

Summer 8-22-2014

## Parenting Dimensions and Internalizing Symptoms among Low- Income Latino Adolescents: Cultural Values as Moderators

Crystalia Sulaiman  
*DePaul University*, [csulaima@depaul.edu](mailto:csulaima@depaul.edu)

Follow this and additional works at: [https://via.library.depaul.edu/csh\\_etd](https://via.library.depaul.edu/csh_etd)



Part of the [Child Psychology Commons](#), and the [Clinical Psychology Commons](#)

---

### Recommended Citation

Sulaiman, Crystalia, "Parenting Dimensions and Internalizing Symptoms among Low-Income Latino Adolescents: Cultural Values as Moderators" (2014). *College of Science and Health Theses and Dissertations*. 73.

[https://via.library.depaul.edu/csh\\_etd/73](https://via.library.depaul.edu/csh_etd/73)

This Thesis is brought to you for free and open access by the College of Science and Health at Digital Commons@DePaul. It has been accepted for inclusion in College of Science and Health Theses and Dissertations by an authorized administrator of Digital Commons@DePaul. For more information, please contact [digitalservices@depaul.edu](mailto:digitalservices@depaul.edu).

Parenting Dimensions and Internalizing Symptoms among Low-Income Latino  
Adolescents: Cultural Values as Moderators

A Thesis

Presented in

Partial Fulfillment of the  
Requirements for the Degree of  
Master of Arts

By

Crystalia Sulaiman

August, 2014

Department of Psychology  
College of Science and Health  
DePaul University  
Chicago, Illinois

**Thesis Committee**

Antonio Polo, Ph.D., Chairperson

Yan Li, Ph.D.

## **Acknowledgments**

I would like to express my sincere appreciation to my thesis chair Antonio Polo and committee member Yan Li for their support, encouragement, and patience throughout this project. I would also like to thank the Culture and Evidence-Based Practice Lab and the Chicago Public Schools for making this study possible. My deepest gratitude goes to my family for their support of my educational aspirations and to my fiancé for his encouragement and patience throughout this project.

## **Biography**

The author was born and raised in Texas. She graduated from MacArthur High School in Irving, Texas, and received her Bachelor of Arts degree in Psychology and Anthropology from the University of Notre Dame in 2010.

## Table of Contents

Dissertation Committee .....	i
Acknowledgements .....	ii
Biography .....	iii
List of Tables .....	vi
List of Figures .....	vii
Abstract .....	1
Introduction .....	2
Parenting Dimensions and Youth Mental Health Problems.....	2
Parenting Dimensions and Cultural Values .....	6
Cultural Values and Youth Mental Health Problems .....	7
Aims and Hypotheses .....	10
Hypothesis I .....	11
Hypothesis II .....	12
Hypothesis III .....	14
Hypothesis IV .....	15
Method .....	17
Participants .....	17
Procedures .....	18
Measures .....	19
Data Analytic Strategy .....	21
Results and Analysis .....	22
Hypothesis I .....	24

Hypothesis II .....	28
Hypothesis III .....	29
Hypothesis IV .....	32
Discussion .....	35
References .....	42

**List of Tables**

Table 1. Bivariate correlations for study variables at each time point .....	23
Table 2. Path coefficients for the linear models of predictors of youth depression and youth anxiety for Hypothesis I .....	24
Table 3. Path coefficients for the linear models of predictors of youth depression and youth anxiety for Hypothesis II.....	29
Table 4. Path coefficients for the linear models of predictors of changes in youth depression and changes in youth anxiety for Hypothesis II.....	30
Table 5. Path coefficients for the linear models of predictors of changes in youth depression and changes in youth anxiety for Hypothesis IV.....	33

## List of Figures

Figure 1. Youth cultural values as a moderator between parenting dimensions and youth internalizing symptoms .....	11
Figure 2. The relation between parental acceptance (T2) and youth depression (T2) at low, medium, and high levels of youth family obligation.....	25
Figure 3. The relation between parental acceptance (T2) and youth anxiety (T2) at low, medium, and high levels of youth family obligation .....	27
Figure 4. The relation between parental psychological control (T2) and changes in youth anxiety at low, medium, and high levels of youth family obligation .....	31
Figure 5. The relation between changes in parental psychological control and changes in youth anxiety at low, medium, and high levels of youth family obligation .....	34

### **Abstract**

Among ethnic minority youth, Latino adolescents disproportionately report higher levels of depression and anxiety than their peers of other ethnic backgrounds. The purpose of the present study is to better understand the familial and sociocultural factors that impact mental health among Latino adolescents. Specifically, the present study examines how youth cultural values (i.e., family obligation and affiliative obedience) moderate the relation between parenting dimensions (i.e., parental acceptance and parental psychological control) and youth internalizing symptoms (i.e., depression and anxiety) cross-sectionally and longitudinally. Latino adolescents ( $n = 115$ ) from a Chicago public school categorized as "low-income" participated in a survey and two follow-up interviews. Results indicated that the cultural value of family obligation moderated the relation between parenting dimensions and youth internalizing symptoms. At high levels of parental acceptance, high youth family obligation enhanced the relation between parental acceptance and low internalizing symptoms. High family obligation did not buffer the negative effects of high levels of parental psychological control and youth internalizing symptoms. Results indicate that cultural values cannot be assumed to be protective factors in all situations, emphasizing the need for specificity when understanding the sociocultural and familial factors among Latino adolescents to address mental health disparities.

## **Introduction**

According to the 2010 U.S. Census, 50.5 million people in the U.S. are of Latino origin and accounted for more than half of the population growth since 2000 (Ennis, Rios-Vargas, & Albert, 2011). Currently, nearly a quarter of the population under the age of 18 are of Latino origin and by 2025, projections estimate that three-in-ten children will be of Latino descent (Fry & Passel, 2009). Among youth aged 13 to 18 years, mood and anxiety symptoms are highly prevalent. According to a nationally representative sample in the U.S., the lifetime prevalence for this age group was 14.3% for mood disorders and 31.9% for anxiety disorders (Merikangas et al., 2011). However, the rates of internalizing symptoms among adolescents vary by ethnicity, with Latino adolescents endorsing higher levels of depression and anxiety than their peers of other ethnic backgrounds (Anderson & Mayes, 2010; McLaughlin, Hilt, & Nolen-Hoeksema, 2007; Merikangas et al., 2010, 2011).

With the growing number of Latino children, it is important to address this disparity among this group, and the familial and sociocultural factors that impact their mental health (Anderson & Mayes, 2010; Bámaca-Colbert, Umaña-Taylor, & Gayles, 2012; Chao & Otuski-Clutter, 2011). The purpose of the present study is to examine the interplay between youth cultural values and parenting dimensions on the internalizing symptoms of Latino adolescents. Additionally, the present study will evaluate the longitudinal associations between parenting dimensions and youth internalizing symptoms.

### **Parenting Dimensions and Youth Mental Health Problems**

Parenting styles or behaviors can include multiple characteristics, or dimensions. The present study focuses on two independent parenting dimensions: control and warmth (Deater-Deckard et al., 2012; Domenech Rodríguez, Donovanick, & Crowley, 2009). Parental control refers to the guidance or limitations that parents place on their children to teach them how to behave (Sher-Censor, Parke, & Coltrane, 2011). One specific type of parental control is *psychological control*, which involves the parent's use of guilt and shame in shaping a child's thoughts and behaviors to fit the desires of the parent (Barber, 1996). At the opposite end of parental psychological is psychological autonomy, in which the parent encourages the child to develop his or her own independent thoughts and behaviors relatively free of parental influence (Sher-Censor et al., 2011). Another dimension of parenting is warmth, a positive parenting strategy associated with adaptive development and lower mental health problems (Deater-Deckard et al., 2012; Mason, Walker-Barnes, Tu, Simons, & Martinez-Arree, 2004). *Acceptance* is conveyed through parental warmth behaviors (Deater-Deckard et al., 2012; Mason et al., 2004). At the opposite end of acceptance is rejection, in which parents disapprove the behaviors of their children. Parental warmth is uniformly accepted as a positive parenting dimension (Deater-Deckard et al., 2012). On the contrary, psychological control is often thought to be a negative parenting strategy and has been associated with negative mental health and negative developmental outcomes; a plethora of studies have found psychological control to be associated specifically with internalizing symptoms, including depression (e.g., Barber, Olsen, & Shagle, 1994; Barber, Stolz, Olsen,

Collins, & Burchinal, 2005; Barber, 1996; McLeod, Weisz, & Wood, 2007; Sherk-Censor et al., 2011) and anxiety (e.g., McLeod, Wood, & Weisz, 2007; Pettit, Laird, Dodge, Bates, & Criss, 2001).

More importantly, as the parent-adolescent relationship changes during adolescence, it is important to examine changes in parenting. For example, the amount of control and autonomy granted by parents may be especially important during adolescence, a developmental stage when children are apt to explore and desire more independence from parents (Bámaca-Colbert et al., 2012; Barber et al., 1994; Greenfield, Keller, Fuligni, & Maynard, 2003). The effect of certain types of parenting (i.e., warmth, hostility, and child management) has been found to be associated with changes of externalizing and internalizing problems among adolescents, indicating the importance considering a longitudinal perspective (Scaramella, Conger, & Simons, 1999). Specifically, studies have found that feelings of warmth and closeness decrease over time in the parent-adolescent relationship while conflict in the parent-child relationship increases (Smetana, Campione-Barr, & Metzger, 2006). Additionally, few studies have examined the relation between parenting and youth internalizing symptoms over time, despite the abundance of evidence indicating that parental psychological control is associated with negative mental health outcomes (Barber et al., 2005; Yap, Pilkington, Ryan, & Jorm, 2014). The studies that have examined psychological control and internalizing symptoms longitudinally have found incongruent results. For example, in a community sample of adolescents in Canada, adolescents' initial perceptions of parental psychological control were not associated with changes in

internalizing symptoms (Albrecht, Galambos, & Jansson, 2007). On the other hand, in a longitudinal study of Mexican American adolescents, youth who perceived their parents to have higher parental psychological control reported higher depressive symptoms at a later time point, while those who believed their parents promoted autonomy reported fewer numbers of delinquent friends at a later time point (Sher-Censor et al., 2011). These studies illustrate the need to examine parenting dimensions and internalizing symptoms longitudinally, especially within Latino adolescents.

Although there are many studies documenting the relationship between specific dimensions of parenting and youth mental health problems, considerable variability has been found in empirical studies, especially among ethnic minority families (Chao & Otuski-Clutter, 2011). The patterns and associations between parenting dimensions and youth mental health may or may not be applicable to Latino adolescents. For example, compared to their African American and European American peers, Latino youth reported stronger feelings of concern and love rather than manipulation and anger in response to parental control through guilt (Mason et al., 2004). Furthermore, Hill, Bush, and Roosa (2003) found that Mexican American families in low-income neighborhoods reported higher levels of maternal hostile control and inconsistent discipline compared to European American families in low-income neighborhoods. Despite the differences in parenting behaviors between the two ethnic groups, the positive associations of hostile control and inconsistent discipline with depression and conduct problems were similar (Hill, Bush, & Roosa, 2003). Both these studies illustrate the

importance of evaluating key parenting behaviors both across ethnic groups as well as within ethnic groups. More specifically, research is needed that focuses on Latino youth and families, in order to better identify the specific family processes and characteristics that are impacting their adjustment and that take into account their cultural context.

### **Parenting Dimensions and Cultural Values**

The universality and function of parenting behaviors has been debated in the literature (Calzada & Eyberg, 2002). In two cross-cultural studies in nine different countries, child and parent ratings of parenting behaviors (i.e., warmth, acceptance-rejection, hostility/rejection/neglect) varied by communities (Deater-Deckard et al., 2012; Putnick et al., 2012). Deater-Deckard et al. (2012) found distinct means and associations between parental control and warmth across 13 cultural groups in nine different countries, including three ethnic groups in the U.S. In that study, U.S. Latino families reported higher levels of both control and warmth compared to European American families. Additionally, parenting dimensions have been found to differ depending on the national background of Latino parents. For example, a study that compared the parenting behaviors of Dominican and Puerto Rican mothers towards their young children found Puerto Rican mothers were less authoritative than the Dominican mothers (Calzada & Eyberg, 2002). Although these studies seem to suggest cultural variations, the studies examined context on the basis of ethnicity rather than the sociocultural processes (i.e., cultural values) that may be better explanations of ethnic differences (Halgunseth, Ispa, & Rudy, 2006).

Parents' display of these strategies, the way a child interprets these behaviors, and their influence on children's developmental outcomes are often shaped by the context in which they occur (Camras, Sun, Li, & Wright, 2012; Chao & Otuski-Clutter, 2011; Crockett, Brown, Russell, & Shen, 2007). Calzada and colleagues (2012) found that the Latino cultural value of *respeto* (or respect for authority) was associated with authoritarian parenting while the U.S. cultural value of independence was associated with authoritative parenting among a sample of Mexican and Dominican parents and young children. Although certain parenting strategies may exist across ethnic groups, their impact on youth may not be identical across ethnic or cultural groups. The purpose of this study is to examine the role of youths' cultural values as moderators in the relation between parenting dimensions and youth internalizing symptoms.

### **Cultural Values and Youth Mental Health Problems**

Culture influences developmental trajectories, including the development of mental health outcomes such as depression and anxiety (Greenfield et al., 2003; Zahn-Waxler, Klimes-Dougan, & Slattery, 2000). Numerous studies stress the importance of considering the cultural context in which adolescence takes place (Anderson & Mayes, 2010; Chao & Otuski-Clutter, 2011; Greenfield et al., 2003). Thus, the present study will examine youth cultural values that are prevalent in the Latino culture and are relevant to their family orientation and behaviors towards adults. Core cultural values among U.S. Latinos include *affiliative obedience* and *family obligation*. *Affiliative obedience* refers to the sense of responsibility and respect an individual has toward adults, but most especially

towards parents (Díaz-Guerrero, 1994; Ramirez, 1969). Family obligation is the sense of duty and responsibility an individual has towards the family (Fuligni, Tseng, & Lam, 1999). These cultural values are especially important to consider during adolescence because they impact both feelings towards parents and family and desires towards more autonomy (Greenfield et al., 2003).

The role of cultural values on the mental health and developmental outcomes of adolescents is inconclusive. Most studies have found that cultural values are associated with positive developmental outcomes, such as academic achievement, self-esteem, and fewer internalizing problems and delinquency (Fuligni, 2001; Kuhlberg, Peña, & Zayas, 2010; Le & Stockdale, 2005; Polo & López, 2009; Smokowski, Rose, & Bacallao, 2010). For example, ethnic minority adolescents reported higher levels of family obligation than their European American peers. Furthermore, higher family obligation among these ethnic minority adolescents was associated with higher academic motivation (Fuligni et al., 1999). Similarly, the cultural value of familism, which also includes a sense of duty and obligation for the family, was positively associated with self-esteem and negatively associated with parent-child conflict among Latinas adolescents. Furthermore, Latino family cultural values have also been found to be a protective factor from stressors such as perceived discrimination, economic hardship, and deviant peers (Germán, Gonzales, & Dumka, 2009; Gonzales et al., 2011; Umaña-Taylor & Updegraff, 2007). Although most of the research has been limited to cross-sectional designs, researchers have recently begun to demonstrate the importance of cultural values across time. For example, Smokowski, Rose, and

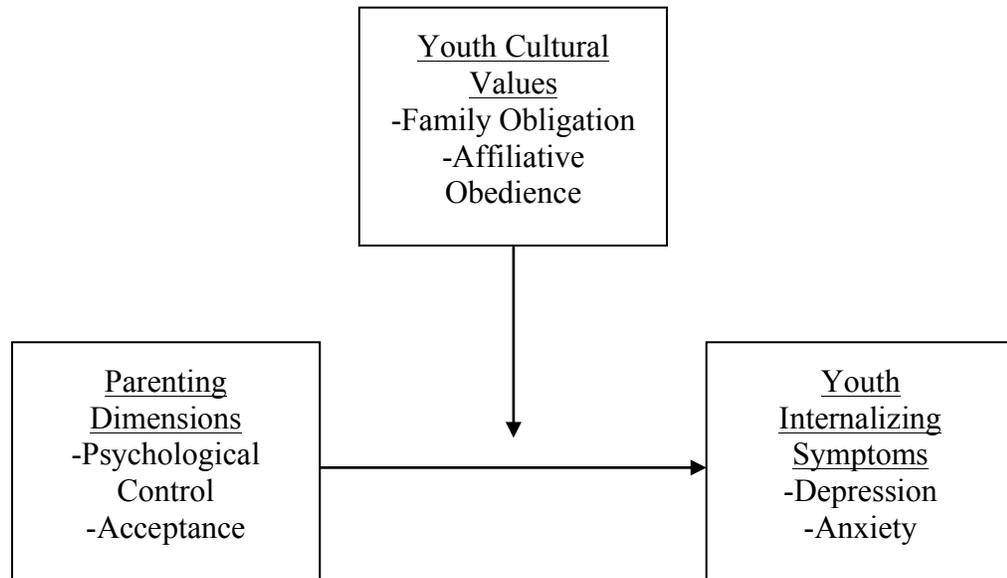
Bacallao (2010) found that Latino adolescents who reported high levels of familism consistently over time also reported lower internalizing symptoms and higher self-esteem consistently over time compared to those who reported low levels of familism. The adolescents who reported low levels of familism consistently over time reported high levels of internalizing symptoms and low self-esteem consistently over time. These findings suggest that traditional cultural values are protective factors and are associated with positive developmental outcomes.

Despite these findings, others have found mixed results, especially in terms of internalizing symptoms. For example, Polo and Lopez (2009) found that higher affiliative obedience was associated with lower internalizing problems and youth depression, but was not associated with either youth loneliness or social anxiety. More recently, Martinez, Polo, and Carter (2012) found that higher Latino “family orientation” (a construct consisting of youth affiliative obedience and family obligation values) was associated with some forms of anxiety (i.e., harm avoidance and separation) but not others (i.e., social anxiety and physical symptoms). In another study, higher familism was associated with lower parent-adolescent conflict, but higher internalizing symptoms in a sample of Latina adolescents (Kuhlberg et al., 2010). These mixed findings suggest the need for specificity when it comes to understanding values and internalizing symptoms. More research is needed to better understand the role of cultural values on specific mental health problems among Latino adolescents. Because the majority of the research cited has utilized cross-sectional designs, longitudinal

examinations of the relationship between youth cultural values and youth internalizing symptoms may be particularly helpful in understanding the nature of these relationships. Therefore, the present study will separately examine family obligation and affiliative obedience and their relation to both youth anxiety and depression, respectively. The design will include cross-sectional as well as longitudinal relationships.

### **Aims and Hypotheses**

The role that cultural values play in the relation between parenting dimensions and youth internalizing symptoms is inconclusive, and research evaluating their role in longitudinal designs is particularly lacking. This study will examine whether specific youth cultural values (i.e., family obligation and affiliative obedience) serve as moderators of the relationship between parenting strategies (i.e., parental psychological control and parental acceptance) and youth internalizing symptoms (i.e., depression and anxiety). Based on theoretical evidence that parenting strategies are dynamic throughout development, the present study will also examine these relationships over time. Figure 1 illustrates the moderation model of the present study. There will be four sets of hypotheses.



*Figure 1.* Youth cultural values as a moderator between parenting dimensions and youth internalizing symptoms.

**Hypothesis I: Cross-Sectional.** The first set of hypotheses examines cultural values as potential moderators of the relation between parenting dimensions and youth internalizing symptoms cross-sectionally. It is hypothesized that parental psychological control will be positively associated with youth depression and anxiety. Additionally, cultural values are expected to moderate the relation between psychological control and internalizing symptoms in the following ways:

- 1A. Youth family obligation and affiliative obedience, respectively, will buffer the detrimental effects of parental psychological control on youth depression. In other words, higher parental psychological control will be associated with higher youth depression symptoms, but to a lesser degree among youth who endorse higher cultural values.

1B. Youth family obligation and affiliative obedience, respectively, will buffer the detrimental effects of psychological control on youth anxiety. In other words, higher parental psychological control will be associated with higher youth anxiety symptoms, but to a lesser degree among youth who endorse higher cultural values.

Cultural values will also be examined as a moderator of the link between parental acceptance and internalizing symptoms. Parental acceptance is hypothesized to be negatively associated with youth depression and anxiety. It is hypothesized that cultural values will be a moderator in the relation between acceptance and internalizing symptoms in the following ways:

1C. Youth family obligation and affiliative obedience, respectively, will have a protective, enhancing effect on youth depression. Specifically, higher parental acceptance will be associated with lower youth depression symptoms, but especially among youth who endorse higher cultural values.

1D. Youth family obligation and affiliative obedience, respectively, will have a protective, enhancing effect on youth anxiety. In other words, higher parental acceptance will be associated with lower youth anxiety symptoms, but especially among adolescents who endorse higher cultural values.

**Hypothesis II: Changes in Parenting Dimensions.** The second set of hypotheses examines cultural values as moderators between changes in parenting dimensions and internalizing symptoms. Changes in parenting are hypothesized to

be associated with internalizing symptoms. For example, an increase in parental psychological control is expected to be associated with higher youth internalizing symptoms while a decrease in psychological control is expected to be associated with lower youth internalizing symptoms. An increase in parental acceptance is expected to be associated with lower youth internalizing symptoms while a decrease in parental acceptance is expected to be associated with higher youth internalizing symptoms. More specifically:

2A. Changes in parental psychological control are hypothesized to be associated with youth depression; however, youth family obligation and affiliative obedience, respectively, will act as buffers of the detrimental effects of parental psychological control. In other words, increases in parental psychological control will be associated with higher youth depression, but to a lesser degree among youth who endorse higher cultural values.

2B. Changes in parental psychological control are hypothesized to be associated with youth anxiety; however, youth family obligation and affiliative obedience, respectively, will act as buffers of these detrimental effects. In other words, increases in parental psychological control will be associated with higher youth anxiety, but to a lesser degree among youth who endorse higher cultural values.

2C. Changes in parental acceptance are hypothesized to be associated with youth depression. In addition, youth family obligation and affiliative

obedience, respectively, will act as buffers of these negative effects.

In other words, decreases in parental acceptance will be associated with higher youth depression, but to a lesser degree among youth who endorse higher cultural values.

2D. Changes in parental acceptance are hypothesized to be associated with youth anxiety. In addition, youth family obligation and affiliative obedience, respectively, will act as buffers of these negative effects. In other words, decreases in parental acceptance will be associated with higher youth anxiety, but to a lesser degree among youth who endorse higher cultural values.

**Hypothesis III: Changes in Internalizing Symptoms.** The third set of hypotheses examines youth cultural values as a moderator between parenting dimensions and changes in youth internalizing symptoms. Youth depression and anxiety are hypothesized to change over time. Higher parental psychological control is expected to be associated with an increase in internalizing symptoms while higher parental acceptance is expected to be associated with a decrease in internalizing symptoms. More specifically:

3A. Higher parental psychological control will be associated with increases in youth depression. Furthermore, youth family obligation and affiliative obedience, respectively, will buffer the detrimental effects of parental psychological control on the increases in youth depression symptoms. In other words, higher parental psychological

control will be associated with increases in youth depression, but to a lesser degree among youth who endorse higher cultural values.

3B. Higher psychological control will be associated increases in youth anxiety. Furthermore, youth family obligation and affiliative obedience, respectively, will buffer the detrimental effects of parental psychological control on the increases in youth anxiety symptoms. In other words, higher parental psychological control will be associated with increases in youth anxiety, but to a lesser degree among youth who endorse higher cultural values.

3C. Higher parental acceptance will be associated with decreases in youth depressive symptoms. Furthermore, youth family obligation and affiliative obedience, respectively, will have a protective, enhancing effect on youth depression symptoms. In other words, higher parental acceptance will be associated with decreases in youth depression, but especially among youth who endorse higher cultural values.

3D. Higher parental acceptance will be associated with decreases in youth anxiety symptoms. Furthermore, youth family obligation and affiliative obedience, respectively, will have a protective, enhancing effect on youth anxiety symptoms. In other words, higher parental acceptance will be associated with decreases in youth anxiety, but especially among youth who endorse higher cultural values.

**Hypothesis IV: Changes in IV and DV.** The fourth set of hypotheses examines youth cultural values as a moderator between changes in parenting

dimensions and changes in youth internalizing symptoms. The direction of the moderating effects of cultural values will be similar to those mentioned in the previous hypotheses. More specifically:

4A. Increases in parental psychological control are hypothesized to be associated with increases in youth depression. However, higher youth family obligation and affiliative obedience, respectively, will have a buffering effect on the link between changes in parental psychological control on changes in youth depression. In other words, increases in parental psychological control will be associated with increases in youth depressive symptoms, but to a lesser extent among youth who endorse higher cultural values.

4B. Increases in parental psychological control are hypothesized to be associated with increases in youth anxiety. Furthermore, higher youth family obligation and affiliative obedience, respectively, will have a buffering effect on the relationship between changes in parental psychological control and changes in youth anxiety symptoms. In other words, increases in parental psychological control will be associated with increases in youth anxiety, but to a lesser extent among youth who endorse higher cultural values.

4C. Increases in parental acceptance are hypothesized to be associated with decreases in youth depression. Furthermore, higher family obligation and affiliative obedience, respectively, will have a protective, enhancing role between changes in parental acceptance

and changes in youth depressive symptoms. In other words, increases in parental acceptance are expected to be associated with decreases in youth depression, but especially among youth who endorse higher cultural values.

4D. Increases in parental acceptance are hypothesized to be associated with decreases in youth anxiety. Furthermore, higher family obligation and affiliative obedience, respectively, will have a protective, enhancing effect between changes in parental acceptance and changes in youth anxiety. In other words, increases in parental acceptance are expected to be associated with decreases in youth anxiety, but especially among youth who endorse higher cultural values.

## **Method**

### **Participants**

Participants included 141 adolescents in 5<sup>th</sup> to 7<sup>th</sup> grades from a longitudinal intervention study. For the purpose of this study, youth were included if they self-identified as Latino and participated in at least one of the two interviews at Time 2 or Time 4. The final sample included 115 adolescents (55.7% male) who ranged in age from 10 years to 14 years ( $M = 11.87$ ,  $SD = .96$ ). The majority of the youth were in 7<sup>th</sup> grade ( $n = 47$ ; 40.9%), followed by the same number of 5<sup>th</sup> and 6<sup>th</sup> graders ( $n = 34$ ; 29.6%). The majority of the adolescents were born in the U.S. (84.3%) and had one or both parents born outside of the U.S. (81.7%). In terms of nationality backgrounds, 74 (64.3%) students were

Mexican, 22 (19.1%) students were Puerto Rican, 8 (7.0%) students were Central/South American, and 11 students (9.6%) were of mixed Latino backgrounds.

### **Procedures**

Data were collected as part of a longitudinal intervention study at a Chicago public elementary school where the majority of the students (89.7%) were classified as “low-income” by the Illinois State Board of Education (2009). The present study focused on Times 1, 2, and 4. Data at Time 1 were collected through classrooms surveys that were administered during the regular school day in a classroom setting and took approximately two hours to complete. To recruit participants, students in 5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> grades in public elementary schools in Chicago were sent home with information about the study, including a letter from the principal investigator and informed consent forms. Students returned the consent forms indicating whether or not the parents allowed their child to participate in the study. The students whose parents gave consent then gave their own assent to participate in the study on the day of the survey administration. All students who returned a consent form received a small prize regardless of whether their parents gave consent to participate in the study. Correspondence and coordination with school staff determined the day and time that the research team was able to administer the survey. Each student received a survey booklet and followed along while a research assistant read the survey items out loud. A team of research assistants monitored the classroom to assist students who needed help with the survey. The team of research assistants was trained before the

administration of the survey on protocols and procedures. Students who participated in the classroom survey had a chance to enter into a raffle to win prizes that were worth from \$5 to \$50.

Time 2 and Time 4 were individual interviews. The first interview occurred approximately eight months after the classroom survey. The second interview occurred approximately a year after the first interview. Youth who participated in the classroom surveys were invited to participate in the individual interviews with their parents. Correspondence and coordination with school staff, students, and parents determined the day and time the students were interviewed after school. Consent and assents from the youth and parents were obtained for the individual interviews. Individual interviews lasted approximately two hours. Trained research assistants interviewed individual students at their respective schools by reading out loud the items and giving youth a booklet with the response scales in order to increase comprehension. Students received gift cards as compensation for their participation. The study procedures were reviewed and approved by the Institutional Review Board of the DePaul Office for the Protection of Research Subjects.

### **Measures**

**Parenting Dimensions.** Parental acceptance and psychological control were assessed during the Time 2 and Time 4 interviews using the psychological control and acceptance subscale of the Child Report of Parenting Behavior Inventory (CRPBI; Schludermann & Schludermann, 1988). Each subscale consists of 10 statements about the parent with responses ranging from 1 (*Not*

*like*) to 3 (*A lot like*). A sample item of the acceptance subscale is "My mother is a person who makes me feel better after talking over my worries with her." Internal consistency for the acceptance subscale was adequate in the present study, with Cronbach's alpha of .80 and .89 at Times 2 and 4, respectively. A sample item of the psychological control subscale is "My mother is a person who tells me of all the things she had done for me." Internal consistency for the psychological control subscale was adequate in the present study, with Cronbach's alpha of .74 at Time 2 and .77 at Time 4.

**Cultural values.** Youth cultural values were assessed at Times 1 using two separate measures: the Family Obligation Scale (Fulgini et al., 1999) and Affiliative Obedience scale (Díaz-Guerrero, 1994; Ramirez, 1969). The Family Obligation Scale (Fulgini et al., 1999) is 25-item self-report questionnaire that assesses the degree to which an individual's behaviors reflect his or her obligation to family and the strength of this belief. Twelve items with responses from 1 (*Almost never*) to 5 (*Almost always*) tap into behaviors that reflect family obligation. A sample item is "Help your brothers and sisters with their homework." Thirteen items assess beliefs towards family obligations with responses from 1 (*Not at all important*) to 5 (*Very important*). A sample item is "Make sacrifices for your family." Internal consistency was adequate in the present study at Time 1, with a Cronbach's alpha of .85.

The Affiliative Obedience scale (Díaz-Guerrero, 1994; Ramirez, 1969) is an 18-item self-report questionnaire that assess attitudes towards adults, especially parents. Items were rated on a 5-point scale from 0 (*strongly disagree*) to 4

(*strongly agree*). A sample item is "A person must always respect his or her parents." Some items were reverse coded so that higher scores represented higher affiliative obedience. Internal consistency was adequate in the present study at Time 1, with a Cronbach's alpha of .88.

**Internalizing symptoms.** Internalizing symptoms of depression and anxiety were assessed during the Time 2 and Time 4 interviews. Depression was assessed using the Children's Depression Inventory (CDI; Kovacs, 1992). The CDI is a widely used self-report measure that assesses a child's depressive symptoms and has demonstrated adequate psychometric properties within diverse samples of children and adolescents (Kovacs, 1992). The measure includes 27 items with three responses each (e.g., "I am sad once in a while," "I am sad many times," or "I am sad all the time"). Adolescents were asked to choose the statement that best describes them within the past two weeks. Internal consistency was adequate in the present study at Times 2 and 4, with a Cronbach's alpha of .81 and .87, respectively.

Anxiety was assessed using the Multidimensional Anxiety Scale for Children (MASC; March, Parker, Sullivan, & Stallings, 1997). The MASC is a widely used self-report measure of anxiety. The measure includes 39 items with items rated on a Likert-type scale ranging from 0 (*Never*) to 3 (*Often*). A sample item includes "I feel tense or uptight." Internal consistency was adequate in the present study at both Time 2 and Time 4, with an overall Cronbach's alpha of .91 and .86, respectively.

### **Data Analytic Strategy**

To test the hypotheses, regression models were run using Hayes' PROCESS macro (Hayes, 2013). Missing data were minimal, and were limited to five participants. Two items on the MASC were missing ( $n = 2$ ); three items were missing on the Family Obligation Scale ( $n = 2$ ); and one item was missing on the acceptance subscale on the CRPBI ( $n = 1$ ). Data were considered to be missing at random; therefore, mean substitution was used to address missing data. To measure changes in the independent variable for Hypotheses II and IV (i.e., psychological control and acceptance), a change score was used by subtracting the Time 2 variable from the Time 4 variable. To measure changes in the dependent variable (i.e., depression and anxiety), the score at Time 4 was used while controlling for internalizing symptoms at Time 2, by including it as a predictor in the regression equation. Altogether, a total of 32 regression models were analyzed across the four sets of hypotheses.

The study variables were each tested independently based on theoretical and empirical evidence. For example, depression and anxiety were analyzed as two independent outcomes because of the evidence that they may be associated differently with cultural values. Family obligation and affiliative obedience were tested independently due to the theoretical differences between the two constructs. Finally, psychological control and acceptance were analyzed independently because of evidence that they are separate constructs.

## **Results**

Bivariate correlations and descriptive statistics for all study variables are presented in Table 1. As noted earlier, youth cultural values were assessed at

Time 1, and parenting dimensions, youth depression, and youth anxiety were assessed at Times 2 and 4. Regression analyses using PROCESS were used to test the four sets of hypotheses using mean-centered variables.

Table 1

*Bivariate correlations for study variables at each time point.*

	1	2	3	4	5	6	7	8	9	10
1. Y Family Obligation T1	--									
2. Y Affiliative Obedience T1	.52***	--								
3. P Acceptance T2	.34***	.35***	--							
4. P Acceptance T4	.38***	.17	.53***	--						
5. P Psych. Control T2	.01	.16	.01	.04	--					
6. P Psych. Control T4	.15	.09	-.06	-.07	.47***	--				
7. Y Anxiety T2	.12	.003	-.09	-.03	.26**	.27**	--			
8. Y Anxiety T4	.04	-.07	-.06	.001	.14	.33**	.67***	--		
9. Y Depression T2	-.25**	-.13	-.28**	-.13	.22*	.21*	.53***	.32**	--	
10. Y Depression T4	-.21*	-.04	-.31**	-.38***	.11	.29**	.41***	.40***	.56***	--
Mean	3.80	3.66	2.63	2.57	1.83	1.80	77.75	73.18	.22	.17
SD	.54	.60	.32	.42	.36	.39	16.17	12.94	.19	.20

\*\*\* $p < .001$ ; \*\* $p < .01$ ; \* $p < .05$  (two-tailed).

Note: Y = Youth; P = Parent; Time 1 ( $n = 115$ ); Time 2 ( $n = 108$ ); Time 4 ( $n = 109$ ).

**Hypothesis I: Cross-Sectional.** As predicted, higher parental psychological control (T2) was associated with higher youth anxiety (T2) and youth depression (T2; see Table 1). Also as expected, higher parental acceptance (T2) was associated with lower youth depression (T2), but not with lower youth anxiety (T2). Table 2 illustrates the path coefficients of the linear models of the predictors of depression and anxiety. As hypothesized, family obligation was a significant moderator in the relation between parental acceptance (T2) and youth depression (T2). As illustrated in Figure 2, higher parental acceptance was associated with lower youth depression, but especially among youth who endorsed high levels of family obligation.

Table 2

*Path coefficients for the linear models of predictors of youth depression and youth anxiety for Hypothesis I.*

	Y Depression				Y Anxiety			
	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Y Fam. Obl.	-.09	.03	-2.59	< .05	3.13	3.08	1.01	.31
P Acceptance	-.16	.06	-2.71	< .01	-9.26	5.13	-1.80	.07
FO x PA	-.27	.10	-2.70	< .01 <sup>a</sup>	-17.55	8.76	-2.00	< .05 <sup>a</sup>
Y Fam. Obl.	-.09	.03	-2.72	<.01	4.37	2.94	1.49	.14
P Psych. Cntrl.	.12	.05	2.40	<.05	11.81	4.25	2.78	< .05
FO x PPC	.04	.10	.38	.71	-7.78	8.34	-.93	.35
Y Affl Obed.	-.02	.03	-.72	.47	.29	2.83	.10	.92
P Acceptance	-.19	.06	-3.05	< .01	-7.20	5.36	-1.34	.18
AO x PA	-.13	.08	-1.75	.08	-8.83	6.60	-1.34	.18
Y Affl. Obed.	-.06	.03	-1.95	.05	-1.39	2.59	-.53	.59
P Psych. Cntrl.	.12	.05	2.24	< .05	11.39	4.47	2.55	< .05
AO x PPC	.13	.10	1.21	.23	6.36	8.74	.73	.47

*Note.* Refer to text for time points. N = 108; *b* = unstandardized coefficients; Y = Youth; P = Parent; FO x PA = Interaction of youth family obligation and parental acceptance; FO x PPC = Interaction of youth family obligation and parental psychological control; AO x PA = Interaction of youth affiliative obedience and parental acceptance; AO x PPC = Interaction of youth affiliative obedience and parental psychological control.

<sup>a</sup>  $\Delta R^2 = .06$  for depression and  $.04$  for anxiety.

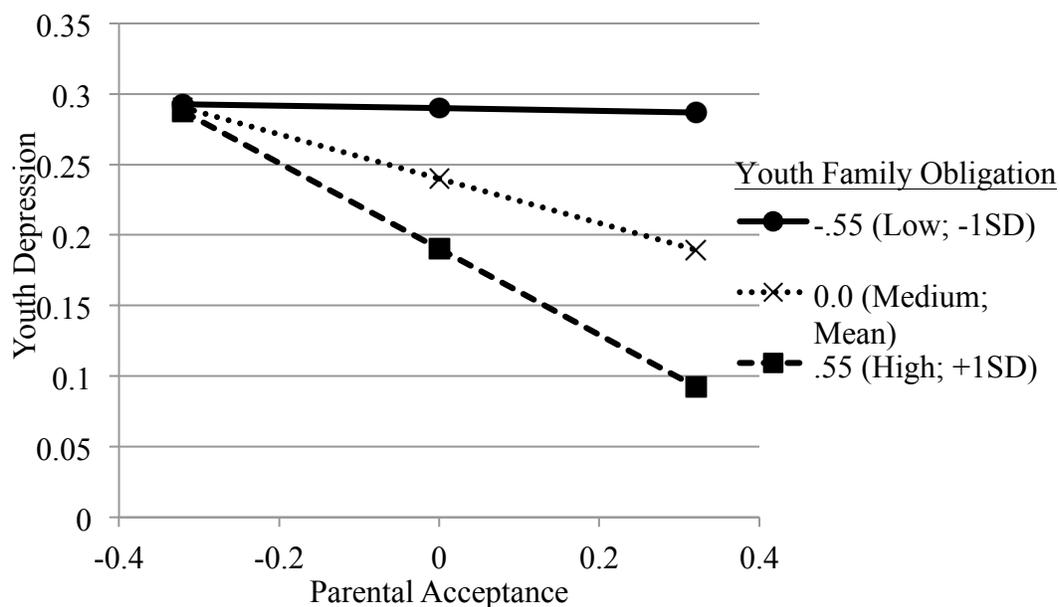


Figure 2. The relation between parental acceptance (T2) and youth depression (T2) at low, medium, and high levels of youth family obligation.

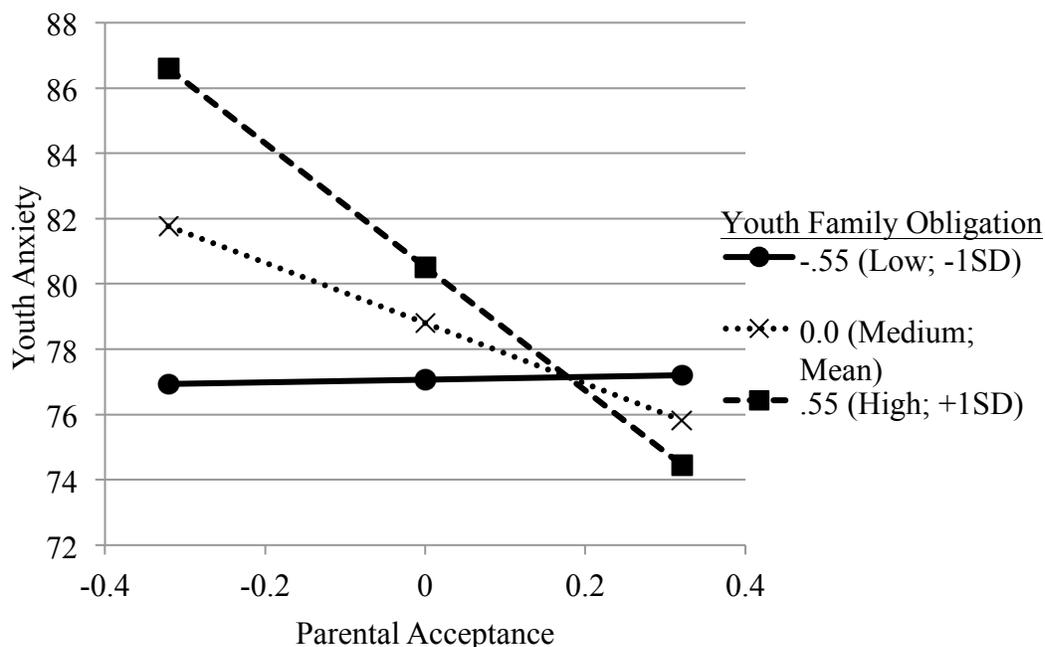
After probing this significant interaction, a simple slopes analysis indicated that parental acceptance and youth depression was significant and negative at mean levels of youth family obligation ( $t = -2.71; p < .01$ ) and high levels of youth family obligation ( $t = -3.55; p < .001$ ). In other words, higher parental acceptance was associated with lower youth depression among those with medium and high levels of family obligation. More specifically, the Johnson-Neyman technique was used to probe the significant interaction beyond one standard deviation above and below the mean (Hayes, 2013). Results indicated that the interaction of parental acceptance and youth family obligation was observed for adolescents who reported levels of family obligation below 3 *SD* of the mean (i.e., -2.17) and above .29 *SD* below the mean (i.e., -.16). Parental acceptance and youth depression was significant and positive at very low levels of

youth family obligation ( $t = 1.98; p = .05$ ); approximately .93% of the sample fell in this region. In other words, for less than one percent of the sample, high levels of parental acceptance were associated with high levels of youth depression.

When level of family obligation was  $-.16$  and above, parental acceptance and youth depression was significant and negative ( $t = -1.98; p = .05$ ); approximately 69% of the sample fell in this region in which, consistent with predictions, higher parental acceptance was associated with low levels of youth depression.

Additionally, consistent with the hypotheses, family obligation was a significant moderator between parental acceptance (T2) and youth anxiety (T2; see Table 2). As shown in Figure 3, higher parental acceptance was associated with lower anxiety, but that relationship was most evident among youth with medium to high family obligation. Among youth with low family obligation, higher parental acceptance does not seem to be associated with youth anxiety, although they appear to have lower levels of anxiety than youth with higher family obligation. After probing this significant interaction, a simple slopes analysis indicated that parental acceptance and youth anxiety was significant and negative at high levels of youth family obligation ( $t = -2.50; p < .05$ ). In other words, among youth with high family obligation higher parental acceptance was associated with low levels of anxiety, but that relationship was not present for youth of medium or low levels of family obligation. Again, the Johnson-Neyman technique was used to probe the significant interaction beyond one standard deviation above and below the mean. Results indicated that the association was observed for adolescents who reported levels of family obligation at  $.07$  and

higher (at least .12 *SD* above the mean). Parental acceptance and youth anxiety was significant and negative at levels of youth family obligation close to the mean ( $t = -1.98; p = .05$ ); approximately 56% of the sample fell in this region of significance. In other words, when family obligation is at least .12 *SD* above the mean, high levels of parental acceptance was negatively associated with low levels of youth anxiety.



*Figure 3.* The relation between parental acceptance (T2) and youth anxiety (T2) at low, medium, and high levels of youth family obligation.

Similarly, affiliative obedience was marginally significant ( $p = .08$ ) as a moderator of the relation between parental acceptance and youth anxiety in a similar pattern to family obligation (see Table 2). Contrary to predictions, none of the other five models revealed that family obligation or affiliative obedience were

significant moderators in the relationship between parenting and internalizing symptoms.

**Hypothesis II: Changes in Parenting Dimensions.** To test cultural values as a moderator between changes in parenting dimensions and youth internalizing symptoms, change scores were calculated for parenting dimensions by finding the difference scores between Time 4 and Time 2 in parental psychological control and parental acceptance. Results are presented in Table 3, which displays the path coefficients for the linear models of the predictors of depression and anxiety. Youth family obligation was negatively correlated with youth depression when holding changes in parental acceptance constant ( $b = -.08$ ;  $t = -2.05$ ;  $p < .05$ ). While holding youth family obligation constant, changes in parental psychological control was positively associated with youth depression ( $b = .12$ ;  $t = 2.40$ ;  $p < .05$ ) and anxiety ( $b = 7.66$ ;  $t = 2.27$ ;  $p < .05$ ). Additionally, parental psychological control was positively associated with anxiety when holding youth affiliative obedience constant ( $b = 8.13$ ;  $t = 2.44$ ;  $p < .05$ ). Affiliative obedience was marginally significant ( $p = .07$ ) as a moderator between parental psychological control and youth affiliative obedience; results indicated a trend that high levels of affiliative obedience may buffer the negative effects of high parental psychological control and youth anxiety. Contrary to the study hypotheses, neither youth family obligation nor youth affiliative obedience was a significant moderator between changes in parenting dimensions and youth internalizing symptoms.

Table 3

*Path coefficients for the linear models of predictors of youth depression and youth anxiety for Hypothesis II.*

	Y Depression				Y Anxiety			
	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Y Fam. Obl.	-.08	.04	-2.05	< .05	-.12	2.58	-.05	.96
ΔP Acceptance	-.08	.06	-1.31	.19	1.26	3.72	.34	.74
FO x ΔPA	-.04	.08	-.54	.59	-5.29	5.13	-1.03	.30
Y Fam. Obl.	-.07	.04	-1.94	.06	-.55	2.44	-.22	.82
ΔP Psych. Cntrl.	.12	.05	2.40	< .05	7.66	3.37	2.27	< .05
FO x ΔPPC	.10	.08	1.34	.18	-6.82	5.03	-1.36	.18
Y Affl. Obed.	-.03	.04	-.83	.41	-2.16	2.34	-.93	.36
ΔP Acceptance	-.08	.06	-1.36	.18	2.52	3.70	.68	.50
AO x ΔPA	.03	.07	.39	.70	1.32	4.73	.28	.78
Y Affl. Obed.	-.02	.03	-.49	.63	-2.00	2.09	-.95	.34
ΔP Psych. Cntrl.	.11	.05	1.97	.05	8.13	3.33	2.44	< .05
AO x ΔPPC	.05	.10	.48	.63	-10.93	6.06	-1.80	.07

*Note.* Refer to text for time points. N = 102; *b* = unstandardized coefficients; Y = Youth; P = Parent; Δ = changes; FO x ΔPA = Interaction of family obligation and changes in parental acceptance; FO x ΔPPC = Interaction of family obligation and changes in parental psychological control; AO x ΔPA = Interaction of youth affiliative obedience and changes in parental acceptance; AO x ΔPPC = Interaction of youth affiliative obedience and changes in parental psychological control.

**Hypothesis III: Changes in Internalizing Symptoms.** Table 4 presents the results and path coefficients of the linear model of the predictors for changes in youth depression and changes in youth anxiety. The table displays the results of the regression models evaluating youth family obligation and youth affiliative obedience as moderators of the relation between parenting dimensions at Time 2 and youth internalizing symptoms at Time 4, while controlling for youth internalizing symptoms at Time 2. As hypothesized, youth family obligation significantly moderated the relation between parental psychological control (T2) and youth anxiety (T4). A graphical depiction of these results is shown in Figure

4. As illustrated, youth family obligation seemed to buffer the negative effect of parental psychological control, but only at low or medium levels of parental psychological control. Visual inspection of the interaction effect suggests that those with high family obligation had lower increases of anxiety over time, unless psychological control was high, in which case it appears that high psychological control was associated with higher increases in anxiety.

Table 4

*Path coefficients for the linear models of predictors of changes in youth depression and changes in youth anxiety for Hypothesis III.*

	$\Delta$ Y Depression				$\Delta$ Y Anxiety			
	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Y Fam. Obl.	-.01	.04	-.27	.79	-1.43	1.96	-.73	.47
P Acceptance	-.10	.06	-1.71	.09	.18	3.33	.05	.96
FO x PA	.01	.10	.12	.90	-6.69	5.73	-1.17	.25
Y Fam. Obl.	-.01	.03	-.34	.73	-2.18	1.87	-1.16	.25
P Psych. Cntrl.	.01	.05	.12	.90	.07	2.89	.02	.98
FO x PPC	-.14	.10	-1.40	.17	12.70	5.54	2.29	< .05 <sup>a</sup>
Y Affl Obed.	.03	.03	.89	.38	-2.19	1.76	-1.24	.22
P Acceptance	-.12	.06	-1.96	.05	1.91	3.38	.57	.57
AO x PA	.02	.07	.25	.80	.40	4.17	.10	.92
Y Affl. Obed.	.01	.03	.31	.76	-2.15	1.64	-1.31	.19
P Psych. Cntrl.	.02	.05	.37	.71	-.35	3.01	-.12	.91
AO x PPC	-.13	.10	-1.22	.22	7.17	5.81	1.23	.22

*Note.* Refer to text for time points. *N* = 102; *b* = unstandardized coefficients; Y = Youth; P = Parent;  $\Delta$  = changes; FO x PA = Interaction of family obligation and parental acceptance; FO x PPC = Interaction of family obligation and parental psychological control; AO x PA = Interaction of youth affiliative obedience and parental acceptance; AO x PPC = Interaction of youth affiliative obedience and parental psychological control.

<sup>a</sup> $\Delta R^2 = .03, p < .05$ .

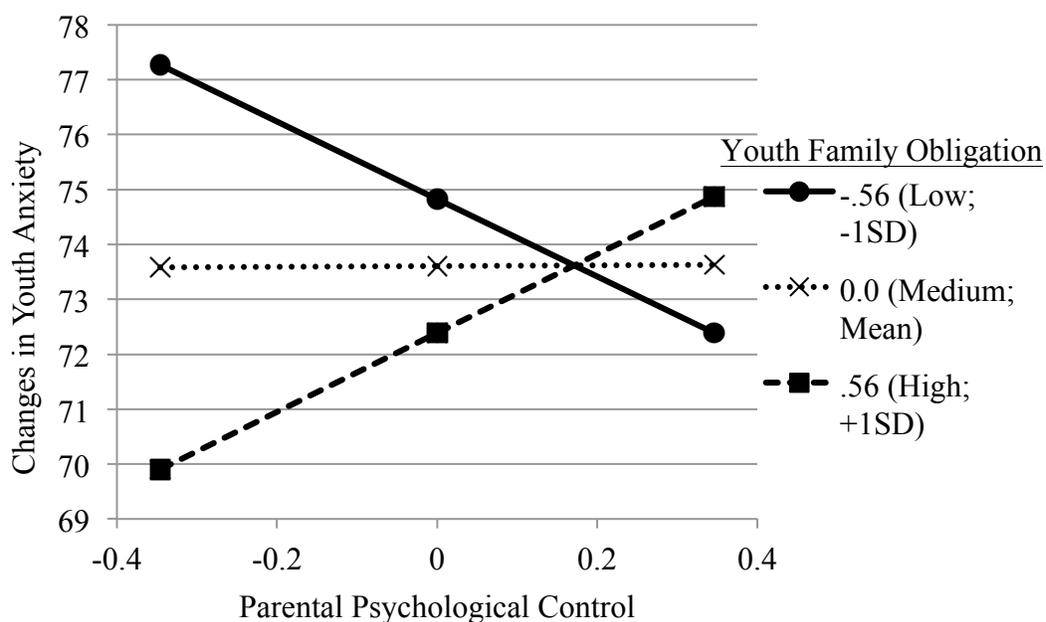


Figure 4. The relation between parental psychological control (T2) and changes in youth anxiety at low, medium, and high levels of youth family obligation.

Simple slopes analyses did not reveal significant slopes for youths who were low, medium, or high for family obligation. Once more, the Johnson-Neyman technique was used to probe the significant interaction beyond one standard deviation above and below the mean. Results indicated a significant association between parental psychological control and changes in anxiety for adolescents who reported levels of family obligation that were below 1.5 *SD* and above 1.7 *SD* from the mean (i.e.,  $-.85$  and  $.97$ ). Parental psychological control was associated with decreasing youth anxiety (significant and negative) at levels of youth family obligation 1.5 *SD* below from the mean ( $t = -1.98$ ;  $p = .05$ ). Approximately 6% of the sample fell in this region of significance. At levels of family obligation 1.7 *SD* above the mean, parental psychological control was associated with increasing youth anxiety (significant and positive;  $t = 1.98$ ;  $p =$

.05). Approximately 2% of the sample fell in this region of significance. Contrary to the hypotheses, high family obligation did not seem to buffer the negative effects of high levels of parental psychological control. Moreover, none of the other seven moderation models were significant as originally hypothesized.

**Hypothesis IV: Changes in IV and DV.** Table 5 presents the path coefficients of the linear models of the predictors for Hypothesis IV, which evaluates the potential moderational role of youth cultural values on the relationship between the changes (T4-T2) in parenting dimensions and youth internalizing symptoms at Time 4 while controlling for Time 2 symptoms. As hypothesized, family obligation was a significant moderator in the relation between changes in parental psychological control and changes in youth depression. As illustrated in Figure 5, youth family obligation seemed to have a buffering effect of changes in parental psychological control and changes in youth depression, but only when parental psychological control decreased. This pattern was most evident among youth with high and medium levels of family obligation. Furthermore, visual inspection of the interaction effect suggests that among youth with low family obligation, changes in parental psychological control did not seem to be associated with pronounced changes in youth depression.

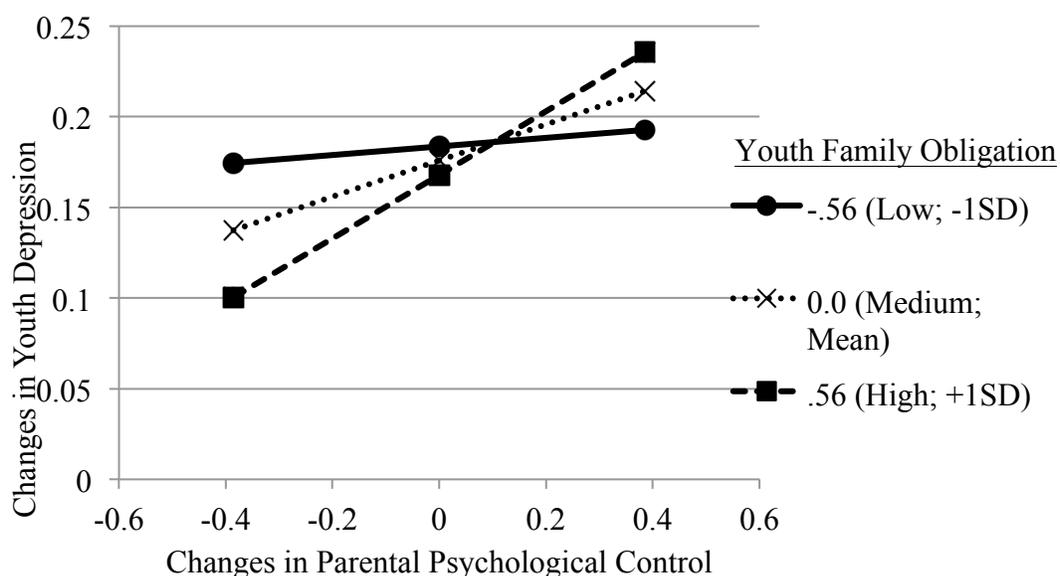
Table 5

*Path coefficients for the linear models of predictors of changes in youth depression and changes in youth anxiety for Hypothesis IV.*

	$\Delta$ Y Depression				$\Delta$ Y Anxiety			
	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>t</i>	<i>p</i>
Y Fam. Obl.	-.002	.04	-.06	.95	-1.92	1.93	-.99	.32
$\Delta$ P Acceptance	-.10	.05	-2.15	< .05	.20	2.77	.07	.94
FO x $\Delta$ PA	.05	.07	.80	.43	-5.86	3.82	-1.53	.13
Y Fam. Obl.	-.01	.03	-.43	.67	-2.05	1.82	-1.13	.26
$\Delta$ P Psych. Cntrl.	.10	.04	2.28	< .05	6.14	2.51	2.45	< .05
FO x $\Delta$ PPC	.14	.07	2.07	< .05 <sup>a</sup>	-6.09	3.73	-1.63	.11
Y Affl. Obed.	-.01	.03	-.19	.85	-2.24	1.74	-1.28	.20
$\Delta$ P Acceptance	-.11	.05	-2.28	< .05	1.43	2.76	.52	.60
AO x $\Delta$ PA	.04	.06	.60	.55	2.19	3.53	.62	.54
Y Affl. Obed.	.01	.03	.31	.76	-1.87	1.56	-1.20	.23
$\Delta$ P Psych. Cntrl.	.09	.04	2.06	< .05	6.26	2.49	2.52	< .05
AO x $\Delta$ PPC	.02	.08	.29	.77	-8.45	4.52	-1.87	.06

*Note.* Refer to text for time points. N = 102;  $\Delta$  = changes; *b* = unstandardized coefficients; Y = Youth; P = Parent; FO x  $\Delta$ PA = Interaction of family obligation and changes in parental acceptance; FO x  $\Delta$ PPC = Interaction of family obligation and changes in parental psychological control; AO x  $\Delta$ PA = Interaction of affiliative obedience and changes in parental acceptance; AO x  $\Delta$ PPC = Interaction of affiliative obedience and changes in parental psychological control.

<sup>a</sup> $\Delta R^2 = .03, p < .05$ .



*Figure 5.* The relation between changes in parental psychological control and changes in youth anxiety at low, medium, and high levels of youth family obligation.

After probing this significant interaction, a simple slopes analysis indicated that changes in parental psychological control and changes in youth depression was significant and positive at mean levels of youth family obligation ( $t = 2.28$ ;  $p < .05$ ) and high levels of youth family obligation ( $t = 3.07$ ;  $p < .01$ ). In other words, increasing parental psychological control was associated with increasing youth depression at medium and high levels of youth family obligation. More specifically, the Johnson-Neyman technique was used to probe the significant interaction beyond one standard deviation above and below the mean. Results indicated that the interaction of changes in parental psychological control and youth family obligation was observed for adolescents who reported levels of family obligation at  $-.09$  and above, approximately 61% of the sample. Changes in parental psychological control and changes in youth depression were significant and positive at this level of youth family obligation ( $t = 1.98$ ;  $p = .05$ ).

In other words, increased levels of parental psychological control was associated with increased levels of depression among youth with levels of family obligation at and above .09.

Similarly, the moderating effect of affiliative obedience in the relation between changes in psychological control and changes in anxiety approached significance ( $p = .06$ ). Contrary to the hypotheses, none of the other seven models revealed that family obligation or affiliative obedience were significant moderators in the relationship between changes in parenting dimensions and changes in internalizing symptoms.

### **Discussion**

The present study tested whether youth cultural values (i.e., family obligation and affiliative obedience) moderated the relation between parenting dimensions (i.e., psychological control and acceptance) and internalizing symptoms (i.e., depression and anxiety) among Latino adolescents. The study tested the moderation model cross-sectionally and longitudinally. Each variable was tested independently in the model. As such, four hypotheses were tested through 32 moderation models. The first set of hypotheses tested youth cultural values as moderators between parenting dimensions and youth internalizing symptoms. The second set of hypotheses tested youth cultural values as moderators between changes in parenting dimensions and youth internalizing symptoms. The third set of hypotheses tested youth cultural values as moderators between parenting dimensions and changes in youth internalizing symptoms. The

fourth set of hypotheses tested youth cultural values as moderators between changes in parenting dimensions and changes in youth internalizing symptoms.

As hypothesized in the first set of hypotheses, the cultural value of family obligation moderated the relation between parental acceptance and youth depression and anxiety. As hypothesized, the combination of high parental acceptance and high family obligation was related to lower levels of youth anxiety and youth depression. These findings indicate that high levels of family obligation may have an enhancing effect when combined with high levels of parental acceptance. Consistent with the literature on the adaptive outcomes of parental acceptance and youth family obligation, this study extends these mainstream findings to a specific sample of low-income Latino adolescents.

In Hypotheses III and IV, cultural values (i.e., family obligation) were again a significant moderator between parenting dimensions and internalizing symptoms. It was hypothesized that at high levels of parental psychological control, youth who endorsed high levels of family obligation would report low levels, or decreased levels, of internalizing symptoms. Findings were contrary to the hypothesized effects for youth with high levels of family obligation. High levels of family obligation seemed to exacerbate the relation between parental psychological control and increased levels of anxiety at high levels of parental psychological control. Furthermore, family obligation seemed to exacerbate the relation between changes in parental psychological control and changes in youth depression at high increases in parental psychological control. High levels of parental psychological control may be indicative of low levels of autonomy. As

such, when adolescents feel a strong obligation to the family and do not feel autonomous, but rather controlled by their parents' use of guilt, adolescents may feel a stronger sense of anxiety and sadness in fulfilling the expectations and goals of both their parents and the family as a whole.

These results support the theories and past empirical research that parenting dimensions are related to mental health outcomes (e.g., Barber, Olsen, & Shagle, 1994; Barber, 1996; Mason, Walker-Barnes, Tu, Simons, & Martinez-Arrue, 2004) and that cultural values impact mental health outcomes (e.g., Martinez, Polo, & Carter, 2012; Polo & López, 2009; Smokowski, Rose, & Bacallao, 2010). Specifically, the study illustrated the importance of examining each of the parenting dimensions, cultural values, and internalizing symptoms as independent variables among low-income Latino adolescents. For example, the results show that the cultural value of family obligation moderates the relation between parenting and youth internalizing symptoms in three of the hypotheses. Affiliative obedience, on the other hand, was not a significant moderator in the relation between parenting dimensions and youth internalizing symptoms. While the target of respect and responsibility of affiliative obedience is adults, including parents, the target of respect and responsibility of the cultural value of family obligation is the family. It could be that a sense of obligation to the family is more influential in youth's perceptions of parenting and their internalizing symptoms because of the added obligation to fulfill the goals of the family as a whole, rather than individual adults. This study illustrates that even though cultural values may seem similar with their underlying values that emphasize family, each cultural

value is associated differently with parenting dimensions and internalizing symptoms. Most importantly, this study illustrates that cultural values cannot be assumed to be protective or risk factors in all situations, but instead may vary depending on the outcomes studied. Future studies may incorporate other indicators of cultural values, such as familism, to better understand the distinct characteristics that different cultural values may have on outcomes of mental health and family processes.

Additionally, this study illustrates that despite the comorbidity between anxiety and depression, it may be important to examine these two constructs separately among Latino adolescents. It seems that distinct cultural values are related to internalizing symptoms differently. This may account for the inconclusive findings on the relation between cultural values and youth mental health outcomes among Latino adolescents and calls for more specificity on studies examining youth cultural values and internalizing symptoms.

Finally, the findings of this study reveal the different nature of parental acceptance and parental psychological control through their distinct associations with family obligation. In combination with high parental psychological control, family obligation did not buffer the effect of parental psychological control on youth internalizing symptoms. On the other hand, family obligation seems to have an enhancing effect of parental acceptance on youth internalizing symptoms at high levels of parental acceptance. These findings indicate the need to study parenting dimensions, rather than parenting types (Calzada & Eyberg, 2002). Additionally, the results support studies that indicate the independent nature of

parenting dimensions. High parental acceptance does not indicate low levels or absence of parental psychological control. Future studies should examine other dimensions of parenting to examine how those are related to adolescent outcomes.

These findings have research and clinical implications. In terms of research, the results indicate that different cultural values, parenting dimensions, and internalizing symptoms are distinct constructs among Latino adolescents. For example, while family obligation serves as a moderator between acceptance and internalizing symptoms, affiliative obedience did not. Moreover, the effects of parenting dimensions may be more universal than originally proposed. Even though some studies have found that certain types of parenting are related to different outcomes among different ethnic groups, the results of this study indicate that acceptance, as found in previous research, is generally associated with positive outcomes. Contrary to the majority of findings, however, the cultural value of family obligation seemed to worsen the association between parental psychological control and internalizing symptoms rather than buffer the detrimental effects. In terms of clinical implications, the results suggest that it is important to consider the developmental trajectory of parenting dimensions and internalizing symptoms. Clinicians should also be aware of adolescents' cultural values by cultivating the significance of the family as they may serve to strengthen positive parenting among adolescents with internalizing symptoms. Finally, when working with parents of Latino adolescents, interventions should include a discussion on how different types of parenting dimensions are related to youth mental health outcomes.

Despite the strengths of the study, there are some limitations. First, it is important to take into account the heterogeneity of the Latino population. The findings cannot be generalized to Latinos of different socioeconomic status or background. Additionally, even though the measures of cultural values have been validated across ethnic groups, including Latinos, future studies should examine how these cultural values may differ across nationality and levels of acculturation. Second, the majority of the parental figures reported by the youth were mothers. More research needs to be done to include information on the parenting dimensions of fathers and its relation with youth mental health outcomes. Third, the study relied on adolescent self-reports. Reports from parents may serve as additional information in that parents may be able to better describe their parenting strategies and intent behind their actions. Future studies will also want to examine the moderating effect of gender as Latino parents may socialize their daughters and sons differently based on gender roles and expectations associated with cultural values.

In sum, this study was able to test youth cultural values as a moderator between parenting dimensions and youth internalizing symptoms. The results contribute to the inconclusive findings of the effect of cultural values on youth mental health and developmental outcomes. Cultural values cannot be assumed to be protective factors in all situations and outcomes. Furthermore, the study emphasizes the distinctive nature of parenting dimensions and internalizing symptoms. The study, however, illustrates that more research is needed to better understand the nuances of different cultural and familial processes among Latino

adolescents. By better understanding the interplay between cultural and familial processes, mental health services can better cater to the needs of a rapidly growing population in the US.

## References

- Albrecht, A. K., Galambos, N. L., & Jansson, S. M. (2007). Adolescents' internalizing and aggressive behaviors and perceptions of parents' psychological control: A panel study examining direction of effects. *Journal of Youth and Adolescence, 36*(5), 673–684. doi:10.1007/s10964-007-9191-5
- Anderson, E. R., & Mayes, L. C. (2010). Race/ethnicity and internalizing disorders in youth: A review. *Clinical Psychology Review, 30*(3), 338–48. doi:10.1016/j.cpr.2009.12.008
- Bámaca-Colbert, M. Y., Umaña-Taylor, A. J., & Gayles, J. G. (2012). A developmental-contextual model of depressive symptoms in Mexican-origin female adolescents. *Developmental Psychology, 48*(2), 406–21. doi:10.1037/a0025666
- Barber, B. K. (1996). Parental psychological control: Revisiting a neglected construct. *Child Development, 67*(6), 3296–3319.
- Barber, B. K., Olsen, J. E., & Shagle, S. C. (1994). Associations between parental psychological and behavioral control and youth internalized and externalized behaviors. *Child Development, 65*(4), 1120–1136.
- Barber, B. K., Stolz, H. E., Olsen, J. A., Collins, W. A., & Burchinal, M. (2005). Parental support, psychological control, and behavioral control: Assessing relevance across time, culture, and method. *Monographs of the Society for Research in Child Development, 70*(4).
- Calzada, E. J., & Eyberg, S. M. (2002). Self-reported parenting practices in Dominican and Puerto Rican mothers of young children. *Journal of Clinical*

*Child and Adolescent Psychology*, 31, 354–363. doi:  
10.1207/S15374424JCCP3103\_07

Camras, L. A., Sun, K., Li, Y., & Wright, M. F. (2012). Do Chinese and American children's interpretations of parenting moderate links between perceived parenting and child adjustment? *Parenting*, 12(4), 306–327. doi:10.1080/15295192.2012.709154

Chao, R., & Otuski-Clutter, M. (2011). Racial and ethnic differences: Sociocultural and contextual explanations. *Journal of Research on Adolescence*, 21, 47–60. doi: 10.1111/j.1532-7795.2010.00714.x

Crockett, L. J., Brown, J., Russell, S. T., & Shen, Y.-L. (2007). The meaning of good parent-child relationships for Mexican American adolescents. *Journal of Research on Adolescence*, 17(4), 639–668. doi:10.1111/j.1532-7795.2007.00539.x

Deater-Deckard, K., Tech, V., Lansford, J. E., Malone, P. S., Sorbring, E., Bacchini, D., ... Giunta, L. Di. (2012). The association between parental warmth and control in thirteen cultural groups. *Journal of Family Psychology*, 25(5), 790–794. doi:10.1037/a0025120.

Díaz-Guerrero, R. (1994). *Psicología del mexicano: descubrimiento de la etnopsicología* (6th ed.). Mexico, D.F., Mexico: Trillas.

Domenech Rodríguez, M. M., Donovanick, M. R., & Crowley, S. L. (2009). Parenting styles in a cultural context: Observations of “Protective Parenting” in first-generation Latinos. *Family Process*, 48(2), 195–210. doi:10.1111/j.1545-5300.2009.01277.x

- Ennis, S. R., Rios-Vargas, M., & Albert, N. G. (2011). *The Hispanic Population: 2010* (pp. 1–16).
- Fry, R., & Passel, J. S. (2009). *Latino children: A majority are U.S.-born offspring of immigrants*. Washington, DC.
- Fuligni, A. J. (2001). Family obligation and the academic motivation of adolescents from Asian, Latin American, and European backgrounds. *New Directions for Child and Adolescent Development*, (94), 61–75.  
doi:10.1002/cd.31
- Fuligni, A. J., Tseng, V., & Lam, M. (1999). Attitudes toward Family Obligations among American Adolescents with Asian, Latin American, and European Backgrounds. *Child Development*, 70(4), 1030–1044. doi:10.1111/1467-8624.00075
- Germán, M., Gonzales, N. A., & Dumka, L. (2009). Familism Values as a Protective Factor for Mexican-origin Adolescents Exposed to Deviant Peers. *The Journal of Early Adolescence*, 29(1), 16–42.  
doi:10.1177/0272431608324475
- Gonzales, N. A., Coxe, S., Roosa, M. W., White, R. M. B., Knight, G. P., Zeiders, K. H., & Saenz, D. (2011). Economic hardship, neighborhood context, and parenting: Prospective effects on Mexican-American adolescent's mental health. *American Journal of Community Psychology*, 47(1-2), 98–113.  
doi:10.1007/s10464-010-9366-1

- Greenfield, P. M., Keller, H., Fuligni, A., & Maynard, A. (2003). Cultural pathways through universal development. *Annual Review of Psychology, 54*, 461–90. doi:10.1146/annurev.psych.54.101601.145221
- Halgunseth, L. C., Ispa, J. M., & Rudy, D. (2006). Parental control in Latino families: An integrated review of the literature. *Child Development, 77*(5), 1282–97. doi:10.1111/j.1467-8624.2006.00934.x
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach*. New York: Guilford Press.
- 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*(1), 189–204. doi: 10.1111/1467-8624.t01-1-00530
- Illinois State Board of Education. (2009). Data analysis and progress reporting. Retrieved from [http://www.isbe.net/research/xls/school\\_sum09.xls](http://www.isbe.net/research/xls/school_sum09.xls).
- Kovacs, M. (1992). *Children's depression inventory*. (Multi-Health Systems, Ed.). New York.
- Kuhlberg, J. A., Peña, J. B., & Zayas, L. H. (2010). Familism, parent-adolescent conflict, self-esteem, internalizing behaviors and suicide attempts among adolescent Latinas. *Child Psychiatry and Human Development, 41*(4), 425–40. doi:10.1007/s10578-010-0179-0
- Le, T. N., & Stockdale, G. D. (2005). Individualism, collectivism, and delinquency in Asian American adolescents. *Journal of Clinical Child and*

*Adolescent Psychology*, 53, 34, 681–691. doi:  
10.1207/s15374424jccp3404\_10

- March, J. S., Parker, J. D. A., Sullivan, K., & Stallings, P. (1997). The Multidimensional Anxiety Scale for Children (MASC): Factor structure, reliability, and validity. *Journal of the American Academy of Child & Adolescent Psychiatry*, 36(4), 554–565. doi: 10.1097/00004583-199704000-00019
- Martinez, W., Polo, A. J., & Carter, J. S. (2012). Family orientation, language, and anxiety among low-income Latino youth. *Journal of Anxiety Disorders*, 26(4), 517-525. doi: 10.1016/j.janxdis.2012.02.005
- 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(1), 59–79. doi:10.1023/B:JOPP.0000039939.83804.37
- McLaughlin, K. A., Hilt, L. M., & Nolen-Hoeksema, S. (2007). Racial/ethnic differences in internalizing and externalizing symptoms in adolescents. *Journal of Abnormal Child Psychology*, 35(5), 801–16. doi:10.1007/s10802-007-9128-1
- McLeod, B. D., Weisz, J. R., & Wood, J. J. (2007). Examining the association between parenting and childhood depression: A meta-analysis. *Clinical Psychology Review*, 27(8), 986–1003. doi:10.1016/j.cpr.2007.03.001

- 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*(2), 155–72. doi:10.1016/j.cpr.2006.09.002
- Merikangas, K. R., He, J.-P., Brody, D., Fisher, P. W., Bourdon, K., & Koretz, D. S. (2010). Prevalence and treatment of mental disorders among US children in the 2001-2004 NHANES. *Pediatrics, 125*(1), 75–81. doi:10.1542/peds.2008-2598
- Merikangas, K. R., He, J.-P., Burstein, M., Swanson, S. A., Avenevoli, S., Cui, L., ... Swendsen, J. (2011). Lifetime prevalence of mental disorders in US adolescents: Results from the National Comorbidity Survey Replication-Adolescent Supplement (NCS-A). *Journal of the American Academy of Child & Adolescent Psychiatry, 49*(10), 980–989. doi:10.1016/j.jaac.2010.05.017.Lifetime
- Pettit, G. S., Laird, R. D., Dodge, K. A., Bates, J. E., & Criss, M. M. (2001). Antecedents and behavior-problem outcomes of parental monitoring and psychological control in early adolescence. *Child Development, 72*(2), 583–98. doi: 10.1111/1467-8624.00298
- Polo, A. J., & López, S. R. (2009). Culture, context, and the internalizing distress of Mexican American youth. *Journal of Clinical Child and Adolescent Psychology, 38*(2), 273–85. doi:10.1080/15374410802698370
- Putnick, D. L., Bornstein, M. H., Lansford, J. E., Chang, L., Deater-Deckard, K., Di Giunta, L., ... Bombi, A. S. (2012). Agreement in mother and father acceptance-rejection, warmth, and hostility/rejection/neglect of children

across nine countries. *Cross-Cultural Research*, 46(3), 191–223.

doi:10.1177/1069397112440931

Ramirez, M. (1969). Identification with Mexican-American values and psychological adjustment in Mexican-American adolescents. *International Journal of Social Psychiatry*, 15, 151–156. doi: 10.1177/002076406901500210

Scaramella, L. V., Conger, R. D., & Simons, R. L. (1999). Parental protective influences and gender-specific increases in adolescent internalizing and externalizing problems. *Journal of Research on Adolescence*, 9(2), 111–141. doi: 10.1207/s15327795jra0902\_1

Schludermann, E. H., & Schludermann, S. M. (1988). Children's Report on Parent Behavior (CRPBI-108, CRPBI-30) for older children and adolescents. Winnipeg, MB, Canada: University of Manitoba.

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(5), 620–32. doi:10.1007/s10964-010-9552-3

Smetana, J. G., Campione-Barr, N., & Metzger, A. (2006). Adolescent development in interpersonal and societal contexts. *Annual Review of Psychology*, 57, 255–84. doi:10.1146/annurev.psych.57.102904.190124

Smokowski, P. R., Rose, R. a, & Bacallao, M. (2010). Influence of risk factors and cultural assets on Latino adolescents' trajectories of self-esteem and

internalizing symptoms. *Child Psychiatry and Human Development*, 41(2), 133–55. doi:10.1007/s10578-009-0157-6

Umaña-Taylor, A. J., & Updegraff, K. a. (2007). Latino adolescents' mental health: Exploring the interrelations among discrimination, ethnic identity, cultural orientation, self-esteem, and depressive symptoms. *Journal of Adolescence*, 30(4), 549–67. doi:10.1016/j.adolescence.2006.08.002

Yap, M. B. H., Pilkington, P. D., Ryan, S. M., & Jorm, A. F. (2014). Parental factors associated with depression and anxiety in young people: A systematic review and meta-analysis. *Journal of Affective Disorders*, 156, 8–23. doi:10.1016/j.jad.2013.11.007

Zahn-Waxler, C., Klimes-Dougan, B., & Slattery, M. J. (2000). Internalizing problems of childhood and adolescence: Prospects, pitfalls, and progress in understanding the development of anxiety and depression. *Development and Psychopathology*, 12(3), 443–66.