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ORIGINAL ARTICLE

Variations in the Influence of Parental Socialization of Anxiety among Clinic Referred Children

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Abstract This study examined the relations between parental socialization of child anxious behaviors (i.e., reinforcement, punishment, modeling, transmission of information) and child anxiety and related problems at varying child sensitivity levels. Data corresponding to 70 clinic-referred children (*M* age = 9.86 years; 50 % girls; 49 % Hispanic/Latino, 51 % Caucasian) showed that for children with low (but not high) anxiety sensitivity, anxiety-related parental socialization behaviors were associated with more child anxiety and depression symptoms. Findings also indicated that parental socialization of anxious behaviors and anxiety sensitivity functioned similarly in the prediction of anxiety and depression across Caucasian and Hispanic/Latino children. There were no significant mean level variations across child sociodemographic characteristics in general, but anxiety-promoting parenting behaviors were twice as high in Hispanic/Latino compared to Caucasian families.

Keywords Parenting behaviors · Child anxiety · Child depression · Anxiety sensitivity

Introduction

Theoretical models of child anxiety emphasize the role of family factors in the development and maintenance of child maladaptive outcomes and consistently identify parenting as relevant to anxiety disorder development [1–10]. Typically, parental warmth and responsiveness are conceptually linked to lower levels of child anxiety [11, 12], while parental rejection, criticism, and control are linked to elevated anxiety in children [12–15]. However, when it comes to data accumulated across studies, McLeod, Wood, and Weisz [16] found in their meta-analysis that parenting behaviors (i.e., withdrawal, aversiveness, warmth, over involvement, autonomy-granting) only explained about four percent of the variance in child anxiety levels. Although this finding could suggest that parenting plays a relatively minor role in children's anxiety, it also is possible a more fine-grained operationalization and investigation of parental socialization of child anxiety is needed. That is, previously examined parenting constructs might not contribute to the development of anxiety specifically, but rather confer risk for child maladjustment more broadly. For example, certain parenting factors linked to child anxiety also predict childhood behavior problems that are clinically distinct from anxiety (e.g., rejection is linked to antisocial behavior but also to anxiety [17]). Thus, the small association between parenting and anxiety found in some studies could indicate a need to systematically study more nuanced parental behaviors that are specific to the socialization of anxiety in children. In fact, Ginsburg and colleagues [18] have argued for the need to study what they call "anxiety-promoting" parenting behaviors, which are any parenting practices that increase the likelihood that children will experience anxious symptoms. To this end, it was our objective to examine anxiety-promoting parenting behaviors theorized to lead to elevated anxiety in children via a closer examination of learning processes typically associated with some parenting practices [4].

Building on past research and learning theory, the present study examined parental socialization of anxiety defined as reinforcement, punishment, and modeling (i.e.,

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behaviorally and via transmission of information) in response to children's expressions of anxious thoughts and feelings. Prior research suggests that parents of anxious children engage in these anxiety-promoting socialization behaviors more frequently than parents of non-anxious children [19–24]. For example, Dadds et al. [24] found that parents of clinically anxious children reciprocated and rewarded child avoidant responses significantly more than parents of non-anxious children when asked to discuss, interpret, and respond to ambiguous laboratory-based situations. As explained, by enabling and reinforcing anxious responses (i.e., promoting anxious avoidance), parents might be inhibiting the development of effective coping strategies while promoting avoidance coping, which leads to anxiety [25]. Continuing with modeling, parents have been found to socialize anxious behaviors by describing to the child their own anxious thoughts, feelings, and behaviors [26–28]. Consistent with social learning theory [29], children who observe their parents respond with high anxiety to feared objects or situations often imitate anxious responses when facing similar objects and situations [28, 30]. Lastly, parents also may contribute to child anxious and avoidant responding by communicating to children "threat" messages. As articulated by Beidel and Turner [31], parents of anxious children are more likely than parents of non-anxious children to use direct instructions such as "be careful" and "don't climb too high" during free play situations. These verbalizations may serve to direct children's attention to the possible dangers that may (or not) be present in the environment thus creating schemas that denote situations as unsafe or unmanageable and thereby should be avoided [22, 27, 32].

It is important to highlight that while parental socialization of child anxiety has been linked to higher levels of fear and anxiety in clinical samples, some children who experience these parenting behaviors do not have an anxiety disorder [33–37]. In fact, it appears that children respond differently to similar parenting practices, including parental socialization of anxious emotions. Support for this differential response theory comes from models proposing that individuals with certain characteristics are more vulnerable to the effects of certain risk factors (e.g., diathesis-stress model; [38, 39]) and that children with some traits (and trait levels) are more sensitive to the negative (and positive) effects of parenting (differential susceptibility theory; [40–43]). In the child anxiety area, for instance, few studies have examined the differential response proposition in terms of the role parental socialization of child anxiety plays in contexts of other child vulnerabilities [44, 45]. This relative lack of research is likely linked to the fact that most child anxiety disorder risk factors are not typically anxiety specific. Also, the lack of focus on levels of vulnerability (e.g., in their relation to parental socialization of anxiety) may be related to a methodological need for relatively large prospective samples or specialty samples (e.g., anxiety disordered children who would sufficiently show traces of a specific vulnerability). Regarding the latter, data suggest that anxiety sensitivity is linked to problematic anxiety levels in children [46–49]. Anxiety sensitivity is defined as the degree to which an individual believes that feelings of anxiety or fear are distressing, aversive, and cause harmful social, physical, and psychological consequences (e.g., trembling will lead to ridicule or rejection, heart beating fast will lead to heart attack, inability to focus will lead to losing one's mind, etc.) [50, 51]. Research shows that anxiety sensitivity is distinct from (but related to) both fearfulness and anxiety symptoms [52–54]. For example, research shows that child anxiety sensitivity uniquely predicts trait anxiety levels even after controlling for both fear and manifest anxiety symptoms (this is true cross-sectionally and longitudinally) [20, 55]. Moreover, anxiety sensitivity also is distinct from anxiety symptoms but related to both anxiety and depression (even when controlling for anxiety in the prediction of the latter) [52, 56] possibly due to similarities in the etiology and clinical phenomenology underlying anxious and depressed symptoms (e.g., negative affectivity, cognitive distortions) [57]. Of unique relevance to the present study, theory and research on the origins of anxiety sensitivity point to childhood learning experiences [49]. In fact, four studies examined the relation between parental socialization of anxiety and anxiety sensitivity. That is, using a college sample, Watt and colleagues found in two studies that retrospective data supported a link between parental socialization of anxiety and anxiety sensitivity and using Dutch child samples Muris and colleagues [58–61] found support for the concurrent relations between parental socialization of anxiety and anxiety sensitivity in two other studies. Given the potential influence of parenting on child anxiety sensitivity and the well-documented link between anxiety sensitivity and anxiety/depression, we believe an important next step is to understand the relation between parental socialization of anxiety and child anxiety sensitivity in the prediction of child anxiety and depression symptoms. With a gain in knowledge regarding these relations, this research has the potential to inform theory about the mechanisms by which anxiety problems develop and may be more effectively reversed via intervention efforts.

Thus, the present study examined the effects of parental socialization of child anxiety behaviors on child anxiety (and related symptoms) among children with different levels of anxiety sensitivity. Herein, we relied on child self-reports, knowing that data supporting our predictions could serve to inform further research, ideally based on behavioral observations [62, 63]. Specifically, the present study

examined the relation among parental socialization of children's anxious thoughts and behaviors (i.e., reinforcement, punishment, modeling, transmission of information) and anxiety-related symptoms in childhood. We predicted that parenting factors would interact with child anxiety sensitivity levels to influence symptoms of anxiety and related problems. In addition to focusing on anxiety, it was deemed important to also focus on depression because of the high comorbidity and symptom overlap among these problems, as noted earlier [64, 65]. Also, by examining depression (in addition to anxiety), we feel this research could help discern whether parenting and anxiety sensitivity are unique or non-specific factors associated with child maladjustment (an issue relevant to Research Domain Criteria; [66, 67]). We thus predicted that parental socialization of children's expressions of anxious thoughts and feelings would serve as a shared factor for these symptom types, whereas anxiety sensitivity would be a more robust predictor of child anxiety symptoms compared to child depression symptoms. Because of the nature of our sample, we also conducted data analyses by ethnicity. That is, our dataset included a sizeable proportion of Hispanic/Latino children (mostly Mexican-origin) and thus parental socialization was considered separately for these groups. More specifically, when it comes to parental socialization of emotion, it has been suggested that parents select parenting practices designed to socialize their children's experience, expression, and regulation of emotion in a manner that reflects their cultural values [68]. To this end, Hispanic/Latino parents have a tendency to emphasize children's ability to exercise of self-control (restraint, *respeto*), get along with others (*simpatia*), and be obedient (*bien portados*) [69]. For example, research shows that Hispanic/Latino parents exert more direct control over their children's emotion expression and behavior [70, 71], use fewer emotion words when speaking with their children [72], and exhibit higher levels of authoritarian parenting styles (i.e., demanding and unresponsive behaviors [73, 74]) than parents from other backgrounds. In this context, limited research attention has been given to the ways Hispanic/Latino parents socialize child anxiety. However, emerging evidence suggests cross-ethnic variations in both the type of socialization practices and the effects of these practices on child anxiety may exist [68, 75–78]. For instance, Varela and colleagues [79] investigated a tendency for parents to communicate anxious (i.e., psychological) or somatic (i.e., physical) interpretations of ambiguous symptom situations to their children during a discussion task. In their study, Mexican-origin parents generated more somatic explanations and fewer anxious explanations compared to their Caucasian counterparts, a finding consistent with using somatization to explain culturally sanctioned emotional distress in traditional Mexican culture [80, 81]. In addition, Luis, Varela, and Moore, in another study [78], found that overcontrolling parenting behaviors were linked to lower levels of anxious behaviors for Mexican–American youth but to higher levels of anxious behaviors in Caucasian youth. As such, and based on these data, we anticipated cross-ethnic variations in the relations among parental socialization, anxiety sensitivity, and anxiety (along with depression) and thus conducted analyses for Hispanic/Latino children separately from their Caucasian counterparts.

Methods

Participants

Participants were 70 children (6–16 years old; M age = 9.86, SD = 2.59; 50 % girls) referred to a university-based anxiety disorders clinic by school staff (teachers, school counselors, nurses, school psychologists, or social workers) due to excessive fears and/or worries. Inclusion and exclusion criteria were ascertained via the Anxiety Disorders Interview Schedule for DSM-IV: Child and Parent Versions (ADIS-C/P; [82]). Exclusion criteria were developmental delays, psychosis, or schizophrenia. Based on the ADIS-C/P, 62 children met diagnostic criteria for an anxiety disorder. More specifically, 15 received a primary diagnosis of separation anxiety disorder, 14 social anxiety disorder, 13 generalized anxiety disorder, 13 specific phobia, five obsessive compulsive disorder, and two panic with agoraphobia. Eight of the children exhibited anxiety disorder symptoms as the principal problem but did not meet criteria for an anxiety disorder diagnosis. Prior research has shown more similarities than differences among children who are clinic referred and impaired but undiagnosed and those who meet criteria for an anxiety disorder; thus suggesting that a fewer number of DSM symptoms should not preclude this group of children from being considered 'clinically anxious' [83]. As such, data pertaining to these children were included in the current study. In this sample, 34 children (49 %) were Caucasian and 36 (51 %) were Hispanic/Latino (mostly Mexican-origin). Median annual family incomes ranged from $24,000 to $90,000.

Measures

Anxiety Disorders Interview Schedule for DSM-IV: Child and Parent Versions (ADIS-IV: C/P) [82] are semi-structured diagnostic interviews designed to assess for anxiety disorders and other major childhood disorders according to DSM-IV criteria. To determine diagnoses, separate interviews with the child and parent using the child and parent

versions of the ADIS-IV were conducted. The clinicians assigned diagnoses that both sources agreed were most interfering, as delineated in the ADIS-IV: C/P guide [82]. The diagnosis/disorder that was deemed most interfering or disturbing was rendered primary. Previous research has found that the ADIS-IV: C/P yields reliable anxiety symptom counts (intraclass correlation coefficients [ICCs] = 0.78–0.95 for ADIS-C, 0.81–0.96 for ADIS-P), diagnoses ($\kappa = 0.80$–0.92), and clinician severity ratings (rs = 0.80–0.84) [84].

Multidimensional Anxiety Scale for Children (*MASC*) [85, 86] is a 39-item self-rating scale designed to assess anxiety symptoms across four domains: physical symptoms, harm avoidance, social anxiety, and separation anxiety/panic. Sample items include: "My heart races or skips a beat," "I stay away from things that upset me," "I worry about other people laughing at me," "I get scared when my parents go away." Children report the extent to which each statement is true for them based on a four-point scale (0 = *never true*, 1 = *rarely true*, 2 = *sometimes true*, 3 = *often true*). Internal consistencies of the MASC have been reported as ranging from 0.87 to 0.90 and estimates of concurrent validity have been found to range from (rs) 0.60 to 0.69 [86, 87]. The internal consistency (alpha) coefficient for the MASC total scale was 0.91 for the current sample.

Children's Depression Inventory (*CDI*) [88] is a 27-item self-rating scale that assesses cognitive and behavioral aspects of depression in children and adolescents using a three-choice format (e.g., 0 = *"I am sad once in a while,"* 1 = *"I am sad many times,"* 2 = *"I am sad all the time"; 0 = "I feel like crying every day,"* 1 = *"I feel like crying many days,"* 2 = *"I feel like crying once in a while").* Internal consistencies of the CDI have been reported as ranging from 0.83 to 0.89 and test–retest reliabilities have been reported as ranging from 0.74 to 0.77 [89]. The CDI has been found to discriminate between psychiatric and nonclinical samples; the CDI also has been found to correlate with clinicians' independent global depression ratings (e.g., $r = 0.55$; [88]). In this sample, internal consistency (alpha coefficient) for the CDI total scale was 0.89.

Childhood Anxiety Sensitivity Index (*CASI*) [54] is an 18-item measure designed to assess the extent to which children and adolescents view the experience of anxiety-related somatic/physiological symptoms as distressing or aversive. Sample items include: "It scares me when I feel 'shaky,'" "When I'm afraid, I worry that I might be crazy," "I don't want other people to know when I'm afraid." Children report the extent to which they agree with each statement based on a three-point scale (1 = *none*, 2 = *some*, 3 = *a lot*). Previous research has found the CASI to be psychometrically sound: Internal consistency (alpha) coefficients of 0.87 and test–retest reliability rates using a 2-week retest interval of 0.79 were reported for clinical samples [54]. Moreover, Weems et al. [55] found the CASI to have incremental validity such that scores predicted variance in trait anxiety that was not predicted by other measures (i.e., Revised Children's Manifest Anxiety Scale [90] and Fear Survey Schedule for Children-Revised [91]). The internal consistency (alpha) coefficient for the CASI total scale was 0.91 for the current sample.

Parental socialization of anxious behaviors interview schedule (P-SABIS; [92]) is a modified version of the Learning History Questionnaire (LHQ; [59, 93]). P-SABIS scores reflect the degree to which parents or caregivers transmit information, model, reinforce, and/or punish child anxious emotion expression. To identify parental socialization relevant to child anxiety, the P-SABIS was administered as a follow-up to items endorsed by the child on the Negative Affect Self-Statement Questionnaire (NASSQ) [94] and the Physiological Hyperarousal Scale for Children (PHS-C) [95, 96]. This multi-measure approach allowed us to ascertain the extent to which parents or caregivers transmitted information, modeled, reinforced, and/or punished child emotion expression relevant to current anxiety symptoms (based on the NASSQ and PH-C). More specifically, the P-SABIS is comprised of 19-items and children respond using a three-point scale (0 = *none*, 1 = *some*, 2 = *a lot*). Sample P-SABIS items include: "When you experience [*anxiety symptom*]… do you skip your school work, homework, or jobs around the house?", "…do you get special things. Like special foods or presents?", "do your parents tell you that something bad may happen to you when you feel this way?", "do your parents seem scared or nervous about how you are feeling?" Similar to its adult counterpart (the LHQ), P-SABIS scores are derived by multiplying the number of anxiety items/symptoms positively endorsed by the mean frequency of parental socialization experiences positively endorsed as relevant to the target symptom. In this study, the internal consistency (alpha) coefficient for the P-SABIS was 0.94.

Procedures

Study procedures were approved by the university's Institutional Review Board. After parents' informed consent (assent for children) was obtained, the Anxiety Disorders Interview Schedule for DSM-IV: Child and Parent Versions (ADIS-IV: C/P) [82], the P-SABIS and a battery of self-report measures were administered. Bilingual research assistants administered Spanish versions of the consent forms, ADIS-IV, and questionnaires to Hispanic/Latino parents as needed. All children indicated a preference for the English language materials and were assisted, as necessary, by a trained research assistant who either read aloud

Table 1 Means and standard deviations for child clinical characteristics

	Total sample M (SD)	Hispanic/Latino M (SD)	Caucasian M (SD)
P-SABIS	24.76 (31.18)	33.54 (35.01)$_a$	15.46 (23.67)$_a$
CASI	27.33 (8.06)	28.08 (8.37)	26.53 (7.76)
MASC	49.14 (20.45)	48.83 (22.93)	49.47 (17.79)
CDI	9.80 (7.94)	11.33 (7.19)	8.18 (8.47)

P-SABIS Parental Socialization of Anxious Behaviors Interview Schedule, *CASI* Childhood Anxiety Sensitivity Index, *MASC* Multidimensional Anxiety Scale for Children, *CDI* Children's Depression Inventory

Means sharing the same subscripts are statistically different from each other, $p < .05$

Table 2 Intercorrelations among child clinical characteristics

	1	2	3	4
1. P-SABIS	–	0.73**	0.67**	0.80**
2. CASI	0.79**	–	0.57**	0.76**
3. MASC	0.72**	0.80**	–	0.48**
4. CDI	0.48**	0.33	0.49**	–

Correlations for Caucasian youth are above the diagonal ($N = 34$). Correlations for Hispanic/Latino youth are below the diagonal ($N = 36$)

P-SABIS Parental Socialization of Anxious Behaviors Interview Schedule, *CASI* Childhood Anxiety Sensitivity Index, *MASC* Multidimensional Anxiety Scale for Children, *CDI* Children's Depression Inventory

** $p < .01$; * $p < .05$

the self-report questions to younger children or monitored completion of the questionnaires. The P-SABIS was administered to participant children by a trained research assistant using a structured interview approach. No issues related to comprehension of materials were reported or observed. Only data corresponding to Caucasian and Hispanic/Latino children were used for this study's secondary data analyses to allow exploration of hypotheses using a cross-ethic comparative approach.

Results

Preliminary Analyses

Table 1 shows means and standard deviations for clinical characteristics corresponding to the total sample and separately by ethnicity. As shown, Hispanic/Latino children reported greater parental socialization of their anxious behaviors than Caucasian children [P-SABIS; t (68) = 2.50, $p < .05$]. No significant differences were found between the ethnic groups on the CASI, MASC, or CDI. Preliminary analyses indicated that all variables were normally distributed (skewness < 2 and kurtosis < 7; [97]). Correlations among the clinical characteristics are presented in Table 2 and several coefficients were statistically significant.

Outliers were examined using two measures of influence- DFFITS and DFBETAS values in SPSS version 20 [98]. DFFITS indicates the number of standard errors a predicted score changes with the inclusion of a case, and DFBETAS indicates the standardized change in an individual regression coefficient by presence of the data point. Because the sample size for this study is small to moderate, a cutoff of less than one was used to identify influential cases [99]. Analyses suggested the absence of any outliers influencing the results and so all cases were retained. A survey of missingness showed that less than 1 % of data were missing. Missingness was not correlated with any sociodemographic and child clinical characteristics and therefore assumed to have occurred at random.

Parental Socialization of Anxiety and Related Symptoms

Regression analyses were used to explore the prediction of MASC and CDI from parental socialization of child anxious behaviors and CASI. In each model, child age and sex were entered simultaneously as covariates at step 1 and mean centered scores on the parental socialization variable, CASI scores, and a P-SABIS × CASI interaction term were included in step 2. Regression models were tested separately for Caucasian versus Hispanic/Latino children and results are shown in Table 3.

For Hispanic/Latino children, results of the first regression model revealed that the P-SABIS, CASI, and P-SABIS × CASI interaction significantly predicted MASC-measured anxiety (controlling for age and sex), $\Delta R^2 = 0.64$, $F(5,30) = 16.98$, $p < .001$. Specifically, the P-SABIS ($\beta = .36$, $p = .03$) and CASI ($\beta = .61$, $p < .01$) both predicted higher MASC scores. Following Cohen et al. (2003), the significant P-SABIS × CASI interaction ($\beta = -.31$, $p = .01$) was probed by examining simple slopes. The simple slope of P-SABIS at low to average levels of CASI was significant in predicting MASC. That is, when CASI level was 1 SD below the mean, the simple slope of P-SABIS on MASC scores was significant ($b = 0.81$, t = 3.17, $p = .01$) and at mean levels of CASI, the simple slope of P-SABIS on MASC scores also was significant ($b = 0.36$, t = 2.23, $p = .03$). On the other hand, when CASI level was 1 SD above the mean, the simple slope of P-SABIS on MASC scores was not statistically significant. Turning to the CDI, regression model revealed that the P-SABIS, CASI, and P-SABIS × CASI

Table 3 Hierarchal regressions of P-SABIS and CASI on MASC and CDI

	MASC				CDI			
	β	*t* value	*p* value	Δ R^2	β	*t* value	*p* value	Δ R^2
Hispanic/Latino								
Step 1				0.10				0.06
Age	−.02	0.13	.90		.24	1.38	.18	
Sex	−.31	1.88	.07		−.06	0.34	.74	
Step 2				0.74**				0.44**
P-SABIS	.36	2.23	.03		.80	3.33	<.01	
CASI	.61	3.95	<.01		−.11	0.48	.64	
P-SABIS × CASI	−.31	2.92	<.01		−.37	2.39	.02	
Caucasian								
Step 1				0.04				0.05
Age	.20	1.10	.28		.17	0.96	.34	
Sex	.01	0.01	.99		−.11	.61	.55	
Step 2				0.57**				0.73**
P-SABIS	.78	3.82	<.01		.43	2.61	.01	
CASI	.39	1.88	.07		.28	1.71	.10	
P-SABIS × CASI	−.51	2.46	.02		−.23	1.39	.17	

P-SABIS Parental Socialization of Anxious Behaviors Interview Schedule, *CASI* Childhood Anxiety Sensitivity Index, *MASC* Multidimensional Anxiety Scale for Children, *CDI* Children's Depression Inventory

** $p < .01$; * $p < .05$

interaction significantly predicted CDI-measured depression (controlling for age and sex) for Hispanic/Latino children, Δ $R^2 = 0.38$, $F(5,30) = 4.62$, $p = .003$. More specifically, the CDI was significantly predicted by P-SABIS (β = .80, $p < .01$) and the P-SABIS × CASI interaction term (β = −.37, $p = .02$). In the prediction of the CDI, CASI did not reach statistical significance. Following Cohen et al. [99], the significant P-SABIS × CASI interaction was probed by examining simple slopes. The simple slope of P-SABIS at low to average levels of CASI was significant in predicting CDI. That is, when CASI level was 1 SD below the mean, the simple slope of P-SABIS on CDI scores was significant ($b = 1.33$, t = 3.6, $p < .01$) and at mean levels of CASI the simple slope of P-SABIS on CDI scores also was significant ($b = .80$, t = 3.33, $p < .01$). On the other hand, when CASI level was 1 SD above the mean, the simple slope of P-SABIS on CDI scores was not statistically significant.

For Caucasian children, results from the regression model showed that the P-SABIS, CASI, and P-SABIS × CASI interaction significantly predicted MASC-measured anxiety (controlling for age and sex), Δ $R^2 = 0.54$, $F(5,29) = 7.51$, $p < .001$. MASC was significantly predicted by the P-SABIS (β = .78, $p < .01$) and the P-SABIS × CASI interaction (β = −.51, $p = .02$). In the prediction of the MASC for Caucasian children, CASI did not reach statistical significance. Following Cohen et al. [99], the significant P-SABIS × CASI interaction was probed by examining simple slopes. The simple slope of P-SABIS at low levels of CASI was significant in predicting MASC. That is, when CASI level was 1 SD below the mean, the simple slope of P-SABIS on MASC scores was significant ($b = 1.05$, t = 3.89, $p < .01$) and at mean levels of CASI, the simple slope of P-SABIS on MASC scores was also significant ($b = 0.78$, t = 3.82, $p < .01$). On the other hand, when CASI level was 1 SD above the mean, the simple slope of P-SABIS on MASC scores is not statistically significant. Results from the regression model focusing on the CDI showed that the P-SABIS, CASI, and P-SABIS × CASI interaction significantly predicted CDI-measured depression (controlling for age and sex), Δ $R^2 = 0.68$, $F(5,29) = 14.86$, $p < .001$.CDI scores were predicted by P-SABIS (β = .43, $p = .01$) but CASI and the P-SABIS × CASI interaction term did not reach statistical significance.

Discussion

Findings extend previous knowledge about the parenting and child anxiety relations and this is the first study to examine and demonstrate variations in the link between parental socialization and child anxiety levels as a function of child anxiety sensitivity. While interplays between parenting and child symptoms have been articulated in the literature [100, 101], this study reveals new knowledge showing that for children with low anxiety sensitivity levels, anxiety-related parental socialization processes exerted a robust deleterious and concurrent effect on child anxiety levels. The effects of anxiety-related parental socialization processes did not reach significance in the concurrent prediction of child anxiety for children with

high anxiety sensitivity levels. Thus, findings provide evidence for individual child-level variations in the influence parenting may exert on child anxiety but the pattern of results varied from that posited by well-established differential response theory.

Conceptually, diathesis-stress and differential susceptibility theories would predict that children with *high* (not low) anxiety sensitivity would show greater vulnerability to parental socialization behaviors and thus report greater internalizing symptoms; however, our findings did not support this proposition. For our findings, other theoretical explanations may be more useful. That is, from an open systems theory perspective, parental socialization and anxiety sensitivity may represent different paths to a similar or convergent outcome (anxiety symptoms) because of equifinality [102, 103]. Moreover, in the current sample, anxiety sensitivity predicted significantly more anxiety symptoms in Hispanic/Latino children but not in Caucasian children suggesting there may be different pathways to anxiety for some youth compared to others on the basis of culture and/or context. Lastly, from an attention theory perspective [104, 105], parental socialization and anxiety sensitivity may be influencing a common mechanism in the maintenance of anxiety vis-à-vis self-directed attention toward threat as it is the case with anxiety sensitivity ("When I notice that my heart is beating fast, I worry that there might be something wrong with me") or parent-directed attention toward threat as it is the case with parental socialization ("… parents tell you that they worry about you feeling this way"). Thus, we are proposing a synthesis in that our findings might be tapping on a common process (e.g., attention) by which anxiety is maintained (or even exacerbated [106]) but activated by distinct paths (parental socialization, anxiety sensitivity). And, perhaps to better understand the reason for these varying paths, future research could examine the activating roles of cultural and contextual settings.

Turning to child depression levels, this study showed that for children with low anxiety sensitivity levels, anxiety-related parental socialization processes exerted a concurrent effect on their depression. On the other hand, the effects of anxiety-related parental socialization processes did not reach significance in the concurrent prediction of child depression levels for children with high anxiety sensitivity levels. The interaction effect in the regression model reached statistical significance for Hispanic/Latino and approached significance for Caucasian children. We believe that interpreting this effect for Hispanic/Latino children may require a culturally responsive explanation as well. That is, the parental behaviors indexed in this study alleviate (rather than exacerbate) symptoms of depression for Hispanic/Latino children with elevated anxiety sensitivity (this was not the case for Caucasian children in this study). This is possible because what our traditional parenting measure conceptualizes as positive reinforcement of child anxious behaviors also could be defined as *familismo* (a cultural factor implicated as a protective factor in the research literature; [107–110]). For example, our measure of parental socialization includes the item "When you experience [*anxiety symptom*], do you get special attention or get to spend special time with your parents?" and the Mexican–American Cultural Values Scale (MACVS; [111]; a measure that includes a *familismo* scale) includes several items that are similar (such as "Family provides a sense of security because they will always be there for you"). Thus, Hispanic/Latino children may be interpreting some parental socialization of anxiety items within a schema of *familismo* support (the cultural value emphasizing family closeness and reliance on family members as the primary source of support). These possibilities, however, require careful examination in future research and possibly by using mixed methods.

Taken together, we believe our primary findings are robust for several reasons. First, well-established developmental psychopathology and anxiety theory as well as cultural contextual factors relevant to Hispanic/Latino children and families help explain the results [8, 68, 112]. Second, the parental socialization and child mental health literature [28, 113] as well as literature supporting common factors linked to anxiety and depression [64, 65, 114] are consistent with our results indicating that parenting behaviors predict both these types of child symptoms, although this was true under specific conditions. Third, consistent with past research, our study replicated the well-established relations among anxiety sensitivity and anxiety symptoms among children [46–49, 114–116]. In terms of implications, it is premature of offer recommendations to providers, teachers, or parents. However, if these findings replicate, then it would be important to explore the extent to which intervention efforts (e.g., parenting programs) aimed at targeting problematic child anxiety might need to be refined. It also would be important to establish the need for developing measurement strategies that integrate data relevant to more comprehensive child assessments (e.g., sensitivities + parental socialization) to achieve more personalized child profiles that are relevant to a presenting problem (e.g., anxiety).

Several limitations should be noted. First, the sample size for this study likely placed restrictions on our ability to detect small effects and statistical significance in our models (e.g., some of our non-significant p values ranged from 0.10 to 0.17). In addition, data used in the current study was cross-sectional and therefore precludes our ability to make conclusions related to possible causal associations between parental socialization, anxiety sensitivity, and anxiety and related symptoms. However, several

significant relations discussed are robust and consistent with previous theory and research. Second, our primary findings were based on measures of child anxiety sensitivity and parental socialization of anxiety behaviors that might be somewhat limited. In fact, data on cross-ethnic measurement invariance is limited in the field of child anxiety, although the research published to date indicates that most measures are robust [117–119]. Nonetheless, despite our measures' excellent reliability and validity, future research should examine their cross-ethnic (Hispanic/Latino, Caucasian) measurement invariance. For example, given their tendency to experience more physiological symptoms of anxiety than their Caucasian counterparts, Hispanic/Latino children may respond differently to items on the Child Anxiety Sensitivity Index [120]. In addition, the current study relied on child self-report of parental socialization behaviors, as parent report and observational data were not available in the dataset for these secondary analyses. Measuring children's perceptions of parenting behaviors is sensible given that children may be more influenced by their interpretations of parents' actions rather than actual parenting behaviors or the behaviors self-reported by parents [121, 122]. However, there are typically low levels of agreement between parent and child report of parenting behavior [122] with youth reporting less positive parenting than caregivers [123]. Therefore, future research investigating the influence of parental socialization behaviors on child anxiety should incorporate parent report and observational data. Third, the Hispanic/Latino children in our sample were largely Mexican-origin but not necessarily a homogeneous group. As a result, our findings might only generalize to a specific segment of these minority children (e.g., those who adhere less/more to Mexican values, those living near poverty). For this reason, it would be important for future studies to examine whether cultural orientation and/or socioeconomic status may have moderated effects.

Summary

This study examined the influence of parental socialization of child anxious behaviors (i.e., reinforcement, punishment, modeling, transmission of information) on child anxiety and related problems (i.e., depression) at varying child sensitivity levels. Data corresponding to 70 clinic-referred children revealed that for children with low (but not high) anxiety sensitivity, anxiety-related parental socialization behaviors were associated with more child anxiety and depression symptoms. Findings also indicated that parental socialization of anxious behaviors and anxiety sensitivity functioned similarly in the prediction of anxiety and depression across Caucasian and Hispanic/Latino (primarily Mexican-origin children). However, some cross-ethnic differences emerged such that average anxiety-promoting parenting behaviors were twice as prevalent in Hispanic/Latinos compared to Caucasians and parental socialization appeared to alleviate depression for Hispanic/Latino (but not Caucasian) children with elevated anxiety sensitivity levels. Taken together, these findings highlight the importance of carefully considering the role of parental socialization of child anxious emotion in the development and treatment of child anxiety and related disorders.

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References

1. Chorpita BF, Barlow DH (1998) The development of anxiety: the role of control in the early environment. Psychol Bull 124(1):3–21
2. Craske MG (1999) Anxiety disorders: psychological approaches to theory and treatment. Westview Press, Boulder, CO
3. Dadds MR, Barrett PM (1996) Family processes in child and adolescent anxiety and depression. Behav Change 13(4): 231–239
4. Field AP, Cartwright-Hatton S, Reynolds S, Creswell C (2008) Future directions for child anxiety theory and treatment. Cogn Emot 22(3):385–394
5. Fox NA, Henderson HA, Marshall PJ, Nichols KE, Ghera MM (2005) Behavioral inhibition: linking biology and behavior within a developmental framework. Annu Rev Psychol 56:235–262
6. Krohne HW (1990) Parental childrearing and anxiety development. In: Hurrelmann K, Losel F (eds) Health hazards in adolescence. Walter de Gruyter & Co., Berlin, Germany, pp 115–130
7. Manassis K, Bradley SJ (1994) The development of childhood anxiety disorders: toward an integrated model. J Appl Dev Psychol 15(3):345–366
8. Wood JJ, McLeod BD, Sigman M, Hwang W-C, Chu BC (2003) Parenting and childhood anxiety: theory, empirical findings, and future directions. J Child Psychol Psychiatry 44(1):134–151
9. Thompson RA (2001) Childhood anxiety disorders from the perspective of emotion regulation and attachment. In: Vasey MW, Dadds MR (eds) The developmental psychopathology of anxiety. Oxford University Press, New York, pp 160–182
10. Rapee RM (2001) The development of generalized anxiety. In: Vasey MW, Dadds MR (eds) The developmental psychopathology of anxiety. Oxford University Press, New York, pp 481–503
11. Hudson JL, Rapee RM (2001) Parent—child interactions and anxiety disorders: an observational study. Behav Res Ther 39(12):1411–1427
12. Hudson JL, Dodd HF, Lyneham HJ, Bovopoulous N (2011) Temperament and family environment in the development of anxiety disorder: two-year follow-up. J Am Acad Child Adolesc Psychiatry 50(12):1255–1264
13. Festa CC, Ginsburg GS (2011) Parental and peer predictors of social anxiety in youth. Child Psychiatry Hum Dev 42(3): 291–306

14. Ginsburg GS, Siqueland L, Masia-Warner C, Hedtke KA (2004) Anxiety disorders in children: family matters. Cogn Behav Pract 11(1):28–43
15. Edwards SL, Rapee RM, Kennedy S (2010) Prediction of anxiety symptoms in preschool-aged children: examination of maternal and paternal perspectives. J Child Psychol Psychiatr 51(3):313–321
16. McLeod BD, Weisz JR, Wood JJ (2007) Examining the association between parenting and childhood depression: a meta-analysis. Clin Psychol Rev 27(8):986–1003
17. Trentacosta CJ, Shaw DS (2008) Maternal predictors of rejecting parenting and early adolescent antisocial behavior. J Abnorm Child Psychol 36(2):247–259
18. Ginsburg GS, Grover RL, Cord JJ, Ialongo N (2006) Observational measures of parenting in anxious and nonanxious mothers: does type of task matter? J Clin Child Adolesc Psychol 35(2):323–328
19. Barrett PM, Dadds MR, Rapee RM (1996) Family treatment of childhood anxiety: a controlled trial. J Consult Clin Psychol 64(2):333–342
20. Chorpita BF, Albano AM, Barlow DH (1996) Child anxiety sensitivity index: considerations for children with anxiety disorders. J Clin Child Psychol 25(1):77–82
21. Ginsburg GS, Grover RL, Ialongo N (2004) Parenting behaviors among anxious and non-anxious mothers: relation with concurrent and long-term child outcomes. Child Fam Behav Ther 26(4):23–41
22. Muris P, Merckelbach H (1998) Perceived parental rearing behaviour and anxiety disorders symptoms in normal children. Pers Individ Dif 25(6):1199–1206
23. Rapee R (2001) The development of generalized anxiety. In: Dadds MVM (ed) The developmental psychopathology of anxiety. Oxford University Press, Oxford, pp 481–503
24. Dadds MR, Barrett PM, Rapee RM, Ryan S (1996) Family process and child anxiety and aggression: an observational analysis. J Abnorm Child Psychol 24(6):715–734
25. Breinholst S, Esbjørn BH, Reinholdt-Dunne ML, Stallard P (2012) CBT for the treatment of child anxiety disorders: a review of why parental involvement has not enhanced outcomes. J Anxiety Disord 26(3):416–424
26. Beidel DC, Turner SM (1997) At risk for anxiety: psychopathology in the offspring of anxious parents. J Am Acad Child Adolesc Psychiatry 36(7):918–924
27. Bögels SM, Brechman-Toussaint ML (2006) Family issues in child anxiety: attachment, family functioning, parental rearing and beliefs. Clin Psychol Rev 26(7):834–856
28. Fisak B Jr, Grills-Taquechel AE (2007) Parental modeling, reinforcement, and information transfer: risk factors in the development of child anxiety? Clin Child Fam Psychol Rev 10(3):213–231
29. Bandura A (1977) Social learning theory. Prentice-Hall, Englewood Cliffs, NJ
30. Bruch MA, Heimberg RG (1994) Differences in perceptions of parental and personal characteristics between generalized and nongeneralized social phobics. J Anxiety Disord 8(2): 155–168
31. Beidel DC, Turner SM (1998) Shy children, phobic adults: Nature and treatment of social phobia. American Psychological Association, Washington, DC
32. Lester KJ, Field AP, Oliver S, Cartwright-Hatton S (2009) Do anxious parents interpretive biases towards threat extend into their child's environment? Behav Res Ther 47(2):170–174
33. Burstein M, Ginsburg GS (2010) The effect of parental modeling of anxious behaviors and cognitions in school-aged children: an experimental pilot study. Behav Res Ther 48(6): 506–515
34. Muris P, Merckelbach H, Holdrinet I, Sijsenaar M (1998) Treating phobic children: effects of EMDR versus exposure. J Consult Clin Psychol 66(1):193–198
35. Roelofs J, Meesters C, ter Huurne M, Bamelis L, Muris P (2006) On the links between attachment style, parental rearing behaviors, and internalizing and externalizing problems in non-clinical children. J Child Fam Stud 15(3):319–332
36. Muris P, Steerneman P, Merckelbach H, Meesters C (1996) The role of parental fearfulness and modeling in children's fear. Behav Res Ther 34(3):265–268
37. van Brakel AM, Muris P, Bögels SM, Thomassen C (2006) A multifactorial model for the etiology of anxiety in non-clinical adolescents: main and interactive effects of behavioral inhibition, attachment and parental rearing. J Child Fam Stud 15(5):568–578
38. Monroe SM, Simons AD (1991) Diathesis-stress theories in the context of life stress research: implications for the depressive disorders. Psychol Bull 110(3):406
39. Zuckerman M (1999) Vulnerability to psychopathology: a biosocial model. American Psychological Association, Washington, DC
40. Belsky J, Hsieh K-H, Crnic K (1998) Mothering, fathering, and infant negativity as antecedents of boys' externalizing problems and inhibition at age 3 years: differential susceptibility to rearing experience? Dev Psychopathol 10(02):301–319
41. Bradley RH, Corwyn RF (2008) Infant temperament, parenting, and externalizing behavior in first grade: a test of the differential susceptibility hypothesis. J Child Psychol Psychiatry 49(2): 124–131
42. Belsky J, Pluess M (2009) Beyond diathesis stress: differential susceptibility to environmental influences. Psychol Bull 135(6): 885
43. Pluess M, Belsky J (2010) Differential susceptibility to parenting and quality child care. Dev Psychol 46(2):379
44. Kiff CJ, Lengua LJ, Bush NR (2011) Temperament variation in sensitivity to parenting: predicting changes in depression and anxiety. J Abnorm Child Psychol 39(8):1199–1212
45. Hastings PD et al (2008) Parental socialization, vagal regulation, and preschoolers' anxious difficulties: direct mothers and moderated fathers. Child Dev 79(1):45–64
46. McLaughlin EN, Stewart SH, Taylor S (2007) Childhood anxiety sensitivity index factors predict unique variance in DSM-IV anxiety disorder symptoms. Cogn Behav Ther 36(4):210–219
47. Naragon-Gainey K (2010) Meta-analysis of the relations of anxiety sensitivity to the depressive and anxiety disorders. Psychol Bull 136(1):128
48. Rabian B, Peterson RA, Richters J, Jensen PS (1993) Anxiety sensitivity among anxious children. J Clin Child Psychol 22(4):441–446
49. Reiss S (1991) Expectancy model of fear, anxiety, and panic. Clin Psychol Rev 11(2):141–153
50. Reiss S, McNally R (1985) Expectancy model of fear. In: Reiss S, Bootzin RR (eds) Theoretical issues in behavior therapy. Academic Press, New York, pp 107–121
51. Reiss S, Peterson RA, Gursky DM, McNally RJ (1986) Anxiety sensitivity, anxiety frequency and the prediction of fearfulness. Behav Res Ther 24(1):1–8
52. Muris P, Schmidt H, Merckelbach H, Schouten E (2001) Anxiety sensitivity in adolescents: factor structure and relationships to trait anxiety and symptoms of anxiety disorders and depression. Behav Res Ther 39(1):89–100
53. Rodriguez BF, Bruce SE, Pagano ME, Spencer MA, Keller MB (2004) Factor structure and stability of the anxiety sensitivity index in a longitudinal study of anxiety disorder patients. Behav Res Ther 42(1):79–91
54. Silverman WK, Fleisig W, Rabian B, Peterson RA (1991) Child anxiety sensitivity index. J Clin Child Psychol 20(2):162–168

55. Weems CF, Hammond-Laurence K, Silverman WK, Ginsburg GS (1998) Testing the utility of the anxiety sensitivity construct in children and adolescents referred for anxiety disorders. J Clin Child Psychol 27(1):69–77
56. Weems CF, Hammond-Laurence K, Silverman WK, Ferguson C (1997) The relation between anxiety sensitivity and depression in children and adolescents referred for anxiety. Behav Res Ther 35(10):961–966
57. Taylor S, Koch WJ, Woody S, McLean P (1996) Anxiety sensitivity and depression: how are they related? J Abnorm Psychol 105(3):474
58. Muris P, Merckelbach H, Meesters C (2001) Learning experiences and anxiety sensitivity in normal adolescents. J Psychopathol Behav Assess 23(4):279–283
59. Watt MC, Stewart SH, Cox BJ (1998) A retrospective study of the learning history origins of anxiety sensitivity. Behav Res Ther 36(5):505–525
60. Watt MC, Stewart SH (2000) Anxiety sensitivity mediates the relationships between childhood learning experiences and elevated hypochondriacal concerns in young adulthood. J Psychosom Res 49(2):107–118
61. Muris P, Meesters C (2004) Children's somatization symptoms: correlations with trait anxiety, anxiety sensitivity, and learning experiences. Psychol Rep 94(3c):1269–1275
62. Budinger MC, Drazdowski TK, Ginsburg GS (2013) Anxiety-promoting parenting behaviors: a comparison of anxious parents with and without social anxiety disorder. Child Psychiatry Hum Dev 44(3):412–418
63. Teetsel RN, Ginsburg GS, Drake KL (2014) Anxiety-promoting parenting behaviors: a comparison of anxious mothers and fathers. Child Psychiatry Hum Dev 45(2):133–142
64. Brady EU, Kendall PC (1992) Comorbidity of anxiety and depression in children and adolescents. Psychol Bull 111(2): 244–255
65. Seligman LD, Ollendick TH (1998) Comorbidity of anxiety and depression in children and adolescents: an integrative review. Clin Child Fam Psychol Rev 1(2):125–144
66. Insel T et al (2010) Research domain criteria (RDoC): toward a new classification framework for research on mental disorders. Am J Psychiatry 167(7):748–751
67. Craske MG (2012) The R-DOC initiative: science and practice. Depress Anxiety 29(4):253–256
68. Cole PM, Dennis TA (1998) Variations on a theme: culture and the meaning of socialization practices and child competence. Psychol Inq 9(4):276–278
69. Julian TW, McKenry PC, McKelvey MW (1994) Cultural variations in parenting: perceptions of Caucasian, African-American, Hispanic, and Asian-American parents. Fam Relat 43(1):30–37
70. Bulcroft RA, Carmody DC, Bulcroft KA (1996) Patterns of parental independence giving to adolescents: Variations by race, age, and gender of child. J Marriage Fam 58(4):866–883
71. Fuligni AJ (1998) Authority, autonomy, and parent–adolescent conflict and cohesion: a study of adolescents from Mexican, Chinese, Filipino, and European backgrounds. Dev Psychol 34(4):782
72. Cervantes CA (2002) Explanatory emotion talk in Mexican immigrant and Mexican American families. Hisp J Behav Sci 24(2):138–163
73. Knight GP, Virdin LM, Roosa M (1994) Socialization and family correlates of mental health outcomes among Hispanic and Anglo American children: consideration of cross-ethnic scalar equivalence. Child Dev 65(1):212–224
74. MacPhee D, Fritz J, Miller-Heyl J (1996) Ethnic variations in personal social networks and parenting. Child Dev 67(6): 3278–3295
75. Varela RE, Sanchez-Sosa JJ, Biggs BK, Luis TM (2009) Parenting strategies and socio-cultural influences in childhood anxiety: Mexican, Latin American descent, and European American families. J Anxiety Disord 23(5):609–616
76. Cole PM, Tan PZ (2007) Emotion socialization from a cultural perspective. In: Grusec J, Hastings P (eds) Handbook of socialization: theory and research. Guilford Press, New York
77. Coll CG et al (1996) An integrative model for the study of developmental competencies in minority children. Child Dev 67(5):1891–1914
78. Luis TM, Varela RE, Moore KW (2008) Parenting practices and childhood anxiety reporting in Mexican, Mexican American, and European American families. J Anxiety Disord 22(6):1011–1020
79. Varela RE et al (2004) Anxiety reporting and culturally associated interpretation biases and cognitive schemas: a comparison of Mexican, Mexican American, and European American families. J Clin Child Adolesc Psychol 33(2):237–247
80. Escobar JI, Rubio-Stipec M, Canino G, Karno M (1989) Somatic Symptom Index (SSI): a new and abridged somatization construct. J Nerv Ment Dis 177(3):140–146
81. Koss JD (1990) Somatization and somatic complaint syndromes among Hispanics: overview and ethnopsychological perspectives. Transcultural Psychiatry 27(5):5–29
82. Silverman WA, Marie Anne (1996) Anxiety Disorders Interview Schedule (ADIS-IV) Child and Parent Interview Schedules. Oxford University Press, New York
83. Angold A, Costello E, Farmer EM, Burns BJ, Erkanli A (1999) Impaired but undiagnosed. J Am Acad Child Adolesc Psychiatry 38(2):129–137
84. Silverman WK, Saavedra LM, Pina AA (2001) Test-retest reliability of anxiety symptoms and diagnoses with the anxiety disorders interview schedule for DSM-IV: child and parent versions. J Am Acad Child Adolesc Psychiatry 40(8):937–944
85. March JS, Amaya-Jackson L, Terry R, Costanzo P (1997) Posttraumatic symptomatology in children and adolescents after an industrial fire. J Am Acad Child Adolesc Psychiatry 36(8): 1080–1088
86. March JS, Parker JD, Sullivan K, Stallings P, Conners CK (1997) The Multidimensional Anxiety Scale for Children (MASC): factor structure, reliability, and validity. J Am Acad Child Adolesc Psychiatry 36(4):554–565
87. Rynn MA et al (2006) The psychometric properties of the MASC in a pediatric psychiatric sample. J Anxiety Disord 20(2):139–157
88. Kovacs M (1985) The Children's Depression, Inventory (CDI). Psychopharmacol Bull 21(4):995–998
89. Smucker MR, Craighead WE, Craighead LW, Green BJ (1986) Normative and reliability data for the children's depression inventory. J Abnorm Child Psychol 14(1):25–39
90. Reynolds CR, Richmond BO (1979) Factor structure and construct validity of "what I think and feel": the revised children's manifest anxiety scale. J Pers Assess 43(3):281–283
91. Ollendick TH (1983) Reliability and validity of the Revised Fear Surgery Schedule for Children (FSSC-R). Behav Res Ther 21(6):685–692
92. Alvarez de Lugo CI (2005) Children's learning of anxiety sensitivity: a preliminary study using a sample of youths referred for anxiety disorders. Unpublished thesis, Florida International University
93. Ehlers A (1993) Somatic symptoms and panic attacks: a retrospective study of learning experiences. Behav Res Ther 31(3): 269–278
94. Ronan KR, Kendall PC, Rowe M (1994) Negative affectivity in children: development and validation of a self-statement questionnaire. Cognit Ther Res 18(6):509–528

95. Laurent J, Catanzaro SJ, Joiner TE (2004) development and preliminary validation of the physiological hyperarousal scale for children. Psychol Assess 16(4):373–380
96. Laurent J et al (1999) A measure of positive and negative affect for children: scale development and preliminary validation. Psychol Assess 11(3):326
97. West SG, Finch JF, Curran PJ (1995) Structural equation models with nonnormal variables: problems and remedies. In: Hoyle R (ed) Structural equation modeling: concepts, issues, and applications. Sage Publications, Inc, Thousand Oaks, CA
98. Anonymous (2011) IBM SPSS Statistics for Windows, Version 20.0. (IBM Corp., Armonk, NY)
99. Cohen J, Cohen P, West SG, Aiken LS (2003) Applied multiple regression/correlation analysis for the behavioral sciences. Lawrence Erlbaum Associates Publishers, Mahwah, NJ
100. Ginsburg GS, Schlossberg MC (2002) Family-based treatment of childhood anxiety disorders. Int Rev Psychiatry 14(2):143–154
101. Ginsburg GS (2004) Anxiety prevention programs for youth: practical and theoretical considerations. Clinical Psychol 11(4):430–434
102. Bertalanffy LV (1968) General system theory: Foundations, development, applications. Braziller, New York
103. Cicchetti D, Rogosch FA (1996) Equifinality and multifinality in developmental psychopathology. Dev Psychopathol 8(04):597–600
104. Roy AK et al (2008) Attention bias toward threat in pediatric anxiety disorders. J Am Acad Child Adolesc Psychiatry 47(10): 1189–1196
105. Waters AM, Henry J, Mogg K, Bradley BP, Pine DS (2010) Attentional bias towards angry faces in childhood anxiety disorders. J Behav Ther Exp Psychiatry 41(2):158–164
106. Barlow DH (2000) Unraveling the mysteries of anxiety and its disorders from the perspective of emotion theory. Am Psychol 55(11):1247–1263
107. Ayón C, Marsiglia FF, Bermudez-Parsai M (2010) Latino family mental health: exploring the role of discrimination and familismo. J Community Psychol 38(6):742–756
108. Gamble WC, Modry-Mandell K (2008) Family relations and the adjustment of young children of Mexican descent: do family cultural values moderate these associations? Soc Dev 17(2): 358–379
109. Germán M, Gonzales NA, Dumka L (2009) Familism values as a protective factor for Mexican-origin adolescents exposed to deviant peers. J Early Adolesc 29(1):16–42
110. Morcillo C et al (2011) Parental familism and antisocial behaviors: development, gender, and potential mechanisms. J Am Acad Child Adolesc Psychiatry 50(5):471–479
111. Knight GP et al (2010) The Mexican American Cultural Values Scale for adolescents and adults. J Early Adolesc 30(3):444–481
112. Sroufe LA, Rutter M (1984) The domain of developmental psychopathology. Child Dev 55(1):17–29
113. Rapee RM (2002) The development and modification of temperamental risk for anxiety disorders: prevention of a lifetime of anxiety? Biol Psychiatry 52(10):947–957
114. Chorpita BF, Albano AM, Barlow DH (1998) The structure of negative emotions in a clinical sample of children and adolescents. J Abnorm Psychol 107(1):74
115. Silverman WK, Weems CF (1999) Anxiety sensitivity in children. Anxiety sensitivity: theory, research, and treatment of the fear of anxiety. The LEA series in personality and clinical psychology. Lawrence Erlbaum Associates Publishers, Mahwah, NJ, pp 239–268
116. Laurent J, Schmidt NB, Catanzaro SJ, Joiner TE Jr, Kelley AM (1998) Factor structure of a measure of anxiety sensitivity in children. J Anxiety Disord 12(4):307–331
117. Pina AA, Gonzales NA, Holly LE, Zerr AA, Wynne H (2013) Toward evidence-based assessment of ethnic minority youth. In: McLeod AJ-D BD, Ollendick T (eds) Diagnostic and Behavioral Assessment in Children and Adolescents: a Clinical Guide. Guilford, New York, pp 348–376
118. Holly LE, Little M, Pina AA, Caterino LC (in press) Assessment of anxiety symptoms in school children: a cross-sex and ethnic examination. J Abnorm Child Psychol
119. Varela RE, Sanchez-Sosa JJ, Biggs BK, Luis TM (2008) Anxiety symptoms and fears in Hispanic and European American children: cross-cultural measurement equivalence. J Psychopathol Behav Assess 30(2):132–145
120. Pina AA, Silverman WK (2004) Clinical phenomenology, somatic symptoms, and distress in Hispanic/Latino and European American youths with anxiety disorders. J Clin Child Adolesc Psychol 33(2):227–236
121. Demo DH, Small SA, Savin-Williams RC (1987) Family relations and the self-esteem of adolescents and their parents. J Marriage Fam 49(4):705–715
122. Tein J-Y, Roosa MW, Michaels M (1994) Agreement between parent and child reports on parental behaviors. J Marriage Fam 56(2):341–355
123. Bögels SM, Melick MV (2004) The relationship between child-report, parent self-report, and partner report of perceived parental rearing behaviors and anxiety in children and parents. Pers Individ Dif 37(8):1583–1596