Ethnic differences in relations between family process and child internalizing problems

Matthew Vendlinski, Jennifer S. Silk, Daniel S. Shaw, and Tonya J. Lane
University of Pittsburgh, USA

**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 child-rearing 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.

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 (Rothebaum & Weiss, 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. In addition to the relative paucity of research on the potential moderating effects of ethnicity on internalizing versus externalizing problems, the current sample included mothers with a history of childhood-onset depression (COD). As history of maternal COD has been associated with elevated risk of internalizing problems for offspring, we also chose to focus on internalizing versus externalizing symptoms for this reason. Specifically, we chose to focus 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 & Davies, 1994; Davies & Cummings, 1998; Puig-Antich et al., 1985). Theoretically, children’s emotional security has been linked to parental acrimony (Davies & Cummings, 1994), with greater conflict hypothesized to lead to greater emotional distress and fear among offspring, two core symptoms of internalizing problems. 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 predictive of 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 (Sorensen, 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 is 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, based on the notion that overt expressions of warmth and openness might be less normative among AA parents (Ispa et al., 2004; McLoyd & Smith, 2002) and therefore less strongly associated with children’s internalizing symptoms, 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**

**Recruitment and diagnoses**

Children and their mothers were participants in a larger program project focusing on risk factors for childhood-onset mood disorder. Families with a history of COD were recruited into the project through prior research studies or community advertisements. For adults with a history of COD, the two criteria for participation in the program project were the presence of a verifiable early-onset depressive disorder and willingness to participate in at least one of the component studies (genetics, 2006 The Authors
Journal compilation © 2006 Association for Child and Adolescent Mental Health.
psychophysiology, and parent–child interaction) in addition to diagnostic assessment. To participate in the current study, adult participants needed to be women enrolled in the parent–child interaction component of the program project, and have children in the age range of 6–9 years. Of the participants who completed the diagnostic assessment and met criteria for inclusion in the current study, all agreed to participate.

Families in the control group were recruited into the program project by accessing individuals who had participated in studies during their childhood or adolescence as ‘normal controls,’ soliciting participation using the Cole Directory of households in neighborhoods comparable in socioeconomic status to the COD group, and advertising in the general community or through special community programs. For adults in the non-childhood-onset depression (NCOD) group, criteria for participation in the program project included a lifetime history free of major psychiatric disorder. All adult participants were required to be free of major systemic medical disorders and without evidence of mental retardation.

Participants

In the current study, 101 children participated, including 52 children of COD mothers. 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). These families were recruited through prior research studies or community advertisements. A subgroup of the COD mothers (n = 15) had participated in a longitudinal, naturalistic follow-up study of COD during childhood (Kovacs, Obrosky, Gatsonis, & Richards, 1997). Twenty-four of the COD mothers were recruited from the community during adulthood and two from other means.

In the control group for the current study, families were recruited using the Cole Directory (n = 15), community advertisements (n = 12), or through a local Women, Infants, and Children (WIC) center, a program that provides nutritional services for income-eligible families with young children (n = 20).

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 (χ² = 5.53, p < .05). One vs. two parent households did not differ on family process or internalizing variables; therefore, marital status was not included as a covariate in subsequent analyses.

We also examined potential differences on demographic characteristics between COD and NCOD families, including number of children, marital status, and maternal age. While no differences were found on number of children, COD mothers were more likely to be single parents (χ² = 7.49, p < .01) and to be younger (t(199) = 3.34, p < .01, M = 32.44 years for NCOD and M = 29.59 for COD mothers). As neither marital status

<table>
<thead>
<tr>
<th>Table 1 Demographic characteristics of child participants</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td><strong>European American (n = 58)</strong></td>
</tr>
<tr>
<td><strong>African American (n = 43)</strong></td>
</tr>
<tr>
<td><strong>Cohort (N = 101 children)</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Mother’s diagnosis</strong></td>
</tr>
<tr>
<td>NCOD</td>
</tr>
<tr>
<td>COD</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Mother’s age</strong></td>
</tr>
<tr>
<td>M</td>
</tr>
<tr>
<td>SD</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Mother’s marital status</strong></td>
</tr>
<tr>
<td>Married</td>
</tr>
<tr>
<td>Living together</td>
</tr>
<tr>
<td>Divorced/Separated</td>
</tr>
<tr>
<td>Single</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Mother’s education</strong></td>
</tr>
<tr>
<td>&lt;12th grade</td>
</tr>
<tr>
<td>HS grad/GED</td>
</tr>
<tr>
<td>Some college</td>
</tr>
<tr>
<td>College grad</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Child’s age</strong></td>
</tr>
<tr>
<td>M</td>
</tr>
<tr>
<td>SD</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td><strong>Child’s gender</strong></td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

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

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

© 2006 The Authors
Journal compilation © 2006 Association for Child and Adolescent Mental Health.
nor maternal age was significantly associated with any of the four child internalizing outcomes, neither variable was included as a covariate in subsequent analyses.

**Procedures**

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 (see Silk, Shaw, Oland, & Kovacs, 2006). The current report focuses on mother-report of child-rearing disagreements and mother–child openness and child-report of internalizing symptoms.

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 maternal lifetime diagnostic status.

**Measures**

*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 current and lifetime criteria for affective disorders.

*Adult–Child Relationship Scale (ACRS).* This 30-item questionnaire assesses the parent’s perceptions of his/her relationship with his/her children, and was adapted from the Student–Teacher Relationship Scale (Pianta, 1994). For purposes of the present study, the 5-item factor tapping parent–child openness (F = .69) was used because of its theoretical relevance to child internalizing problems and potential ethnic differences in the value of openness for EA and AA mother–child dyads. Items for the openness factor 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 (e.g., ‘This child likes telling me about herself/ himself,’ ‘S/he is open with me about sharing feelings and telling me how things are,’ ‘If upset, this child seeks comfort from me’). A separate ACRS was completed for each child, including siblings from the same family.

*Levonn* (Richters, Martinez, & Valla, 1990). The Levonn is a 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, \( F = .76 \); 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 (four items, \( F = .73 \); 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). In those instances where mothers were not married, they were asked to complete the questionnaire if there was a co-parent who was responsible for rearing the child with them, including live-in boyfriends, ex-husbands, mothers, or other live-in relatives and friends. This strategy is responsive to the fact that many of the study’s mothers were single, and allowed for the provision of important information on adults who were actively and consistently involved in parenting the target child (Shaw, Winslow, Owens, & Hood, 1998). A score is generated reflecting the frequency of disagreements over child-rearing issues (\( F = .93 \)). Mothers were asked to respond to how often she and the co-parent disagreed about a variety of child behaviors and contexts (e.g., ‘Being too harsh when disciplining our child,’ ‘Not keeping close enough eye on our child’s whereabouts,’ ‘Contradicting my decisions about our child’).

*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 (\( F = .88 \)).
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 (e.g., ‘I am sad once in a while’ versus ‘I am sad many times’ versus ‘I am sad all of the time’; ‘Things will work out for me OK’ versus ‘I am not sure if things will work out for me’ versus ‘Nothing will ever work out for me’). 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 (α = .55) but consistent with other uses of the short form, where alphas have ranged from .51–.53 (Shaw, D., pers. comm., 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(1,99) = 2.48, p < .05) and higher levels of child-rearing disagreements (t(1, 71) = −3.64, p < .01) than NCOD mothers.

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).

<table>
<thead>
<tr>
<th>Table 2 Mean scores and standard deviations for family process and child internalizing variables by ethnic group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family process</td>
</tr>
<tr>
<td>Parent-child openness</td>
</tr>
<tr>
<td>Child-rearing disagreements</td>
</tr>
<tr>
<td>Child internalizing</td>
</tr>
<tr>
<td>CDI</td>
</tr>
<tr>
<td>MASC</td>
</tr>
<tr>
<td>Levonn - Dep</td>
</tr>
<tr>
<td>Levonn - Anx</td>
</tr>
</tbody>
</table>

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

© 2006 The Authors
Journal compilation © 2006 Association for Child and Adolescent Mental Health.
between parent–child openness and ethnicity on children’s anxious symptomatology on the Levonn \( F(1,94) = 3.33, p = .07 \). 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 \( (\beta = -0.29, p < .05) \) but not for AA children \( (\beta = 0.26, p = .23) \; \text{see Figure 1} \). Although parent–child openness was not associated with anxiety symptoms for EA children on the MASC \( (\beta = -0.15, p = .25) \) or Levonn \( (\beta = -0.15, p = .25) \), parent–child openness was positively associated with anxiety symptoms for AA children on the MASC \( (\beta = 0.67, p < .01) \) and the Levonn \( (\beta = 0.48, p < .01) \).

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 depressive symptomatology on the CDI \( F(1,66) = 4.58, p < .05 \) and Levonn \( F(1,66) = 3.75, p < .05 \). A significant three-way interaction effect emerged between child-rearing disagreements and ethnicity on children’s anxious symptomatology on the Levonn \( (F(1,66) = 3.75, p < .05) \). Probing of these interactions indicated that child-rearing disagreements were positively associated with depressive symptomatology on the CDI for EA children \( (\beta = 0.46, p < .01) \), but negatively associated with depressive symptomatology on the CDI for AA children \( (\beta = -0.68, p < .01) \). Child-rearing disagreements were not significantly associated with depressive symptomatology on the Levonn for EA children \( (\beta = 0.21, p = .16) \), but again were negatively associated with depressive symptomatology on the Levonn for AA children \( (\beta = -0.40, p < .05) \; \text{see Figure 2} \). The three-way interaction was probed by computing separate mixed models for the COD and NCOD groups. For the NCOD group, there were no main or interaction effects on Levonn anxious symptomatology. For the COD group, however, there was a main effect of child-rearing disagreements and an interaction between child-rearing disagreements and ethnicity on Levonn anxious symptomatology. Further probing of this interaction using the Holmbeck (2002) method indicated that child-rearing disagreements were not associated with anxious symptomatology on the Levonn for EA children \( (\beta = 0.18, p = .22) \), but were inversely associated with anxious symptomatology on the Levonn for AA children \( (\beta = -1.09, p < .001) \; \text{see Figure 3} \). This general pattern of findings was replicated including and excluding biracial children from the AA group, although some significant interactions were attenuated to a trend level when the biracial group was excluded.

**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

---

**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 child-rearing disagreements and child internalizing outcomes by ethnicity, plotted at 1 SD above and below the centered mean.
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 depression as their parents reported higher levels of child-rearing disagreements.

Interestingly, the inverse relationship between child-rearing disagreements and anxious symptomatology was found only among families of mothers with childhood-onset depression. Within this high risk group, but not within the control group, AA children reported lower symptoms of anxiety as their parents reported higher levels of child-rearing disagreements. It might be the case that in AA families where child-rearing disagreements are high and there is also a history of maternal depression, alternative caregivers might play a more involved role in caregiving, attenuating adverse effects of parental conflict on child internalizing symptoms. In such contexts, higher rates of child-rearing disagreements could actually be indexing higher rates of alternative caregiver involvement. However, this explanation is speculative and merits further investigation.

The 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 (Sorensen 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 (2005) have speculated that physical punishment may be seen as more appropriate 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. 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 (1977) posited that for AA parents, authoritarian child-rearing practices may be carried out to build character and autonomy in AA girls. These practices are therefore seen as nurturant and adaptive caretaking rather than parental rejection. 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 findings 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. It is also worth noting that two-parent families were more common in EA versus AA families, as they were for NCOD versus COD families. Caution should therefore be used in interpreting the results, as subgroups of two-parent COD and AA families were relatively small. Future research is needed that includes greater numbers of two-parent AA and/or COD families, as well as more single-parent EA and/or NCOD families to corroborate the validity of the current findings. Although our sample size provided adequate power (.80) to detect large interaction effects, it should be noted that the study was underpowered to detect small and moderate interaction effects (Aiken & West, 1991). Additional interaction effects may be observed in studies with larger samples.

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. At a broader level, it is also possible that the ethnic differences found in relation to family process variables and child internalizing problems were due to differences in how AA and EA mothers interpreted the meaning of questionnaires. Research is needed to validate whether the questionnaires had the same meaning for AA and EA mothers. The study was also limited by not knowing about the nature of the alternative caregiver’s relationship with the mother, which included spouses and close relatives (e.g., grandmother of children). As single-parent families were more common among AA and COD families than EA and NCOD families, this could have influenced the pattern of results. Future investigators should clearly gather such data to see if the current associations would be found across different types of parenting dyads, including traditional heterosexual partners, same-sex partners, as well as mother–grandmother and other related dyads (e.g., mother and sister). The current study also 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.
Correspondence to
Matthew Vendlinski, Department of Psychology, 1202 W. Johnson St, Madison, WI 53706, USA; Tel: 608-262-1568; Email: vendlinski@wisc.edu

References
points of attachment theory and research, monographs of the Society for Research in Child Development, 50(1–2, Serial No. 209).


Manuscript accepted 5 April 2006