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ORIGINAL ARTICLE

Mothers' Psychological Control and Accommodation are Associated with More Severe Anxiety in Hispanic Youth

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Abstract

Psychological accommodation and control may help explain the finding that anxiety is more severe and common in Hispanic youth. Research with White samples conceptualizes psychological control as part of an authoritarian parenting style; however, research with Hispanic families suggests that psychological control is more likely to be indicative of a protective parenting style. Based on these findings, we hypothesized that in Hispanic families, psychological control would be related to protective parenting behaviors that ultimately maintain child anxiety. We tested a cross-sectional model hypothesizing that in Hispanic families the link between ethnicity and anxiety would be mediated through psychological control and parental accommodation of child anxiety, a parenting behavior which protects the child from the aversive experiences in the moment but ultimately serves to maintain child anxiety. A sample of mothers ($n = 145$; 48% Hispanic) and fathers ($n = 59$; 48% Hispanic) of youth from 8 to 18 years of age completed a survey assessing anxiety and parenting. With Hispanic mothers, the relation between ethnicity (Hispanic/non-Hispanic) and child anxiety was mediated through psychological control and accommodation. With fathers, although control was related to accommodation which, in turn, was related to child anxiety, ethnicity was not associated with control, accommodation, or child anxiety. Findings suggest that the context of parenting behavior should be considered in research, and adaptations of child anxiety treatments should consider ways to allow parents to express their desire to communicate warmth and protectiveness while avoiding negative reinforcement of child anxiety.

Keywords Hispanic youth · Anxiety · Psychological control · Parental accommodation · Parenting

Introduction

Anxiety disorders are the most prevalent mental health problems in children and adolescents[1] and are associated with social and academic impairment, suicidal thoughts and behaviors, and billions of dollars in treatment and related costs [1, 2]. Research from community [3–6] and clinical samples [7, 8] examining youth from 4 to 17 years of age suggests that anxiety symptoms may be more severe and more common in Hispanic youth compared to non-Hispanic youth. For example, in a community sample of over 600 Hispanic preschoolers in the United States, Calzada et al. [3] found almost one-half of the sample were reported by their mothers as experiencing anxiety symptoms in the at-risk or clinical range. This finding did not appear to reflect a general tendency for Hispanic mothers to report more internalizing symptoms as mothers' reports of their child's depression and somatization symptoms were in the normative range.

Despite studies showing higher anxiety severity in this population, Hispanic youth have been greatly underrepresented in anxiety research, including in studies of factors that contribute to the development, maintenance, and amelioration of anxiety disorders. The distress associated with anxiety disorders and the rapidly growing Hispanic population in the United States [9] makes addressing this gap critically important.

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[1] Hereafter we use youth to denote both children and adolescents.

Varela et al. [6] suggest that there are several pathways that could result in more severe anxiety in Hispanic youth, including those stemming from cultural factors and/or minority status. On this last point, however, Varela et al. [6] found Hispanic youth in the United States and Mexico evidenced similar levels of anxiety symptoms but both groups reported higher anxiety levels compared with youth of European descent in the United States. These findings suggest other factors, independent of minority status, may be of importance. One factor suggested by recent research is culturally rooted parenting practices [3]. Nevertheless, research in this area is relatively scarce and is therefore the focus of our study.

Parental Factors in the Development of Anxiety in Youth

Parental Control

Understanding how culturally tied parenting practices may relate to youth anxiety first requires an examination of the types of parenting behavior that have been shown to correlate with child anxiety. Parental control, a parenting style characterized by high levels of supervision and monitoring, and low levels of autonomy granting [10], is one such behavior that has been linked to anxiety in youth in numerous studies (e.g., [11, 12]). Moreover, a meta-analysis of 47 studies measuring the relationship between parental behavior and child anxiety confirmed this correlation, finding an effect size of 0.20 [13]. However, the generalizability of this body of literature, conducted mostly in non-Hispanic, predominantly White samples of children and their mothers, is questionable and there are several reasons why generalization to Hispanic families may be particularly problematic.

It has long been recognized that parental control is a multi-faceted construct and attempts to explain how and why parental control relate to child anxiety have yielded inconsistent results [14]. One reason for the inconsistency may be that parent control is one behavior that presents as part of a constellation of correlated or co-occurring parenting behaviors, collectively referred to as parenting style. This constellation of parenting behaviors may not be the same across families of different cultures. Parenting behaviors, such as parental control, may be reflective of different motivations depending on the cultural meaning of these behaviors or the context in which the family is embedded [15, 16]. For example, in a culture in which nurturing is expressed through high levels of control, parental control would likely be associated with high degrees of warmth whereas in a culture in which parental control is reflective of the value placed on child obedience, psychological control might be accompanied by less warmth and more emotional distance. Similarly, some environments call for high parental control to ensure a child's physical or emotional safety and, in these cases, parental control may be part of a larger constellation of behaviors reflective of parental engagement (e.g., [17]). This has important implications for research trying to understand the associations between parent behavior and child psychopathology in that it has often been implicitly presumed that a particular *parenting behavior* reliably serves a marker for a *specific parenting style*. However, this may not be the case, and the variability in constellations of parenting behavior likely has implications for the relationship between parenting behavior and child psychopathology [15]. In the case of parental control and child anxiety, the implication is that parental control may be associated either with different levels of risk or resilience or with similar outcomes through different pathways, depending on how parental control is associated with other parenting behaviors. This is especially important to consider in Hispanic families as research suggests that high parental control in Hispanic families is common [18] but as we discuss next, control does not present in the way that has been presumed based on research in non-Hispanic families.

Parental Psychological Control in a Cultural Context

Theory suggests that Hispanic values such as *respeto, familismo, and educación* lead to high levels of parental control in Hispanic families [18] and research in this area, albeit limited, suggests this may be true at least for Hispanic mothers [6]. Research with families, most likely of European descent, has conceptualized high parental control as being coupled with low warmth in an authoritarian parenting style [19]; it presumably would follow that that this type of parenting style would be common in Hispanic families. However, research on the role of parental control in parenting styles, grounded in decades old research with largely non-Hispanic, predominantly White, and middle-class families, is unlikely to accurately reflect the parenting of Hispanic parents. In fact, observations of Hispanic families suggest a very different pattern; the most common parenting style found in an observational study of Hispanic mothers and fathers was one in which *high* warmth was associated with high levels of control/low autonomy granting [20]. This style of parenting was labeled "protective" by Domenech Rodríguez and her colleagues; protective parenting and another style that combined high warmth and low autonomy granting characterized the majority (67%) of the mothers and fathers in this study. Other investigations have also found evidence that elements of parental control and warmth commonly co-exist in some cultures as well as evidence that Hispanic parents are more likely than non-Hispanic parents to evidence a protective parenting style [16, 21, 22]. The implications of

this combination of parenting behaviors have largely been ignored in the literature on child anxiety.

Additionally, much of the research in this area has been conducted solely with mothers, so we know comparatively little regarding fathers. Independent of cultural background, there is some evidence suggesting that mothers' and fathers' behavior is differentially related to child anxiety [6, 23]. This is especially relevant in Hispanic youth in that an examination of parental control in Mexican youth, US youth of Latin American descent, and US youth of European descent found that maternal control was associated with child anxiety in all three samples while paternal control was associated with child anxiety in the European descent sample but not the Latin American descent sample[2] [6]. Therefore, it may be that maternal control is more relevant in the study of anxiety in Hispanic youth but that both maternal and paternal control are more equally predictive in non-Hispanic youth. However, there are too few studies that include fathers to definitively draw this conclusion.

Parental Accommodation of Child Anxiety

Adding to this complexity, it has long been recognized that parenting behavior reflects a combination of parenting style and reactions to child behavior (e.g., [24]). Importantly, Thompson-Hollands et al. [25] have suggested that in the face of displays of anxiety, a protective parenting style may manifest itself as accommodation of child anxiety. It stands to reason that a parent who evidences high levels of psychological control, *with the intended goal of protecting the child*, would intervene to save the child from the distress associated with the experience of anxiety. Therefore, in Hispanic families in which parental control is more likely to be part of a protective style, control may be more likely to be associated with parental accommodation of anxiety, compared to non-Hispanic families in which control is more likely to serve as a marker of authoritarian parenting.

Problematic, however, is the finding that family accommodation of child anxiety, defined as behavioral changes on the part of parents to aid the youth in decreasing distress or avoiding contact with anxiety-provoking stimuli, has been shown to positively correlate with child anxiety symptom severity [26, 27]. Family accommodation, first widely observed in obsessive compulsive disorder (OCD) patients (e.g., [28]), presumably functions to increase avoidance and associated anxiety through negative reinforcement and interference with inhibitory (non-anxious) learning. At the same time, accommodation increases family stress and disruption in family functioning due to the machinations that family members must go through to decrease the probability the child will come into contact with anxiety provoking stimuli [29]. It is now recognized that family accommodation of anxiety is not limited to youth with OCD; in fact, families of youth with anxiety disorders have been shown to accommodate child anxiety significantly more than families of non-anxious youth and at rates similar to families of youth with OCD [30, 31]. Additional research also suggests that accommodation is common across all forms of pediatric anxiety [27]. Moreover, a recent study supports the role of parent accommodation as a *mechanism* for the maintenance of child anxiety symptoms—in a randomized explanatory clinical trial of childhood anxiety, Silverman et al. [32] found that reductions in parental use of negative reinforcement (i.e., accommodation) was associated with reductions in child anxiety at the immediate posttest and at 1 year follow up.

To date, however, most of what we know about parental accommodation of child anxiety comes from samples of European American, middle-class mothers [33], although related research shows that Hispanic parents engage in anxiety-promoting behaviors at significantly higher rates than non-Hispanic European-American parents [34]. Therefore, it is important to understand the parenting behaviors that may be associated with negative reinforcement of child anxiety through parental accommodation.

The Current Study

Past research has shown the parental control is more common in Hispanic families, or at least with Hispanic mothers, and that control is commonly part of a protective parenting style for both Hispanic mothers and fathers. Although this type of style would be expected to lead to greater accommodation of child anxiety in the face of youth anxiety symptoms and ultimately to more anxiety, to our knowledge these hypotheses have not been tested. Therefore, the aim of the current study is to test the conceptual model, depicted in Fig. 1, examining parenting behaviors that might help explain the observed health disparities in child anxiety for Hispanic youth. Further, given the lack of research with fathers and some evidence of discrepant findings regarding the effects of maternal and paternal parenting behavior on child anxiety, this model is examined in both mothers and fathers.

For mother behavior, based on past research [6] and theory [18], it is hypothesized that ethnicity will be related to maternal control, with Hispanic mothers evidencing greater control.

Further, given that we expect control in Hispanic mothers to more likely be part of a protective parenting style, we hypothesize that maternal control will be related to maternal

[2] Paternal control was not examined in the sample of Mexican youth because of the poor psychometrics of the measure of parent control in this sample.

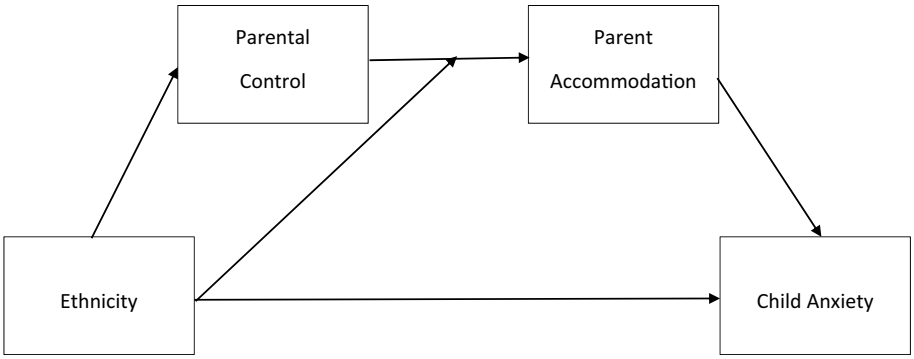

Fig. 1 Conceptual model depicting study hypotheses

accommodation of child anxiety in Hispanic mothers but not for non-Hispanic mothers.

Last, we hypothesize that maternal accommodation will be related to higher child anxiety symptoms and that the hypothesized relationships between ethnicity and maternal control and accommodation will partially mediate the relationship between ethnicity and child anxiety.

These relationships in fathers are more complex in that there is some evidence that Hispanic fathers do not evidence greater control than non-Hispanic fathers and that father control is not related to child anxiety in Hispanic families. However, these conclusions are based on single studies. Moreover, Hispanic fathers were included in Domenech Rodríguez et al.'s [20] study, which found that a protective parenting style was more common in Hispanic parents; given the well-established finding that negative reinforcement of anxiety can maintain child anxiety symptoms, paternal accommodation would still be expected to be positively (directly) related to child anxiety. Therefore, given the paucity of research with fathers and the sometimes-conflicting findings, we consider the examination of the model in fathers to be more exploratory.

Method

Participants

Participants were 145 mothers aged 23 to 55 years ($M = 35.12$; $SD = 7.38$) of youth aged 8 to 18 years ($M = 10.77$; $SD = 2.90$; 57% girls) and 59 fathers aged 24 to 47 years ($M = 34.41$; $SD = 5.62$) of youth between the ages of 8 and 17 years ($M = 9.78$; $SD = 2.15$; 25% girls) living in the United States. In part, this age range was chosen to provide substantial overlap with previous research. Additionally, epidemiological studies in the United States suggest a median age of onset for anxiety disorders to be age 11, with some anxiety disorders evidencing a median age of onset as early as age 7 years [35]. We reasoned that by 8 years, parents would start to become aware of developing anxiety symptoms. We also sought to include youth throughout the end of childhood, which is commonly defined as 18 years in the United States. All parents were recruited through Amazon Mechanical Turk (MTurk), a website that matches requestors who have online tasks that needs to be completed and individuals willing to complete such tasks. As was expected given the restrictions set up in the survey, about one half of the mothers were Hispanic ($n = 70$; 48.3%) and about one half of the fathers were Hispanic ($n = 28$, 47.5%). See Table 1 for descriptive statistics of sociodemographic and study variables by child ethnicity.

Procedures

All study procedures were reviewed and approved by an IRB and participants provided informed consent before participating in any study procedures.

Participants completed a demographics questionnaire and measures of youth anxiety, parental control, and family accommodation described below. Given that parent symptoms can affect reporting, parents also reported on their own anxiety and depression so these could be controlled for in analyses. Before completing the study measures, participants were required to respond to two screening questions. The first question inquired about whether the respondent had a child between the ages of 8 and 18 years living at home and the second asked about whether the respondent was Hispanic. The survey was set-up with quotas to obtain a sample that was approximately 50% Hispanic. To randomly select a child in multiple child families, participants with more than one child were told to complete measures about the child whose birthday was closest to the day of their participation. Respondents who answered the screening questions more than once, changing answers to circumvent the inclusion criteria, were removed from the sample. Embedded within the survey described below were 11 attention check items (e.g., "Select 0-Never" for this statement); participant responses were retained if at least nine of the attention check items were correct. After it was determined participants were eligible to participate in the study, demographics questions were

Table 1 Descriptive statistics for sociodemographic and study variables

	Mother sample		Father sample	
	Non-Hispanic (n = 75)	Hispanic (n = 70)	Non-Hispanic (n = 31)	Hispanic (n = 28)
Child age [*M* (SD)]	11.24 (3.32)	10.27 (2.38)	10.03 (2.42)	9.50 (1.82)
Child sex (female, %)	40 (53.3)	42 (60.0)	4 (14.3)	11 (35.5)
Child race (%)				
White	57 (76.0)	29 (41.4)	25 (80.6)	11 (39.3)
Black	12 (16.0)	2 (2.9)	2 (6.5)	1 (3.6)
Asian	4 (5.3)	1 (1.4)	4 (12.9)	1 (3.6)
Multiracial	2 (2.7)	31 (44.3)	0 (0)	15 (53.6)
Marital status (%)				
Married	47 (63.5)	53 (75.7)	24 (77.4)	21 (75)
Single	15 (20.3)	11 (15.7)	6 (19.4)	5 (17.9)
Divorced/separated	11 (14.9)	6 (8.6)	1 (3.6)	2 (7.2)
Widowed	1 (1.4)	0 (0)	0 (0)	0 (0)
Household income (%)				
< $41,000	30 (40.1)	36 (51.4)	8 (25.8)	9 (32.1)
$41,000–$99,999	37 (49.4)	27 (38.5)	19 (61.3)	16 (57.1)
> $100,000	8 (10.6)	7 (10.1)	4 (12.9)	3 (10.7)
Heritage (%)				
Mexican	–	39 (56)	–	17 (61)
Puerto Rican	–	12 (17)	–	3 (11)
Central or South American	–	9 (13)	–	4 (14)
Cuban	–	8 (11)	–	3 (11)
Other/unknown	–	2 (3)	–	1 (3)
Study variables [*M* (SD)]				
FASA	9.32 (8.58)	12.50 (9.60)	8.00 (6.98)	11.15 (6.95)
MASC – P	37.70 (24.13)	55.90 (31.92)	33.13 (21.28)	49.48 (25.43)
PRPBI – PC	3.61 (4.00)	6.15 (4.88)	5.32 (3.83)	7.19 (4.22)

FASA Family Accommodation Scale-Anxiety, Parent Report, *MASC-P* Multidimensional Anxiety Scale for Children-Parent, *PRPBI-PC* Parent Report of the Parenting Behavior Inventory-Psychological Control

presented first, followed by the measure of parental accommodation; all other measures were presented in random order. Participants were paid $3.25 for their participation.

Measures

Multidimensional Anxiety Scale for Children-2nd Edition-Parent (MASC2-P; [36]). The MASC2-P is a 50-item questionnaire that assesses children's anxiety symptoms from the parent's perspective. Respondents rate each item on a scale of 0 to 3 ('*Never*' to '*Often*'). The total MASC2-P score ranges from 0 to 150, with higher scores indicating higher levels of anxiety. The internal consistency, reliability, and validity are well-established [37]. In the present study, internal consistency (Cronbach's alpha) was 0.97 for mothers and 0.96 for fathers.

Family Accommodation Scale—Anxiety (FASA—Parent Version [27]. The FASA is a 13-item parent-report questionnaire used to assess family accommodation of child anxiety. The first 9 items assess the frequency with which parents provide accommodations and are summed to provide the total family accommodation score. Respondents rate each item on a scale of 0 to 4 ('*Never'* to '*Daily'*). Four additional items assess parental distress associated with family accommodation and children's short-term responses to not being accommodated. Total family accommodation scores range from 0 to 36, with higher scores indicating higher levels of family accommodation. In the present study, internal consistency was 0.93 for mothers and 0.90 for fathers.

Parent Report of Parenting Behavior Inventory—Parental Psychological Control (PRPBI-PC; [38]). The PRPBI is a 30-item rating scale that assesses perceived parents' behaviors toward the youth, from the perspective of parent. All items are rated on a 0 (*Not like*) to 2 (*A lot like*) point scale. Given the link between psychological control in particular and child anxiety [39], we used the psychological control (PC) subscale of the PRPBI. The PC subscale consists of 10 items and scores range from 0 to 20; higher scores indicate

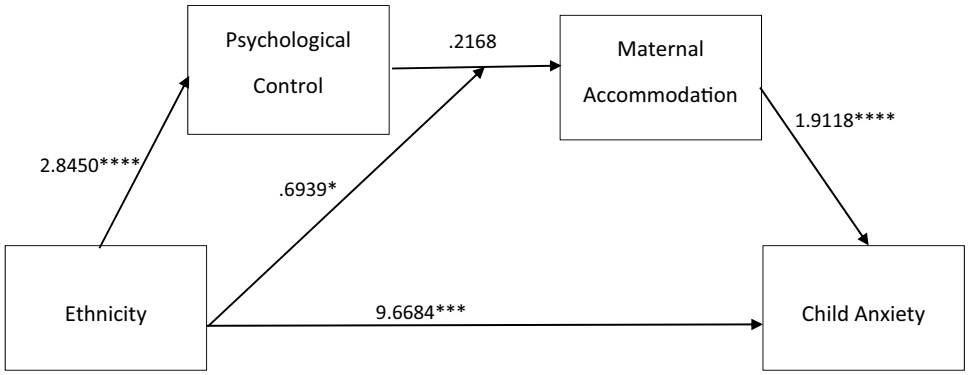

Fig. 2 Unstandardized path coefficients in mother sample

Note. * $p = .06$, ** $p < .05$, *** $p < .01$, **** $p < .001$

higher levels of perceived PC. Coefficient alphas between 0.76 and 0.82 have been reported for different informants [40]. In the present study, internal consistency was 0.86 for mothers and 0.82 for fathers.

Beck Anxiety Inventory (BAI [41]. The BAI is a 21-item rating scale that measures adults' severity of anxiety symptoms. Respondents rate each item on a scale of 0 to 3 (*'Not at all'* to *'Severely—I could barely stand it'*) with total scores ranging from 0 to 63. Higher scores indicate higher levels of anxiety severity. The internal consistency, reliability, and validity are well-established [42]. In the present study, internal consistency (Cronbach's alpha) was 0.96 for mothers and 0.97 for fathers.

Beck Depression Inventory- II (BDI-II [43]. The BDI-II is a 21-item rating scale that measures adults' severity of depression symptoms. For each item, respondents select the statement that best describes how they have felt in the past month, with each statement assigned a severity score from 0 to 3. Total scores range from 0 to 63 with higher scores indicating higher levels of depression severity. The internal consistency, reliability, and validity are well-established [43]. In the present study, internal consistency (Cronbach's alpha) was 0.96 for mothers and 0.96 for fathers.

Data Analytic Strategy

Figure 1 presents the conceptual model of study hypotheses. This model depicted in Fig. 1 was tested separately for mothers and fathers using the PROCESS syntax-driven macro [44] in SPSS version 28. PROCESS uses an ordinary least squares regression approach. Indirect effects were tested using the bias-corrected confidence intervals with 5000 bootstrapped samples [45]. To account for developmental differences and bias in reporting as a result of parent symptomatology, we included child age and parent anxiety and depression as covariates. For the sake of clarity, these paths are not depicted or reported.

Results

The Relationship Between Mother's Parenting and Child Anxiety

As can be seen in Fig. 2,[3] on average, Hispanic mothers reported greater maternal control compared to non-Hispanic mothers ($M_{\text{Hispanic Mothers}} - M_{\text{Non-Hispanic Mothers}} = 2.8450$). There was not evidence suggesting that maternal control or maternal ethnicity was directly related to maternal accommodation; rather, the relationship between maternal psychological control and accommodation appears to depend on ethnicity ($B = 0.6939$[4]). Further probing of this interaction revealed that Hispanic mothers evidencing higher levels of psychological control also evidenced more accommodation of child anxiety ($B = 0.9106$, $p < 0.0001$) but there was no evidence of such a relationship for non-Hispanic mothers ($B = 0.2168$, $p = .4886$). Holding constant psychological control and ethnicity, mothers reporting greater accommodation of child anxiety indicated that their children experienced greater anxiety ($B = 1.9118$). Additionally, holding all other variables in the model constant, Hispanic mothers reported their children experienced greater anxiety.

The relationship between ethnicity and child anxiety was mediated through maternal psychological control and accommodation for Hispanic mothers ($B = 4.9528$, 95% bias corrected bootstrap confidence interval constructed with 5000 bootstrap samples = 1.1571 to 10.3130). This was not true for non-Hispanic mothers ($B = 1.1789$, 95% bias

[3] Given that previous literature often used exclusively non-Hispanic White or predominantly non-Hispanic White samples, we also ran all analyses excluding non-White participants. The findings remained the same, with the exception that parental control and accommodation were no longer significantly related in the sample of fathers.

[4] This effect was found at the trend level; however, given the power to detect an interaction effect is highly dependent on sample size and the significance, both statistically and substantively, of the follow-up analysis, we report the effect here.

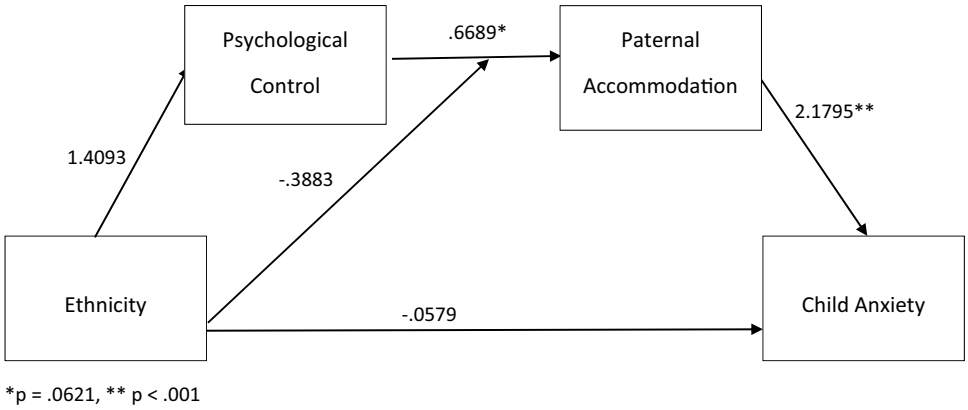

Fig. 3 Unstandardized path coefficients in father sample

corrected bootstrap confidence interval constructed with 5000 bootstrap samples = − 2.4010 to 4.8421).

The Relationship Between Father's Parenting and Child Anxiety

Tests of the model with father data are presented in Fig. 3. Few of the hypothesized relationships were supported in father reports. There was no evidence that ethnicity was related to paternal psychological control and ethnicity did not moderate the relationship between paternal psychological control and accommodation; rather, there was a main effect for paternal psychological control suggesting, at the trend level, that greater paternal psychological control was related to greater paternal accommodation, regardless of ethnicity. Accommodation was related to child anxiety—greater accommodation was associated with greater anxiety, as expected. Holding other variables in the model constant, ethnicity was not related to child anxiety.

Discussion

Past research has found that Hispanic mothers exhibit higher levels of control [6], and that parental control in Hispanic mothers and fathers is more likely to be part of a protective style of parenting [20]. The current study builds on these findings, examining the relationship between these parenting behaviors and child anxiety, including a sample of Hispanic families that closely mirrors the variability in familial country of origin of Hispanic families in the United States [46]. Our results could, in part, explain previous findings that Hispanic youth experience more severe anxiety compared to non-Hispanic youth [3, 5, 8] and provide further support for past research suggesting that culturally-tied parenting behavior may confer risk for child anxiety [3]. More specifically, our results suggest a specific process by which Hispanic youth experience fewer naturalistic learning opportunities with the potential to ameliorate anxiety. However, the hypothesized relationships were found in mothers but not fathers.

Consistent with past research, Hispanic mothers reported using greater psychological control as part of their parenting style. Importantly, higher psychological control was associated with greater parent accommodation of child anxiety for Hispanic mothers but not for non-Hispanic mothers. These results support past research that has found parental control in Hispanic families to be part of a protective parenting style [20]. Our findings also point to a specific type of protective behavior that could help explain the higher levels of anxiety experienced by Hispanic youth. Results suggest a style of parenting that includes parental accommodation of child anxiety, a process that is thought to maintain symptoms through negative reinforcement. Consistent with this thinking, parent accommodation, independent of control and ethnicity, was associated with greater child anxiety.

We also found that in Hispanic families, maternal psychological control and accommodation mediated the associations between ethnicity and child anxiety. Although this finding must be interpreted with caution given that we did not use experimental methods, and in some cases, we cannot definitively establish temporal sequencing, this is at least suggestive of a process that could explain the disparity in anxiety observed in Hispanic youth. If these findings are borne out in experimental studies, this could have important implications for evidence-based cultural adaptations of child anxiety treatment. Extant studies suggest that treatments for child anxiety that address parental understanding of and reactions to child expressions of anxiety can be effacious even when the child is not involved in treatment (e.g., [30, 31, 47]. More recently, decreasing parents' control and negative reinforcement of child expressions of anxiety has been shown to be an important mechanism through which cognitive behavioral treatments transmit their effects [32]. The current study suggests these targets may be particularly important to address with Hispanic mothers; however, this should be done while being mindful of the potential culturally

tied meaning of these parenting behaviors. For example, rather than simply focusing on decreasing psychological control and accommodation of anxiety, which may ignore the purpose of these behaviors as a way to show warmth and protection of one's child, it may be more productive to help Hispanic mothers focus on the long-term sequelae of child anxiety and the associated distress so that their behavior can shift from protecting the child from short-term to long-term distress. This shifts the conversation from one of blaming parents to helping the parent understand the context in which the behavior accomplishes one's parenting goals. Similarly, rather than simply focusing on minimizing parental control, it may be more helpful to focus on controlling the child's activities and environment to provide opportunities to confront, rather than escape, anxiety-provoking situations and ultimately protect the child from ongoing distress and the downstream consequences of anxiety [48].

Such an approach may be particularly important in addressing parenting behavior in Hispanic families that are less acculturated, as some research suggests these parents may be less open to treatment focusing on parenting behavior [49]. This makes sense if treatment requires changes in parenting behaviors that are culturally valued. Our findings could help guide therapists in understanding where specifically these parenting behaviors can be maladaptive so the behaviors can be refocused rather than changed. Failure to include such options may inadvertently pathologize important cultural values, pitting a parent's culture against her goals for her child (i.e., decreased anxiety). This is unlikely to be effective in changing parenting behavior and is likely to result in conflict between the treatment provider and the parent.

Past research has been less clear on how and if Hispanic fathers' parenting behavior would be expected to be related to child anxiety. On the one hand, Domenech Rodríguez et al. [20] found a high control/high warmth protective parenting style to be characteristic of both Hispanic mothers and fathers. A protective parenting style should ultimately be related to greater child anxiety via parent accommodation of child anxiety, as accommodation protects a child from the short-term consequences of anxiety (e.g., distress). On the other hand, some studies have found that paternal control, one component of this parenting style, is not related to child anxiety in Hispanic youth [6] or, albeit not specific to Hispanic families, that mothers' and fathers' parenting behavior serves different functions for youth [23]. Interestingly, our findings suggest a relationship between paternal control and accommodation for both Hispanic and non-Hispanic fathers, rather than a specific association in Hispanic families.

Limitations and Future Directions

As with any study, the current investigation is not without limitations. First, there have been questions about the quality of data and the types of samples obtained from MTurk. However, studies have demonstrated that quality of data provided by MTurk users is at least on par with data obtained through more traditional methods [50, 51]. MTurk samples are also more diverse than those recruited through more traditional means [50, 51]. One difference that has emerged, though, is that compared with non-clinical samples obtained through other methods, samples recruited through MTurk have been found to report greater anxiety and depression symptoms [52]. Given that parent and child anxiety are related, this may be advantageous in that our sample could represent a greater range in child anxiety. However, because of this finding in previous research, we controlled for parental anxiety and depression in our analyses to account for possible reporting biases relate to parental mood. A distinct disadvantage of using MTurk is that we were unable to obtain child reports of anxiety symptoms and perceptions of parenting behavior.

Findings regarding fathers' parenting should be regarded with caution given the smaller number of fathers included and the fact that the fathers in our sample were more frequently reporting on their sons than their daughters. Unfortunately, our sample sizes were not large enough to examine whether mothers' or fathers' behavior varied as a function of the sex of their child, although given cultural differences in how anxiety and autonomy are viewed for girls versus boys, this is an important avenue for future inquiry.

Similarly, we were unable to examine developmental differences or differences within Hispanic subgroups given our samples sizes. Although parent accommodation of child anxiety is expected to be maladaptive across the lifespan, it is not clear that this is equally true for psychological control given that one could expect autonomy granting would need to vary with development. Additionally, it is important to recognize Hispanic culture is not monolithic. In developing a better understanding of the model, we propose that examining different subgroups within the Hispanic population from a developmental psychopathology framework would be an important step for future research.

Of note, although a similar number of Hispanic non-Hispanic parents in our sample self-reported being in the highest income bracket on our demographic questionnaire, a larger proportion of the Hispanic parents reported being in the lowest income bracket. Socioeconomic status and ethnicity are intertwined in the United States and this study did not attempt to disentangle their individual roles. This is an important area for future research given that others have suggested that environmental factors, including those driven by economic factors, play a large role in parenting behavior [17]; however, it is notable that even in these investigations,

it is often difficult to isolate the role of cultural beliefs and economic status.

Lastly, the model was tested using observational (i.e., non-experimental), cross-sectional data so we consider this to be a preliminary examination of these relationships. Experimental methods and ones that can firmly establish the temporal sequence necessary for causality are needed to definitively draw any conclusions about any causal relationships and how these processes operate over time.

Summary

This study advances current understanding of the link between culture and child anxiety. Rather than simply documenting similarities and differences across ethnic groups, we investigated a conceptual model to explain the variability in anxiety symptoms between Hispanic and non-Hispanic youth. The results suggest a relationship between Hispanic ethnicity and child anxiety mediated by maternal psychological control and accommodation of child expressions of anxiety. This suggests that maternal accommodation and psychological control may be particularly relevant treatment targets when working with Hispanic families to address child anxiety. However, it will also be important for future research to assess the degree to which environmental variables and parental acculturation are contributing to both parent behavior and child anxiety.

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Data Availability Datasets can be accessed by contacting the first author.

Declarations

Competing interests The authors declare that they have no conflict of interest.

Ethical Approval Research procedures were approved by the University of Texas Rio Grande Valley's Institutional Review Board (IRB).

Consent to Participate Participants provided informed consent prior to engaging in study procedures.

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