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Ethnic Differences in Relations between Family Process and Child Internalizing
Problems

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Abstract

Background: Family process variables have been linked to child problem behavior, but recent research suggests that child ethnicity may moderate relations between family process and child outcomes. The current study examined how ethnicity moderates relations between parent conflict, parent-child relationship quality, and internalizing problems. **Methods:** A sample of 101 mother-child dyads was drawn from a larger longitudinal study of childhood-onset depression. Maternal reports of family process factors were used with child reports of anxiety and depressive symptoms. **Results:** The results indicated a moderating effect of ethnicity for multiple indicators of internalizing symptoms, such that childrearing disagreement and low levels of mother-child openness were associated with internalizing problems only for European American (not African American) children. **Conclusions:** Findings suggest that ethnicity moderates the effects of family process factors on child psychopathology. Ethnic differences may be accounted for by the normativeness of family processes and the meaning that children of different ethnic backgrounds assign to these processes. **Keywords:** ethnicity, family factors, anxiety, depression. **Abbreviations:** EA, European American; AA, African American; IPC, Interparental Conflict; CRD, Child-rearing Disagreements.

Ethnic Differences in Relations between Family Process and Child Internalizing Problems

Family process variables, including parental conflict, family climate, and parenting, have been linked to a wide variety of child outcomes including academic achievement, social competence, self-esteem, and children's externalizing problems (Rothbaum & Weisz, 1994; Steinberg, 2001). Although less widely studied, family process factors have also been consistently associated with child internalizing problems, including symptoms of depression and anxiety (Sheeber, Hops, & Davis, 2001). Several aspects of family-related processes have been associated with internalizing symptoms including family conflict, enmeshment and cohesion, and dimensions of the parent-child relationship including decision making, acceptance, warmth, hostility, support, and openness to expression (Sheeber et al., 2001; Siqueland, Kendall, & Steinberg, 1996).

Emerging evidence however, suggests that children's cultural background can moderate associations between family processes and children's adjustment. In an early study, Baumrind (1972) reported that authoritarian parenting was linked to increased self-assertiveness and independence among African American (AA) girls, but not among European American (EA) girls. More recently, Deater-Deckard, Dodge, Bates, and Pettit (1996) found that ethnicity moderated relations between the use of corporal punishment and children's externalizing problems. Specifically, the use of physical discipline was related to higher rates of externalizing problems for EA but not for AA school-age children, a finding that was replicated when youth became adolescents (Lansford, Deater-Deckard, Dodge, Bates, & Pettit, 2004). Other researchers have corroborated these

results, finding ethnic differences in the strength of associations between the use of corporal punishment (Bradley, Corwyn, Burchinal, McAdoo, & Coll, 2001; Gunnoe & Mariner, 1997) or the use of more directive and no-nonsense parenting styles (Walker-Barnes & Mason, 2001; Hill & Bush, 2001; Lindahl & Malik, 1999), in relation to conduct problems and gang-related antisocial activities.

Recent research by Lansford et al. (2005) may explain a potential mechanism underlying these ethnic differences. Examining mother-child dyads from six countries, they found that the association between physical discipline and child aggression was moderated by the normativeness of physical discipline. In countries where physical discipline was perceived to be more normative, there was a weaker association between physical discipline and child aggression relative to countries where physical discipline was less normative.

The vast majority of research examining ethnicity and family process has focused on externalizing problems. The present study aims to explore whether ethnicity also moderates relations between family process variables and children's internalizing problems. The study focuses on two family process variables that have been linked to children's internalizing problems: (1) interparental conflict and (2) parent-child warmth and openness.

Interparental Conflict and Children's Internalizing Problems

There is a substantial body of literature linking interparental conflict with both internalizing and externalizing problems in children (Cummings and Davies, 1994; Davies and Cummings, 1998; Puig-Antich et al., 1985). The present study focuses on frequency of parental disagreements about child-rearing philosophies and practices.

Jouriles et al. (1991) demonstrated that child-rearing disagreements were more predictive of child behavior problems than the more general construct of marital adjustment. Child-rearing disagreements also predicted child internalizing problems even after controlling for marital adjustment and exposure to marital conflict. Although links between interparental conflict and child adjustment have been well established in the literature, relatively few studies have examined these associations in ethnically diverse samples (McLoyd, Harper, & Copeland, 2001).

Evidence also suggests that interparental conflict, particularly the use of physical conflict resolution strategies, may be more normative in AA than EA families. AAs have been found to be 1.58 times more likely than EAs to report the presence of physical violence in marital arguments after controlling for income and education (Sorenson, Upchurch, & Shen, 1996). Although rates of interparental violence have been found to be higher for AA vs. EA couples, ethnic differences in the intensity of verbal marital conflict are less consistent (McLoyd et al., 2001). However, there is some evidence indicating that intensity and frequency of verbal conflict may be more normative in AA versus EA families based on reports from a longitudinal study using the Verbal Aggression factor of Straus' (1979) Conflict Tactics Scale (Vendlinski, Silk, Criss, Shaw, & Lane, 2005). We therefore explored the possibility that child-rearing disagreements would be more strongly associated with child internalizing problems in EA than AA families.

Mother-Child Relationship Quality and Internalizing Problems

The quality of parent-child relationships has also been linked to child internalizing problems (Puig-Antich et al., 1985; Sheeber et al., 2001). The attachment

literature, for example, suggests that early parent-infant relations are related to later internalizing outcomes (Warren, Huston, Egeland, & Sroufe, 1997). However, most studies linking attachment to later internalizing problems have been conducted with North American samples. Interestingly, rates of ‘secure’ attachment vary by culture. For example, Miyake, Chen, and Campos (1985) note that the anxious-avoidant classification to be the most normative category in Northern Germany (49%), where physical proximity with parents is deemed less vital in the first year. In contrast, in a culture where relatively greater value is placed on close physical proximity in the first year, Japanese infants have demonstrated higher rates of the anxious-ambivalent classification (28%) than in North American, EA infants (15%). Just as attachment patterns have been found to be more normative across cultures, reflecting differences in the value placed on sensitivity and the overt expression of parental nurturance, it is logical to expect that associations between measures of parent-child openness and internalizing problems would be negative and stronger for EA versus AA children, if there is evidence to suggest that AA families may place less value on overt expressions of warmth.

There is some evidence that levels of parental openness may differ among EA and AA families. Ispa et al. (2004) found that maternal warmth was significantly lower for AA than EA low-income mothers. McLoyd and Smith (2002) reported a similar ethnic difference in parenting, finding that AA mothers of 4 year olds were less overtly emotionally supportive than EA mothers. Further, AA mothers of both infants and young children have been found to display less physical affection to their children than EA mothers even after accounting for variation due to income level (Bradley, Corwyn, McAdoo, & Coll, 2001). In the current study, we explored whether the magnitude of

association between maternal reports of openness and warmth and children's internalizing symptoms would be stronger in EA versus AA families. We hypothesized a stronger inverse relationship between warmth and internalizing symptoms among EA families than AA families.

Method

Participants

One hundred and one children participated in this study, including 52 children of mothers with a history of childhood-onset depression (COD) and 49 children of never-depressed mothers (NCOD; see Silk, Shaw, Skuban, Oland, & Kovacs, in press).. Children and their mothers were participants in a larger Program Project focusing on risk factors for childhood-onset mood disorder. COD mothers met DSM criteria (DSM-III, DSM-IV; American Psychiatric Association, 1980; 1994) for major depressive and/or dysthymic disorder (N=26) by age 14, or bipolar spectrum disorder (Bipolar I, Bipolar II, or Cyclothymic Disorder) by age 17 (N=8). NCOD mothers had a lifetime-history free of major psychiatric disorder. All participants were free of preexisting major systemic medical disorders.

Children ranged in age from six to nine ($M = 7.46$, $SD = 1.22$) and included 55 males (54.5%) and 46 females (45.5%). Demographic characteristics by ethnicity of participants are reported in Table 1. Twelve children in the AA group participated in the study with a sibling (3 sets of two siblings and 2 sets of three siblings) and ten children from the EA participated in the study with a sibling (5 sets of two siblings). EA and AA groups did not differ in diagnosis, marital status, mother's education, child age, or child gender. When we collapsed the marital status variable into two groups (one parent vs. two parents), a significant ethnicity difference emerged, with AA families more likely to

have one parent than EA families ($t = 5.535$, $p = .021$). One vs. two parent households did not differ on family process or internalizing variables; therefore, marital status was not included as a covariate.

Insert Table 1 Here

Recruitment and Diagnoses

COD mothers were recruited via: a) accessing individuals who had participated in a follow-up study of childhood depression (Kovacs, Obrosky, Gatsonis, & Richards, 1997; $n = 15$), and b) advertising in the general community ($n = 24$). Two mothers were recruited through other means. Diagnostic status was confirmed via administration of standardized, semistructured psychiatric interviews. NCOD participants were recruited by: a) using the Cole Directory, which provides phone numbers for families meeting specific sociodemographic criteria ($n = 15$), b) advertising for volunteers in the general community ($n = 12$), or c) advertising through a local Women, Infants, and Children (WIC) center, a program that provides nutritional services for income-eligible families with young children ($n = 20$).

Procedures

The present study included mothers who met criteria for the larger study and had children aged 6-9 years. Participants completed a 2.5 hour laboratory visit that included a video-recording through a one-way mirror. All visits began with the child playing with toys on his/her own while the mothers completed questionnaires, followed by a series of age-appropriate structured tasks and questionnaires. The current report focuses on

mother-report of child-rearing disagreements and mother-child openness and child-report of internalizing symptoms.

Measures

Maternal depression. The Psychiatric Evaluation Core of the Program Project, staffed by professional-level clinical evaluators and independent best-estimate psychiatrists, conducted all psychiatric assessments. Interviews were conducted with the mother and a second informant (e.g. the mother's parent or sibling), if available. In addition, childhood psychiatric records were required to verify the onset of disorders. Two senior psychiatrists independently reviewed the assessment results and supporting records and arrived at a final DSM-based consensus diagnoses. Data from these assessments were used to determine (1) maternal lifetime diagnostic status and (2) lifetime number of depressive episodes. Number of episodes was coded on a 5 point scale with a "0" indicating "no episodes," a "1" indicating "one episode," a "2" indicating "2 episodes," a "3" indicating "three or more episodes," and a "4" indicating "too many episodes to count."

Follow-Up Interview Schedule for Adults. COD probands recruited from the follow-up study of childhood depression (Kovacs et al., 1997) were assessed via the Follow-Up Interview Schedule for Adults (FISA), a semi-structured diagnostic interview for adults adapted from the Interview Schedule for Children and Adolescents (Sherrill & Kovacs, 2000). Diagnoses were derived based on symptom ratings and assigned by consensus among the interviewers according to DSM-III criteria. Inter-rater reliabilities are satisfactory, with a mean intra-class correlation of .89 for psychiatric symptoms.

Structured Clinical Interview for DSM-IV Patient Version (SCID). The Structured Clinical Interview for DSM-IV Axis I Disorders, Patient Edition (SCID; First, Spitzer, Gibbon, & Williams, 1995) was used to assess lifetime psychiatric disorders among prospectively recruited COD probands and NCOD probands. The SCID is a semi-structured, clinician-administered diagnostic interview that includes modules corresponding to major DSM psychiatric classes. The SCID was expanded to include criteria for selected childhood diagnoses and DSM-III (APA, 1980) current and lifetime criteria for affective disorders.

Adult-Child Relationship Scale (ACRS). This 30-item questionnaire assesses the parent's perceptions of their relationship with children, and was adapted from the Student-Teacher Relationship Scale (Pianta, 1994). The ACRS yields a 5-item factor for parent-child openness/closeness ($\alpha = .69$). Items were written to reflect attachment-related aspects of caregiver-child interactions (e.g., trust, dependency) and caregiver's own feelings about the child and his/her behavior.

Levonn (Richters, Martinez, & Valla, 1990). The Levonn is cartoon-based interview for assessing young, urban school-age children's distress symptoms. For each cartoon, a 2-3 sentence script is read to the child. Responses are indicated using three different temperatures on a thermometer, labeled "never," "some of the time," and "a lot of the time," respectively. Items include symptoms of both depression and anxiety disorders, as well as post traumatic stress disorder, and exposure to community crime and violence. For the purposes of the present study, factors were generated for depression (eight items, $\alpha = .76$: e.g., 'Here, Levonn is feeling very, very sad, and he doesn't know why. How many times have you felt like Levonn?') and anxiety (4 items, $\alpha = .73$: e.g.,

‘Levonn feels really nervous or scared a lot, even doing things that do not make his friends nervous or scared. How often do you feel like Levonn?’), for which scores were summed and averaged for analyses. One week test-retest data of all distress ratings have been found to be high and significant $r = .81$, $p < .001$ (Martinez & Richters, 1993).

Child-Rearing Disagreements Scale (CRD). The CRD is a 30-item measure of common child-rearing disagreements (Jouriles et al., 1991). A score is generated reflecting the frequency of disagreements over childrearing issues ($\alpha = .93$).

Multidimensional Anxiety Scale for Children (MASC; March et al., 1997). The MASC is a 39-item self-report measure of child anxiety that was administered to children ages 7 and older. Children were presented with a series of symptoms and were asked to rate how much each symptom applied to him/her (e.g., “I try to stay near my mom or dad”). These items were summed and averaged to form a symptom score ($\alpha = .88$).

Child Depression Inventory (CDI; Kovacs, 1992). The short form of the CDI is a 10-item self-report measure of depressive symptoms in children and was administered to children age 7 and older. Children were presented with a group of three statements and asked to choose the sentence that best described his/her feelings in the past two weeks. Items were summed to form a total score. This measure has been shown to have adequate reliability (Kovacs, 1992). In the present study, internal consistency for the CDI was somewhat low ($\alpha = .55$) but consistent with other uses of the short form, where alphas have ranged from .51-.53 (Shaw, D., personal communication, June 18, 2005).

Results

Preliminary Analyses

Independent t-tests and Chi Square analyses indicated that AA and EA children did not differ in age, gender, marital status, or maternal education. There were no child gender or age differences in family process variables or internalizing symptomatology. COD and NCOD children did not differ on internalizing symptoms, however, COD mothers reported lower levels of parent-child openness ($t = 2.48, p < .05$) and higher levels of child-rearing disagreements ($t = -3.64, p < .01$) than NCOD mothers. Maternal diagnostic group was therefore included as a covariate in subsequent analyses.

Direct Relations between Family Process, Symptomatology, and Ethnicity

Table 2 presents descriptive statistics and results of independent samples t-tests of family process and symptomatology variables by children's ethnic group. Raw scores (versus means) are used for presentation purposes. AA and EA children did not differ on family process or symptomatology variables. Correlational analyses indicated that family process variables were not significantly associated with internalizing variables, with the exception of a positive correlation between parent-child openness and symptoms of anxiety on the Levonn ($r = .23, p < .05$).

Insert Table 2 Here

Ethnicity as a Moderator of the Relation between Family Process and Child Internalizing

The role of ethnicity in moderating the relations between family process and child internalizing symptoms was examined using a series of Mixed Effects Linear Models using Restricted Maximum Likelihood Estimation. Mixed effects models can be used to jointly model the effects of fixed factors with the effects of random factors, such as

family membership, in which data exhibit correlated or non-constant variability. In cases where siblings participated, potential biases created by treating all the subjects as independent are addressed. Separate models were estimated for each family process and internalizing variable. Fixed effects included the family process variable (parent-child openness or child-rearing disagreements), ethnic status, and the interaction between family process and ethnic status. Family membership was included as a random effect. Mother's diagnostic group (COD vs. NCOD) was included as a covariate. All independent variables were centered prior to inclusion in the model.

Mixed Effects Models indicated that there were no main effects of parent-child openness on depressive symptoms, although greater parent-child openness was associated with higher anxious symptomatology on the Levonn. There was a significant interaction effect between parent-child openness and ethnicity on children's anxious symptomatology on the MASC ($F(1,66) = 10.19, p < .01$) and the Levonn ($F(1,96) = 4.14, p < .05$), and on depressive symptomatology on the CDI ($F(1,65) = 4.90, p < .05$). Following procedures outlined by Holmbeck (2002), interaction effects were probed by computing and plotting regression slopes predicting symptomatology from parent-child openness for EA and AA families. These analyses indicated that parent-child openness was inversely associated with depressive symptomatology on the CDI for EA children ($\beta = -.29, p < .05$) but not for AA children ($\beta = .26, p = .23$; see Figure 1). Although parent-child openness was not associated with anxiety symptoms for EA children on the MASC ($\beta = -.15, p = .25$) or Levonn ($\beta = -.15, p = .25$), parent-child openness was positively associated with anxiety symptoms for AA children on the MASC ($\beta = .67, p < .01$) and the Levonn ($\beta = .48, p < .01$).

Insert Figure 1 Here

A similar pattern of findings emerged for child-rearing disagreements. There were no main effects of child-rearing disagreements on children's symptomatology, however, significant interaction effects emerged between child-rearing disagreements and ethnicity on children's anxious symptomatology on the Levonn ($F(1,68) = 4.04, p < .05$), and depressive symptomatology on the CDI ($F(1,43) = 22.25, p < .001$) and Levonn ($F(1,68) = 6.38, p < .05$). There was also a trend toward an interaction between child-rearing disagreements and ethnicity on children's anxious symptomatology on the MASC ($F(1,45) = 3.00, p = .09$). Probing of these interactions indicated that child-rearing disagreements were positively associated with depressive symptomatology on the CDI for EA children ($\beta = .46, p < .01$), but negatively associated with depressive symptomatology on the CDI for AA children ($\beta = -.68, p < .01$). Child-rearing disagreements were not significantly associated with depressive symptomatology on the Levonn for EA children ($\beta = .21, p = .16$), but, again were negatively associated with depressive symptomatology on the Levonn for AA children ($\beta = -.40, p < .05$). Child-rearing disagreements were not associated with anxious symptomatology on the Levonn for EA children ($\beta = .08, p = .59$), but were inversely associated with anxious symptomatology on the Levonn for AA children ($\beta = -.37, p < .05$; see Figure 1). This pattern of findings was replicated including and excluding biracial children from the AA group.

Insert Figure 2 Here

Discussion

This study evaluated whether ethnicity moderated relations between two family process variables, child-rearing disagreements and mother-child openness, and child internalizing symptoms. Overall, we found support for the hypothesis that AA status would attenuate the strength of associations between family process variables and child-reported internalizing symptoms, whereas higher rates of child-rearing disagreements and lower rates of parent-child openness were associated with internalizing symptoms for EA children. Interestingly, without accounting for ethnicity, no significant association was found between family process variables and child internalizing problems in seven of eight tests, suggesting that it is vital to consider ethnicity in understanding how family processes are associated with children's adjustment.

With respect to interparental child-rearing disagreements (CRD), we predicted that there would be a stronger positive association for EA versus AA families, a hypothesis that was partially supported. CRD were positively associated with symptoms of depression as measured by the CDI for EA children, but were negatively associated with symptoms of depression measured by the CDI and Levonn for AA children. These findings suggest that while CRD are associated with internalizing symptoms for EA children, such an association does not appear to exist for AA children. In fact, AA children reported *lower* symptoms of anxiety and depression as their parents reported higher levels of child-rearing disagreements.

This ethnic difference in the relationship between CRD and internalizing problems may be partially accounted for by the normativeness of interparental conflict within EA and AA families. There is some evidence to suggest that verbal aggression between parents is more typical in AA vs. EA families (Vendlinski et al., 2005), and a greater body of literature finding physical aggression between parents to be more normative in AA families (Sorenson et al., 1996). Based on these differences in normative exposure to parental conflict, including physical conflict, AA children may be more accustomed to parental arguments and in turn may view such conflict resolution strategies as a more normative facet of family life. Similar to AA children's interpretation of being punished using physical means (Deater-Deckard et al., 1996), AA children's understanding of the meaning of conflict may dampen associations commonly found for interparental conflict and EA children's internalizing problems.

In fact, researchers have speculated that children from different ethnic backgrounds may assign different meanings to various family processes. Walker-Barnes and Mason (2001) hypothesized that parental control may be viewed by AA children as a sign of caring and concern and could be associated with lower feelings of anger and manipulation than it is for EA children. On the other hand, EA children may view this control as being intrusive and inappropriate. Further, Deater-Deckard, Dodge, and Sorbring (in press) have speculated that physical punishment may be seen as more appropriate by AA children, but viewed as a sign of parental rejection by EA children. In the current study, it is possible that AA children are more likely to interpret their parents' CRD as a sign that their parents are concerned for their adjustment. This interpretation is consistent with the finding that CRD are less detrimental to the mental health of AA than

EA children. Future research into the meanings that children of different ethnicities ascribe to various family processes is necessary to validate these speculations.

Mother-Child Relationship Quality and Internalizing Problems

We also found some support for our prediction that there would be a stronger negative association between the level of openness in the mother-child relationship and internalizing problems in EA than AA families. There was a significant negative association between level of openness and depressive symptoms for EA children, and a significant positive relationship between level of openness and anxiety symptoms for AA children. Again, this ethnic difference may be at least partially explained by the normativeness and value placed on parent-child openness for EA versus AA families.

Research on the normativeness of open mother-child relationships is very limited, but there is some evidence to suggest that openness is less normative in AA vs. EA families (Ispa et al., 2004; McLoyd & Smith, 2002). Differences in openness may reflect a broader difference in parenting values between ethnicities. For example, AA parents have been shown to value early autonomy development in their children. Bartz and Levine (1978) suggest that AA parents expect children to assume responsibilities for their own body functions and personal feelings at an early age compared to EA families. As several of the items we used in our measure of mother-child openness focused on emotional connectedness (e.g., 'It's easy to be in tune with what he is feeling,' 'He is open with me about sharing feelings and telling me about how things are. '), it would follow that higher levels of openness could be less valued by AA mothers. In fact, low levels of openness in AA mother-child dyads may signal that early autonomy

development has been achieved and that the benefits of autonomy development outweigh the consequences of lower openness for AA children

It is also possible that AA children interpret the meaning of having a less open relationship with their mothers differently than EA children. In a study examining the impact of parental authority on child adjustment, Baumrind (1972) posited that for AA parents, authoritarian child-rearing practices may be carried out to develop toughness and self-sufficiency in AA girls. These practices are therefore perceived not as rejecting, but as nurturant caretaking. Applying this line of reasoning to the results of the current study, it is possible that AA children may interpret a maternal push for autonomy development and less overt openness in the mother-child relationship as nurturant caretaking, while EA children may interpret less openness as maternal rejection. This more positive interpretation of low levels of openness by AA children could explain our finding that having an open mother-child relationship is less beneficial to the mental health of AA vs. EA children.

Limitations and Future Directions

Several limitations to the present study should be noted. First, the sample size was modest, ranging from 66 to 101 participants depending on the measure examined. In addition, this sample consisted of predominantly low-income, urban children, half of whom are at increased risk for psychopathology by virtue of a maternal history of depression. Thus, the results may not be generalizable to lower-risk children.

Most of the literature examining associations between family process and child outcomes derives from a knowledge base of processes common to EA, middle-class families. Future research should investigate processes and child-rearing values among

other cultural and ethnic groups. For example, for AA families there is research to suggest that parents value children's autonomous behavior, compliance, and respect for authority. Thus, it may prove fruitful to investigate associations between these child-rearing priorities and child outcomes for AA families. The current study was limited to examining ethnic differences in relation to two family process variables and internalizing problems. Future research should examine within-group ethnic processes or between-group ethnic differences in relation to other family process factors and different child outcomes (e.g., externalizing problems, social and instrumental competence). Studies that address how children of different ethnicities might vary in assigning meaning to family processes may also help clinicians and mental health practitioners understand how family processes may differentially relate to mental health outcomes in children of different ethnic backgrounds.

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References

- American Psychiatric Association, (1980). *Diagnostic and statistical manual of mental disorders* (3rd ed.) Washington, DC.
- American Psychiatric Association, (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC.
- Bartz, K. W., & Levine, E. S. (1978). Childrearing by Black parents: A description and comparison to Anglo and Chicano parents. *Journal of Marriage and the Family*, 40, 709-719.
- Baumrind, D. (1972). An exploratory study of socialization effects on Black children: Some Black-White comparisons. *Child Development*, 43, 261-267.
- Bradley, R. H., Corwyn, R. F., Burchinal, M., McAadoo, H. P., & Coll, C. G. (2001). The home environments of children in the United States Part II: Relations with behavioral development through age thirteen. *Child Development*, 72, 1868-1886.
- Bradley, R. H., Corwyn, R. F., McAadoo, H. P., & Coll, C. G. (2001). The home environments of children in the United States Part I: Variations by age, ethnicity, and poverty status. *Child Development*, 72, 1844-1867.
- Cummings, E. M., & Davies, P. (1994). *Children and marital conflict: The impact of family dispute and resolution*. New York, NY: Guilford Press.
- Davies, P. T., & Cummings, E. M. (1998). Exploring children's emotional security as a mediator of the link between marital relations and child adjustment. *Child Development*, 69, 124-139.

- Deater-Deckard, K., Dodge, K. A., Bates, J. E., & Pettit, G. S. (1996). Physical discipline among African American and European American mothers: Links to children's externalizing behaviors. *Developmental Psychology*, 32, 1065-1072.
- Deater-Deckard, K., Dodge, K. A., & Sorbring, E. (in press). Cultural differences in the effects of physical punishment. In M. Tienda & M. Rutter (Eds.), *Ethnicity and Causal Mechanisms*. Cambridge, US: Cambridge University Press.
- First, M. B., Spitzer, R. L., Gibbon, M., Williams, J. B. (1995). *Structured Clinical Interview for DSM-IV Axis I Disorders – Patient Edition (SCID-I/P, Version 2.0)*. New York: Biometrics Research Department, New York State Psychiatric Institute.
- Gunnoe, M. L., & Mariner, C. L. (1997). Toward a developmental-contextual model of the effects of parental spanking on children's aggression. *Archives of Pediatrics & Adolescent Medicine*, 151, 768-775.
- Hill, N. E., & Bush, K. R. (2001). Relationships between parenting environments and children's mental health among African American and European American mothers and children. *Journal of Marriage and the Family*, 63, 954-966.
- Holmbeck, G. N. (2002). Post-hoc probing of significant moderational and mediational effects in studies of pediatric populations. *Journal of Pediatric Psychology*, 27, 87-96.
- Ispa, J. M., Fine, M. A., Halgunseth, L. C., Harper, S., Robinson, J., Boyce, L., et al. (2004). Maternal intrusiveness, maternal warmth, and mother-toddler relationship outcomes: Variations across low-income ethnic and acculturation groups. *Child Development*, 75, 1613-1631.

- Jouriles, E. N., Murphy, C. M., Farris, A. M., Smith, D. A., Richters, J. E., & Waters, E. (1991). Marital adjustment, parental disagreements about child rearing, and behavior problems in boys: Increasing the specificity of the marital assessment. *Child Development, 62*, 1424-1433.
- Kovacs, M. (1992). *The Children's Depression Inventory manual*. North Tonawanda, NY: Multi-Health Systems.
- Kovacs, M., Obrosky, S., Gatsonis, C., & Richards, C. (1997). First-episode major depressive and dysthymic disorder in childhood: Clinical and sociodemographic factors in recovery. *Journal of the American Academy of Child & Adolescent Psychiatry, 36*, 777-784.
- Lansford, J. E., Chang, L., Dodge, K. A., Malone, P. S., Oburu, P., Palmerus, K., et al. (2005). Cultural normativeness as a moderator of the link between physical discipline and children's adjustment: A comparison of China, India, Italy, Kenya, Philippines, and Thailand. *Submitted for publication*.
- Lansford, J. E., Deater-Deckard, K., Dodge, K. A., Bates, J. E., & Pettit, G. S. (2004). Ethnic differences in the link between physical discipline and later adolescent externalizing behaviors. *Journal of Child Psychology and Psychiatry, 45*, 801-812.
- Lindahl, K. M., & Malik, N. M. (1999). Marital conflict, family processes, and boys' externalizing behavior in Hispanic American and European American families. *Journal of Clinical Child Psychology, 28*, 12-24.
- March, J., Parker, J., Sullivan, K., Stallings, P., Conners, C., & Keith (1997). The Multidimensional Anxiety Scale for Children (MASC): Factor structure,

- reliability, and validity. *Journal of the American Academy of Child & Adolescent Psychiatry*, 36, 554-565.
- Martinez, P., & Richters, J. E. (1993). The NIMH community violence project: II. Children's distress symptoms associated with violence exposure. *Psychiatry, Interpersonal and Biological Processes*, 56, 22-35.
- McLoyd, V. C., Harper, C. I., & Copeland, N. L. (2001). Ethnic minority status, interparental conflict, and child adjustment. In J. H. Grych & F. D. Fincham (Eds.), *Interparental conflict and child development: Theory, research, and applications* (pp. 98-125). New York, NY: Cambridge University Press.
- McLoyd, V. C., & Smith, J. (2002). Physical discipline and behavior problems in African American, European Americans, and Hispanic children: Emotional support as a moderator. *Journal of Marriage and the Family*, 64, 40-53.
- Miyake, K., Chen, S., & Campos, J. J. (1985). Infant temperament, mother's mode of interaction, and attachment in Japan: An interim report. *Growing points of attachment theory and research, monographs of the Society for Research in Child Development*, 50(1-2, Serial No. 209).
- Pianta, R. C. (1994). Patterns of relationships between children and kindergarten teachers. *Journal of School Psychology*, 32, 15-31.
- Puig-Antich, J., Lukens, E., Davies, M., Goetz, D., Brennan-Quattrock, J., & Todak, G. (1985). Psychosocial functioning in prepubertal major depressive disorders. *Archives of General Psychiatry*, 42, 500-507.
- Richters, J. E., Martinez, P., & Valla, J. P. (1990). *Levonn: A Cartoon-Based Structured Interview for Assessing Young Children's Distress Symptoms*. Bethesda: National

- Institute of Mental Health.
- Rothbaum, F., & Weisz, J. R. (1994). Parental caregiving and child externalizing behavior in nonclinical samples: A meta-analysis. *Psychological Bulletin*, 116, 55-74.
- Sheeber, L., Hops, H., & Davis, B. (2001). Family processes in adolescent depression. *Clinical Child and Family Psychology Review*, 4, 19-35.
- Sherrill, J. T., & Kovacs, M. (2000). Interview Schedule for Children and Adolescents (ISCA). *Journal of the American Academy of Child & Adolescent Psychiatry*, 39, 67-75.
- Silk, J. S., Shaw, D., Skuban, E., Oland, A., & Kovacs, M. (in press). Emotion regulation strategies among offspring of mothers with childhood onset depression. *Journal of Child Psychology & Psychiatry*.
- Siqueland, L., Kendall, P. C., & Steinberg, L. (1996). Anxiety in children: Perceived family environments and observed family interaction. *Journal of Clinical Child Psychology*, 25, 225-237.
- Sorenson, S. B., Upchurch, D. M., & Shen, H. (1996). Violence and injury in marital arguments: Risk patterns and gender differences. *American Journal of Public Health*, 86, 34-40.
- Steinberg, L. (2001). We know some things: Parent-adolescent relationships in retrospect and prospect. *Journal of Research on Adolescence*, 11, 1-19.
- Straus, M. A. (1979). Measuring intrafamily conflict and violence: The Conflict Tactics (CT) Scale. *Journal of Marriage and the Family*, 41, 75-85.

- Vendlinski, M., Silk, J. S., Criss, M. M., Shaw, D. S., & Lane, T. J. (2005, April). Ethnic differences in relations between family process and child internalizing problems. Poster session presented at the biennial meeting of the Society for Research in Child Development, Atlanta, GA.
- Walker-Barnes, C. J., & Mason, C. A. (2001). Ethnic differences in the effect of parenting on gang involvement and gang delinquency: A longitudinal, hierarchical linear modeling perspective. *Child Development, 72*, 1814-1831.
- Warren, S. L., Huston, L., Egeland, B., & Sroufe, L. A. (1997). Child and adolescent anxiety disorders and early attachment. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 637-644.

Table 1

Demographic Characteristics of Child Participants

	European American (<i>n</i> =58)	African American (<i>n</i> =43)	Cohort (<i>N</i> =101 children)	<i>t</i> / χ^2
Mother's Diagnosis				
NCOD	30	19	49	.562
COD	28	24	52	
Mother's Age				
<i>M</i>	30.37	29.3	29.91	.827
<i>SD</i>	7.17	5.22	6.41	
Mother's Marital Status				
Married	37	16	53	.064
Living together	7	7	14	
Divorced/Separated	5	4	9	
Single	9	16	25	
Mother's Education				
< 12 th grade	8	3	11	.423
HS grad/GED	19	16	35	
Some college	26	21	47	
College grad	5	3	8	
Child's Age				
<i>M</i>	7.47	7.44	7.46	.128

<i>SD</i>	1.27	1.16	1.22	
Child's Gender				
Male	29	26	55	1.09
Female	29	17	46	

* $p < .05$; ** $p < .01$; *** $p < .001$

Note: Siblings had visited the laboratory on different days; therefore, mother's demographic data is included for each date of visit for each child.

Table 2

Mean Scores and Standard Deviations for Family Process and Child Internalizing Variables by Ethnic Group

	Min	Max	European American		African American		<i>t</i>
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Family Process							
Parent-Child Openness	1.50	5.00	4.37	.63	4.37	.52	-.01
Childrearing Disagreements	.00	98.00	20.07	18.65	23.40	20.12	-.72
Child Internalizing							
CDI	.00	9.00	1.79	1.99	1.88	2.00	-.18
MASC	2.00	89.00	47.72	17.33	51.13	20.25	-.78
Levonon – Dep	.00	14.00	2.60	3.14	3.19	2.67	-.98
Levonon – Anx	.00	8.00	1.17	1.67	1.84	1.96	-1.82 ⁺

* $p < .05$; ** $p < .01$; *** $p < .001$; ⁺ $p < .10$; CDI = Child Depression Inventory; MASC = Multidimensional Anxiety Scale for Children;

Levonon Dep = Levonn Depression Scale; Levonn Anx = Levonn Anxiety Scale.

N for EA group ranges from 38 to 58; N for AA group ranges from 28 to 43.

Figure Captions

Figure 1. The relation (slope) between parent-child openness and child internalizing outcomes by ethnicity, plotted at 1 SD above and below the centered mean.

Figure 2. The relation (slope) between childrearing disagreements and child internalizing outcomes by ethnicity, plotted at 1 SD above and below the centered mean.

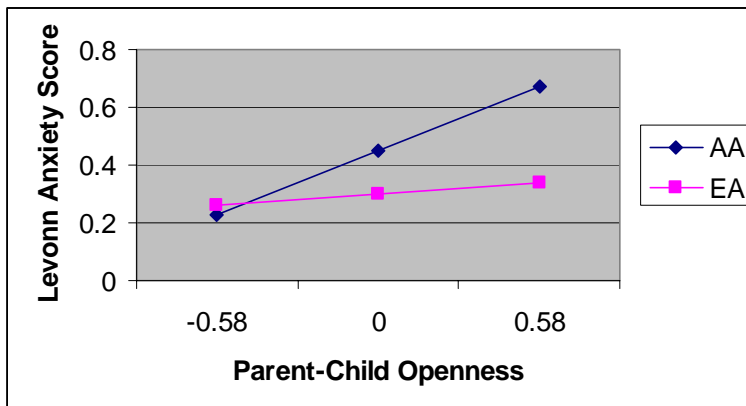
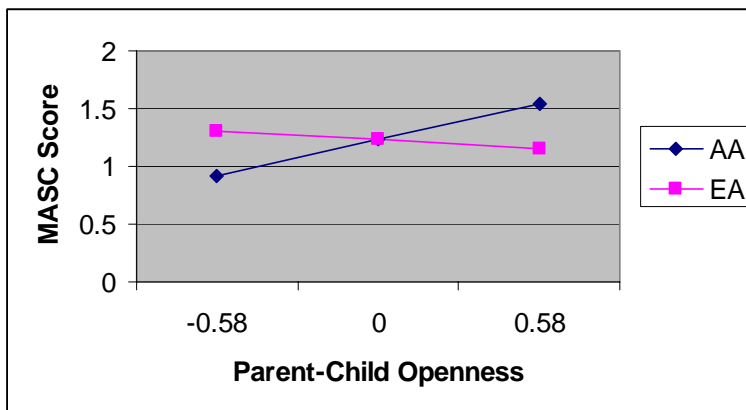
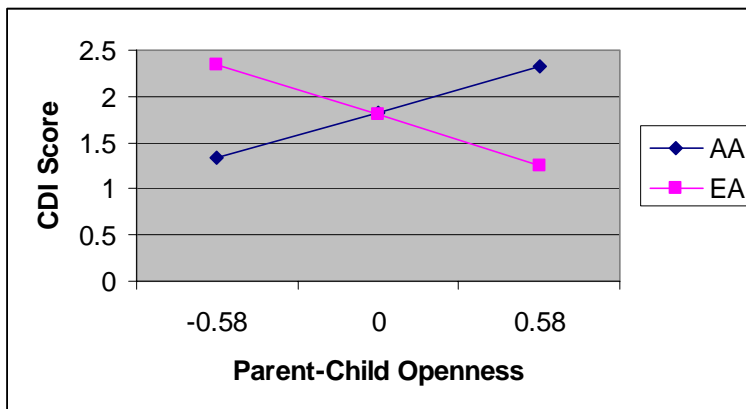
Figure 1.

Figure 2.

