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Developmental Psychopathology in a Racial/Ethnic Minority Group: Are Cultural Risks Relevant?

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Abstract

Objective—The current study examined (a) the mediating role of parenting behaviors in the relationship between parental risks and youth antisocial behaviors (YASB), and (b) the role of youth cultural stress in a racial/ethnic minority group (i.e., Puerto Rican [PR] youth).

Method—This longitudinal study consisted of 3 annual interviews of PR youth (N = 1,150; aged 10–14 years at wave 1) and their caretakers from the South Bronx (SB) in New York City and from San Juan, Puerto Rico. Parents reported on parental risks, parenting behaviors, and YASB. Youth also self-reported on YASB and youth cultural stress. A lagged structural equation model

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examined the relationship between these variables across 3 yearly waves, with youth cultural stress as a moderator of the association between effective parenting behaviors and YASB.

Results—Findings supported the positive influence of effective parenting on YASB, independently of past parental risks and past YASB: higher effective parenting significantly predicted lower YASB at the following wave. Parenting also accounted for (mediated) the association between the composite of parental risks and YASB. Youth cultural stress at wave 1 was cross-sectionally associated with higher YASB and moderated the prospective associations between effective parenting and YASB, such that for youth who perceived higher cultural stress, the positive effect of effective parenting on YASB was weakened compared to those with lower/average cultural stress.

Conclusion—Among PR families, both parental and cultural risk factors influence YASB. Such findings should be considered when treating racial/ethnic minority youth for whom cultural factors may be a relevant influence on determining behaviors.

Keywords

youth; antisocial behaviors; parenting; Puerto Rican; cultural stress

There is increased emphasis on understanding youth psychopathology within a developmental framework that considers the interplay of a broad range of individual and contextual factors in relation to youth symptoms over time (e.g., an ecodevelopmental framework).¹ Among racial/ethnic minority youth, sociocultural influences (e.g., socioeconomic factors, cultural experiences, and related distress) can have profound effects on development.² Yet, research to date has focused mostly on their non-racial/ethnic minority peers, overlooking such considerations. When racial/ethnic minority youth are examined, the approach is usually to compare racial/ethnic groups, lacking exploration of group-specific mechanisms such as cultural factors for immigrant groups. The current study examines risk processes within a Latino subgroup, Puerto Ricans (PR), who are at high risk for psychopathology in adulthood.³ We conceptualize youth externalizing psychopathology, specifically antisocial behaviors, using an integrative, developmental approach to highlight family and sociocultural processes most relevant to racial/ethnic minority youth and families. Using a longitudinal design, we examined familial (i.e., parental risks, parenting) and cultural (i.e., youth cultural stress) influences on youth antisocial behaviors.

Youth antisocial behaviors (YASB) are prevalent during childhood and are among the most frequent reasons for referrals to services. Symptoms often persist into adulthood and link to other psychiatric comorbidities, criminality, and impairment in social, academic, as well as occupational functioning.⁴ A prior analysis of our population-based study revealed that approximately 6% of PR youth residing in either the United States or Puerto Rico had conduct and/or oppositional defiant disorder.⁵ Although this rate is comparable to youth from other racial/ethnic backgrounds such as those of white or African American ethnicity,⁵ some evidence suggests that a certain subgroup of Latino youth may exhibit higher levels of antisocial behaviors.⁶

Parental risks and parenting behaviors can have a significant impact on YASB. Foremost, parental psychopathology has been consistently linked to YASB.^{7,8} Parental stress and level of social support may also be relevant according to empirical studies.^{8–10} As the literature on risk factors for YASB is mostly based on evidence derived from studies of nonminority youth and families, understanding processes in Latino families requires considering both universal and racial/ethnic minority group-specific factors. For instance, social support has a positive influence on parenting behaviors among Latino parents¹¹ and might be a particularly important predictor of positive youth outcomes because of the cultural emphasis on family connections and communal values.¹⁰ Cultural stress among Latino parents is a unique risk factor predicting youth risky behaviors such as drinking and smoking,¹² and internalizing and externalizing psychopathology.¹³ Importantly, because Latino youth living in the United States may be exposed to an array of parental risks,¹⁴ it is crucial to consider cumulative effects of these risk factors.¹⁵

There is strong evidence supporting the role of specific parenting, such as monitoring, warmth, and noncoercive/punitive discipline, in reducing YASB.^{15–17} As parents practice more effective parenting (e.g., monitoring, warmth) and use less punitive measures (noncoercive discipline), youth endorse fewer symptoms later on.^{18–21} Among Latino families, who highly value and invest in family relations, the impact of parenting on youth behaviors may be especially salient.^{11,22} Indeed, current research among Latino families suggests that effective parenting behaviors, which includes monitoring, warmth/positive parent-child attachment, and low physical punishment/harsh discipline, are associated with decreased YASB,^{18,23–25} with warmth having a particularly meaningful and generalized effect.^{2,24} One longitudinal study established the prospective effect of parental physical punishment on increased youth symptoms over the long term among both Latino and African American families.¹⁸ Furthermore, parenting is a likely mechanism linking parental risks such as parental psychopathology and YASB, according to research on other youth externalizing symptoms, including substance use⁷ and attention-deficit/hyperactivity disorder.²⁶ No research to date, however, has examined the potential mediating role of parenting in the association between parental risks and YASB.

Among racial/ethnic minority families, conflicts related to one's cultural background are frequent²⁷ and can influence youth behaviors,²⁸ which may add complexity to the impact of parenting behaviors on YASB. Cultural stress refers to distress associated with being treated unfairly or discriminated against because of one's racial/ethnic background. Such distress, experienced uniquely by minority youth, is associated with unfavorable mental health outcomes. Specifically, negative experiences related to one's race/ethnicity and/or acculturation process, such as discrimination²⁹ and cultural stress,¹³ are associated with YASB among PR youth. However, it remains unknown how youth cultural stress might interact with parenting behaviors to affect YASB within an integrative model that considers these multidimensional risk factors. Comorbidity and concurrent psychosocial distress have been shown to interfere with the relationship between parenting and specific youth psychopathology, such that the association between parenting and youth psychopathology weakens as co-occurring distress increases.³⁰ Therefore, it is possible that youth cultural stress would moderate the relationship between parenting and YASB: for youth experiencing higher cultural stress, the effect of parenting on their symptoms may not be as strong

compared with youth who do not experience cultural stress. Findings about this process would bear important clinical implications to inform whether youth cultural stress might be a potential treatment target among racial/ethnic minority youth.

Taken together, existing literature points to parental risks and ineffective parenting behaviors as relevant to the development of YASB; however, important questions remain unanswered. The current study advances past research in several ways. First, a longitudinal design allows for proper examination of how parental risks may influence YASB through parenting behaviors. Second, the inclusion of cultural factors reflects risk processes commonly and uniquely experienced by racial/ethnic minority youth and families. Finally, the large sample size offers the opportunity to examine an integrative model that considers multidimensional parental risks and cultural stress associated with youth symptoms. We examined parental risks (psychopathology, social support, and cultural stress), parenting behaviors (monitoring, warmth, and noncoercive discipline), and youth cultural stress, in relation to YASB. We hypothesized the following: that (1) lower parental risks would predict lower YASB; (2) effective parenting behaviors would predict lower YASB; (3) effective parenting would account for (mediate) the relationship between parental risks and YASB; (4) higher youth cultural stress would predict higher YASB; and (5) youth cultural stress would moderate the relationship between effective parenting and YASB. These hypotheses were tested using structural equation modeling in a longitudinal, population-based, minority community-based sample (see Figure 1 for the conceptual model).

METHOD

Participants

The current study uses data from the Boricua Youth Study, which has followed PR children in 2 contexts: the South Bronx (SB) in New York City ($n = 1,138$), and the Standard Metropolitan Areas in San Juan and Caguas, Puerto Rico ($n = 1,353$). This is a longitudinal study with 3 annual assessments (waves 1–3 [W1–W3], between 2000 and 2004) of multistage probability household samples representing the 2 target populations. A household was eligible for the study if: (1) there was at least one child residing in the household aged 5 through 13 years at enumeration and identified by the family as being of PR background; and (2) at least one of the child's parents or primary caretakers residing in the household also identified as being of PR background. All eligible children were selected to participate, up to a maximum of 3 (randomly selected) children per household. Children with severe developmental disabilities were excluded. Retention rates at W3 were high (87.8%).³¹ Sampling weights were created to represent the population of children of PR background aged 5 to 13 years in the San Juan Metropolitan area and Caguas and in the South Bronx, New York City. The study design and procedures have been detailed in previous publications.³²

Home interviews with youth and a parent/primary caretaker were conducted in Spanish or English using the Diagnostic Interview Schedule for Children, *DSM-IV* version (DISC-IV)^{33,34} and extensive inquiries about youth and parental psychosocial factors.^{5,32} To test our hypothesis on youth cultural stress, the current analyses included youth aged 10 years and older who had completed the cultural stress module at both W1 and W2 ($N = 1,150$, $n =$

515 in SB, $n = 635$ in PR, $W1$ mean age = 11.8 years, $SD = 1.2$, range 10–14; 51.7% male; 69.9% below the federal poverty line). The majority of participating parents were biological/adoptive mothers (91.4%), and 34.5% completed less than a high school education. All procedures were approved by the Institutional Review Board of the New York State Psychiatric Institute and the University of Puerto Rico Medical School.

Measures

Youth Antisocial Behaviors—Youth antisocial behaviors (YASB) were assessed through parent and child reports. Parents responded to items from the conduct disorder and oppositional defiant disorder modules of the DISC-IV, and children completed the Elliot Delinquency Scale.³⁵ Responses from both informants were combined to create an Antisocial Behavior Severity Index,³⁶ an inclusive index reflecting the severity of antisocial behaviors that takes into account the frequency and seriousness of the behaviors based on youth developmental level. The YASB index is classified on an ordinal scale of 0 to 5, where higher numbers represent more frequent and serious behaviors.^{13,31}

Parental Risks—Parental risks were assessed through parent-reported psychopathology, low social support, and cultural stress. Parental psychopathology was measured using 6 items from the Family Psychiatric Screening Instruments for Epidemiologic Studies that indicate the presence or absence of mental illness and emotional or substance use problems (via known history and having received treatment).³⁷ Parental social support was measured using 15 items reflecting the availability and quality of social support (e.g., “Who can you depend on for help with practical things, like doing favors for you?”; $\alpha = .71$).³⁸ Parental cultural stress was measured using the Hispanic Stress Inventory,³⁹ including 15 questions about the pressure and stressors to adapt to another culture in the past year (e.g., “You have felt rejected by other people because you are PR/Latino”) using a Likert scale of 0 to 2 (0 = rarely or never, 1 = sometimes, and 2 = often). These items are combined into an index following a formative measurement framework where endorsing more items indicates higher stress. Since they do not follow a reflective measurement framework, a Cronbach’s α is not an appropriate measure.⁴⁰

Effective Parenting—Effective parenting includes parent-reported monitoring, warmth, and noncoercive discipline. Parental monitoring was assessed using the Parental Monitoring Scale,⁴¹ with 9 items inquiring about parents’ knowledge of their children’s whereabouts and supervision (e.g., “How often do you or your child’s other caretakers know where your child is when [s/he] is not at home?”) during the past year using a Likert scale of 0 to 2 (0 = never/almost never to 2 = very much; $\alpha = .57$). Parental warmth and acceptance was measured using an adapted version of the Hudson’s Index of Parental Attitudes.⁴² This measure consists of 13 items tapping into the overall quality of the parent–child relationship, closeness, trust, and understanding between the parent and the child (e.g., “How much can you really trust her/him?”). Responses ranged from 0 = not at all/never to 3 = a lot/very often; $\alpha = .81$. Noncoercive discipline was measured through the Parental Discipline Scale,⁴³ which consists of 6 items reflecting coercive and harsh discipline (e.g., “When your child has done something wrong, or something that you do not approve of, how often do you yell

or swear at him/her?") using a 4-point Likert scale (0 = never/almost never to 3 = very often; $\alpha = .54$).

Youth Cultural Stress—Youth cultural stress was assessed using the Hispanic Stress Inventory,³⁹ with 4 items tapping into children's experiences of unfair treatment, difficulties adjusting to the values of the American culture, and language difficulties in the past year (e.g., "You feel like you don't belong either in [PR/Latino country] or in the US"). Participants indicated whether this happened (0 = "rarely or never" or 1 = "sometimes or often"). Similar to the parental cultural stress measurement above, a Cronbach's α is not an appropriate measure.⁴⁰

Data Analysis

Measurement Model—We first used confirmatory factor analysis to test whether parental risks and effective parenting behaviors could each be modeled as latent variables representing the 2 constructs. We fit a latent parental risks variable at each wave measured by 3 indicators: parental psychopathology, lack of social support, and parental cultural stress. We found that the factor loadings were not all statistically significant, indicating that a latent variable was not appropriate. Instead, we conceptualized each parental risk as an independent contributor to a total load of risk, following a formative measurement scheme,⁴³ and created a parental risk composite from the 3 parental risks by standardizing each of them and summing them, such that higher values represent more parental risks. Similarly, we fit a latent effective parenting factor at each wave measured by 3 indicators: parental monitoring, warmth and acceptance, and lack of coercive discipline. Loadings were constrained to be the same at each of the 3 waves. In this case, the latent measurement model fit the data well ($\chi^2_{19} = 19.060$, $p = .4530$, root mean square error of approximation [RMSEA] = 0.002, comparative fit index [CFI] = 1.000, Tucker–Lewis index [TLI] = 1.000, standardized root mean residual [SRMR] = 0.028), and all of the indicators loaded significantly ($p < .001$) on the latent variable (standardized loadings 0.33 for monitoring, 0.95 for warmth, and -0.39 for lack of coercive discipline). Consequently, we treated effective parenting behaviors as a latent variable in our subsequent modeling.

Structural Model—Using structural equation modeling (SEM), we tested the direct effects of the parental risk composite, effective parenting, and youth cultural stress on YASB, as well as the indirect effect of the parental risk composite on YASB through effective parenting. Lagged associations between the parental risk composite, effective parenting, and youth cultural stress at wave t ($t = 1, 2$) and YASB at wave $t+1$ were tested, adjusting for YASB at wave t . The W1 cross-sectional associations of the parental risk composite, effective parenting, and youth cultural stress in relation to YASB were also tested (see Figure 2, representing a developmental psychopathology cascade).⁴⁴ To test the mediation hypothesis, the indirect effects of parental risk composite at wave t ($t = 1, 2$) on YASB at wave $t+1$ through effective parenting at wave t were estimated and tested using "model indirect" statements in MPlus. The indirect effect is estimated in the usual way for linear models as the product of the direct effect paths and can be compared to the total effect to obtain the percentage of the effect that is mediated. We also tested the indirect effect of parental risk composite on YASB through effective parenting at W1.

To test the moderating effect of youth cultural stress on the association between effective parenting and YASB, a second SEM was fit, including lagged interaction terms for effective parenting and youth cultural stress predicting YASB at W2 and W3. Specifically, a continuous interaction between latent effective parenting and continuous youth cultural stress at W1 and W2 was included, predicting YASB at W2 and W3, and the effect was constrained to be equal across waves. A statistically significant interaction would indicate that the strength of the association between effective parenting and YASB was larger (or smaller) at different levels of youth cultural stress. To facilitate interpretation, model-adjusted mean values of YASB were plotted at the average (i.e., mean) and high (i.e., 2 standard deviations above the mean) values of both effective parenting and youth cultural stress.

Hypothesized associations were constrained to be the same across waves, and all paths were adjusted for child age at each wave, gender, site (SB or PR), and socioeconomic status (SES; i.e., above/below the federal poverty level). An additional multiple group SEM was fit to test whether there were significantly different effects across site and gender. Specifically, 4 groups (site by gender) were modeled with equality constraints placed on all the structural model parameters, and fit was compared (χ^2 difference test and CFI) to a model allowing the respective parameters to be freely estimated across groups. A nonsignificant χ^2 difference test or a CFI < 0.01 indicate no differential effects across the groups.⁴⁵

Analyses were conducted in Mplus version 7.1 using TYPE=COMPLEX procedures and took into account the sampling weights, study site, and clustered sampling design. Missing data were handled by using full information maximum likelihood, the default in Mplus.

RESULTS

Association Among Parental Risks, Parenting, and Youth Antisocial Behaviors

Means and standard deviations for parent and youth variables at each wave are presented in Table 1, and correlations indicated that parental risks, parenting behaviors, and youth cultural stress were statistically significantly associated with YASB across waves (see Table S1, available online). Fit statistics for SEM (Figure 2) indicated that the model fit the data adequately (RMSEA = 0.041, CFI = 0.87, TLI = 0.85, SRMR = 0.061).

The lagged SEM revealed that the parental risk composite was negatively associated with effective parenting at each wave (Figure 2). Effective parenting at W1 and W2 was prospectively negatively associated with YASB at W2 and W3, respectively, adjusting for YASB at the previous wave. At W1, effective parenting was inversely associated with YASB, and youth cultural stress was positively associated with YASB. Effective parenting was found to mediate the association between the parental risk composite and YASB cross-sectionally at W1 and also prospectively from W1 and W2 to the next waves (Table 2). The indirect effect of W2 parental risk composite on W3 YASB through W2 effective parenting ($\beta = 0.029$, SE = 0.008, $p = .001$) accounted for 45.3% of the total effect from W2 parental risk composite to W3 YASB. Similarly, the indirect effect from W1 to W2 explained 27.6% of the total effect, and cross-sectionally the indirect effect through effective parenting explained 58.3% of the total effect. Multiple group SEM found no significant differences

across site and gender (unconstrained model: CFI = 0.886, $\chi^2_{647} = 1156$; constrained model: CFI = 0.886, $\chi^2_{666} = 1172$; χ^2 difference test $p > 0.05$, CFI < 0.01).

Influence of Youth Cultural Stress

Youth cultural stress did not show a direct prospective relationship with W2 or W3 YASB after controlling for previous wave YASB. When the interaction terms for youth cultural stress and effective parenting were added to the SEM, youth cultural stress at W1 and W2 significantly moderated the prospective relationship between effective parenting behaviors at W1 and W2 and YASB at W2 and W3 (interaction term estimate = 0.432, SE = 0.199, $p = .030$). Figure 3 illustrates adjusted mean levels of YASB for those with high and average levels of effective parenting and youth cultural stress. At an average level of youth cultural stress, effective parenting is strongly related to YASB. However, at a higher level of youth cultural stress, effective parenting had a significantly weaker association with YASB. Thus, the inverse relationship between effective parenting and YASB diminished at higher levels of youth cultural stress.

DISCUSSION

The present study examined the role of parental risks, parenting behaviors, and youth cultural stress in the development of YASB using a population-based sample of PR children. There are 3 main contributions of the study. First, as hypothesized and consistent with existing literature, our study replicated the direct, prospective effect of parenting behaviors on YASB¹⁸ among youth of PR background. In particular, this is the first study to corroborate that parenting behaviors serve as an important mechanism in the relationship between parental risks and YASB among Latino families, such that parental risks led to less effective parenting behaviors, which in turn indirectly increased YASB. Our finding underlines the strength of parenting among Latino families and continues to substantiate the importance of parenting-enhanced treatments as evidence-based interventions for youth externalizing symptoms.⁴ Of note, when working with Latino families whose parenting abilities are likely to be hindered by the presence of multiple risks, intervention efforts should take into account the high levels of parental risks and adequately address these factors when implementing parenting interventions.

The second contribution of the current study is the result that youth cultural stress moderated the inverse relationship between effective parenting and YASB in a longitudinal (lagged) model in which effective parenting mediated the parental risks–YASB relationship. Specifically, for youth experiencing higher cultural stress, the influence of effective parenting on YASB was significantly weaker compared to that for youth with lower/average cultural stress. With few exceptions,^{13,29} the literature has scarcely addressed the role of cultural experiences in relation to youth mental health and implications for intervention. Yet our finding indicates that the conceptualization of risk processes among minority youth needs to integrate minority-specific experiences, such as the cultural stress that these youth experience. This result has critical implications for existing evidence-based treatments for youth externalizing symptoms, particularly those targeting low-resource Latino families (e.g., Familias Unidas).⁴⁶ To enhance treatment outcomes for racial/ethnic minority youth,

interventions must consider and address youth cultural stress whenever appropriate, in addition to parenting. Clinicians should consider integrating culturally responsive materials in treatment to help youth and families process relevant racial/cultural minority issues, such as the youth's racial/ethnic identity, self-concept, worldview, and coping skills to navigate youth cultural stress (e.g., resilience).⁴⁷

Third, and most importantly, our study specifies an ecodevelopmental model of underlying processes for developmental psychopathology in a racial/ethnic minority group. Our work highlights the need for within-group analyses in future research, as current findings provided evidence that conceptual models based on mainly nonminority samples may need to be refined to properly capture relevant processes among groups from diverse sociocultural communities. In addition, a large body of research on youth psychopathology to date has focused on non-minority-specific risk factors, which falls short of grasping the complexity of potential influence from multidimensional contextual factors, such as familial and sociocultural variables relevant for racial/ethnic minority youth.² Our work shifts to a developmental approach that integrates a broad range of both individual and contextual factors and strives to depict the interaction of these factors over time to facilitate the understanding of underlying processes for childhood psychopathology.

Of note, overwhelming research on racial/ethnic minority youth mental health has been based on minority versus nonminority comparative models. Although data generated from such methodology informs the differences/similarities of psychopathology prevalence and characteristics across racial/ethnic minority groups, they do not provide specific sociocultural mechanisms that can enhance treatment for minority youth. To address these shortcomings, we implemented an integrative, developmental conceptualization of childhood psychopathology to examine population-relevant, multidimensional factors—including familial (i.e., parental risks; parenting) and sociocultural (i.e., youth cultural stress) influences on antisocial behaviors among Latino youth—using a longitudinal design.

Study limitations warrant consideration. Information about parental risks and parenting behaviors relied on single-informant report. Biases associated with single-informant variance and social desirability should be considered. Two of the scales for effective parenting had suboptimal reliability; however, our method of modeling a latent variable underlying these measures took this measurement error into account when estimating associations. Nearly all primary caretaker informants were mothers. Because existing literature suggests differences between paternal and maternal interaction with youth and their reports of youth externalizing behaviors,¹⁶ future studies should include fathers. Finally, as our study establishes the relevance of cultural stress in racial/ethnic minority youth antisocial behaviors, the interplay with other sociocultural determinants (e.g., SES, housing, food security, neighborhood risks, employment, to name a few) will be an important next step for future research.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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References

1. Bronfenbrenner, U. Ecological models of human development. In: Husen, T., Postlethwaite, TN., editors. *International Encyclopedia of Education*. 2. Oxford, UK: Pergamon Press; 1994. p. 1643-1647.
2. Diaz, Y., Zambrana, RE. Understanding Contextual Influences on Parenting and Child Behavior in the Assessment and Treatment of ADHD in Latino Children. In: Fitzgerald, HE., editor. *Latina and Latino Children's Mental Health*. Vol. 2. Santa Barbara, CA: ABC-CLIO; 2011.
3. Alegría M, Canino G, Shrout PE, et al. Prevalence of mental illness in immigrant and non-immigrant US Latino groups. *Am J Psychiatry*. 2008; 165:359–369. [PubMed: 18245178]
4. National Institute for Health and Care Excellence (NICE). *Antisocial Behaviour and Conduct Disorders in Children and Young People: Recognition and Management*. Leicester (UK): British Psychological Society and the Royal College of Psychiatrists; 2013.
5. Bird HR, Davies M, Duarte CS, Shen S, Loeber R, Canino GJ. A study of disruptive behavior disorders in Puerto Rican youth: II. Baseline prevalence, comorbidity, and correlates in two sites. *J Am Acad Child Adolesc Psychiatry*. 2006; 45:1042–1053. [PubMed: 16926611]
6. McLaughlin KA, Hilt LM, Nolen-Hoeksema S. Racial/ethnic differences in internalizing and externalizing symptoms in adolescents. *J Abnorm Child Psychol*. 2007; 35:801–816. [PubMed: 17508278]
7. Burstein M, Stanger C, Dumenci L. Relations between parent psychopathology, family functioning, and adolescent problems in substance-abusing families: disaggregating the effects of parent gender. *Child Psychiatry Hum Dev*. 2012; 43:631–647. [PubMed: 22392413]
8. Schleider JL, Patel A, Krumholz L, Chorpita BF, Weisz JR. Relation between parent symptomatology and youth problems: multiple mediation through family income and parent-youth stress. *Child Psychiatry Hum Dev*. 2015; 46:1. [PubMed: 24515314]
9. Sumner J, Boisvert D, Andersen JP. The effects of stress and social support on externalizing behaviors among children in military families. *Deviant Behav*. 2016; 37:246–262.
10. Taylor ZE, Conger RD, Robins RW, Widaman KF. Parenting practices and perceived social support: longitudinal relations with the social competence of Mexican-origin children. *J Latina/o Psychol*. 2015; 3:193.
11. Ayón C, Williams LR, Marsiglia FF, Ayers S, Kiehne E. A latent profile analysis of Latino parenting: the infusion of cultural values on family conflict. *Fam Soc*. 2015; 96:203–210. [PubMed: 26966343]
12. Lorenzo Blanco, EL, Meca, A., Unger, JB., et al. Longitudinal effects of Latino parent cultural stress, depressive symptoms, and family functioning on youth emotional well-being and health risk behaviors [published online ahead of print Oct 2016]. *Fam Process*. 2016. <https://doi.org/10.1111/famp.12258>
13. Duarte CS, Bird HR, Shrout PE, et al. Culture and psychiatric symptoms in Puerto Rican children: longitudinal results from one ethnic group in two contexts. *J Child Psychol Psychiatry*. 2008; 49:563–572. [PubMed: 18400061]
14. Pew Research Center. *Statistical Portrait of Latinos in the United States 2013*. Washington, DC: 2015. Available at: http://assets.pewresearch.org/wp-content/uploads/sites/7/2015/05/2015-05-12_statistical-portrait-of-hispanics-in-the-united-states-2013_final.pdf [Accessed October 9, 2017]

15. Lösel F, Farrington DP. Direct protective and buffering protective factors in the development of youth violence. *Am J Prev Med.* 2012; 43:S8–S23. [PubMed: 22789961]
16. Buschgens CJ, van Aken MA, Swinkels SH, Ormel J, Verhulst FC, Buitelaar JK. Externalizing behaviors in preadolescents: familial risk to externalizing behaviors and perceived parenting styles. *Eur Child Adolesc Psychiatry.* 2010; 19:567–575. [PubMed: 20041337]
17. Sentse M, Veenstra R, Lindenberg S, Verhulst FC, Ormel J. Buffers and risks in temperament and family for early adolescent psychopathology: generic, conditional, or domain-specific effects? The TRAILS study. *Dev Psychol.* 2009; 45:419. [PubMed: 19271828]
18. Coley RL, Kull MA, Carrano J. Parental endorsement of spanking and children's internalizing and externalizing problems in African American and Hispanic families. *J Fam Psychol.* 2014; 28:22. [PubMed: 24364363]
19. De Haan AD, Prinzie P, Deković M. Change and reciprocity in adolescent aggressive and rule-breaking behaviors and parental support and dysfunctional discipline. *Dev Psychopathol.* 2012; 24:301–315. [PubMed: 22293011]
20. Pardini DA, Fite PJ, Burke JD. Bidirectional associations between parenting practices and conduct problems in boys from childhood to adolescence: the moderating effect of age and African-American ethnicity. *J Abnorm Child Psychol.* 2008; 36:647–662. [PubMed: 17899362]
21. Williams LR, Steinberg L. Reciprocal relations between parenting and adjustment in a sample of juvenile offenders. *Child Dev.* 2011; 82:633–645. [PubMed: 21410908]
22. Calzada EJ, Huang K-Y, Anicama C, Fernandez Y, Brotman LM. Test of a cultural framework of parenting with Latino families of young children. *Cult Divers Ethn Minor Psychol.* 2012; 18:285.
23. Eamon MK, Mulder C. Predicting antisocial behavior among Latino young adolescents: an ecological systems analysis. *Am J Orthopsychiatry.* 2005; 75:117. [PubMed: 15709855]
24. Germán M, Gonzales NA, Bonds McClain D, Dumka L, Millsap R. Maternal warmth moderates the link between harsh discipline and later externalizing behaviors for Mexican American adolescents. *Parenting.* 2013; 13:169–177. [PubMed: 23894229]
25. Holtrop K, Smith M, Scott JC. Associations between positive parenting practices and child externalizing behavior in underserved Latino immigrant families. *Fam Process.* 2015; 54:359–375. [PubMed: 25287585]
26. Moroney E, Tung I, Brammer WA, Peris TS, Lee SS. Externalizing outcomes of youth with and without ADHD: time-varying prediction by parental ADHD and mediated effects. *J Abnorm Child Psychol.* 2017; 45:457–470. [PubMed: 27796692]
27. Pérez DJ, Fortuna L, Alegria M. Prevalence and correlates of everyday discrimination among US Latinos. *J Commun Psychol.* 2008; 36:421–433.
28. Szalacha LA, Erkut S, Coll CG, Alarcon O, Fields JP, Ceder I. Discrimination and Puerto Rican children's and adolescents' mental health. *Cult Divers Ethn Minor Psychol.* 2003; 9:141–155.
29. Rivera F, Lopez I, Guarnaccia P, Ramirez R, Canino G, Bird H. Perceived discrimination and antisocial behaviors in Puerto Rican children. *J Immigr Minor Health.* 2011; 13:453–461. [PubMed: 21113817]
30. Wei C, Kendall PC. Child perceived parenting behaviors and childhood anxiety and related symptoms. *Child Fam Behav Ther.* 2014; 36:1–18. [PubMed: 25061257]
31. Bird HR, Shrout PE, Davies M, et al. Longitudinal development of antisocial behaviors in young and early adolescent Puerto Rican children at two sites. *J Am Acad Child Adolesc Psychiatry.* 2007; 46:5–14. [PubMed: 17195724]
32. Bird HR, Canino GJ, Davies M, et al. A study of disruptive behavior disorders in Puerto Rican youth: I. Background, design, and survey methods. *J Am Acad Child Adolesc Psychiatry.* 2006; 45:1032–1041. [PubMed: 16926610]
33. Bravo M, Woodbury-Fariña M, Canino GJ, Rubio-Stipec M. The Spanish translation and cultural adaptation of the Diagnostic Interview Schedule for Children (DISC) in Puerto Rico. *Cult Med Psychiatry.* 1993; 17:329–344. [PubMed: 8269713]
34. Shaffer D, Fisher P, Lucas CP, Dulcan MK, Schwab-Stone ME. NIMH Diagnostic Interview Schedule for Children Version IV (NIMH DISC-IV): description, differences from previous versions, and reliability of some common diagnoses. *J Am Acad Child Adolesc Psychiatry.* 2000; 39:28–38. [PubMed: 10638065]

35. Elliott, DS., Huizinga, D., Ageton, SS. Explaining Delinquency and Drug Use. Thousand Oaks, CA: Sage Publications; 1985.
36. Bird HR, Davies M, Canino G, Loeber R, Rubio-Stipec M, Shen S. Classification of antisocial behaviors along severity and frequency parameters. *J Child Fam Stud*. 2005; 14:325–341.
37. Lish JD, Weissman MM, Adams PB, Hoven CW, Bird H. Family psychiatric screening instrument for epidemiologic studies: pilot testing and validation. *Psychiatry Res*. 1995; 57:169–180. [PubMed: 7480383]
38. Thoits PA. Stress, coping, and social support processes: where are we? What next? *J Health Soc Behav*. 1995; (Spec. No):53–79. [PubMed: 7560850]
39. Cervantes RC, Padilla AM, Salgado de Snyder N. The Hispanic Stress Inventory: a culturally relevant approach to psychosocial assessment. *Psychol Assess*. 1991; 3:438.
40. Diamantopolous A, Winklhofer HM. Index construction with formative indicators: an alternative to scale development. *J Market Res*. 2001; 38:269–277.
41. Patterson GR, Stouthamer-Loeber M. The correlation of family management practices and delinquency. *Child Dev*. 1984; 55:1299–1307. [PubMed: 6488958]
42. Hudson WW. A measurement package for clinical workers. *J Appl Behav Sci*. 1982; 18:229–238. [PubMed: 10256706]
43. Goodman SH, Hoven CW, Narrow WE, et al. Measurement of risk for mental disorders and competence in a psychiatric epidemiologic community survey: the National Institute of Mental Health Methods for the Epidemiology of Child and Adolescent Mental Disorders (MECA) Study. *Soc Psychiatry Psychiatr Epidemiol*. 1998; 33:162–173. [PubMed: 9567666]
44. Masten A, Cicchetti D. Developmental cascades. *Dev Psychopathol*. 2010; 22:491–495. [PubMed: 20576173]
45. Chueng GW, Rensvold RB. Evaluating goodness of fit indexes for testing model invariance. *Struct Equat Model*. 2002; 9:235–255.
46. Pantin H, Coatsworth JD, Feaster DJ, et al. Familias Unidas: The efficacy of an intervention to promote parental investment in Hispanic immigrant families. *Prev Sci*. 2003; 4:189–201. [PubMed: 12940469]
47. American Psychological Association Task Force on Resilience and Strength in Black Children and Adolescents. [Accessed October 9, 2017] Resilience in African American children and adolescents: a vision for optimal development. 2008. Available at: <http://www.apa.org/pi/cyf/resilience.html>

Clinical Guidance

- Among families of Puerto Rican ethnicity, effective parenting behaviors such as monitoring, warmth, and lack of coercive discipline served as a positive influence on the association between parental risks and youth antisocial behavioral problems, consistent with current literature.
- Youth cultural stress played a moderating role in the relationship between parenting behaviors and youth antisocial behaviors: for youth who experienced higher cultural stress, the protective effect of parenting on antisocial behaviors weakened.
- Although parenting remains a critical component in treatment for youth antisocial behaviors, integrating culturally responsive materials to adequately address youth cultural stress when working with minority youth and families is of particular importance.

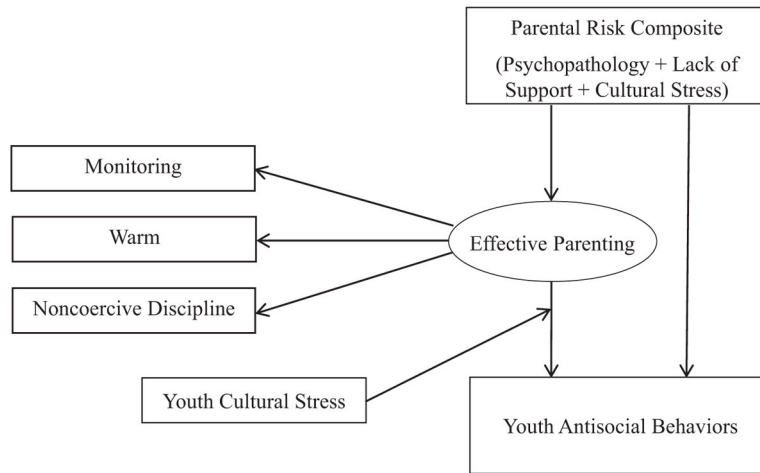


FIGURE 1. A conceptual model of parental risks, parenting, youth cultural stress, and youth antisocial behaviors.

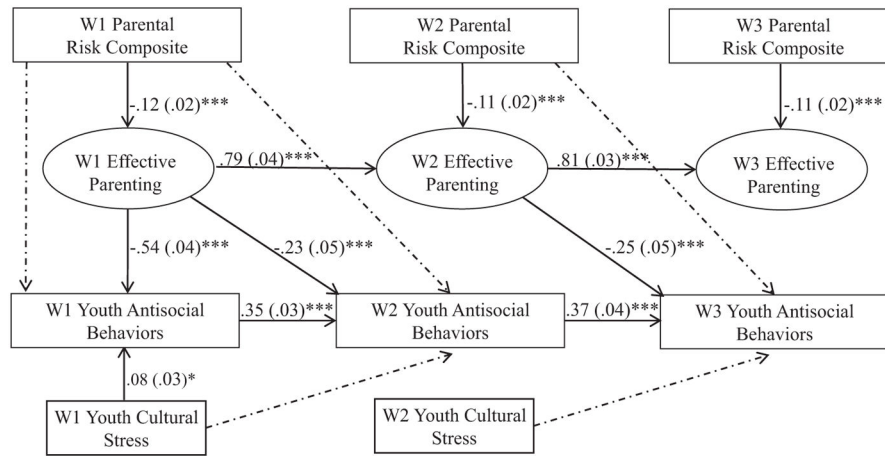


FIGURE 2.

Longitudinal structural equation model examining predictive effects of parental risks (a composite of Psychopathology, Lack of Social Support, and Cultural Stress), effective parenting (a latent variable of Monitoring, Warmth, and Noncoercive Discipline), and youth cultural stress on youth antisocial behaviors. *Note:* Standardized coefficients and standard errors of statistically significant paths are displayed. Nonsignificant paths ($p > .05$) are represented with dotted lines, with no coefficients shown. All paths are adjusted for child age at each wave (W1–3), gender, site, and socioeconomic status. $*p < .05$; $**p < .01$; $***p < .001$.

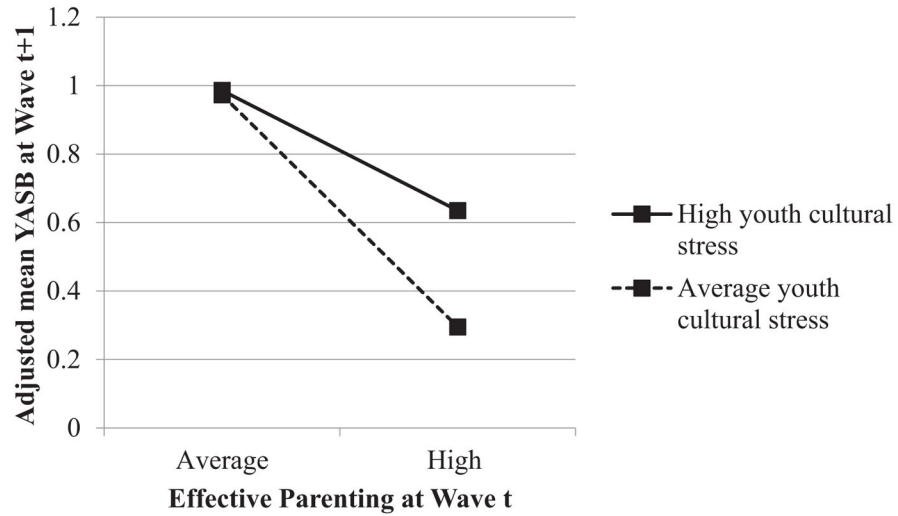


FIGURE 3.

Lagged moderating effect of youth cultural stress at wave 1 (W1) and wave 2 (W2) on the prospective association between effective parenting behaviors at W1 and W2 and youth antisocial behaviors at W2 and wave 3 (W3). *Note:* Model-adjusted mean youth antisocial behaviors by parent and youth reports (YASB) values are plotted from structural equation modeling that adds an interaction term for youth cultural stress \times effective parenting to the model displayed in Figure 2, with interaction constrained to be the same across waves (interaction term estimate = 0.432, SE = 0.199, $p = .030$). The endpoints are presented at the average (i.e., mean) and high (i.e., 2 standard deviations above the mean) values of effective parenting and youth cultural stress.

Descriptive Statistics for Child and Parent Factors at Waves 1 to 3 (Unweighted, N = 1,150)

TABLE 1

Measures	Wave 1 ^a n = 1,150		Wave 2 ^a n = 1,150		Wave 3 ^b n = 1,082	
	Mean	SD	Mean	SD	Mean	SD
Child Factors						
Antisocial Behaviors (YASB)	1.45	1.38	1.22	1.36	1.15	1.35
Cultural Stress	0.14	0.20	0.07	0.15	0.05	0.13
Parent Factors						
Parental Risk Composite	0.01	1.86	0.08	1.91	0.04	1.95
Psychopathology (n %)	398	34.8	246	21.5	209	19.4
Lack of Social Support	1.53	0.55	1.68	0.49	1.66	0.48
Cultural Stress	0.12	0.21	0.08	0.18	0.08	0.17
Effective Parenting						
Monitoring	13.22	2.64	13.09	2.62	12.67	2.56
Warmth	2.43	0.42	2.47	0.41	2.47	0.42
Noncoercive Discipline	2.52	0.55	2.60	0.51	2.66	0.49

Note: YASB = youth antisocial behaviors.

^aSouth Bronx, n = 515; Puerto Rico, n = 635.

^bSouth Bronx, n = 478; Puerto Rico, n = 604.

TABLE 2

Total and Indirect Effects for Mediation Hypothesis

Path	Total Effect			Speci3c Indirect Effect			% Mediated
	Standardized β	SE	p	Standardized β	SE	p	
W2 Parental Risk Composite on W3 YASB through W2 Effective Parenting	0.064	0.030	.036	0.029	0.008	.001	45.3
W1 Parental Risk Composite on W2 YASB through W1 Effective Parenting	0.098	0.033	.003	0.027	0.008	.001	27.6
W1 Parental Risk Composite on W1 YASB through W1 Effective Parenting	0.108	0.036	.002	0.063	0.015	<.001	58.3

Note: Parental Risk Composite refers to a composite score of Parental Psycho pathology, Lack of Social Support, and Cultural Stress by parent self-reports; Effective Parenting refers to latent variable of effective parenting behaviors including Monitoring, Warmth, and Noncoercive Discipline by parent reports. All paths were adjusted for child gender and age, site, and socioeconomic status. W1 = wave 1; YASB = youth antisocial behaviors (by parent and youth reports).