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Chapter VI: Longitudinal Contributions of Maternal and Paternal Intrusive Behaviors to Children's Sociability and Sustained Attention at Prekindergarten

Elizabeth Karberg¹, Natasha Cabrera², Jenessa Malin², Catherine Kuhns²

¹Child Trends ²University of Maryland

Abstract

We examined the association between U.S.-born mothers' and fathers' intrusiveness at 24 months and children's sociability and sustained attention at prekindergarten in a sample of low-income, ethnic minority children (N = 74) enrolled in Early Head Start in the U.S. Event-based coding captured the frequency and intensity of parents' intrusive episodes with their children as well as the contingent affect of parents and children during each episode. Fathers and mothers did not differ in frequency of intrusive episodes; fathers were more intensely intrusive but exhibited more positive affect during intrusive episodes than mothers. Children exhibited more positive affect during intrusive exchanges with their fathers than with their mothers. Positive mother-child dyadic affect but not intrusive behaviors at 24 months were not related to sociability and sustained attention in prekindergarten. Moreover, positive mother-child dyadic affect buffered children from the negative effects of maternal intrusive behaviors on sociability.

The quality of parent-child interactions is a strong predictor of children's social and emotional development (see Chapter 1 this volume; Feldman, 2015). Intrusive, or over-controlling behaviors that use frequent physical behavior or verbal directives and limit children's autonomy to influence the focus or pace of play (Smith & Pederson, 1998), is an important predictor of maladjustment. Intrusive behavior is related to a host of negative child outcomes including poor effortful control (Eisenberg, Talyor, Widaman, & Spinrad, 2015) and social maladjustment (Feldman, 2015). Yet, for certain ethnic groups (e.g., Latinos) where intrusive parenting is normative, this socialization strategy does not appear to negatively affect children (e.g., Ispa et al., 2004). And the few studies on paternal intrusiveness are also mixed, either finding no associations with children's social engagement (Cabrera et al., 2007) or finding negative associations with social skills (Stevenson & Crnic, 2013).

Theoretical Framework

We frame this study using the parental emotional socialization model that emotion-related parenting practices are directly related to children's emotional arousal and their social and

emotional skills (Eisenberg, Cumberland, & Spinrad, 1998). This framework is well aligned with ecological theories that focus on a child's microsystem (the parent-child relationship) and the role of parental socialization in development (See Chapter 1, this volume). Accordingly, children's social and regulatory behaviors are shaped by parents' positive and negative emotional expressions and the way they control children's emotional expression during parent-child interactions. This heuristic model suggests that parental intrusive behaviors may have different effects on children's outcomes depending on the dyadic affect. Intrusive behaviors accompanied by emotionally positive messages (e.g., smiling, laughing) may help children regulate their emotional arousal and behaviors (Eisenberg et al., 1998). When intrusiveness is accompanied by emotionally negative messages (e.g., frowning, yelling), it may exacerbate children's arousal. In this study we examined the affect of the child and parent during intrusive episodes and its association with sociability and sustained attention.

The overall inconsistent findings linking parental intrusive behaviors to children's social adjustment can be understood in terms of several methodological limitations: (1) there is a lack of consensus in the way parental intrusive behaviors are coded (macro vs. micro-coding), which may produce different results; (2) most studies do not assess both parents' intrusive behaviors, which makes it difficult to test for unique parental effects; (3) not all studies control for parental responsiveness (e.g., Flanders et al., 2010) thus confounding the effects pertaining to intrusiveness with those pertaining to other forms of parenting.

In the current study and based on the developmental ecological systems framework presented in Chapter 1, we address these gaps and contribute to the literature in several ways. First, we used an event-based coding scheme to assess the frequency and intensity of maternal and paternal intrusive behaviors and the affect of the parent and child (i.e., dyadic affect) during intrusive episodes. We then explored whether the frequency of intrusive behaviors was as important as its intensity for children's social development and tested whether mutual dyadic affect during an intrusive episode moderated this association. Second, to assess unique parental effects, we examined how mothers' and fathers' intrusive behaviors (frequency and intensity) were associated with children's social and emotional skills. Finally, we focused on sociability (e.g., mood regulation, feelings, anxiety) and higher order cognitive skills such as sustained attention because they are central to children's abilities to get along with others, control their behaviors, and regulate their feelings (Andrade, Brodeur, Waschbush, Stewart, & McGee, 2009). These foundational skills emerge during the second and third years of life, where children voluntarily control their attention to resolve conflicting feelings or behaviors and thus are increasingly able to stay focused or sustain attention on a specific stimulus (Rueda et al., 2005).

We use data from a sample of low-income, ethnic minority, mothers, fathers, and their toddlers to ask: (1) Are the intensity and frequency of mothers' and fathers' intrusive behaviors during play with their 24-month old children associated with their sociability and sustained attention at prekindergarten? And, (2) does dyadic affect (mother-child and father-child) during intrusive episodes moderate the longitudinal association between the intensity and frequency of mothers' and fathers' intrusive behaviors and children's sociability and sustained attention?

Mothers' and Fathers' Intrusiveness and Children's Socioemotional Skills

Acknowledging the variability in children's social and emotional development attributed to genetics (Loesch et al., 2003), responsive parenting that includes autonomy granting, use of praise, positive affect, and sensitivity during parent-child interactions have been associated with children's sustained attention and social skills (Bernier, Carlson, & Whipple, 2010). Also, parents' positive affect during play stimulates children's interest in the task, refocuses their attention, and increases the likelihood that they will internalize their parents' values for desirable behaviors (e.g., paying attention).

In contrast, intrusive behaviors that do not support children emotionally are likely to increase children's stress and negative affect, which may affect their ability to sustain attention (Blair & Diamond, 2008). Children whose parents are over-controlling lag behind their peers in the development of social and emotional skills (Blair & Diamond, 2008). Parental over-control, characterized by intrusiveness, excessive demands and re-directing of the child's behavior without sensitivity to the child's cues, may be most frustrating to toddlers who are beginning to engage in more autonomous behaviors (Calkins & Johnsons, 1998). Intrusive parental behaviors have been shown to interfere with children's spontaneous engagement in play and diminish their motivation to pursue their interests (Smith & Pederson, 1998). Parents who exhibit high levels of intrusive behaviors have children who are anxious (Majdandzic, Moller, De Vente, Bogels & van den Boom 2013), exhibit behavioral problems and regulatory difficulties (Clincy & Mills-Koonce, 2013; Ispa et al., 2004). Parents' intrusive behaviors may also distract children from focusing on a task and reduce their motivation to practice sustained attention.

However, studies with non-white and socio-economically diverse samples of mothers find inconsistent results. An early study of Cuban mothers found that observed controlling behavior was not associated with school-aged boys' behavioral problems (Lindahl & Malik, 1999). In contrast, a study of low-income children enrolled in Early Head Start found a positive association between intrusive behaviors and poor emotion regulation (Cabrera, Shannon, & Tamis-LeMonda, 2007). Other studies that have found a positive association between intrusive parenting and maladjustment (e.g., little eye contact and not responding to the parent) found the effect sizes were relatively small mostly because ethnic minority mothers exhibited higher levels of positive affect than white mothers (e.g., Ispa et al., 2004). Thus, mothers' affect during intrusive interactions may be an important moderating factor.

The literature on how fathers' intrusive behavior is related to children's socioemotional skills is smaller than the literature with mothers but just as inconsistent in its findings. Part of the reason might be that the construct of intrusive behavior is not uniformly assessed across studies. For example, the work of Volling et al., (this volume) shows that activative parenting as a class of behaviors, which includes intrusiveness, is observed more often observed among fathers in two-parent middle class families than among mothers. Some studies have found that fathers who exhibit intrusive behaviors have children who are likely to experience externalizing and internalizing problems (Stevenson & Crnic, 2013) and others have not (e.g., Cabrera et al., 2007). Neither of these studies, however, assessed the affect of the parent *and child* (dyadic affect).

Mothers', fathers' and children's affect and social and emotional skills. Children who exhibit positive affect toward their parents are happier and better adjusted than children who do not (Isley, O'Neil, Clatfelter, & Parke, 1999; Morris, Silk, Steinberg, & Robinson, 2007). Ispa et al. (2004) found that the emotional climate of the mother-child interaction moderated the association between intrusive behaviors and children's skills.

Event-based Coding of Parental Intrusive behaviors

Typically, studies of parent-child interactions use a global or macro-coding (e.g., code 10-minute interactions in 10-second intervals) approach that combines intensity and frequency of the behavior of interest into one metric (Tamis-LeMonda et al., 2008). This global coding approach does not accurately reflect the reciprocity and moment-to-moment variability of parent-child interactions (Morawska, Basha, Adamson, & Winter, 2015). In contrast, event-based coding (e.g., coding the specific event only when it is observed) is more sensitive to the moment-to-moment variability, giving us information about behaviors *in direct response* to a particular event and code for the intensity (e.g. parental intrusiveness) *only when it is observed* (Yaman, Mesman, van IJzendoorn, Bakermans-Kranenburg, & Linting, 2010). We use this approach to code for the dyadic affective response to a particular episode of intrusive parental behavior.

Aims and Hypotheses

We examined the longitudinal associations between maternal and paternal intrusiveness at 24 months and children's sociability (e.g., ability to regulate mood, levels of energy and activity) and sustained attention at prekindergarten using a newly developed event-based coding scheme that captured the frequency of intrusiveness, the intensity of each intrusive episode, and the dyadic affect of the parent-child interaction during each intrusive episode. First, we tested whether maternal and paternal intrusive behaviors were linked to children's sociability and sustained attention. Second, we examined whether dyadic affect moderated the association between parental intrusive behaviors and children's outcomes. We hypothesized that higher levels of maternal and paternal intrusive behaviors would be associated with lower levels of children's sociability and sustained attention skills, and that this association would be attenuated when children and their parents exhibited positive affect during intrusive episodes.

Methods

Participants

Participants were 74 fathers, mothers, and their toddlers from low-income, African-American (n=37) and Latino (n=37) families who participated in the Father Involvement with Toddlers Substudy (FITS; n=727) of the Early Head Start Research Evaluation Project (N=2,000; EHSREP). The children participating in the FITS study were recruited from Early Head Start (EHS) sites across the U.S. (see Boller et al., 2006 for more information). All participating families in both studies were eligible for EHS services based on family income (at or below the federal poverty level), as EHS is a federal program that provides services for low-income families (see Administration for Children and Families, 2002). From the FITS

sample, we selected a subsample of ethnic minority children with available videotaped mother-child and father-child observational data at the 24-month data collection wave and outcome data at the prekindergarten wave, which took place the spring before kindergarten entry when children were approximately 5 years old. In general, parents who participated in FITS were more likely to be employed and have completed more years of education than families who only participated in the broader EHSREP (see Cabrera & Mitchell, 2009 for more detailed analysis of selection bias). Twenty-four children lived with married, biological parents and 26 children lived with cohabiting biological parents. Fifty-seven percent ($n = 41$) of the children were female and their mean age was 25 months old (range 23–28). The majority of the fathers and mothers in the sample, 84% and 74%, respectively, had at least a high school education. Forty-seven percent of families lived below the poverty line when the child was 24 months old (Table 1).

Procedures and Measures

Children's sociability and sustained attention at prekindergarten were assessed by asking children to complete a series of protocol-defined tasks using the Leiter International Performance Scale, Social-Emotional Rating Scale, Revised (Leiter-R; Roid & Miller, 1997). The Social-Emotional Examiner Rating Scale gathers information about the individual's attention, organization skills, impulse control, activity level, anxiety, energy and feelings, mood regulation, sociability, and sensory reactivity. The Leiter-R was developed to assess intellectual function, including sustained attention, in children with limited verbal abilities. Trained EHSREP assessors (Boller et al., 2006) assessed children's *sustained attention* using a task in which children were asked to find and cross out pictures with a determined target. Higher sustained-attention scores reflected greater numbers of correct answers with fewer errors, indicating focused attention and greater vigilance. *Children's sociability* was rated by trained EHSREP assessors based on observations of toddlers' interactions with other children and their teachers. Higher scores indicated higher levels of sociability (i.e., children were more alert, interactive). Sociability scores ranged from 4 to 10 ($M = 9.14$, $SD = 1.38$; see Boller et al., 2006).

Parental intrusive behaviors were assessed during observed 10-minute semi-structured parent-child interactions using an event-based coding developed by this study's authors. In the larger FITS study, mothers and fathers were provided with three bags, each containing either a book or toy, and were instructed to divide up the 10-minutes of play among the bags. The event-based coding scheme captured intrusive episodes, defined as times when parents imposed their agenda on their child despite signals from the child that a different activity, level, or pace was desired (Stevenson & Crnic, 2013). The coding scheme captured the intensity of each intrusive episode and the frequency of intrusive episodes across the interaction. The *intensity* of each intrusive episode was rated using a 5-point ($1 = no intrusiveness$, $5 = extreme intrusiveness; the parent doesn't allow the child to lead/express autonomy at all$). The number of intrusive episodes was summed to determine the *frequency of intrusive episodes* observed in 10 minutes of parent-child interactions. Coders – authors on this chapter – independently identified episodes of intrusiveness and rated the intensity on 20% of the videos. Raters agreed on all episodes of intrusiveness, achieving perfect reliability on the frequency of intrusiveness. Inter-rater reliability was achieved on intensity

of intrusiveness when coders agreed 90% of the time within 1 point on all of the videos coded. Some videos were in Spanish; both coders speak Spanish.

To validate the event-based coding scheme, we conducted bivariate correlations with global codes of intrusiveness. We used global intrusiveness codes completed at Columbia University as part of the EHSREP (See Boller et al., 2006). The global coding used by the EHSREP study was adapted from the NICHD Study of Early Child Care's coding scales (NICHD Early Child Care Research Network, 2001; see Love et al., 2005), which rated mothers' and fathers' intrusiveness during the entire 3-bag task on a scale from 1 to 7 (1 = *very low* to 7 = *very high*). Mothers' and fathers' intensity of intrusiveness (event-based) was positively correlated with the global intrusiveness rating ($r = .33$, $p < .01$ for mothers; $r = .43$, $p < .001$ for fathers), providing evidence of convergent validity for the event-based coding of intrusiveness.

Dyadic affect was defined as both the parent and child's contingent affect to a particular intrusive episode. Dyadic affect was scored from 1 (1 = negative affect; crying or frowning, pouting, clearly distressed; 3 = neutral affect) to 5 (5 = positive affect; laughing or smiling the whole time). At each parental intrusiveness episode the simultaneous parent and child affect were coded. Parents and children were each given an affect score using the same scale, and on average, children displayed more negative affect ($M = 2.8$ with mothers; 3.1 with fathers) than their parents ($M = 3.1$ for mothers; 3.3 for fathers). Two independent coders – both authors on this chapter – rated paternal, maternal, and child affect during the identified episodes of intrusiveness following the same procedures for reliability described above. Reliability was achieved when the two coders reached or were near agreement (i.e., within 1) 90% of the time. From these scores we also calculated the *mutual dyadic affect* by creating a variable that assessed whether parents and children displayed the same affect (e.g., positive) during the intrusive episode (range: -1=both display negative; 0 = discordant affect; and 1= both display positive affect during all intrusive episodes).

Control variables. Correlations among possible confounding variables, child gender, maternal education, paternal education, ethnicity, child language skills, and parental responsiveness, were conducted. Results revealed that fathers were more intrusive with boys than girls so child gender was controlled in subsequent analyses. A power analysis was conducted to determine the minimum required sample size to detect an effect size of .20 (i.e., small effect; Cohen, 1992). With four predictor variables in the model, an alpha level of .05 and 80% power (i.e., statistical convention), a minimum sample of 53 families was determined to be required.

Plan of Analysis

To address our research questions, we first descriptively examined the frequency and intensity of intrusive episodes among mothers, fathers, and their 24-month old children and the dyadic affect of those episodes. Next, we conducted two sets of OLS multiple regression analyses: the first set predicted children's prekindergarten sociability and the second set predicted children's prekindergarten sustained attention. These analyses examined (1) whether the intensity of mothers' and fathers' intrusiveness at 24-months predicted children's sociability and sustained attention at prekindergarten and (2) whether the dyadic

affect of the interaction moderated this association. In the first step we entered the intensity of maternal or paternal intrusiveness; second step we entered the dyadic affect and the interaction term between parents' intrusiveness and affect (maternal intrusiveness x dyadic affect; paternal intrusiveness x dyadic affect); and, third step we entered our control variable, child gender. We entered child gender last in the models to test the association between our independent variables and dependent variables as well as whether this association held after accounting for child gender.

Of our sample of 74 families, 14 mothers and 10 fathers showed no intrusiveness during 10-minute play-child interactions. These parents were given scores of 0 on frequency and intensity of intrusiveness and were omitted from the moderation analyses because children's affect could not be coded, leaving 60 families in the final analyses. One child was missing a sociability score and two were missing sustained attention scores at prekindergarten; these values were imputed using multiple imputation procedures and both the imputed data set and raw data set were used in analyses. There was no difference between results from the two data sets, therefore the results based on raw data are shown.

Results

Descriptive statistics

Table 1 presents descriptive statistics and bivariate correlations. Mothers and fathers did not differ in the frequency of intrusive episodes $t(71) = 0.85, p = .40, t(73) = 2.13, p = .04$, but fathers' intensity was higher than mothers' (see Table 1). On average, fathers exhibited more positive affect than mothers during intrusive episodes, $t(53) = 2.69, p = .01$ and children exhibited more positive affect when fathers were intrusive than when their mothers were intrusive, $t(52) = 2.6, p = .01$. Bivariate correlations revealed that mothers' intensity of intrusiveness was negatively correlated with children's sociability (Table 1). Dyadic affect with the mother was positively associated with children's sociability and sustained attention. Fathers' intensity of intrusiveness was negatively associated with children's sustained attention.

Multiple Regression Analyses

Because frequency of intrusiveness did not relate to child outcomes, only the intensity of intrusiveness was used in multiple regression models to predict children's sociability and sustained attention. Models were conducted for mothers and fathers separately for each outcome, resulting in four models in total, each controlling for child gender. We did not control for parental responsiveness as this was not correlated with any of our variables of interest. Neither fathers' intensity of intrusive behaviors nor dyadic affect (father-child) predicted child sociability at prekindergarten (Table 2, Model 1). However, the intensity of maternal intrusive behaviors at 24 months was marginally associated with lower levels of sociability at prekindergarten and accounted for 5% of the variance in children's sociability. When dyadic affect was entered into the model only dyadic affect predicted children's sociability at 60 months (Table 2, Model 2).

Fathers' intrusive behaviors at 24 months predicted lower levels of children's sustained attention at prekindergarten, but became nonsignificant when dyadic affect was entered into the model (Table 3, Model 3). The dyadic affect between father and child did not predict sustained attention (Table 3) but the dyadic affect between mother and child did (Table 3, Model 4).

To address our final research question, we added parent-child dyadic affect and its interaction term to the last step of the multiple regression analyses. Positive dyadic affect between children and mothers during the intrusive episode protected children from the potentially negative effects of intrusive behaviors on children's sociability at prekindergarten (Table 2, Model 2); this model accounted for 18% of the variability in children's sociability scores. The association between intensity of maternal intrusiveness and children's sustained attention was unchanged when the dyadic affect was positive (Model 4).

In summary, neither maternal nor paternal intensity of intrusive behaviors at 24 months were associated with children's sociability and sustained attention, long term at prekindergarten, after controlling for the effects of child gender and dyadic affect. However, the dyadic affect shared between mothers and children was predictive of children's sustained attention and sociability, acting also as a buffer for sociability. This was not the case for the effects of dyadic affect of fathers and children on children's skills.

Discussion

The goal of this paper was to examine how maternal and paternal intrusive behaviors and dyadic affect at 24 months during parent-child play interactions were associated with children's sustained attention and sociability (i.e., mood regulation, anxiety, and feelings during interactions) at prekindergarten. We contribute to this literature by using an event-based coding scheme that coded for the frequency and intensity of parents' intrusive behaviors as well as dyadic affect during the interaction to examine how both mothers' and fathers' intrusive behaviors and dyadic affect of the parent-child interaction at 24 months were related to children's social and emotional skills at prekindergarten. The presented study is firmly rooted in ecological theory as presented in Chapter 1, this volume, that the microsystem includes fathers and mothers, even when fathers do not reside with their children (see Fagan, this volume) and therefore any efforts to understand how proximal process influence children should include measures that assess the influence of both parents.

We highlight three sets of findings. First, in contrast to past studies that have primarily used global coding, we used event-based coding and found that in our sample of low-income families, although both parents, on average, engaged in *infrequent* intrusive episodes, fathers' intrusive behaviors *were more intense* but they also exhibited more positive affect than mothers during the intrusive episodes. And, importantly, children exhibited more positive affect with their fathers than mothers during these events. These are important findings because they suggest that differences between mothers' and fathers' relationships with their children might be evident in the *quality* and in the meaning of such interactions for children rather than in the frequency (Cabrera et al., 2014). Our findings also extend current research by suggesting that mothers *and* fathers engage in intrusive behaviors for

different reasons and that whether a particular behavior is interpreted by the child as interfering with autonomy or as being frustrating, really depends on the affective component of that dyad, as shown by Ispa et al., (2004). These findings also lend support to the specificity principle that specific input such as intrusive behaviors are related to specific outputs such as sociability and for specific dyads, for fathers and not for mothers (Bornstein, 2001).

Second, contrary to our hypothesis we found that over and above the contribution of dyadic affect, the *intensity* of intrusive behaviors between mothers and fathers and their children was not longitudinally related to children's sociability or sustained attention. This finding is consistent with some previous literature (Cabrera et al., 2007) but not with others (e.g., Graziano, Calkins, & Keane, 2011; Keown, 2012; Stevenson & Crnic, 2013). The inconsistency could be explained by the fact that both Stevenson & Crnic's (2013) and Keown's (2012) samples were composed of children diagnosed with developmental delays and ADHD, respectively, thus father intrusiveness posed a unique risk for children with difficulties. In contrast, our study was based on a sample of typically developing children growing up in low-income families. For this group, fathers' or mothers' intrusive behaviors appear to pose no risk for the development of social and emotional skills. Studies that have found maternal intrusiveness to be related to low-income children's development (e.g., Graziano, Calkins, & Keane, 2011) had not controlled for father's intrusiveness or included dyadic affect. Nevertheless, these findings do not imply that intrusive behaviors are good for children but rather that when these behaviors occur in low frequency (as they do in our sample) its intensity is not deleterious when the dyadic affect is considered.

A notable finding is that shared affect (dyadic affect) between parents and children was more important for mother-child interactions than for father-child interactions in its association with both sustained attention and sociability. So that children who shared affect with their mothers during the interaction were more likely to stay focused on a task, regulate their mood and feelings, and exhibit less anxiety than children who did not. These findings support the parental emotional socialization model (Eisenberg et al., 1998) that intrusive behaviors accompanied by emotionally positive messages from the parent may help children regulate their emotional arousal and behaviors.

Contrary to the parental emotional socialization model, dyadic affect was not important when children interacted with their fathers. Children and fathers were more likely to exhibit positive affect (e.g., smile, laugh) during intrusive episodes than children and mothers, but it did not help children to regulate their behaviors. Why? One possible explanation is that that in our sample of low-income families there was little variability in the affect exhibited by fathers and children during the intrusive interaction. In other words, almost all paternal intrusive episodes occurred in a positive emotional climate, so there was not enough variability (i.e., negative emotional climate) that could explain the variance in child outcomes.

Third, we found support for our moderation hypothesis and found that the dyadic affect of the mother-child interaction buffered children from the potential negative effects of intrusive maternal parenting behaviors on their social skills. Mothers who were intensively intrusive

had children who were more sociable (i.e., were alert and interactive) when the mothers smiled or expressed positive affect during the interaction with their children than when she was upset. We did not find this effect for fathers. Paternal intrusive behaviors did not have a negative effect on children's social development and thus dyadic affect was not a moderating factor. These findings merit further investigation.

Overall, unlike past studies (Deater-Deckard & Dodge, 1997), we found that our sample of low-income mothers and fathers exhibited low frequency of intrusive behaviors. Fathers were more intensely intrusive than mothers, yet children and fathers were more likely to exhibit positive affect during these episodes and thus not affect children negatively. Although the nonsignificant effect between paternal dyadic affect and children's skills might be an artifact of the lack of variability in dyadic affect observed in our sample, our findings show that at least for mothers, the dyadic affect during the interaction was more important than the intrusive behavior per se. For mothers and children, the emotional tone of the interaction had stronger long-term consequences than intrusive behaviors.

An important aspect of this study is the way parental intrusive behaviors and dyadic affect were assessed and coded. We coded both the parent and child's affect during intrusive behaviors using event-based coding, which enable us to de-couple, in a sense, the emotional response from the actual behavior. This captured the parent (mother or father) and child's affective response to the episode of parental intrusiveness. This is a significant strength over global coding, which assesses intrusiveness and affect during an interaction but does not capture the contingency between intrusiveness and affect. The utility of observational approaches used to study father-child interactions is exemplified in this chapter and others in this volume, including Volling et al., Lee et al., Feinberg et al., and Piskernik and Ahnert (this volume). Collectively, these studies make the case that to build the science on father-child relationships, researchers should use observational methods. Moreover, as we argue here and elsewhere in this volume (see Leet et al. and Feinberg et al.), fathers are part of families, which include mothers and children, thus studies of fathers should use a family system approach that clearly situates fathers in a network of relationships that are interdependent but also unique.

Limitations

There are several limitations that should be considered when interpreting the findings of this study. First, data come from a small convenience sample of low-income minority parents and their toddlers, and thus the generalizability of findings is limited. Second, the sample size was too small to include many controls and maintain statistical power to detect effects. Further, we were unable to control for both parents' behavior in the same model and ran separate models for mothers and fathers, which run the risk of increasing Type II error. As a result, we cannot determine whether parent's intrusiveness is associated with children's sustained attention or social skills over and above the influence of the other parent.

Future Directions and Conclusions

An important next step is to replicate these findings with larger and more diverse samples and with mothers and fathers using event-based coding schemes that can account for the

affective context of the interaction. The findings of this study suggest that while both parents may engage in similar behaviors, the impact on children may be different. This conclusion is also echoed in Volling et al. (this volume), who found evidence of an activating profile of fathering and mothers. Our findings also point to clear questions for future studies: are negative parenting behaviors attenuated by a strong coparenting relationship (see Lee et al., and Feinberg et al., this volume)? How do we assess intrusive behaviors in nonresident fathers (see Fagan, this volume)? Why are paternal intrusive behaviors that do not support children emotionally not increase children's stress and negative affect as hypothesized in the literature (Blair & Diamond, 2008)?

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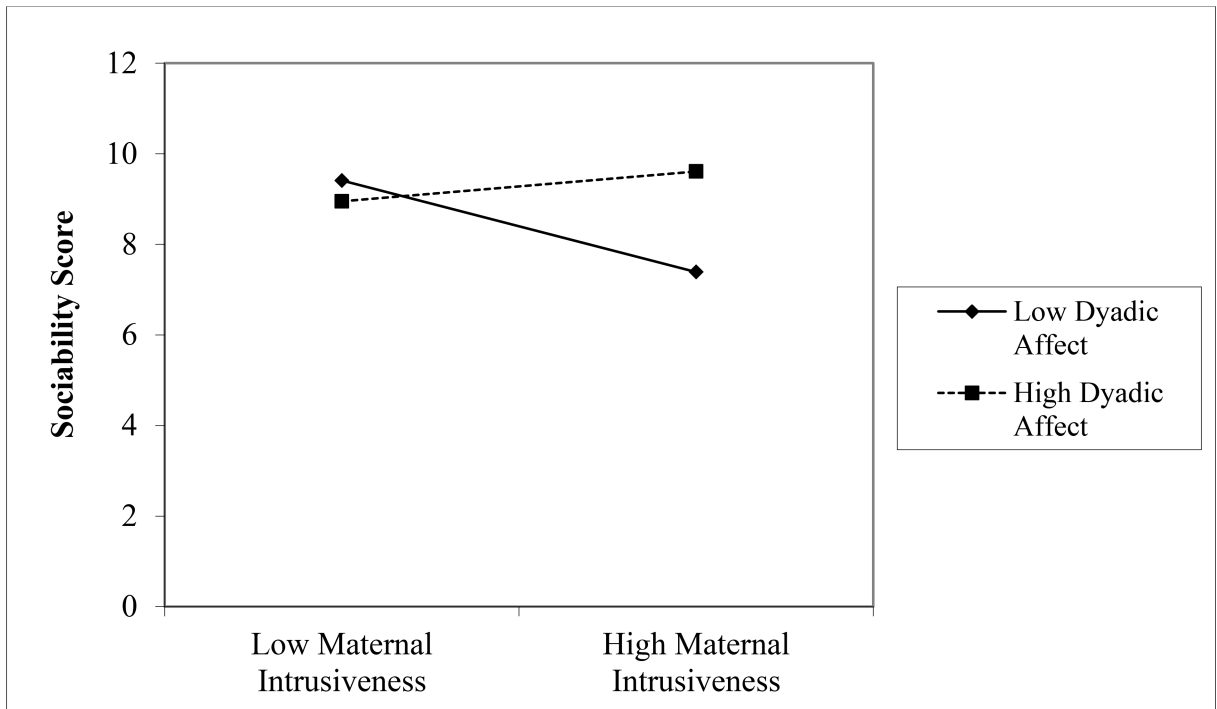


Figure 1. Interaction of mother intrusiveness and mother-child affective context predicting children’s pre-kindergarten sociability scores.

Table 1.

Correlations and key demographic characteristics

	1	2	3	4	5	6	7
1. Sociability	1						
2. Sustained attention	.00	1					
3. Mother intrusiveness (intensity)	-.27*	.08	1				
4. Father intrusiveness (intensity)	.11	-.26*	-.12	1			
5. Affective context with M	.25*	.41**	-.21	.06	1		
6. Affective context with F	.00	.13	.12	-.35**	.09	1	
7. Child is a girl	.17	.19	-.08	-.25*	-.02	.24*	1
M(SD)/%	9.14(1.40)	10.70(3.20)	2.00(0.70)	2.30(0.70)	0.20(0.70)	0.50(0.80)	56.80%

p<.10

*

p <.05

**

p<.01

p<.001

Table 2.

Multiple Regression Analyses Predicting Sociability

	Step 1		Step 2		Step 3	
	B	(SE) β	B	(SE) β	B	(SE) β
Model 1						
Father intrusiveness (intensity)	0.19	0.25	0.10	0.26	0.14	0.27
Dyadic affect		0.20	0.35	0.08	0.11	0.33
Intrusiveness X dyadic affect		0.14	0.40	0.05	0.16	0.38
Child gender				0.81	0.33	0.32*
Model 2						
Mother intrusiveness (intensity)	-0.47	0.26	-0.23 ^t	-0.36	-0.17	-0.34
Dyadic affect		0.43	0.21	0.26*	0.44	0.21
Intrusiveness X dyadic affect		0.63	0.32	0.25*	0.67	0.32
Child gender					0.45	0.36

Note. Child gender is coded 1=girl; 0=boy.

^t p<.10

* p <.05

** p<.01

*** p<.001

Model 1: Step 1. $R^2 = 0.01$, $F(1, 61) = 0.59$, $p = 0.45$; Step 2. $R^2 = 0.02$, $F(3, 59) = 0.33$, $p = 0.80$; Step 3. $R^2 = 0.11$, $F(4, 58) = 1.79$, $p = 0.14$

Model 2: Step 1. $R^2 = 0.05$, $F(1, 57) = 3.15$, $p = 0.08$; Step 2. $R^2 = 0.16$, $F(3, 55) = 3.41$, $p = 0.02$; Step 3. $R^2 = 0.18$, $F(4, 54) = 2.98$, $p = 0.03$

Table 3.

Multiple Regression Analyses Predicting Sustained Attention

	Step 1		Step 2		Step 3	
	B	(SE) β	B	(SE) β	B	(SE) β
Model 3						
Father intrusiveness (intensity)	-1.23	0.61	-0.80	0.67	-0.16	0.68
Dyadic affect			1.06	0.84	0.17	0.85
Intrusiveness X affective context			1.07	0.96	0.14	0.96
Child gender					0.54	0.84
Model 4						
Mother intrusiveness (intensity)	0.76	0.59	0.76	0.58	0.16	0.57
Dyadic affect			1.73	0.49	0.45***	0.48
Intrusiveness X Dyadic affect			0.82	0.74	0.14	0.73
Child gender					1.54	0.81

Note. Child gender is coded 1=girl, 0=boy.

t

$p < .10$

* $p < .05$

** $p < .01$

*** $p < .001$

Model 3: Step 1. $R^2 = 0.06$, $F(1, 60) = 4.00$, $p = 0.05$; Step 2. $R^2 = 0.10$, $F(3, 58) = 2.18$, $p = 0.10$; Step 3. $R^2 = 0.11$, $F(4, 57) = 1.73$, $p = 0.16$

Model 4: Step 1. $R^2 = 0.18$, $F(1, 55) = 5.85$, $p = 0.01$; Step 2. $R^2 = 0.19$, $F(3, 54) = 4.32$, $p = 0.01$; Step 3. $R^2 = 0.25$, $F(4, 53) = 4.30$, $p < 0.01$