child Psychology, 20*, 439-449.
- Manassis, K., & Bradley, S. J. (1994). The development of childhood anxiety disorders: Toward an integrated model. *Journal of Applied Developmental Psychology, 15*, 345-366.

- Mancini, C., Van Ameringen, M., Szatmari, P., Fugere, C., & Boyle, M. (1996). A high-risk pilot study of the children of adults with social phobia. *Journal of the American Academy of Child and Adolescent Psychology, 35*, 1511-1517.
- Manongdo, J. A., & Ramírez García, J. I. (2007). Mothers' parenting dimensions and adolescent externalizing and internalizing in a low-income, urban Mexican American sample. *Journal of Clinical Child and Adolescent Psychology, 36*, 593-604.
- Marin, G., Sabogal, F., Marin, B. V., & Otero-Sabogal, R., & Perez-Stable, E. J. (1987). Development of a short acculturation scale for Hispanics. *Hispanic Journal of Behavioral Sciences, 9*, 183-205.
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychology Review, 98*, 224-253.
- Mason, C. A., Walker-Barnes, C. J., Tu, S., Simons, J., & Martinez-Arrue, R. (2004). Ethnic differences in the affective meaning of parental control behaviors. *The Journal of Primary Prevention, 25*, 59-79.
- McClure, E. B., Brennan, P. A., Hammen, C., & Le Brocque, R. M. (2001). Parental anxiety disorders, child anxiety disorders, and the perceived parent-child relationship in an Australian high-risk sample. *Journal of Abnormal Child Psychology, 29*, 1-10.
- McLeod, B. D., Wood, J. J., & Avny, S. B. (2011). Parenting and child anxiety. In McKay, D. & Storch, E. (Eds.), *Handbook of Child and Adolescent Anxiety Disorders*. Springer: New York. 213-228.
- McLeod, B. D., Wood, J. J., & Weisz, J. R. (2007). Examining the association between parenting and childhood anxiety: A meta-analysis. *Clinical Psychology Review, 27*, 155-172.
- Meesters, C., Muris, P., Ghys, A., Reumerman, T., & Rooijmans, M. (2003). The Children's Somatization Inventory: Further evidence of its reliability and validity in a pediatric and a community sample of Dutch children and adolescents. *Journal of Pediatric Psychology, 28*, 413-422.
- Merikangas, K. R., & Avenevoli, S. (2002). Epidemiology of mood and anxiety disorders in children and adolescents. In M. T. Tsuang and M. Tohen (Eds.), *Textbook in psychiatric epidemiology* (2nd ed, pp. 657-704). New York, NY: Wiley-Liss.
- Moffitt, T. E., Harrington, H., Caspi, A., Kim-Cohen, J., Goldberg, D., Gregory, A. M., et al. (2007). Depression and generalized anxiety disorder: Cumulative and sequential comorbidity in a birth cohort followed prospectively to age 32 years. *Archives of General Psychiatry, 64*, 651-660.

- Moore, P. S., Whaley, S. E., & Sigman, M. (2004). Interactions between mothers and children: Impacts of maternal and child anxiety. *Journal of Abnormal Psychology, 113*, 471-476.
- Murray, L., DeRosnay, M., Pearson, J., Bergeron, C., Schofield, L., Royal-Lawson, M., et al. (2008). Intergenerational transmission of maternal social anxiety: The role of the social referencing process. *Child Development, 79*, 1049–1064.
- Nadeem, E., Romo, L. F., Sigman, M., Lefkowitz, E. S., & Au, T. K. (2007). The validity of observational measures in detecting optimal maternal communication styles: Evidence from European Americans and Latinos. *Journal of Research on Adolescence, 17*, 153-168.
- Negy, C., & Woods, D. J. (1992). The importance of acculturation in understanding research with Hispanic-Americans. *Hispanic Journal of Behavioral Sciences, 14*, 224-247.
- Novy, D. M., Stanley, M. A., Averill, P., & Daza, P. (2001). Psychometric comparability of English- and Spanish-language measures of anxiety and related affective symptoms. *Psychological Assessment, 13*, 347-355.
- Paikoff, R. L., & Brooks-Gunn, J. (1991). Do parent-child relationships change during puberty? *Psychological Bulletin, 110*, 47-66.
- Phinney, J. S., Kim-Jo, T., & Osorio, S. (2005). Autonomy and relatedness in adolescent-parent disagreements: Ethnic and developmental factors. *Journal of Adolescent Research, 20*, 8-39.
- Pina, A. A., & Silverman, W. K. (2004). Clinical phenomenology, somatic symptoms, and distress in Hispanic/Latino and European American youths with anxiety disorders. *Journal of Clinical Child and Adolescent Psychology, 33*, 227-236.
- Poznanski, E. O. & Mokros, H. B. (1996). *Children's Depression Rating Scale – Revised, manual*. Los Angeles: Western Psychological Services.
- Raeff, C., Greenfield, P. M., & Quiroz, B. (2000). Conceptualizing interpersonal relationships in the cultural contexts of individualism and collectivism. *New Directions for Child and Adolescent Development, 87*, 59-74.
- Rapee, R. M. (1997). Potential role of childrearing practices in the development of anxiety and depression. *Clinical Psychology Review, 17*, 47–67.
- Roberts, R. E., & Sobhan, M. (1992). Symptoms of depression in adolescence: A comparison of Anglo, African, and Hispanic Americans. *Journal of Youth and Adolescence, 21*, 639-651.

- Rork, K. E., & Morris, T. L. (2009). Influence of parenting factors on childhood social anxiety: Direct observation of parental warmth and control. *Child & Family Behavior Therapy, 31*, 220-235.
- Rosselló, J., Bernal, G., & Rivera-Medina, C. (2008). Individual and group CBT and IPT for Puerto Rican adolescents with depressive symptoms. *Cultural Diversity and Ethnic Minority Psychology, 14*(3), 234-245.
- Rubin, K. H., & Mills, R. S. (1991). Conceptualizing developmental pathways to internalizing disorders in childhood. *Canadian Journal of Behavioural Science, 23*, 300-317.
- Rudy, D., & Halgunseth, L. C. (2005). Psychological control, maternal emotion and cognition, and child outcomes in individualist and collectivist groups. *Journal of Emotional Abuse, 5*(4), 237-264.
- Rueschenberg, E., & Buriel, R. (1989). Mexican American family functioning and acculturation: A family systems perspective. *Hispanic Journal of Behavioral Sciences, 11*, 232-244.
- Ruiz, S. Y., Roosa, M. W., & Gonzales, N. A. (2002). Predictors of self-esteem for Mexican American and European American youths: A reexamination of the influence of parenting. *Journal of Family Psychology, 16*, 70-80.
- The Research Units on Pediatric Psychopharmacology (RUPP) Anxiety Study Group. (2002). The Pediatric Anxiety Rating Scale (PARS): Development and psychometric properties. *Journal of the American Academy of Child and Adolescent Psychiatry, 41*, 1061-1069.
- Schaefer, E. S. (1965). A configurational analysis of children's reports of parent behavior. *Journal of Consulting Psychology, 29*, 552-557.
- Schludermann, S., & Schludermann, E. (1970). Replicability of factors in Children's Report of Parental Behavior (CRPBI). *Journal of Psychology, 76*, 239-249.
- Schludermann, S., & Schludermann, E. (1988). Questionnaire for Children and Youth (CRPBI-30). Unpublished manuscript, University of Manitoba, Winnipeg.
- Sher-Censor, E., Parke, R. D., & Coltrane, S. (2011). Parents' promotion of psychological autonomy, psychological control, and Mexican-American adolescents' adjustment. *Journal of Youth and Adolescence, 40*, 620-632.

- Silk, J. S., Morris, A. S., Kanaya, T., & Steinberg, L. (2003). Psychological control and autonomy-granting: Opposite ends of a continuum or distinct constructs? *Journal of Research on Adolescence, 13*, 113-128.
- Silverman, W. K., Kurtines, W. M., Ginsburg, G. S., Weems, C. F., Rabian, B., & Serafini, L. T. (1999). Contingency management, self-control, and education support in the treatment of childhood phobic disorders: A randomized clinical trial. *Journal of Consulting and Clinical Psychology, 67*, 675-687.
- Silverman, W. K., Pina, A. A., & Viswesvaran, C. (2008). Evidence-based psychosocial treatments for phobic and anxiety disorders in children and adolescents. *Journal of Clinical Child and Adolescent Psychology, 37*, 105-130.
- Siqueland, L., Kendall, P. C., & Steinberg, L. (1996). Anxiety in children: Perceived family environments and observed family interaction. *Journal of Clinical Child Psychology, 25*, 225-237.
- Soto, J. A., Levenson, R. W., & Ebling, R. (2005). Cultures of moderation and expression: Emotional experience, behavior, and physiology in Chinese Americans and Mexican Americans. *Emotion, 5*, 154-165.
- Spence, S. H., Najman, J. M., Bor, W., O'Callaghan, M., & Williams, G. M. (2002). Maternal anxiety and depression, poverty and marital relationship factors during early childhood as predictors of anxiety and depressive symptoms in adolescence. *Journal of Child Psychology and Psychiatry, 43*, 457-470.
- Spielberger, C. D. (1983) *Manual for the State-Trait Anxiety Inventory: STAI (Form Y)* Consulting Psychologists Press, Palo Alto, CA.
- Steinberg, L. (2005). Psychological control: Style or substance? In J. G. Smetana (Ed.), *New directions for child and adolescent development: Changes in parental authority during adolescence* (pp. 71-78). San Francisco: Jossey-Bass.
- Triandis, H. C. (1996). The psychological measurement of cultural syndromes. *American Psychologist, 51*, 407-415.
- Turner, S. M., Beidel, D. C., & Costello, A. (1987). Psychopathology in the offspring of anxiety disorders patients. *Journal of Consulting and Clinical Psychology, 55*, 229-235.
- U.S. Census Bureau (2010a). *The Hispanic Population: 2010. 2010 Census Briefs*. Washington DC: U.S. Census Bureau. 1-16.
<http://www.census.gov/prod/cen2010/briefs/c2010br-04.pdf>
- U.S. Census Bureau (2010b). Table B16006, Language Spoken at Home by Ability to Speak English for the Population 5 Years and Over (Hispanic or Latino).

http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_3YR_B16006&prodType=table

U.S. Census Bureau (2010c). Table B19001I, Household Income in the Past 12 Months (Hispanic or Latino Household).

http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_5YR_B19001I&prodType=table

U.S. Department of Health and Human Services (USDHHS). *Mental Health: Culture, Race, and Ethnicity – A Supplement to Mental Health: A Report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services. 2001.

Valdés G. (1996). *Con respeto: Bridging the distances between culturally diverse families and schools. An ethnographic portrait*. New York: Teachers College Press.

van der Bruggen, C. O., Stams, G. J. J. M., & Bögels, S. M. (2008). Research review: The relation between child and parent anxiety and parental control: A meta-analytic review. *Journal of Child Psychology and Psychiatry*, 49, 1257-1269.

van Gastel, W., Legerstee, J. S., & Ferdinand, R. F. (2009). The role of perceived parenting in familial aggregation of anxiety disorders in children. *Journal of Anxiety Disorder*, 23, 46-53.

Varela, R. E., Sanchez-Sosa, J. J., Biggs, B. K., & Luis, T. M. (2009). Parenting strategies and socio-cultural influences in childhood anxiety: Mexican, Latin American descent, and European American families. *Journal of Anxiety Disorders*, 23, 609-616.

Varela, R. E., Vernberg, E. M., Sanchez-Sosa, J. J., Riveros, A., Mitchell, M., & Mashunkashey, J. (2004). Parenting style of Mexican, Mexican American, and Caucasian–Non-Hispanic families: Social context and cultural influences. *Journal of Family Psychology*, 18, 651-657.

Varela, E. R., Weems, C. F., Berman, S. L., Hensley, L., & de Bernal, M. C. R. (2007). Internalizing symptoms in Latinos: The role of anxiety sensitivity. *Journal of Youth and Adolescence*, 36, 429-440.

Vigil, J. D., & Long, J. M. (1981). Unidirectional or nativist acculturation: Chicano paths to school achievement. *Human Organization*, 40, 273-277.

Walker, L. S., Garber, J., & Greene, J. W. (1991). Somatization symptoms in pediatric abdominal pain patients: Relation to chronicity of abdominal pain and parent somatization. *Journal of Abnormal Child Psychology*, 19, 379-394.

- Warren, S. L., Schmitz, S., & Emde, R. N. (1999). Behavioral genetic analysis of self-reported anxiety at 7 years of age. *Journal of the American Academy of Child and Adolescent Psychiatry, 38*, 1403-1408.
- Weersing, V. R., Rozenman, M. S., Maher-Bridge, M., & Campo, J. V. (2012). Anxiety, depression, and somatic distress: Developing a transdiagnostic internalizing toolbox for pediatric practice. *Cognitive and Behavioral Practice, 19*, 68-82.
- Weiss, L. H., & Schwarz, J. C. (1996). The relationship between parenting types and older adolescents' personality, academic achievement, adjustment, and substance use. *Child Development, 67*, 2101-2114.
- Weissman, M. M., Pilowsky, D. J., Wickramaratne, P. J., Talati, A., Wisniewski, S. R., Fava, M., et al. (2006). Remissions in maternal depression and child psychopathology: A STAR*D-Child report. *Journal of the American Medical Association, 295*, 1389-1398.
- Whaley, S. E., Pinto, A., & Sigman, M. (1999). Characterizing interactions between anxious mother and their children. *Journal of Consulting and Clinical Psychology, 67*, 826-836.
- Wijsbroek, S. A. M., Hale, W. W., Raaijmakers, Q. A. W., & Meeus, W. H. J. (2011). The direction of effects between perceived parental behavioral control and psychological control and adolescent's self-reported GAD and SAD symptoms. *European Children and Adolescent Psychiatry, 20*, 361-371.
- Wood, A., Kroll, L., Moore, A., & Harrington, R. (1995). Properties of the Mood and Feelings Questionnaire in adolescent psychiatric outpatients: A research note. *Journal of Child Psychology and Psychiatry, 36*, 327-334.
- Wood J. J., McLeod, B. D., Sigman, M., Wei-Chin, H., & Chu, B.C. (2003). Parenting and childhood anxiety: Theory, empirical findings, and future directions. *Journal of Child Psychology and Psychiatry, 44*, 134-151.
- Woodruff-Borden, J., Morrow, C., Bourland, S., & Cambron, S. (2002). The behavior of anxious parents: Examining mechanisms of transmission of anxiety from parent to child. *Journal of Clinical Child and Adolescent Psychology, 21*, 364-374.
- Woodward, L. J., & Fergusson, D. M. (2001). Life course outcomes of young people with anxiety disorders in adolescence. *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 1086-1093.
- Wu, C., & Chao, R. K., (2005). Intergenerational cultural conflicts in norms of parental warmth among Chinese American immigrants. *International Journal of Behavioral Development, 29*, 516-523.

Yeganeh, R., Beidel, D. C., & Turner, S. M. (2006). Selective mutism: More than social anxiety? *Depression and Anxiety, 23*, 117-123.

Zayas, L. H., Lester, R. J., Cabassa, L. J., & Fortuna, L. R. (2005). Why do so many Latina teens attempt suicide? A conceptual model for research. *American Journal of Orthopsychiatry, 75*, 275-287.