Trajectories of Intrusive Parenting During Infancy and Toddlerhood as Predictors of Rural, Low-Income African American Boys' School-Related Outcomes

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Abstract:

Stability and change in maternal intrusiveness during early childhood is rarely explored, particularly within African American families. The current study examined the prediction of maternal intrusiveness during the first 3 years of life among mothers of rural, low-income African American boys and its relation to school-related outcomes. Observations of mothers (N = 230) interacting with children at 6, 24, and 36 months were coded and analyzed. Predictors of the trajectories and child outcomes were assessed using questionnaires and various tasks. On average, mothers of African American boys increased in intrusiveness across the first 3 years of life. Cumulative sociodemographic risk was associated with initial levels of intrusiveness, and child fearfulness and maternal negative regard predicted increases in intrusiveness over time. After controlling for sociodemographic risk, child temperament, and parental negativity, increases in intrusiveness over the first 3 years of life were associated with lower levels of expressive communication, inhibitory control, and intellectual functioning but not with attention focusing. Comprehensive parenting intervention efforts aimed toward improving children's outcomes must take into consideration the broader socioeconomic and affective context in which parenting behaviors occur as well as stability and change in parenting over time.

Keywords: African American boys | African American mothers | child development | early childhood | infancy | toddlerhood | maternal intrusiveness | maternal negative regard | controlling parenting | effortful control

Article:

Maternal intrusiveness within the context of mother–infant and mother–toddler relationships is often conceptualized as an exertion of parental control over the child that preempts the

development of child autonomy (Ainsworth, Blehar, Waters, & Wall, 1978). As such, intrusiveness is often defined as frequent, noncontingent physical behavior or verbal directives that limit the child's activities (Biringen & Robinson, 1991; Egeland, Pianta, & O'Brien, 1993; Isabella & Belsky, 1991; Smith & Pederson, 1988). Among European American families, intrusive parenting behaviors have been associated with less optimal child outcomes, including increased levels of aggression, mental health difficulties, and externalizing behavioral problems (Belsky, Putnam, & Crnic, 1996; Egeland et al., 1993; Gershoff, 2002; Ispa et al.,2004; Pettit, Harrist, Bates, & Dodge, 1991). Interestingly, positive associations between intrusive parenting behaviors and maladaptive behavioral outcomes tend to be larger among European American families as compared to African American families (Ispa et al., 2004; Tamis-LeMonda, Briggs, McClowry, & Snow, 2008), even though on average, African American mothers use more controlling parenting behaviors (Tamis-LeMonda et al., 2008).

Scholars often attribute these discrepant findings to differences in the meaning of intrusiveness across groups. Among European American mothers, intrusiveness is often accompanied by a belief that intrusiveness is rooted in mothers' prioritizing their personal agendas above the autonomy of their child, and that this is a product of either the mother's experience of elevated stress load or the mother's negative opinions of their child's behaviors or motivations (Ispa et al., 2004). In contrast, some social scientists view intrusive parenting among African American mothers as reflecting cultural differences in how mothers view children and their roles in socializing them. In more non-Western collectivistic cultures and among many African American families, authoritarian parenting (characterized in part by higher levels of parental control) is not only more common but often considered to be a best practice for child rearing (Deater-Deckard & Dodge, 1997; Ispa et al., 2004; Tamis-LeMonda et al., 2008). In addition, it has also been suggested that within African American families, there is a decoupling of intrusiveness and parental warmth and sensitivity as compared to European American families in which the negative correlation between parental warmth and intrusiveness is often stronger (Deater-Deckard & Dodge, 1997).

Previous work in this area has greatly advanced our conceptualization of intrusive and controlling parenting behaviors in African American families. However, the majority of what is currently known about these types of parenting behaviors and their implications for child adjustment in African American families has been derived from cross-sectional studies that only focused on behavioral problems. Very little is known about change or stability in intrusiveness during early childhood and the longitudinal implications for African American children's adjustment in other domains of functioning. Understanding trajectories of intrusion during early childhood, specifically infancy and toddlerhood, is very important given that this period is characterized by rapid developmental changes. Indeed, the child is transitioning from complete dependency on the parent to a more mobile and autonomous individual. How parents support this transition may greatly influence children's later adjustment.

Furthermore, few, if any, studies of intrusive parenting have focused on young African American boys despite the fact that among older children and adolescents, scholars have noted differences in the parenting behaviors used with African American boys as compared to the behaviors employed by parents of girls (Brody & Flor, 1998; Li, Stanton, & Feigelman, 2000; Smetana & Gaines, 1999). In fact, it has been suggested that harsher parenting behaviors may be more detrimental for boys and supportive behaviors more beneficial for girls (Gutman, McLoyd, & Tokoyawa, 2005).

Taking all this into consideration, the current study examined the prediction of maternal intrusiveness during the first 3 years of life among mothers of African American boys as well as school-related outcomes associated with intrusiveness over time.

Factors Associated With Maternal Intrusiveness in Early Childhood

Theory and empirical evidence suggest that multiple systems, including that of the child, family, and broader ecology, influence human behavior (Bronfenbrenner, 1986), particularly the parenting behaviors of ethnic minority parents (Boykin & Toms, 1985; Garcia Coll & Pachter, 2002). The literature reviewed in subsequent sections focuses on several systems that differ in their proximity to parenting behaviors and have previously emerged as strong predictors of intrusiveness at different points during development. The influence of these systems on African American mothers' intrusiveness over time has not been adequately explored.

Child Characteristics: Child Temperament

Temperament is thought to have a biological basis and is broadly defined as individual differences in emotional, motor, and attentional reactivity and self-regulation (Rothbart & Bates, 1998, 2006). Two commonly studied dimensions of infant reactivity are distress to novelty, or fear, and distress to limitations, or anger, both of which comprise negative emotionality (Rothbart, Ahadi, & Hershey, 1994). Children high on these dimensions may be irritable and difficult to soothe and show high-intensity negative reactions (Paulussen-Hoogeboom, Stams, Hermanns, & Peetsma, 2007). Thus, it is not surprising that mothers of temperamental difficult children are more likely to use inconsistent discipline (Lengua & Kovacs, 2005) and more intrusive and controlling parenting tactics (Paulussen-Hoogeboom et al., 2007). The majority of work in this area has focused on European American children, and very little attention has been given to African American children.

Maternal Characteristics: Psychological Risk

Similarly, emotional and psychological distress can exert an influence on family processes (Barnett, 2008; Conger & Donnel-lan, 2007; Conger, Rueter, & Conger, 2000; McLoyd, 1998). Specifically, psychological risk factors such as depression have been associated with more controlling and intrusive behaviors (Lovejoy, Graczyk, O'Hare, & Neuman, 2000). The effects of psychological distress appear to be intensified among disadvantaged mothers and mothers of

very young children (Lovejoy et al., 2000). This is not surprising given that disadvantaged mothers often face multiple risk factors that may exceed their emotional and coping resources. In turn, these mothers may be taxed by depression, which can challenge their parenting capabilities. This may be especially true for mothers of young children because of the intensive demands placed on them for protection, socialization, nurturance, and support. Despite this, little is known about the longitudinal implications of psychological distress for intrusive parenting among African American mothers, who disproportionately experience poverty and its associated risk factors (McLoyd, 1990).

Contextual Influences: Cumulative Sociodemographic Risk

It is widely recognized that risk factors such as poverty, single parenthood, low parental education, and unemployment often occur together (Masten et al., 1995) and are generally more predictive when examined cumulatively (Burchinal, Vernon-Feagans, Cox, & Key Family Life Project Investigators, 2008). Higher levels of cumulative risk have been linked to a number of maladaptive outcomes for children as well as their parents. Indeed, mothers who experience heightened levels of risk factors are less likely to be responsive to their children's needs (Conger et al., 2002; Kotchick, Dorsey, & Heller, 2005; Trentacosta et al., 2008) and more likely to use controlling and restrictive parenting behaviors, such as physical discipline (Gershoff, 2002; Larzelere & Patterson, 1990). Scholars suggest that the experience of risk factors puts greater stress and strain on parents and leaves them with fewer resources to devote to parenting (McLoyd, 1990).

In spite of the findings related to contextual influences on parenting behaviors, a paucity of research has examined the effects of cumulative risk on low-income African American mothers' intrusive parenting behaviors, especially the longitudinal effects.

Consequences of Maternal Intrusiveness in Early Childhood for Children's Later Adjustment

In addition to understanding the systems that influence African American mothers' intrusiveness over time, there is a need for research focused on elucidating the consequences of changes in intrusiveness for children's later adjustment, particularly adjustment in multiple domains. The results of cross-sectional studies suggest that controlling parenting behaviors have little effect on African American children's behavioral outcomes. However, very little is known about the longitudinal implications for other relevant school-related outcomes such as self-regulation, peer problems, language development, and intellectual functioning. The literature reviewed later focuses on several outcome variables that are of interest in the current study and have been shown to be predictive of children's future school success.

Effortful Control

Effortful control is a self-regulatory facet of temperament generally defined as “the ability to suppress a dominant response in order to perform a subdominant response” (Rothbart, Ellis, Rueda, & Posner, 2003, p. 1114). More specifically, effortful control is a class of regulatory mechanisms that includes both inhibitory control and attention shifting and focusing skills (Rothbart & Rueda, 2005). These processes are used to voluntarily modulate the overt expression of emotion, as well as the internal experience of emotion. High levels of intrusive and controlling parenting have been linked to lower levels of self-regulation in both early and middle childhood (Colman, Hardy, Albert, Raffaelli, & Crockett, 2006; Karreman, van Tuijl, van Aken, & Deković, 2006). More punitive forms of expressivity from parents are thought to overarouse children, which can undermine their regulation (Hoffman, 2000). Specifically, children may experience heightened negative emotions and are less able to focus their attention. Children who try to regulate reactively, as opposed to effortfully, may not be able to use higher order cognitive processes, because withdrawal from or acting out on emotions does not require such processes. In turn, these higher order skills may then be underdeveloped (Blair, 2002). Indeed, effortful control plays a critical role in the development of a number of socioemotional outcomes, including empathy (Eisenberg, Fabes, Murphy, et al. 1996), prosocial behavior (Eisenberg, Fabes, Karbon, et al., 1996), and social adjustment (Henry, Caspi, Moffitt, Harrington, & Silva, 1999). Despite the significant gains that have been made in understanding the consequences of controlling parenting practices for children's effortful control, little is known about longitudinal linkages between intrusive parenting and children's effortful control, particularly for African American boys.

Peer Problems

Similarly, intrusive parenting behaviors may contribute to greater peer problems. In fact, high levels of intrusive parenting have been associated with greater peer victimization in kindergarten (Ladd & Kochenderfer-Ladd, 1998). Scholars suggest that controlling parenting behaviors foster passivity. The lack of autonomy experienced in social interactions with a parent prevents a child from being assertive in establishing positive relationships in social situations with peers (Clark & Ladd, 2000; Ladd & Kochenderfer-Ladd, 1998). Children who experience difficulty establishing and maintaining positive peer relationships are at greater risk for maladjustment in social, behavioral, and cognitive domains. Specifically, they are at an increased risk for behavioral and mental health problems and substance abuse (Bierman & Wargo, 1995; Coie, Terry, Lenox, Lochman, & Hyman, 1995; Dunn & McGuire, 1992; Parker & Asher, 1987; Woodward & Fergusson,2002). In spite of these risks, few, if any, studies have attempted to understand the implications of intrusiveness for African American boys' peer problems.

Language Development

Ample research suggests that children's language development is an important component of school readiness and later academic success (Hart & Risley, 1995; Shonkoff & Phillips, 2000) and that parenting behaviors play a very influential role in its development (Mistry, Biesanz,

Taylor, Burchinal, & Cox, 2004; Pungello, Iruka, Dotterer, Mills-Koonce, & Reznick, 2009; Tamis-LeMonda, Bornstein, & Baumwell,2001; Tamis-LeMonda, Shannon, Cabrera, & Lamb, 2004). Much of the research on language development has focused on sensitive parenting; however, the small body of work focused on intrusive parenting suggests that more negative and controlling parenting behaviors are associated with less optimal language development (Field, 2001; Pungello et al., 2009). Indeed, mothers who are more intrusive often use shorter and more controlling utterances in their verbal interactions with their child (Field, 2001). Moreover, rather than expanding upon and supporting their child's attempts to communicate, the mother's own agenda takes precedence (Pungello et al., 2009). To the best of our knowledge, no studies have examined the longitudinal effects of intrusiveness on the language development of African American boys.

Intellectual Functioning

Similarly, intellectual functioning is greatly influenced by positive interactions between a parent and child. Certainly, engaging in joint activities that support the child's autonomy and exploration of the environment fosters intellectual development (Culp, Hubbs-Tait, Culp, & Starost, 2000). Interactions characterized by a prioritizing of the parent's agenda over the child's do not create these same intellectually stimulating opportunities **(**Calkins & Johnson, 1998; Ruff & Rothbart, 1996). As a result, it is not surprising that negative and intrusive parenting behaviors have been associated with lower levels of intellectual functioning (Blair et al., 2011). However, few studies have focused specifically on African American families to determine whether these processes operate similarly in other ethnic groups. Furthermore, the longitudinal implications of intrusive parenting for intellectual functioning have not received adequate attention.

In sum, it is clear that research on parenting has not begun to explore the correlates and developmental consequences of patterns of change in parenting behaviors over time, particularly as they relate to the adjustment of African American boys. Thus, the present study examined change and stability in intrusiveness over infancy and toddlerhood. Secondly, individual differences in trajectories of intrusiveness were explored as a function of early child, maternal, and broader ecological characteristics. Lastly, the current study examined the implications of individual differences in the rate of change in intrusiveness over time for children's effortful control, peer problems, language development, and intellectual functioning.

Method

Participants

The sample for the current study was drawn from the Family Life Project (FLP). The FLP is a longitudinal, multimethod, multirespondent rural study, which explores the ways in which child, family, and contextual factors shape child development over time. The FLP used a developmental, epidemiological sampling design to recruit a representative sample of families with oversampling of low-income families in Pennsylvania and North Carolina and African

American families in North Carolina. Families were recruited in person at hospitals and over the phone using birth records. Eligibility criteria included residency in the target counties, English as the primary language spoken in the home, and plans to stay in the area for the next 3 years. A total of 1,292 families enrolled in the study by completing the first home visit when the infant was 2 months of age. Only the 230 African American maternal primary caregivers and their male child residing in North Carolina were included in the present study. At the 8-month visit, 67% of the mothers were single, and 33% were married. On average, the primary caregivers income-to-needs ratio was about 1.19 (*SD* = 1.04). There was variability in education within the sample. Twenty-seven percent had less than a high school degree, and 73% had at least a high school degree.

Procedure

Two trained research assistants collected all data during home visits. All data for the proposed study were collected when children were on average 6, 24, and 36 months of age, right before starting kindergarten (prekindergarten), and during kindergarten. During the 6-month visit, the caregiver completed the KFAST literacy screener (Kaufman & Kaufman, 1994). All caregivers reading at the eighth grade level or above independently completed the questionnaires, while those reading below the eighth grade had the questionnaires read to them by home visitors. At this time point, caregivers also completed a demographic questionnaire, the Brief Symptom Inventory, Questionnaire of Social Support, and Infant Behavior Questionnaire. At the 36-month visit, caregivers completed the Wechsler Preschool and Primary Scales of Intelligence and The Preschool Language Scale. During the prekindergarten visit, they completed the Child Behavior Questionnaire, and the target child's kindergarten teacher completed the Strength and Difficulties Questionnaire during the kindergarten visit.

At the 6-month visit, in addition to completing questionnaires, the primary caregiver and the child were filmed in a free play activity. At the 24- and 36-month visits, the dyads were filmed in a semistructured 10-min dyadic puzzle activity. A team of six coders scored the DVDs at each time point for caregiver behavior. All coders were blind to other information about the families. Two criterion coders trained all other coders until excellent reliability (intraclass correlation > .80 for all composites) was maintained for each coder on each scale. Once reliability was met, two noncriterion coders were assigned to each case and completed independent codes (on which reliability was based) and then resolved any disagreements to arrive at a final code. Every coder also continued to code at least 20% of cases with a criterion coder to ensure continued reliability with the criterion, master coder

Measures

Parental intrusiveness

Parental intrusiveness was assessed at 6, 24, and 36 months by a system in which mothers were coded during the caregiver–child interaction. A 7-point Likert scale was used on the following

scales, all revised from scales developed in the National Institute of Child Health and Human Development Study of Early Child Care (Cox, Paley, Burchinal, & Payne, 1999; National Institute of Child Health & Human Development, Early Child Care Research Network, 1999): sensitivity/responsiveness, intrusiveness, detachment/disengagement, positive regard for the child, negative regard for the child, animation, and stimulation of development. The scales ranged from *very low* to*very high*. In the current sample, average interrater reliability across pairs of coders was .82 for intrusiveness. These scales have previously been used in studies with African American samples (e.g., Propper, Willoughby, Halpern, Carbone, & Cox, 2007).

Child temperament

Child temperament was assessed at 6 months using primary caregivers' responses to the Infant Behavior Questionnaire (Rothbart, 1981). This measure consists of 60 items representing five dimensions of temperament. These five scales include approach, distress to novelty, distress to limitations, duration of orientation, and recovery to distress. Parents were asked to rate the frequency of temperamental behaviors during activities over the past week such as bathing, play, and daily activities on a 7-point scale. The internal consistency of the scales ranges from .67 to .85 in a normative sample (Rothbart, 1986). For the purpose of this study, only the distress to novelty and distress to limitations subscales were used. Both capture temperamental reactivity (Paulussen-Hoogeboom et al., 2007). In the current sample, the Cronbach's alpha was .78 for distress to limitations and .87 for distress to novelty. A principal components factor analysis indicated that the items loaded positively and highly on their two corresponding factors.

Maternal psychological distress

Maternal psychological distress was measured at 6 months using the Brief Symptom Inventory-18 (BSI-18; Derogatis, 2000). BSI-18 is an 18-item self-report symptom inventory designed to measure the psychological symptom patterns of normative and psychiatric respondents. The measure is a 5-point scale ranging from 0 (*not at all*) to 4 (*extremely*). The measure is made up of three subscales assessing somatization, depressive symptoms, and anxiety. Sample items include “faintness or dizziness” and “temper outburst that you cannot control.” The BSI-18 has been used in a number of studies (Kotchick et al., 2005). A confirmatory factor analysis was run on each set of items corresponding with each of the three subscales. All six items measuring somatization loaded on one factor, with an alpha coefficient of .78. The six items measuring anxiety also loaded on one factor, with a resulting alpha coefficient of .82. Lastly, the six items measuring depressive symptoms all loaded onto one factor, with an alpha coefficient of .80. A sum score across subscales was used to capture maternal psychological distress.

Sociodemographic risk

Sociodemographic risk was calculated based on six self-reported risks measured at 6 months that reflect family structure and a lack of socioeconomic resources (Li-Grining, 2007). Risk factors included whether mothers had less than a high school degree, were single, received welfare, and

were below the federal poverty line. Whether or not mothers were employed was also used as a risk factor. Whether or not the household contained more than four minors (Ackerman, Izard, Schoff, Youngstrom, & Kogos, 1999) was also coded as a risk factor. All items were assessed at 36 months of age. The presence or absence of risk factors was added to obtain a final risk score. Similar risk composites have previously been used in studies with low-income, minority samples (e.g., Li-Grining, 2007).

Effortful control

Effortful control was assessed during the prekindergarten visit using the Children's Behavior Questionnaire (CBQ; Rothbart, Ahadi, Hershey, & Fisher, 2001). The CBQ is designed to assess 15 temperament characteristics in young children based on child behavior over the past 6 months. The modified version of the measure used in the current study included two of the 15 dimensions: attention focusing and inhibitory control. Attention focusing is the tendency to maintain attentional focus upon task-related channels. Sample attention-focusing items include "When practicing an activity, has a hard time keeping her/his mind on it." Inhibitory control is the capacity to plan and to suppress inappropriate approach responses under instructions or in novel or uncertain situations. Sample inhibitory control items include "Can easily stop an activity when she/he is told 'no.'" Prekindergarten teachers were asked to rate the child on each item on a 7-point Likert scale ranging from *extremely untrue of your child* to *extremely true of your child*. They were also provided with a *not applicable* response option to be used when the child had not been observed in the situation described. In previous work with this scale, internal consistency for the subscales ranged from .68 to .93 (Kochanska, DeVet, Goldman, Murray, & Putnam, 1994). In the current study, Cronbach's alpha was .70 for the inhibitory control and .72 for the attention-focusing subscales. The scale has been used in other studies with African American children (Chang & Burns, 2005).

Peer problems

Peer problems were measured during the kindergarten visit using the Strength and Difficulties Questionnaire (SDQ; Goodman, 1997). This questionnaire is a brief behavioral screening measure that provides balanced coverage of children's behaviors, emotions, and relationships over the past 6 months. The SDQ inquires about 25 attributes, 10 of which would generally be thought of as strengths, 14 of which would generally be thought of as difficulties, and one of which is neutral. The 25 SDQ items are divided among five scales: hyperactivity, emotional symptoms, conduct problems, peer problems, and prosocial behavior. The kindergarten teacher of the target child rated the child on a 3-point scale ranging from *not true* to *certainly true*. Sample items included, "Considerate of other people's feelings" and "often loses temper." Items on the peer problems scale were summed. The internal consistency of this measure ranged from .51 to .76 in a normative sample (Goodman & Scott, 1999). In the current sample, the Cronbach's alpha was .74 for peer problems. The validity of the measure has been demonstrated within an at-risk, ethnically diverse sample (Hill & Hughes, 2007).

Intellectual functioning

Intellectual functioning was measured at 36 months using the Wechsler Preschool and Primary Scales of Intelligence Third Edition (WPPSI-III; Wechsler, 2002). The full-scale score combines both verbal and performance (visual-spatial coordination) skills.

Language development

Language development was evaluated at 36 months using the Preschool Language Scale–4 (Zimmerman, Steiner, & Pond, 2002). This scale is composed of two subscales: the Auditory Comprehension subscale that evaluates how much language a child understands and the Expressive Communication subscale that determines how well a child communicates with others. Only the expressive communication subscale was used in the current study. Expressive communication in preschool-aged children was assessed by asking children to name common objects, use concepts that describe objects and express quantity, and use specific prepositions, grammatical markers, and sentence structures. In the present data, the internal consistency for the Expressive Communication subscale was .75.

Analysis

The present study had three aims that were evaluated using latent curve models (LCMs), which are highly recommended analytic techniques for modeling intra- and interindividual differences in change over time (Bollen & Curran, 2006). The first aim was to examine initial levels of intrusiveness (i.e., intercept) measured at the initial time point, 6 months of age, and change over time in intrusiveness (i.e., slope) measured from 6 to 36 months of age. This was evaluated by testing several unconditional latent curve models. The unconditional model is displayed in Figure 1.

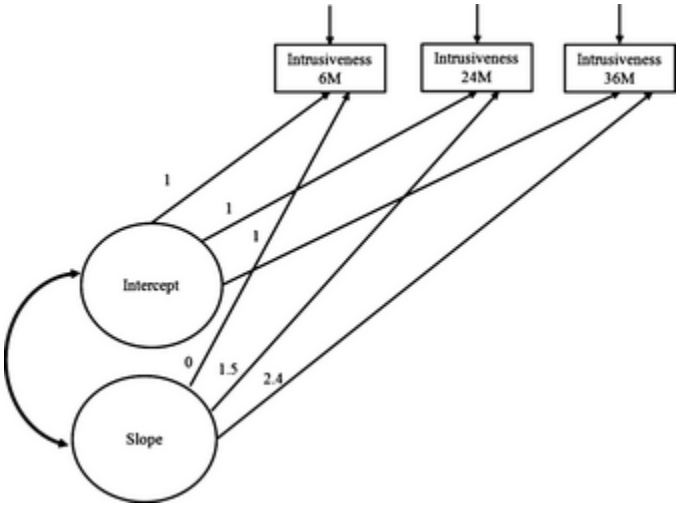

Figure 1. Unconditional Latent Curve Model.

The second aim was to explore whether temperamental characteristics, such as distress to limitation and distress to novelty, maternal psychological distress, maternal negative regard, and cumulative sociodemographic risk, predicted initial levels of and the rate of change in intrusiveness. All of the aforementioned variables were entered into a conditional LCM model predicting the growth factors.

The last aim was to investigate whether initial levels of and the rate of change in intrusiveness predicted children's adjustment as indicated by attention focusing, inhibitory control, peer problems, expressive communication, and intellectual functioning. In the final model, the two growth factors were used to predict child adjustment. Specifically, attention focusing, inhibitory control, peer problems, expressive communication, and intellectual functioning were examined as outcomes. Cumulative sociodemographic risk and child negative emotionality were entered as controls given their well-established linkages to intrusive parenting behavior and children's adjustment (Burchinal et al., 2008; Eisenberg et al., 2001; Gershoff, 2002; Paulussen-Hoogeboom et al., 2007). In addition, initial levels of maternal negative regard as derived from mother–child interactions were entered as a control variable.

All models were evaluated using the MPLUS Version 5.2 software package (Muthén & Muthén, 2007). Full information maximum likelihood (FIML) was utilized given it maximizes the sample size using all available data in an iterative process used to generate the parameters that most likely fit the data. By doing this, FIML produces less biased parameter estimates than those yielded by procedures such as listwise deletion (Schafer & Graham, 2002). In addition, unlike listwise deletion, which assumes that the data are missing completely at random (MCAR; cases are truly missing at random and missingness is not a function of other observed measures), FIML assumes data are missing at random (MAR; cases are missing is a function of observed measures), which is often the case with longitudinal data.

Given that each of the goodness-of-fit indices operates under different assumptions, multiple indices are included to evaluate model fit. These indices are the comparative fit index (CFI), root mean square error of approximation (RMSEA), and the standard root mean square residual (SRMR). A CFI over .9 is considered acceptable, and a RMSEA of less than .8 is considered a decent fit. A SRMR value less than .08 is generally considered a good fit (Hu & Bentler, 1999). Additionally, the chi-squared is reported as well as the associated *p*-value.

Results

Means and standard deviations for each study variable are presented in Table 1. Intrusiveness increased from 6 to 24 months and slightly decreased from 24 to 36 months. Intercorrelations across the three time points ranged from weak to moderate (*r*s = .11–.40).

Table 1. Descriptive Statistics (*N* = 230)

Variable	***M***	***SD***
Intrusiveness (6 months)	3.25	0.88
Intrusiveness (24 months)	3.45	0.93
Intrusiveness (36 months)	3.40	0.99
Predictor (8M)		
Child characteristics		
Distress to limitation	3.67	0.80
Distress to novelty	3.05	0.99
Maternal characteristics		
Psychological distress	46.30	10.49
Contextual influences		
Sociodemographic risk	2.14	1.38
Distal outcomes		
Effortful control (pre-K)		
Attention focusing	4.35	1.25
Inhibitory control	4.41	1.13
Peer problems (kindergarten)	1.52	1.61
Expressive communication (37 months)	92.26	12.83
IQ (37 months)	83.24	13.40

Unconditional LCM

Several nested unconditional LCM with the three repeated measures of intrusiveness were estimated to evaluate the overall fit of a linear trajectory. The first LCM included a linear intercept and slope term with unequal residual variances, and the second model included a linear intercept and slope term with equal residual variances. The fixed loadings from the latent slope factor to each of the three measures of intrusiveness were 0, 1.5, and 2.4 reflecting the time interval measured in years. Based on the results of a chi-squared difference test and examination

of model fit statistics, the second model with equal residual variances provided the best overall fit, $\chi^2(3) = 5.83$, $p < .05$, CFI = .91, root mean square error of approximation (RMSEA) = .06. Parameter estimates for the accepted model are presented in Table 2.

Table 2. Unconditional Latent Curve Parameter Estimates and Standard Errors

Parameter	**Estimate**	***SE***
Variances		
Intercept	.18*	.09
Slope	.08*	.04
Covariance		
Intercept-slope	−.03	.05
Means		
Intercept	3.27***	.06
Slope	.07*	.04
χ^2, *df*	5.83, 3	
RMSEA	.06	
CFI	.91	

*$p < .05$. *** $p < .001$.

At the 6-month time point, mothers were, on average, rated as 3.27 ($p < .001$) on intrusiveness, suggesting that the average level of intrusiveness was significantly different from zero. The significant residual variance of .18 ($p < .05$) indicated that there was individual variation in mothers' intrusiveness at the 6-month time point. On average, mothers of African American boys increased significantly in their intrusive behaviors across the first 3 years of life as indicated by the significant mean slope estimate of .07 ($p < .05$). However, there was significant individual variation in change over time across mothers as indicated by the residual variance of .08 ($p < .05$). Mothers' initial levels of intrusiveness were not related to their rate of change in intrusiveness over time, as indicated by the nonsignificant residual covariance of −.03 ($p > .05$). The two growth factors explained 22%, 30%, and 43% of the variance in intrusiveness at the 6-month, 24-month, and 36-month time points, respectively. Taken together, these results suggest that a linear model of intrusiveness from 6 to 36 months fit the data well.

Conditional LCM

Distress to limitations, distress to novelty, maternal psychological distress, maternal negative regard, and cumulative sociodemographic risk at 6 months of age were evaluated as predictors of the two growth factors. The results from this analysis are presented in Table 3. This model fit the data adequately. Sociodemographic risk and negative regard were associated with higher initial levels of intrusiveness above and beyond the effects of other maternal and child characteristics (.10, $p < .05$; .35, $p < .001$). The other predictors were not significantly related to the intercept factor. Distress to novelty was significantly related to increases in intrusiveness over time (.08, $p < .05$). Negative regard was related to less steep increases in intrusiveness over time (−.15, $p < .05$). Sociodemographic risk, psychological distress, and distress to limitations were unrelated to the slope factor. Together, these predictors account for 30% of the variance in the initial levels of intrusiveness and 17% of the variance in the rate of change.

Table 3. Conditional Latent Curve Model Parameter Estimates and Standard Errors

Predictor variable	**Intercept**		**Slope**	
	Estimate	***SE***	**Estimate**	***SE***
Distress to novelty	−.10	.06	.08*	.04
Distress to limitation	.07	.07	−.08	.05
Psychological distress	−.00	.01	.01	.00
Negative regard	.35***	.05	−.15***	.03
Sociodemographic risk	.10*	.04	.03	.03
χ^2, *df*	23.77, 13			
RMSEA	.06			
CFI	.90			
SRMR	.05			

***p* < .05. ****p* < .001.**

Prediction of Child Adjustment

In the final model, the two growth factors were used to predict child adjustment. Specifically, attention focusing, inhibitory control, peer problems, expressive communication, and intellectual functioning were examined as outcomes. Cumulative sociodemographic risk, child negative emotionality, and maternal negative regard were entered as controls. The results are presented in Table 4. This model fit the data adequately. The results suggest that, although initial levels of intrusiveness do not predict school-related outcomes, the rate of change in intrusiveness was

predictive of children's adjustment in certain domains, but not others. After controlling for sociodemographic risk, maternal negative regard, and child negative emotionality, increases in intrusiveness over the first 3 years of life were associated with lower levels of expressive communication, intellectual functioning at 3 years of age, and lower levels of inhibitory control around the transition to kindergarten. There was a trend to suggest that higher levels of intrusiveness over time were associated with higher levels of peer problems around the transition to kindergarten. The slope factor was not associated with attention focusing. Collectively, the growth factors and control variables account for 53%, 28%, 19%, 25%, and 30% of the variance in attention focusing, inhibitory control, peer problems, expressive communication, and intellectual functioning, respectively.

Table 4. Latent Curve Model Parameter Estimates and Standard Errors for School-Related Outcomes

Predictor variable	**Attention focusing**		**Inhibitory control**		**Peer problems**		**Expressive communication**		**IQ**	
	Estimate	***SE***	**Estimate**	***SE***	**Estimate**	***SE***	**Estimate**	***SE***	**Estimate**	***SE***
Intercept	1.47	2.06	.25	1.03	−.70	1.55	−0.64	9.81	−4.22	9.43
Slope	−3.05	1.94	−2.01*	.99	2.61^{+}	1.55	−24.64*	9.05	−28.26*	10.87
Sociodemographic risk	−.27	.36	−.18	.18	.23	.28	−2.28	1.77	−1.78	1.69
Negative regard	−.09	.06	.01	.06	.11	.07	.19	.54	.07	.55
Negative emotionality	.11	.21	.02	.11	−.05	.16	.41	1.08	.08	1.03
χ^2, *df*	52.89***, 15									
RMSEA	.09									
CFI	.90									
SRMR	.06									

$^{+}p < .10$. $^{*}p < .05$. $^{***}p < .001$.

Discussion

The purpose of this study was to provide a more comprehensive understanding of intrusiveness in infancy and toddlerhood by examining how systems within and outside the family shape intrusive behaviors over time and the consequences of intrusiveness for African American boys' school outcomes around kindergarten. Specifically, child temperament, maternal psychological

distress and negative regard, and cumulative sociodemographic risk were examined as predictors of trajectories of intrusiveness. Furthermore, the developmental consequences of intrusiveness over time for language development, intellectual functioning, peer problems, and effortful control around kindergarten were also examined. There has been virtually no work exploring the correlates and consequences of intrusiveness over time for African American boys' adjustment, particularly their adjustment in multiple domains of functioning. Using longitudinal data, the results of this study suggest that increases in intrusiveness over time are associated with multiple school-related outcomes, but these trajectories are greatly shaped by early characteristics of the child, parent, and broader ecological context.

Trajectories of Maternal Intrusiveness and Predictors Associated With Stability and Change

On average, African American mothers showed increasing levels of intrusiveness between 6 and 36 months of age. The average trend for mothers to increase in intrusiveness, especially as children transition from infancy to toddlerhood, is consistent with prior research on controlling parenting practices that has shown heightened levels during the child's second year of life (Belsky, Woodworth, & Crnic, 1996). High levels of intrusiveness during this period have been attributed to the rapid developmental changes, including increases in verbal abilities and overall mobility that children experience around 24 months of age. Overall, they tend to be less compliant, making parenting very challenging (NICHD Early Child Care Research Network, 1999).

However, this trend was not consistent across the entire sample, as indicated by the significant within- and between-individual variation in the slope factor. That is, although on average, mothers displayed increases in intrusiveness over time, there were mothers who did not increase in intrusiveness as their child approached toddlerhood. In fact, some mothers may have decreased or stayed fairly stable in their levels of intrusiveness. Moreover, there was also variability in mothers' initial levels of intrusiveness, suggesting that some African American mothers used intrusive behaviors more or less frequently than others when their son was 6 months of age. This finding nicely illustrates the heterogeneity with African American families and reinforces numerous scholars' push for more within-groups studies that highlight the variability in the parenting behaviors used by African American parents (Brody & Flor, 1998; Ogbu, 1981; Phinney & Landin,1998).

Variability in mothers' initial levels of intrusiveness at 6 months was partially accounted for by broader contextual factors. Consistent with the literature on controlling parenting practices (e.g., Gershoff, 2002; Larzelere & Patterson, 1990), mothers were more likely to show higher initial levels of intrusiveness if they experienced more sociodemographic risk factors. As has been suggested by McLoyd (1990), the experience of risk factors may put greater stress and strain on low-income African American parents, leaving them with fewer resources to devote to parenting.

Individual variability in changes in intrusiveness from 6 to 36 months was partially accounted for by child and maternal characteristics. Indeed, one temperament dimension, distress to novelty or fear, although not associated with initial levels of intrusiveness, captured a portion of the variability in the rate of change in intrusiveness over time. More specifically, higher levels of child fear at 6 months were associated with increases in intrusiveness over time. Few studies have examined temperamental fear as a predictor of trajectories of intrusive parenting. However, in contrast to the findings of the current study, fearfulness during childhood has typically been associated with increases in positive parenting and unassociated with negative parenting, which includes intrusiveness (van den Akker, Dekovic, Prinzie, & Asscher, 2010). Other longitudinal studies also find associations between child fear and maternal warmth (Lengua & Kovacs, 2005; see Bates, Schermerhorn, & Petersen, 2012, for review). However, none of the aforementioned studies sampled low-income or African American families. Thus, the findings from the present study may suggest that associations between temperament and parenting operate differently for individuals in different sociocultural and socioeconomic contexts. African American parents experiencing risk factors associated with poverty may not have the emotional resources to handle the stress associated with an irritable child, even if the irritability is a result of fear. Indeed, Paulussen-Hoogeboom et al. (2007) found stronger associations between temperamental negative emotionality, which includes fear, and more controlling parenting among low-income families as compared to high-income families.

Alternatively, mothers may consciously respond to child fear by increasing in controlling behaviors over time to help their child overcome fearfulness. A universal goal of all parents is to prepare children to be self-sufficient and competent in their ecological contexts. For rural African American families, that context is often characterized by unique challenges. Poverty is entrenched in a system of political and economic stratification. Furthermore, African American families are often caught in a historical cycle of poverty, which is the result of deeply rooted dependency, racism, and lack of land (Tickamyer & Duncan, 1990). Mothers may view fearfulness as a characteristic that may prevent their child from functioning adaptively in a harsh environment. Subsequently, they may use more controlling behaviors to help their child overcome fear. However, more research is needed to better understand parental responses to child temperamental characteristics in African American families.

Interestingly, distress to limitations, or anger, was not associated with changes in intrusiveness or initial levels of intrusiveness. There is evidence to suggest the dimensions of negative emotionality, fear and anger, have different implications for family functioning (Kochanska, Coy, & Murray, 2001; Lengua, 2006; van der Mark, van IJzendoorn, & Bakermans-Kranenburg, 2002). However, little is known about these processes in low-income, African American families. The results of the present study indicate that fear may be a stronger predictor of increases in intrusiveness than anger.

Taken as a whole, the temperament findings of the current study demonstrate the need for scholars to adopt a broader perspective on parenting influences that includes characteristics of

the child. Oftentimes, given the larger contextual risks that African Americans face (McLoyd, 1990), scholars put a heavy emphasis on the influence of factors outside of the family system to help understand family processes (Boykin & Toms, 1985; Garcia Coll & Pachter, 2002; Garcia Coll et al., 1996; Ogbu, 1981). Future research, while acknowledging contextual influences, should determine whether linkages between temperament and parenting operate similarly or differently for families in different contexts. This has considerable implications for what we consider to be “normative” developmental processes.

Interestingly, maternal negative regard was associated with less steep increases in intrusiveness over time. This is not surprising given that it was associated with higher initial levels of intrusiveness at 6 months of age. Mothers who start out high on negative regard may maintain high levels of intrusiveness over time, which gives them less room to grow in intrusiveness as compared to mothers who score low in negative regard.

Surprisingly, psychological distress was unrelated to initial levels of intrusiveness and changes over time. Given that the findings of the current study are inconsistent with research demonstrating that psychological risk factors are associated with more controlling and intrusive behaviors (Lovejoy et al., 2000), additional work is needed to explore other aspects of parental mental functioning that may influence parenting behaviors in African American families. For example, other researchers have included anger as a dimension of psychological distress and have found links between distress and less optimal parent–child relations (Gutman et al., 2005).

Implications of Intrusiveness for Child Adjustment

While initial levels of intrusiveness were not predictive of child adjustment, increases in intrusiveness over time emerged as a strong predictor of certain outcomes. Increases in intrusiveness over infancy and toddlerhood were associated with lower levels of inhibitory control, language development, and intellectual functioning, and there was a trend to suggest that it was associated with higher levels of peer problems. The findings regarding initial levels of intrusiveness are consistent with the numerous cross-sectional studies that have found that, among African American families, controlling parenting behaviors have no effect on child behavior (see Tamis-LeMonda et al.,2008, for review). However, the results of the present study suggest that findings derived from cross-sectional studies may not tell the entire story. Taken all together, the findings imply that it is the influence of increases in intrusiveness over infancy and toddlerhood that may lead to poor adjustment in multiple domains, not necessarily the initial level of intrusiveness at 6 months.

It is not surprising that increase in intrusive behaviors during toddlerhood, a period where children are increasing in verbal abilities as well as mobility, was associated with intellectual functioning. Children's intellectual functioning and language development are highly dependent upon stimulating and supportive interactions with parents (Culp et al., 2000). Mothers who are intrusive often use short, controlling utterances in verbal interactions with their child, and their

interactions are typically characterized by behaviors that that do not allow the child to explore the environment, a great learning opportunity (Pungello et al., 2009).

The present findings also highlight the importance of considering the impact of intrusiveness on aspects of self-regulation and peer problems. Like Hoffman's (2000), our results suggest that more controlling parenting behaviors may be dysregulating for young children. However, controlling behaviors at 6 months of age do not appear to impede the development of inhibitory control around kindergarten. It is only as mothers increase in intrusiveness during toddlerhood and infancy that impacts on self-regulation appear.

In addition, there was a trend to suggest that increases in intrusiveness were related to peer problems. This is consistent with the results of several studies that have found linkages between controlling parenting, which fosters passivity in social interactions, and poor peer relationships (Clark & Ladd, 2000; Ladd & Kochenderfer-Ladd, 1998). However, the current study adds to previous work by demonstrating that it is increases in intrusiveness over time, not initial levels, that contribute to lower levels of inhibitory control and, potentially, peer problems.

Interestingly, increases in intrusiveness were not related to attention focusing, another aspect of effortful control. In contrast to attention-focusing skills, inhibitory control may be easier to capture using questionnaires, given that as Eisenberg et al. (2004) suggest, it is essentially the ability to inhibit behavior. Attention focusing, the ability to shift and focus attention, is more subtle than inhibitory control; thus, parents may have trouble accurately reporting this aspect of effortful control. Future research should employ observational measures to obtain stronger indices of effortful control as has been done by other scholars (e.g., Kochanska & Knaack, 2003)

Although the results of the present study provide evidence contradictory to some research demonstrating the adaptive function of controlling parenting behaviors for low-income African American children facing multiple risk factors (e.g., Dearing, 2004), it is important to note that the present study only examined intrusion in infancy and toddlerhood. As children age, parents may adapt different types of controlling behaviors that influence child development in different ways. Intrusion in infancy verses adolescence may not look the same. Additional work is needed to further understand how African American parents change their parenting behaviors as children age and how these changes influence development.

Implication for Future Research and Practice

This study has taken an initial step to better understand parenting trajectories in African American families. Future work is needed to identify profiles of intrusiveness and explore what distinguishes mothers who exhibit increases, decreases, or stability in intrusiveness over time. The study did point to child temperament as a potential determinant, but additional work is needed to actually identify groups of mothers and look at other potential predictors. Parental sensitivity might be an important variable to consider. Research indicates that parental sensitivity buffers African American children from the effects of more controlling parenting behaviors over

time (McLoyd & Smith, 2002). Furthermore, research is needed to examine trajectories of intrusiveness beyond toddlerhood and capture individual differences in the rate of change over time. Lastly, future work should seek to empirically identify the mechanisms by which increases in intrusiveness influence child adjustment in different domains.

Although additional work in this area is still needed, the results of the current study have implication for the design of parenting interventions for low-income African American families. Indeed, comprehensive interventions aimed toward improving later child school-related outcomes by helping mothers utilize parenting behaviors that promote the healthy development of their toddlers and infants must take into consideration the broader context in which parenting occurs. Programs that solely focus on reducing maternal intrusiveness without addressing the actual needs of mothers and the multiple systems that contribute to these behaviors may not have sustained impacts. Specifically, the current study highlights the need for intervention efforts to help mothers deal effectively and cope with factors that occur outside the family system, such as socioeconomic conditions, as well as factors inside the family system, such as child temperamental characteristics, that may influence intrusiveness in early childhood and, in turn, children's school adjustment.

Limitations

There are several limitations to the current study that must be noted. First, this study only focused on low-income, rural African American mothers and their sons. Consequently, the findings cannot be generalized to middle-income or urban dwelling African American families or African American girls. Second, although several controls were entered into analyses predicting child adjustment from intrusiveness over time, there may be relevant variables that were not included in the present analyses but are related to intrusion over time and child adjustment. Thus, there is no way to definitively know whether the influence of intrusiveness on children's outcomes is being truly captured or some unmeasured characteristic of the child, parent, or family. Similarly, associations between child, maternal, and ecological factors and trajectories may also be a function of unmeasured variables. For example, several scholars have argued that effects of child temperament on parenting behaviors may actually be a function of genetic similarity (Putnam, Sanson, & Rothbart, 2002).

Lastly, useable data on intrusiveness was only available for three time points. As a result, a linear growth model was the only possible model to fit to the data. If more time points were available, then additional functional forms of the growth trajectories could have been explored. Although the linearly increasing model fit very well, the means suggest a slight decrease in intrusiveness from 24 to 36 months. An exponential functional form that captured the initial increases but then leveled off over time might have more adequately captured the average growth in intrusiveness.

Despite these limitations, the current study adds to what is currently known about intrusiveness in African American families. While on average, African American mothers use more intrusive

and controlling behaviors (Tamis-LeMonda et al., 2008), the results suggest that there is variability during infancy and toddlerhood. In fact, this variability is a function of characteristics of the child, parent, and broader community. For parents who are increasing in intrusiveness over time, child adjustment in multiple domains important for school success may be impacted.

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