

Patterns of Maternal Directiveness by Ethnicity Among Early Head Start Research Participants

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Abstract:

Objective. Using the Early Head Start dataset, this study examined change over time in European American, African American, and Mexican American mothers' directiveness during play with their young children and associations between these patterns and their children's engagement with and negativity toward them. The influences of maternal positive and negative regard were also investigated. *Design.* Mother–child dyads (938 European American, 849 African American, and 465 Mexican American) participated in semistructured play sessions when children were 1, 2, 3, and 5 years old. Videotapes were coded for mothers' directiveness, positive regard, and negative regard and for children's engagement with and negativity toward their mothers. *Results.* All three groups declined in directiveness over time, but varied in initial levels and in rates and patterns of decline. European American mothers had the lowest directiveness ratings and African American mothers had the highest; Mexican American mothers showed the steepest declines after the first observation. Directiveness had generally negative implications for children's behavior toward their mothers, although Mexican American children were least affected. In all three groups, maternal positive regard weakened, while maternal negative regard strengthened, inverse relations between directiveness and child engagement. *Conclusions.* Although there are ethnic differences in levels of directiveness during play with 1- to 5-year-olds, there are also across-group commonalities in the negative implications of high directiveness, especially in the contexts of low positive and high negative maternal regard.

Keywords: Parenting | Mothers | Ethnicity | Maternal Directiveness | Child Engagement

Article:

INTRODUCTION

The word *intrusive* has been used to describe parental behavior that disregards or interferes with children's autonomous activity and/or that is overwhelming and not contingent on children's

behaviors. Intrusiveness has been linked to maternal emotional negativity and to children's attachment insecurity (e.g., Ainsworth, Blehar, Waters, & Wall, 1978; Egeland, Pianta, & O'Brien, 1993; Kelley & Jennings, 2003). So as to remain true to the terminology used in previous research reports, we use intrusive when describing the results of earlier studies. However, in light of recent findings showing ethnic differences in associations between this type of control and the emotional quality of children's orientations toward their mothers, we use the less negatively tinged word *directiveness* when describing the current study's goals and findings.

Most studies have examined directiveness at one time point only, typically when children are under age 3. The present study explored ethnic variations in mothers' directiveness during play over the course of early childhood, from the time when children were approximately 15 months old to the months just preceding kindergarten entry. Implications of mothers' directiveness for patterns of change in children's positive or negative orientations toward them and the moderating influences of maternal positive and negative regard on these links were also explored. The analyses relied on data collected from European American, African American, and Mexican American families.

Change over Time in Maternal Directiveness

Little is known about ethnic variation in the degree to which mothers' levels of directiveness tend to remain consistent, increase, or decrease over the course of their children's first 5 years. Consistency may occur if norms support a particular level over time. By contrast, increases over time may be expected in groups that hold that 1-year-olds are too young to benefit from direct guidance, but will need closer direction as they mature. Decreases should be evident if cultural norms support more autonomy granting as the ability to function independently develops. To our knowledge, over time patterns in mothers' directiveness have been examined only during the first 2 years of children's lives. Tomlinson, Cooper, and Murray (2005) assessed maternal intrusiveness in a Black South African sample when infants were 2 and 18 months old, but longitudinal consistency of intrusiveness could not be directly assessed because the operational definitions differed at the two time points. Studies conducted in the United States have used samples that are primarily European American. Stifter, Coulehan, and Fish (1993) found no change in maternal intrusiveness ratings between 5 and 10 months. Masur and Turner (2001) rated mothers' free play intrusiveness when children were 10, 13, 17, and 21 months old, but reported only correlations between scores at adjacent time periods rather than changes in mean levels over time. No known previous studies have investigated trajectories of maternal directiveness from the time when children are 1 year of age to the time just before kindergarten entry and compared them across ethnic groups, yet these are important years in the development of emotion regulation and social interaction skills (Chen, Fein, Killen, & Tam, 2001; Cole, Martin, & Denis, 2004), both of which have been shown in some studies to be negatively associated with highly directive parenting (e.g., Pettit, Harrist, Bates, & Dodge, 1991; Whiteside-Mansell, Bradley, Owen, Randolph, & Cauce, 2003).

Ethnic Variation in Links between Mothers' Directiveness and their Children's Behavior toward Them

The negative child outcomes linked to maternal intrusiveness often found in studies using European American samples include behavior problems, defensiveness, avoidant attachment, and other aspects of poor mother-child relationship quality (Ainsworth et al., 1978; Carlson & Harwood, 2003; Guzell & Vernon-Feagans, 2004; Ispa et al., 2004; Malatesta, Culver, Tesman, & Shepard, 1989; Pettit et al., 1991). These findings have been explained in terms of children's tendencies to shut down to protect themselves from overstimulation (Ainsworth et al., 1978); as rebellion against interference in opportunities to exercise initiative, self-control, and mutuality (Malatesta et al., 1989); and as rooted in feelings of incompetence born of maternal disregard for children's attempts to take the lead in activities or to signal needs (Pettit et al., 1991).

Within the United States, studies using Latin American samples have similarly indicated that the consequences of directiveness for young children's social and emotional development are positive or neutral rather than negative. Carlson and Harwood (2003) found that high maternal physical control predicted secure attachment in Puerto Rican toddlers, and Fracasso, Busch-Rossnagel, and Fisher (1994) reported that in Puerto Rican and Dominican immigrant families, security of attachment was associated with abrupt, rather than gentle, styles of picking up infants. Such results may have depended on the affective tone conveyed in the behaviors interpreted by observers to be directive. Martínez (1988) found that, although the type of physical control exercised by Mexican American mothers during a teaching task had few implications for the emotional quality of children's interactions with them, *positive* physical control (i.e., control intended to facilitate task solution) predicted children's task involvement and positive talk to mothers, whereas negative physical control (restraining behavior or demonstrating disapproval) predicted negative talk to them.

Maternal Positive and Negative Regard as Possible Moderators of Associations between Directiveness and Children's Behavior toward their Mothers

Findings indicating ethnic differences in the consequences of mothers' directiveness for children and in relations between maternal control and warmth have led researchers to surmise that the intentions and feelings about children that accompany mothers' controlling acts vary across groups (Carlson & Harwood, 2003; Ispa et al., 2004; Jackson-Newsom, Buchanan, & McDonald, 2008). In particular, when cultural values promote independence and assertiveness in children, parental directiveness is likely to be viewed as counterproductive (Grusec, Rudy, & Martini, 1997). In such contexts, parental directiveness may stem from emotional negativity and/or negative views of children's motivations and abilities. In support of such a link, studies based on predominantly European American samples have shown associations between mothers' intrusiveness and preoccupied attachment status, depression, and parenting stress (Adam, Gunnar, & Tanaka, 2004; Bosquet & Egeland, 2001; Calkins, Hungerford, & Dedmon, 2004; Kelley & Jennings, 2003; see, however, Nolen-Hoeksema, Wolfson, Mumme, & Guskin,

1995, for nonsignificant relations). The combination of maternal directiveness and negativity may have particularly negative consequences for mother–child relationship quality.

Even within ethnic groups, high maternal warmth or positive regard seems to diminish or eliminate the negative effects of some forms of high control (McLoyd & Smith, 2002; Spieker, Larson, Lewis, Keller, & Gilchrist, 1999). Ispa and colleagues (2004) found that in African American families, maternal intrusiveness during play predicted toddlers' negativity toward mothers only if mothers were low in positive regard. This buffering effect was not seen in European American or Mexican American families, however. Taken together, these results suggest the need to further investigate the moderating influences of maternal positive and negative regard on young children's reactions to maternal directiveness.

To build on this literature, in the current study, we addressed three research questions: (1) What are the patterns of directiveness observed over time among low-income European American, African American, and Mexican American mothers beginning when their children were 1 year of age and continuing until they were 5? (2) In each group, is maternal directiveness related to patterns of change in children's positive engagement and/or negativity in relation to their mothers? (3) Do maternal positive and negative regard toward the child moderate associations between maternal directiveness and growth patterns in these child behaviors in the three groups? To address these questions, we analyzed data collected from low-income European American, African American, and Mexican American mother–child pairs when the children were 1, 2, 3, and 5 years old. Growth modeling techniques described change over time in maternal directiveness, its predictors, and its relation to children's positive engagement with and negativity toward their mothers.

METHOD

The study used data collected for the longitudinal Early Head Start (EHS) Research and Evaluation Project (Administration on Children, Youth, and Families, 2001). Fuligni and Brooks-Gunn (2013) report on aspects of the sample and the data collection procedures that all of the EHS-based studies in this Special Issue have in common. Here we add details that are specific to the current study.

Participants

The families included in the current study were 938 European American, 849 African American, and 465 Mexican American mothers and their children who had participated in at least one of the four observational assessments conducted when children were approximately 1, 2, and 3 years old and again during the half-year prior to kindergarten entry. European American and African American mothers were all born in the United States. Children's ages did not differ by group at any of the observation points.

Procedure

When children were 1, 2, and 3 years old, they and their mothers participated in the Three Bag task. The fourth observation took place when children were about to enter kindergarten and incorporated the Play Dough task. The Three Bag and Play Dough rating scales used to assess mother–child interaction at all four time points are described by Fuligni and Brooks-Gunn (2013). Ratings of maternal intrusiveness/directiveness, negative regard, and positive regard, and child engagement and negativity were used in the current analyses.

RESULTS

Means and *SDs* for each of the maternal and child rating scales at each time point for each group are presented in Fuligni and Brooks-Gunn (2013).

Model Building

We used random coefficient growth curve modeling to identify patterns of change in maternal directiveness over the course of children's preschool years and to test whether those patterns were predicted by a set of time-invariant and time-varying maternal characteristics in each of the three ethnic groups. In addition, we examined whether patterns of change in child engagement and negativity were related to maternal directiveness and other maternal characteristics for each group. We chose individual growth curve modeling because it examines within-person changes (Level 1) and between-person differences in change (Level 2) (Singer & Willet, 2003).

Furthermore, growth modeling permits the use of data sets with varying numbers of time points per person and variable spacing among time points (Raudenbush & Bryk, 2002). We followed the same general model building strategy for all outcome analyses. In all models, we used a time variable centered at the initial assessment (mean child age in months at the 1-year assessment). We tested all models via SAS PROC MIXED.

To illustrate the magnitude of the relations between the predictors and maternal directiveness, child engagement, and child negativity, we computed effect sizes by dividing the coefficient for the predictor by the corresponding standard error and multiplying by the square root of the group size (effect size = $\beta/SE_{\beta} * \text{Sqrt}(N)$). To illustrate the magnitude of group differences in these relations, we computed standardized effect sizes using the following formula: effect size = $\beta/(SE_{\beta}/\text{sqrt}(1/n_1 + 1/n_2))$. To illustrate the magnitude of moderational effects (e.g., Warmth x Directiveness on child engagement), we computed pseudo-*R* squares (i.e., percentage of variance explained in each outcome by moderator).

Preliminary growth curve analyses on the sample as a whole indicated that maternal education was inversely related to directiveness and child negativity, $F(1, 2242) = 18.96, p < .001$, and $F(1, 2242) = 4.02, p < .05$, respectively, and positively related to child engagement, $F(1, 2242) = 97.91, p < .001$. Furthermore, mothers of boys were more directive than mothers of girls, $F(1, 2242) = 11.23, p < .001$; girls were more engaged with their mothers and displayed less negativity toward them than did boys, $F(1, 2242) = 30.62, p < .001$, and $F(1, 2242) = 19.15, p < .001$, respectively. Children in the EHS treatment group were more engaged with their mothers

than children in the control group, $F(1, 2242) = 5.40, p < .05$. Finally, teenage parenthood was positively related to directiveness, $F(1, 2242) = 44.98, p < .001$, and child negativity, $F(1, 2242) = 24.02, p < .001$, and inversely related to child engagement, $F(1, 2242) = 4.07, p < .05$. All subsequent analyses therefore controlled for maternal education, treatment status, child gender, and teenage parenthood.

Patterns of Maternal Directiveness over Time in the Three Ethnic Groups

To explore variations in patterns of change in maternal directiveness, we tested the effects of ethnic group on the intercept, on the initial linear trend (Group x Initial Linear Trend) and on the quadratic trend (Group x Quadratic Trend) in maternal directiveness. To examine whether groups also differed in terms of between- and within-person variability, we compared a model with variance components constrained to be equal with a model in which we allowed estimates of within- and between-person variability to differ across the groups. This comparison indicated that the latter model provided a significantly better fit to our data, $\chi^2(8, N = 2252) = 113.98, p < .001$. Using this model, we found that, with treatment status, maternal education, child gender, and teenage parenthood controlled, there were significant ethnic group differences in the intercepts, $F(2, 2240) = 91.98, p < .001$, the initial linear trends, $F(2, 4116) = 9.66, p < .001$, and the quadratic trends of directiveness, $F(2, 4116) = 4.05, p = .018$.

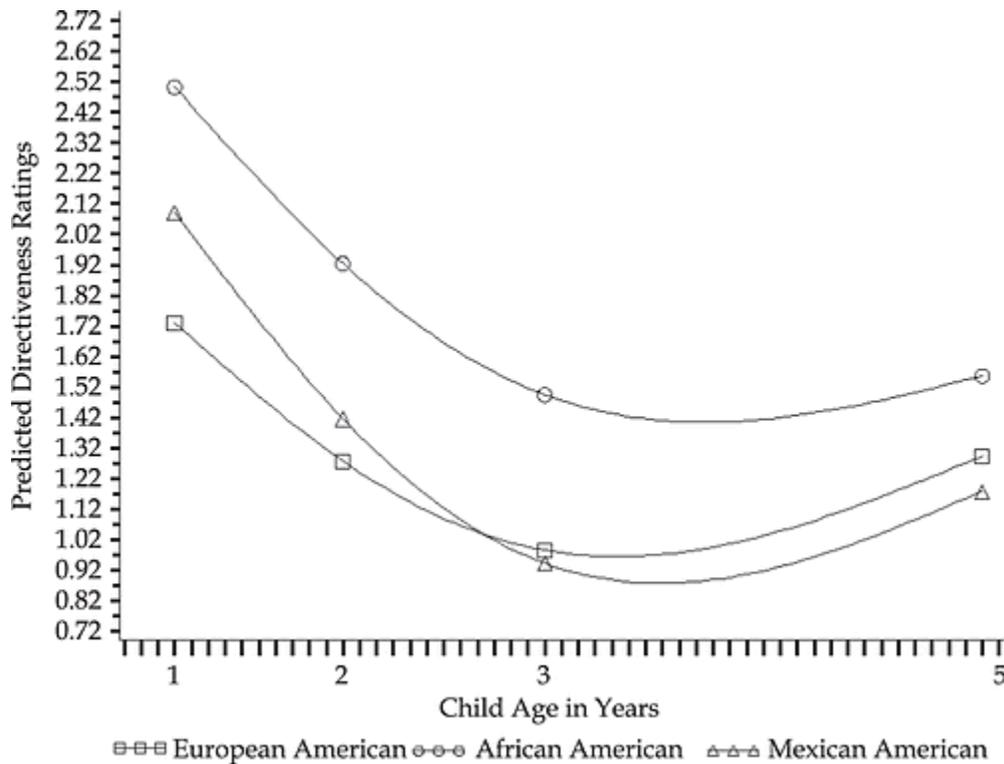
As shown in Table 1 and Figure 1, comparisons among the three groups on initial assessment scores (i.e., when children were 1 year old) showed European American mothers to be the least directive and African American mothers to be the most directive. Mexican American mothers were significantly more directive than European American mothers (effect size of .19) and significantly less directive than African American mothers (effect size of .38).

Table 1. Estimates of Fixed and Random Trajectories of Maternal Directiveness by Ethnic Group After Controls for EHS Treatment Status, Maternal Education, Child Gender, and Teenage Parenthood (Standard Errors in Parentheses)

	Maternal Directiveness Trajectories			
Fixed Effects	European American	African American	Mexican American	Total Sample
Mean directiveness at initial assessment	2.07*** _{ab} (.04)	2.84*** _{ac} (.05)	2.44*** _{bc} (.05)	
Mean initial linear trend	-.06*** _{ab} ($3.2e^{-3}$)	-.07*** _a ($4.3e^{-3}$)	-.08*** _b ($5.1e^{-3}$)	
Mean quadratic trend	$9.52e^{-4}$ *** _a ($6.1e^{-5}$)	$1.0e^{-3}$ *** _b ($8.4e^{-5}$)	$1.3e^{-3}$ *** _{ab} ($9.7e^{-5}$)	
Maternal education ^a				-.03*** ($5.7e^{-3}$)
Program status ^a				-.02 (.03)

Child gender ^a				.10*** (.03)
Teenage parenthood				.10*** (.03)
Random effects				
Initial status	.37*** (.04)	.54*** (.07)	.29*** (.06)	
Initial linear trend	2.3e ⁻⁴ *** (4.4 ⁻⁵)	3.2e ⁻⁵ (6.0 ⁻⁵)	1.6e ⁻⁴ * (7.0e ⁻⁵)	
Level-1 error	.58*** (.02)	.88*** (.04)	.75*** (.04)	
Note. ns = 938 European American, 849 African American, and 465 Mexican American mothers and their children. Coefficients with the same subscripts were significantly different (p < .05 or greater) from each other.				
^a These are control variables. Interactions between control variables and ethnic group were not tested.				
*p < .05. ***p < .001.				

Figure 1. Patterns of change over time in mothers' directiveness in each of the three ethnic groups in EHS research sample.



In each of the three groups, there was a negative initial linear trend in maternal directiveness scores (effect sizes of .33 [European American], .33 [African American], and .42 [Mexican American]). Group comparisons conducted to explore the meaning of the significant ethnic group interaction (Group x Initial Linear Trend) indicated that the initial decrease in directiveness was significantly greater among African American and Mexican American mothers

than among European American mothers (effect sizes of .07 and .14, respectively). African American mothers' initial decrease was not significantly different from that of the Mexican American mothers. In terms of quadratic trends (Group x Quadratic Trend), as shown in Figure 1, we found that the decrease in directiveness prior to age 3 and the increase thereafter was more pronounced in the Mexican American group than in the other two groups (effect sizes of .09 for European American and .07 for African American).

Relations between Maternal Directiveness and Patterns of Change in Children's Positive Engagement and Negativity in each of the Three Ethnic Groups

Next, we examined relations between directiveness and ethnic group and the growth trajectories of the two child behavior scores. Directiveness was considered as a time-varying predictor because we used all four directiveness scores. To ease the interpretation of coefficients, we centered directiveness at its mean at the 1-year observation. In addition to testing for the main effects of directiveness, we also tested for group differences in its effects on the intercepts, initial linear trends, and the quadratic trends in growth patterns of each of the two child behaviors.

Child engagement

After controlling for maternal education, EHS treatment status, child gender, and teenage parenthood, we found significant interactions between ethnicity and maternal directiveness on the intercept, $F(2, 4102) = 5.65, p < .01$, and the initial linear trend, $F(2, 4102) = 3.45, p = .032$, but not on the quadratic trend in child engagement. To determine the meaning of the interaction between ethnicity and directiveness, we conducted separate analyses for each of the three groups. These revealed that directiveness was associated with lower levels of child engagement at 1 year in all three groups (Table 2). However, Mexican American children showed a stronger (negative) relation between mothers' directiveness and age-1 engagement than did children in the other two groups (effect sizes of .09 for the European American and .08 for the African American groups).

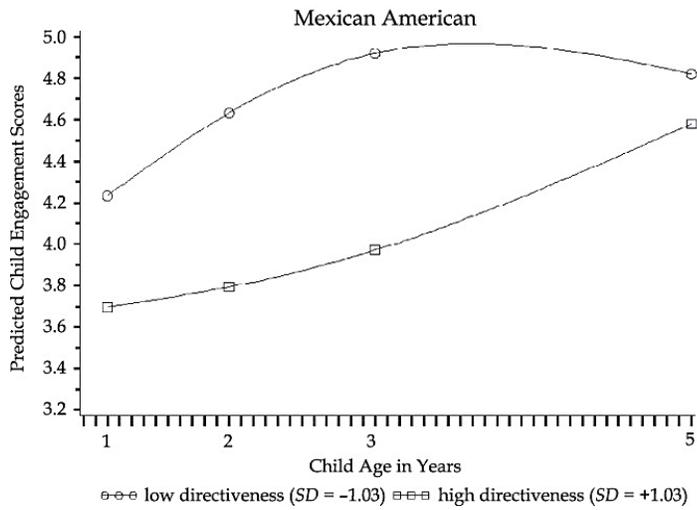
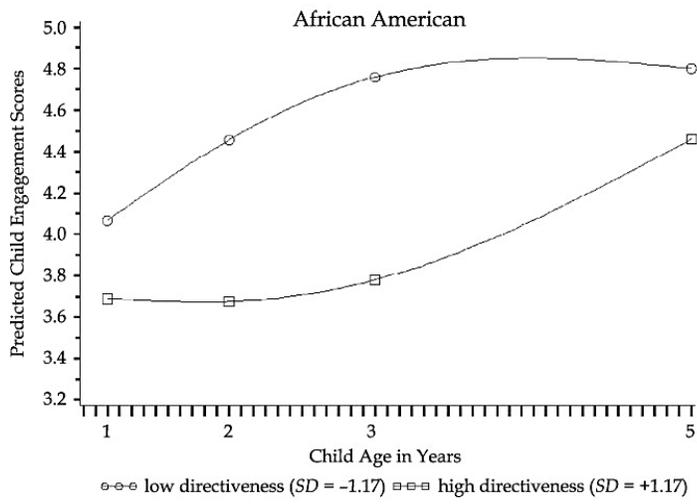
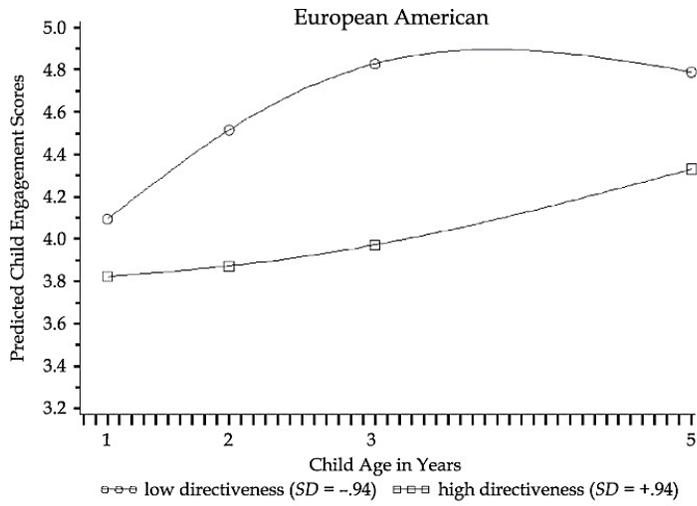
Table 2. Estimates of Fixed and Random Effects from Growth Models in which Maternal Directiveness Predicts Child Engagement Trajectories: Comparisons by Ethnic Group in the EHS Research Sample

	Parameter Estimate (SE) Child Engagement			
Fixed Effects	European American	African American	Mexican American	Total Sample
Mean child engagement at initial assessment	3.96*** (.40)	3.88*** (.04)	3.96*** (.05)	
Mean initial linear trend	.03*** (4.6 ⁻³)	.02*** (4.5e ⁻³)	.03*** (5.7e ⁻³)	
Mean quadratic trend	-2.9e ⁻⁴ ** (9.1e ⁻⁵)	-8.0e ⁻⁵ (8.9e ⁻⁵)	-2.5e ⁻⁴ * (1.13e ⁻⁴)	
Maternal	-.15*** a (.03)	-.16*** b (.03)	-.26*** ab (.04)	

directiveness				
Maternal directiveness x initial linear trend	-.024*** a (2.8e ⁻³)	-.02*** (2.8e ⁻³)	-.02*** a (3.0e ⁻³)	
Maternal directiveness x quadratic trend		4.6e ⁻⁴ *** (5.4e ⁻⁵)		
Maternal education ^a				.06*** (6.5e ⁻³)
Program status ^a				.07* (.03)
Child gender ^a				-.14*** (.03)
Teenage parenthood ^a				.01(.03)
Random effects				
Initial status	.16*** (.02)	.18*** (.03)	.20*** (.03)	
Level-1 error	.84*** (.03)	.86*** (.03)	.73*** (.03)	
Note. ns = 938 European American, 849 African American, and 465 Mexican American mothers and their children. Coefficients with the same subscripts were significantly different ($p < .05$ or greater) from each other.				
^a These are control variables. Interactions between control variables and ethnic group were not tested.				
* $p < .05$. ** $p < .01$. *** $p < .001$.				

Similarly, for all three ethnic groups, there was a significant inverse relation between maternal directiveness and the linear trend in child engagement. Although child engagement in all three groups tended to increase with age, higher levels of directiveness were associated with smaller initial increases in engagement. This inverse relation between mothers' directiveness and the initial linear trend in engagement was weaker for children of Mexican American mothers than for children of European American mothers (effect size of .09). African American children did not differ from children in either of the other two groups in this regard. To illustrate group differences in the strength of the relations between maternal directiveness and child engagement, we constructed two prototypic child engagement growth trajectories: one for children whose mothers scored 1 *SD* above and another for children whose mothers scored 1 *SD* below their group-specific directiveness means (*SDs* = 0.94, 1.17, and 1.03 for European American, African American, and Mexican American mothers, respectively). These trajectories are shown in Figure 2.

Figure 2. Prototypical child engagement trajectories of mothers high and low in directiveness in the EHS sample.



Child negativity

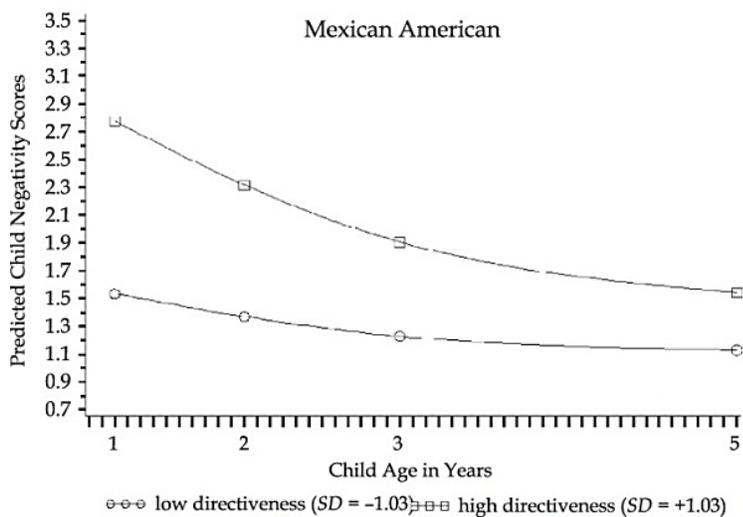
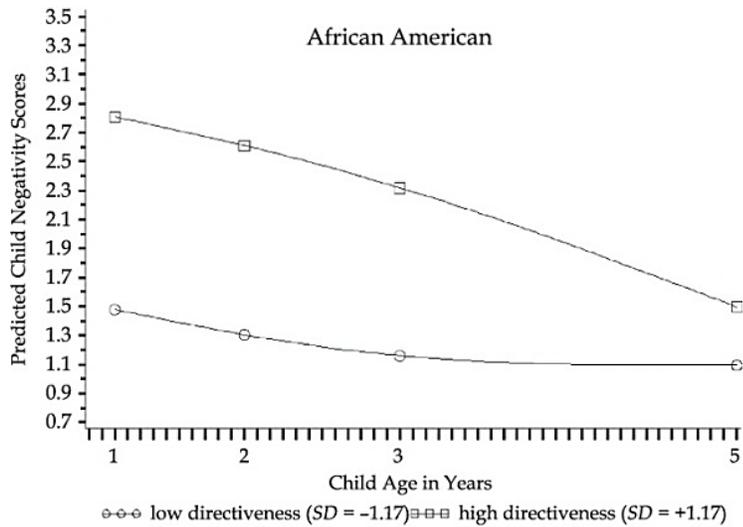
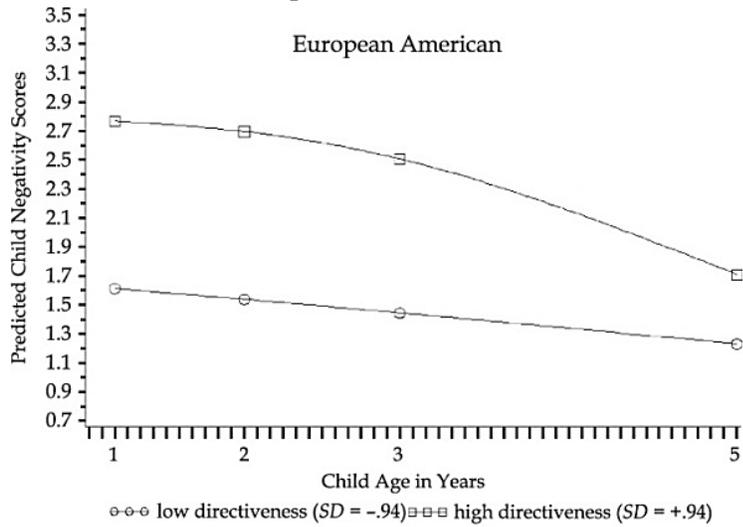
We found significant interactions between ethnicity and directiveness on the linear trend, $F(2, 4105) = 7.99, p < .001$, and the quadratic trend, $F(2, 4105) = 7.98, p < .001$, but not on the intercept, in child negativity. As shown in Table 3, children's negativity tended to decline with age in all groups, but in the Mexican American group only, there was an inverse relation between mothers' directiveness and the initial linear trend of child negativity (effect size of .11). Furthermore, the quadratic trends showed that after the initial decline in children's negativity from age 1 to age 2, mothers' directiveness was associated with a greater rate of decrease in children's negativity over time among the European American and African American children than among Mexican American children (effect sizes of .12 for the European American and African American groups). Figure 3 illustrates these group differences by portraying prototypical child negativity trajectories of children whose mothers scored 1 *SD* above and 1 *SD* below their groups' overall mean directiveness scores.

Table 3. Estimates of Fixed and Random Effects from Growth Models in which Maternal Directiveness Predicts Child Negativity Trajectories by Ethnic Group in the EHS Research Sample

Fixed Effects	Parameter Estimate (SE) Child Negativity			Total Sample
	European American	African American	Mexican American	
Mean child negativity at initial assessment	2.16*** (.03)	2.12*** (.03)	2.13*** (.04)	
Mean initial linear trend	$-5.4e^{-3}$ _{ab} ($3.8e^{-3}$)	$-.02$ *** _{ac} ($3.4e^{-3}$)	$-.04$ *** _{bc} ($4.5e^{-3}$)	
Mean quadratic trend	$-2.0e^{-4}$ ** _{ac} ($7.7e^{-5}$)	$2.6e^{-5}$ _{ab} ($6.8e^{-5}$)	$3.7e^{-4}$ *** _{bc} ($9.1e^{-5}$)	
Maternal directiveness	.61*** (.02)	.57*** (.02)	.60*** (.03)	
Maternal directiveness x initial linear trend	$2.1e^{-3}$ _a ($3.0e^{-3}$)	$9.0e^{-4}$ _c ($2.9e^{-3}$)	$-.02$ *** _{ac} ($3.8e^{-3}$)	
Maternal directiveness x quadratic trend	$-2.0e^{-4}$ ** _a ($6.1e^{-5}$)	$-1.9e^{-4}$ *** _c ($6.0e^{-5}$)	$1.6e^{-4}$ * _{ac} ($7.7e^{-5}$)	
Maternal education ^a				$7.5e^{-4}$ ($3.9e^{-3}$)
Program status ^a		$-.03$ (.02)**		$-.03$ (.02)**
Child gender ^a		.05** (.02)		.05** (.02)
Teenage parenthood ^a		.02 (.02)		.02 (.02)
Random effects				

Initial status	.02** (8.4e ⁻³)	.06*** (.01)	.03** (.02)	
Level-1 error	.41*** (.01)	.48*** (.02)	.36*** (.02)	
Note. ns = 938 European American, 849 African American, and 465 Mexican American mothers and their children. Coefficients with the same subscripts were significantly different (p < .05 or greater) from each other.				
aThese are control variables. Interactions between control variables and ethnic group were not tested.				
*p < .05. **p < .01. ***p < .001.				

Figure 3. Prototypical child negativity trajectories of mothers high and low in directiveness in the EHS research sample.



Moderation by Maternal Positive and Negative Regard

To examine whether maternal positive and negative regard moderated associations between mothers' directiveness and child engagement and negativity in the three groups, we tested the joint effect of each moderator and directiveness on the intercept (e.g., Positive Regard x Directiveness), the initial linear trend (e.g., Directiveness x Initial Linear Trend x Positive Regard), and the quadratic trend (e.g., Directiveness x Quadratic Trend x Positive Regard) and whether these effects differed by ethnicity. Regardless of group, positive regard lessened the negative relation between directiveness and child engagement at 1 year, $F(1, 4088) = 27.75$, $\beta = .07$, $p < .001$. Across groups, positive regard and directiveness also interacted with the linear trend; the moderating effect of positive regard was reduced but still significant at 2 years, $F(1, 4088) = 24.58$, β (unstandardized) = $-.003$, $p < .001$, and nonsignificant at 3 and 5 years. The pseudo- R square for the model predicting child engagement from the interaction of directiveness and positive regard was .39.

In the prediction of the overall trajectory of child negativity, there was a significant three-way interaction among directiveness, positive regard, and ethnic group, $F(2, 4087) = 8.36$, $p < .001$. In European American and Mexican American families only, mothers' positive regard moderated the positive association between directiveness and child negativity (effect sizes of .04 for European American and .07 for Mexican American families). In European American families, directiveness was associated with higher levels of child negativity at low levels of positive regard than at high levels of positive regard (β s at 1 SD below and 1 SD above the mean = .60 and .52, respectively, $ps < .001$). In Mexican American families, the opposite pattern emerged (β s at 1 SD below and 1 SD above the mean = .56 and .70, respectively, $ps < .001$).

Additionally, maternal negative regard moderated the effects of maternal directiveness on child engagement. For all groups, the inverse relation between directiveness and age-1 engagement was stronger at high levels of negative regard than at low levels of negative regard, $F(1, 4093) = 5.79$, β (unstandardized) = $-.036$, $p = .015$. Negative regard and directiveness also interacted with the linear trend; negative regard lessened the inverse relation between directiveness and child engagement at 2 years, $F(1, 4093) = 5.92$, β (unstandardized) = $.002$, $p = .015$. The pseudo- R square for the model predicting child engagement from the interaction of directiveness and negative regard was also .39.

The overall trajectory of child negativity was also predicted by a significant three-way interaction among directiveness, maternal negative regard, and ethnicity, $F(2, 4093) = 3.32$, $p = .036$. In Mexican American families only, directiveness was associated with higher levels of child negativity at low levels of negative regard than at high levels of negative regard (β s at 1 SD below and 1 SD above the mean = .64 and .50, respectively, $ps < .001$) (effect size of .08).

DISCUSSION

This study had several distinct purposes. First, we examined variations in changes over time in European American, African American, and Mexican American mothers' directiveness during play with their young children. Second, we explored the implications of these patterns for young children's engagement with and negativity toward their mothers. Third, we tested the roles played by maternal positive and negative regard in moderating these associations. All analyses controlled for EHS treatment status, maternal education, child gender, and teenage parenthood because each of these was found to be predictive of mothers' levels of directiveness, child engagement, or child negativity.

Change over Time in Maternal Directiveness

Our findings indicated that when children were 1 year old, European American mothers were the least and African American mothers were the most directive of the three groups we studied. The Mexican American group was intermediate. In an earlier study that also drew on the EHS longitudinal dataset (Ispa et al., 2004), African American and Mexican American mothers' directiveness ratings did not differ. The greater differentiation among groups discerned in the present study may be due to increased statistical power resulting from the use of data from all families in the growth modeling techniques employed here. The traditional regression techniques used in our earlier research relied on a listwise deletion approach to missing data, resulting in smaller sample sizes and less statistical power. Even in the current study, using Cohen's (1988) interpretations of effect size magnitude, we note that the effect sizes were small.

The growth curves showed that the three ethnic groups were similar in that mothers in all three displayed higher levels of directiveness when children were 1 year old than thereafter. Declining levels of directiveness from ages 1 to 3 may have resulted from mothers' perceptions that children had become progressively more capable of directing their own play. However, quadratic trends in all three groups suggested that after the 3-year low-point, there is an increase in directiveness just prior to kindergarten entry. The pre-kindergarten increase may reflect mothers' expectations regarding the demands of elementary school and the didactic strategies they should use to prepare their children. The increase in directiveness was most evident among the Mexican American mothers, perhaps as a result of regression to the mean—of the three groups, they were the lowest in directiveness at Time 3. The change in materials at the pre-kindergarten observation may also have played a role, but it is unclear why play dough at Time 4 would have elicited more directiveness than the materials used at Time 3.

African Americans were the highest among the three groups of mothers in directiveness over the course of the 4 years of the study. These high levels are consistent with previous research describing low-income African American mothers as firm and directive, as believing it important to keep a close eye on children and as endorsing the value of didactic instruction in conjunction with opportunities for self-initiated play-based learning (Holloway, Rambaud, Fuller, & Eggers-Piérola 1995). This constellation of beliefs and behaviors may be rooted in cultural values endorsing respect for the authority of parents and other older family members (Ispa &

Halgunseth, 2006). As emphasized in the ecological model of minority group parenting (García Coll et al., 1996; Johnson, Jaeger, Randolph, Cauce, & Ward, 2003), the social positions of low-income African American parents should also be considered. Authority-focused parenting may have developed as a secondary norm in response to the stresses engendered by societal oppression. Additionally, Ogbu's (1991) distinction between voluntary and involuntary immigrants may help explain why African American mothers tended to be more directive than Mexican American mothers. Individuals with family histories of more voluntary immigration (even if for pressing economic reasons) may experience less resistance to the dominant culture than individuals with family histories of forced immigration through enslavement.

The pattern shown by the Mexican American mothers suggests the greatest over time change relative to African American and European American mothers. Mexican American mothers differed from the European American mothers in terms of every component of the directiveness trajectory (intercept, initial linear trend, and quadratic trend). They demonstrated relatively high directiveness when children were 1 year old followed by a steeper drop and more pronounced curvature during the following years. Although the effect sizes were very small, the pattern deserves discussion. Traditional Mexican beliefs holding that infants and toddlers are too cognitively and physically immature to be able to accomplish very much on their own may explain the relatively high levels of directiveness at the age-1 assessment. The drop thereafter may be due to beliefs that in the following few years, before school begins, emotional support and love from family members are more important for children's current and future well-being than direct teaching of skills and knowledge (Crosnoe, 2006; Halgunseth, Ispa, & Rudy, 2006; Okagaki & Sternberg, 1993; Valdés, 1996). Unfortunately, we cannot know exactly what mothers in any of the three ethnic groups were thinking or feeling during the behaviors coded as directive. We recommend that future studies include interviews with mothers to elicit the meanings and intentions behind their behaviors.

Relations between Maternal Directiveness and Patterns of Change in Children's Positive Engagement and Negativity

Our age-1 findings link directiveness to lower levels of child engagement and higher levels of child negativity in all three groups, with the child engagement association being strongest for the Mexican American families. These results differ from those of previous studies that have shown negative implications of high control primarily for European American infants and toddlers, not for their African American or Mexican American counterparts (Carlson & Harwood, 2003; Ispa et al., 2004), and we note that the effect size for the comparison of Mexican American and other children was very small. It is possible that the larger sample sizes (and hence, greater power) in the current study permitted relatively small relations between maternal directiveness and child engagement and negativity among African American and Mexican American children to reach statistical significance.

Whereas mothers' directiveness was associated with lower age-1 child engagement in all three groups, this inverse association was greatest in the Mexican American group. However, as is shown in Figure 2, Mexican American children of prototypical highly directive mothers increased in engagement over the first 3 years at nearly the same rate as children of prototypical low-directive mothers. This was not the case for European American and African American children, for whom higher levels of directiveness were related to less steep increases in children's engagement over time.

In addition, whereas directiveness was associated with lower age-1 child negativity in all three groups, the over time relations between maternal directiveness and child negativity were weaker in the Mexican American group than in the European American and African American groups. The absence of any European American–African American differences in child behaviors associated with maternal directiveness is noteworthy and in keeping with a review highlighting similarities between these two groups in relations between maternal control and child outcomes (Tamis-LeMonda, Briggs, McClowry, & Snow, 2008).

We do not know why the negative behaviors associated with maternal directiveness decline over time more in Mexican American children than in European American and African American children, but it has been suggested that Mexican American mothers deliver directiveness in ways that minimize or compensate for its aversiveness. In fact, for Mexican American children, directiveness may convey caring and a desire to be involved (Halgunseth et al., 2006). This issue clearly deserves further exploration.

Maternal Positive and Negative Regard as Possible Moderators of Associations between Directiveness and Children's Behavior toward their Mothers

Our findings indicated that in all three groups, mothers' positive regard weakened, and their negative regard strengthened, the inverse relation between their directiveness and children's engagement with them. The pseudo-*R*squares suggested small-to-moderate effects. In European American and Mexican American families, mothers' positive regard also moderated associations between their directiveness and children's trajectories of negativity toward them, although in the opposite directions. The results predicting child engagement are reminiscent of findings indicating that maternal emotional responsiveness moderates relations between physical and verbal punishment and child problem behavior in European American, African American, and Latin American families (Berlin et al., 2009; McLoyd & Smith, 2002). It differs, however, from the Ispa and colleagues' (2004) finding (from the same dataset) of a moderating effect of maternal positive regard only for child negativity and only in African American families. As already mentioned, the larger samples available for the current analyses and our present focus on trajectories may have revealed more pervasive effects of maternal directiveness.

On the face of it, two interactions predicting child outcomes may seem counterintuitive. In the first, at high levels of maternal negative regard, the inverse relation between directiveness and

the linear trend of child engagement was reduced. The most likely explanation involves the inverse relation between age-1 level of child engagement and maternal negative regard (β [unstandardized] = $-.19$, $p = .01$). Given that in the context of high maternal negative regard, child engagement was relatively low at the outset, there was likely more room for its increase over time. In the second anomalous interaction, Mexican American mothers' directiveness predicted higher levels of child negativity especially at high levels of positive regard and low levels of negative regard. This interaction, although puzzling at first, is in keeping with Dix, Stewart, Gershoff, and Day's (2007) observation linking maternal supportiveness to toddlers' defiance when appealing toys were forbidden and during clean-up. These researchers proposed that during toddlerhood, when the motivation to be autonomous is emerging, children with supportive mothers feel safe expressing active resistance to loss of control.

To date, no study (including the present one) has included assessments of positive and negative regard specifically during controlling acts. In the current study, for example, positive and negative regard and directiveness each received separate global scores reflecting maternal behavior during the entire parent-child interaction. Future research would benefit from measures capturing maternal affect at the same moment that directive behaviors are displayed. Such research would provide further clues regarding ethnic variations in the affective contexts in which directiveness is delivered.

Finally, we note that our preliminary findings resulting in decisions to control for maternal education, EHS treatment group, child gender, and teenage parenthood were in keeping with a large body of past research. Inverse relations between educational attainment and highly directive childrearing practices have been explained in the contexts of poorly educated parents' greater likelihood of experiencing financial stress, workplace emphasis on obedience, parent-oriented attitudes, and fear that children will fall prey to negative influences (Kelley, Power, & Wimbush, 1992; Kohn, 1963). Furthermore, in a review of the results of the EHS national evaluation, Love and colleagues (2005) similarly reported that children in the program showed higher child engagement with their mothers than children in the control group and added that the effect was strongest at sites that had fully implemented program performance standards. Our finding that girls were more engaged with their mother and displayed less negativity is also not new and may be a reason that some researchers find that mothers are more directive toward boys than toward girls (Tamis-LeMonda, Briggs, McClowry, & Snow, 2009). Lastly, Berlin, Brady-Smith, and Brooks-Gunn (2002) explained that their results showing greater intrusiveness by teenage mothers than by older mothers was likely due to adolescents' immature perspective-taking skills, focus on their own rapid developmental transitions, and lack of knowledge. These issues are likely in part responsible for the current finding linking teenage childbearing with children's lower levels of engagement and higher levels of negativity.

IMPLICATIONS FOR PRACTICE, APPLICATION, AND POLICY

Parent education should be approached with the understanding that links between childrearing practices and children's development depend on many factors, including the child's age, ethnicity, and the parents' emotional disposition toward the child. For example, we have shown that maternal directiveness during play, especially in Mexican American families, is likely to decrease considerably after age 1. This is important knowledge for those who worry that high maternal directiveness when children are 1 signals that high levels will be maintained throughout the child's early years. Nonetheless, our findings raise concern regarding mothers who exhibit particularly high levels of directiveness relative to others within their ethnic group, especially if directiveness is occurring in the context of low warmth. For some mothers, parent education may be sufficient. For others, interventions should include efforts to reduce sources of stress and depression that are known to contribute to highly controlling parenting (Bosquet & Egeland, 2001).

REFERENCES

1. Adam, E. K., Gunnar, M. R. and Tanaka, A. 2004. Adult attachment, parent emotion, and observed parenting behavior: Mediator and moderator models. *Child Development*, 75: 110–122.
2. Administration on Children, Youth, and Families, Department of Health and Human Services. 2001. *Building their future: How Early Head Start programs are enhancing the lives of infants and toddlers in low-income families*, Washington, DC, , U.S: Department of Health and Human Services.
3. Ainsworth, M. D. S., Blehar, M. C., Waters, E. and Wall, S. 1978. *Patterns of attachment: A psychological study of the strange situation*, Hillsdale, NJ: Erlbaum Associates.
4. Berlin, L. J., Brady-Smith, C. and Brooks-Gunn, J. 2002. Links between childbearing age and observed maternal behaviors with 14-month-olds in the Early Head Start Research and Evaluation Project. *Infant Mental Health Journal*, 23: 104–129.
5. Berlin, L. J., Ispa, J. M., Fine, M. A., Malone, P.S., Brooks-Gunn, J., Brady-Smith, C. and Bai, Y. 2009. Correlates and consequences of spanking and verbal punishment for low-income White, African American, and Mexican American toddlers. *Child Development*, 80: 1403–1420. ...
6. Bosquet, M. and Egeland, B. 2001. Associations among maternal depressive symptomatology, state of mind and parent and child behaviors: Implications for attachment-based interventions. *Attachment and Human Development*, 3: 173–199.
7. Calkins, S. D., Hungerford, A. and Dedmon, S. E. 2004. Mothers' interactions with temperamentally frustrated infants. *Infant Mental Health Journal*, 25(3): 219–239.

- 8.** Carlson, V. J. and Harwood, R. L. 2003. Attachment, culture, and the caregiving system: The cultural patterning of everyday experiences among Anglo and Puerto Rican mother-infant pairs. *Infant Mental Health Journal*, 24: 53–73.
- 9.** Chen, D. W., Fein, G. G., Killen, M. and Tam, H. P. 2001. Peer conflicts of preschool children: Issues, resolution, incidence, and age-related patterns. *Early Education and Development*, 12: 523–544.
- 10.** Cohen, J. 1988. *Statistical power analysis for the behavioral sciences*, 2nd, New York, NY: Psychology Press.
- 11.** Cole, P. M., Martin, S. E. and Dennis, T. A. 2004. Emotion regulation as a scientific construct: Methodological challenges and directions for child development research. *Child Development*, 75: 317–333.
- 12.** Crosnoe, R. 2006. *Mexican roots, American schools: Helping Mexican immigrant children succeed*, Stanford, CA: Stanford University Press.
- 13.** Dix, T., Stewart, A. D., Gershoff, E. T. and Day, W. H. 2007. Autonomy and children's reactions to being controlled: Evidence that compliance and defiance may be positive markers in early development. *Child Development*, 78: 1204–1221.
- 14.** Egeland, B., Pianta, R. and O'Brien, M. A. 1993. Maternal intrusiveness in infancy and child maladaptation in early school years. *Development and Psychopathology*, 5: 359–370.
- 15.** Fracasso, M. P., Busch-Rossnagel, N. A. and Fisher, C. B. 1994. The relationship of maternal behavior and acculturation to the quality of attachment in Hispanic infants living in New York City. *Hispanic Journal of Behavioral Sciences*, 16: 143–154.
- 16.** Fuligni, A. S. and Brooks-Gunn, J. 2013. Mother-child interactions in Early Head Start: Age and ethnic differences in low-income dyads. *Parenting: Science and Practice*, 13, 1–26.
- 17.** García Coll, C., Lamberty, G., Jenkins, R., McAdoo, H. P., Crnic, K., Wasik, B. H. and García, H. V. 1996. An integrative model for the study of developmental competencies in minority children. *Child Development*, 67: 1891–1914.
- 18.** Grusec, J. E., Rudy, D. and Martini, T. 1997. “Parenting cognitions and child constructs: An overview and implications for children's internalization of values”. In *Parenting and children's internalization of values: A handbook of contemporary theory*, Edited by: Grusec, J. E. and Kuczynski, L. 259–282. New York, NY: Wiley.
- 19.** Guzella, J. R. and Vernon-Feagans, L. 2004. Parental perceived control over caregiving and its relationship to parent-infant interaction. *Child Development*, 75: 134–146.

- 20.** Halgunseth, L., Ispa, J. M. and Rudy, D. 2006. Parental control in Latino families: An integrated review of the literature. *Child Development*, 77: 1282–1297.
- 21.** Holloway, S. D., Rambaud, M. F., Fuller, B. and Eggers-Piérrola, E. 1995. What is “appropriate practice” at home and in child care? Low-income mothers' views on preparing their children for school. *Early Childhood Research Quarterly*, 10: 451–473.
- 22.** Ispa, J. M., Fine, M. A., Halgunseth, L. C., Harper, S., Robinson, J., Boyce, L. and Brady-Smith, C. 2004. Maternal intrusiveness, maternal warmth, and mother-toddler relationship outcomes: Variations across low-income ethnic and acculturation groups. *Child Development*, 75: 1613–1631.
- 23.** Ispa, J. M. and Halgunseth, L. C. 2006. “Raising children”. In *Keepin' on: The everyday struggles of young families in poverty*, Edited by: Ispa, J. M., Thornburg, K. R. and Fine, M. A. 157–201. Baltimore, MD: Brookes Publishing Co.
- 24.** Jackson-Newsom, J., Buchanan, C. M. and McDonald, R. M. 2008. Parenting and perceived maternal warmth in European American and African American adolescents. *Journal of Marriage and Family*, 70: 62–75.
- 25.** Johnson, D. J., Jaeger, E., Randolph, S. M., Cauce, A. M. and Ward, J. 2003. Studying the effects of early child care experiences on the development of children of color in the United States: Toward a more inclusive research agenda. *Child Development*, 74: 1227–1244.
- 26.** Kelley, M. L., Power, T. G. and Wimbush, D. D. 1992. Determinants of disciplinary practices in low-income black mothers. *Child Development*, 63: 573–582.
- 27.** Kelley, S. A. and Jennings, K. D. 2003. Putting the pieces together: Maternal depression, maternal behavior, and toddler helplessness. *Infant Mental Health Journal*, 24: 74–90.
- 28.** Kohn, M. 1963. Social class and parent-child relationships: An interpretation. *American Journal of Sociology*, 68: 471–480.
- 29.** Love, J. M., Kisker, E. E., Ross, C., Constantine, J., Boller, K., Chazan-Cohen, R. and Vogel, C. 2005. The effectiveness of Early Head Start for 3-year-old children and their parents: Lessons for policy and programs. *Developmental Psychology*, 41: 883–901.
- 30.** Malatesta, C. Z., Culver, C., Tesman, J. R. and Shepard, B. 1989. The development of emotion expression during the first two years of life. *Monographs of the Society for Research in Child Development*, 54: (1–2). v–104.
- 31.** Martínez, E. A. 1988. Child behavior in Mexican American/Chicano families: Maternal teaching and child-rearing practices. *Family Relations*, 37: 275–280.

- 32.** Masur, E. F. and Turner, M. 2001. Stability and consistency in mothers' and infants' interactive styles. *Merrill-Palmer Quarterly*, 47: 100–120.
- 33.** McLoyd, L. and Smith, J. 2002. Physical discipline and behavior problems in African American, European American, and Hispanic children: Emotional support as a moderator. *Journal of Marriage and the Family*, 64: 40–53.
- 34.** Nolen-Hoeksema, S., Wolfson, A., Mumme, D. and Guskin, K. 1995. Helplessness in children of depressed and nondepressed mothers. *Developmental Psychology*, 31: 377–384.
- 35.** Ogbu, J. U. 1991. Minority coping responses and school experience. *Journal of Psychohistory*, 18: 433–456.
- 36.** Okagaki, L. and Sternberg, R. 1993. Parental beliefs and children's school performance. *Child Development*, 64: 36–56.
- 37.** Pettit, G. S., Harrist, A. W., Bates, J. E. and Dodge, K. A. 1991. Family interaction, social cognition and children's subsequent relations with peers at kindergarten. *Journal of Social and Personal Relationships*, 8: 383–402.
- 38.** Raudenbush, S. W. and Bryk, A. S. 2002. *Hierarchical linear models: Applications and data analysis methods*, Thousand Oaks, CA: Sage Publications.
- 39.** Singer, J. D. and Willett, J. B. 2003. *Applied longitudinal data analysis: Modeling change and event occurrence*, New York, NY: Oxford University Press.
- 40.** Spieker, S. J., Larson, N. C., Lewis, S., Keller, T. E. and Gilchrist, L. 1999. Developmental trajectories of disruptive behavior problems in preschool children of adolescent mothers. *Child Development*, 70: 443–458.
- 41.** Stifter, C. A., Coulehan, C. M. and Fish, M. 1993. Linking employment to attachment: The mediating effects of maternal separation anxiety and interactive behavior. *Child Development*, 64: 1451–1460.
- 42.** Tamis-LeMonda, C. S., Briggs, R. D., McClowry, S. G. and Snow, D. L. 2008. Challenges to the study of African American parenting: Conceptualization, sampling, research approaches, measurement, and design. *Parenting: Science and Practice*, 8: 319–358.
- 43.** Tamis-LeMonda, C. S., Briggs, R. D., McClowry, S. G. and Snow, D. L. 2009. Maternal control and sensitivity, child gender, and maternal education in relation to children's behavioral outcomes in African American families. *Journal of Applied Developmental Psychology*, 30: 321–331.
- 44.** Tomlinson, M., Cooper, P. and Murray, L. 2005. The mother-infant relationship and infant attachment in a South African peri-urban settlement. *Child Development*, 76: 1044–1054.

45. Valdéz, G. 1996. *Con respeto: Bringing the distances between culturally diverse families and schools. An ethnographic portrait*, New York: Teachers College Press.

46. Whiteside-Mansell, L., Bradley, R. H., Owen, M. T., Randolph, S. M. and Cauce, A. M. 2003. Parenting and children's behavior at 36 months: Equivalence between African American and European American mother-child dyads. *Parenting: Science and Practice*, 3: 197–234.