Resident father-child involvement: Associations with young children's social development and kindergarten readiness in the ECLS-B.

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Abstract

The current investigation examined continuity from 9-months to 4-years of age in father-child interaction in instrumental child care activities, as well as enrichment and play activities, using data collected from 8,450 children with residential fathers included in the Early Childhood Longitudinal Study, Birth Cohort (ECLS-B). Additionally, social and pre-academic outcomes at age four were examined as potential correlates of father-child interaction. Because these variables may interact differently for boys and girls, associations were examined separately for each sex. Results indicate considerable stability in father involvement in both instrumental and enrichment/play activities with both boys and girls from 9-months to 2-years to 4-years, and that residential fathers may have meaningful impact on young children's competence with peers. These findings may help to better understand the role that father-child involvement plays in children's development.

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The quantity of time that residential fathers spend interacting and caring for young children has increased from previous decades (Lamb & Lewis, 2010). Father involvement has been associated with children's academic and social outcomes, and has been linked with child sex, fathers' attitudes and beliefs, cultural influences, fathers' work, and the quality of the relationship with the mother. Data from the 2000 National Survey of Parents indicates that U.S. Fathers spent an average of 2.3 hours per week in interactive engagement with their children, 4.1 hours per week in child care activities, and 26.5 hours per week in time with children present but not actively engaged (Bianchi, Robinson, & Milkie, 2006). Overall, the 2000 data suggests that fathers spent 64.7% as much time with children as did mothers. Data from the 2003-2004 American Time Use Survey based on a representative national sample indicates that father's interactive engagement time with children had increased from the 1965 level of 1.3 hours per week to 3.0 hours per week (Wang & Bianich, 2009).

Father-child interaction has been linked to positive outcomes for children (Paquette, Coyl-Shepherd, & Newland, 2012). A 2008 review of 24 longitudinal studies revealed that 21 of the studies documented positive impact of father involvement on children's cognitive development and on behavior problems for boys and psychological adjustment for girls (Sarkardi, Kristianson, Oberklaid, & Bremberg, 2008). Pleck

proposed that theory linking father–child interaction to children's outcomes be reconceptualized to include three main components: positive engagement activities, warmth and responsiveness, and control (Pleck, 2010).

In the U.S., fathers tend to spend a greater proportion of their time spent interacting with children engaging in play activities, whereas mothers are more likely to engage in care taking activities (Lamb, 2010). Not only do fathers spend a greater proportion of time than mothers engaging in play activities, the quality of play between fathers and young children differs from that between mothers and young children. Mothers are more likely to engage in pretense play with both boys and girls, whereas fathers are more likely to engage in physical play with boys (Lindsey, Mize, & Pettit, 1997). Physical play with fathers has been linked to children's competence with peers (Lindsey, Mize, & Pettit, 1997; MacDonald & Parke, 1984).

Because interaction with fathers is often more physical and emotionally arousing (Fletcher, St. George, & Freeman, 2012), interaction with fathers may provide children opportunities to practice and develop self-regulation skills (Meece & Mize, 2011). Self-regulation skills, in turn, may be associated with greater peer competence (Meece & Mize, 2009). For example, focusing exclusively on father–child rough and tumble play, Flanders and colleagues (2010) have proposed and evaluated a model in which rough-and-tumble play with fathers is associated with lower levels of aggression during the preschool years, and this association is mediated by children's emotion regulation (Flanders, Leo, Paquette, Phil, & Séguin, 2009). Results from this

group (Flanders, Simard, Paquette, Parent, Vitaro, Phil, & Séguin, 2010) indicate that the linkage between rough-and-tumble father-child play, children's emotion regulation, and children's aggression is moderated by the father's dominance in the play; for fathers who are less dominant, rough-and-tumble play was associated with lower levels of emotion regulation and higher levels of aggression. However, for fathers who were more dominant during play, there was no association between rough and tumble play and later emotional regulation and aggression.

Because the quantity and quality of interaction between fathers and young children differs from that between mothers and young children, father-child interaction may play a unique role in children's development (Meece & Mize, 2010). The current investigation examined continuity from 9-months to 4-years of age in father-child interaction in instrumental child care activities, as well as enrichment and play activities, using data collected from residential fathers in the Early Childhood Longitudinal Study, Birth Cohort (ECLS-B). Additionally, social and pre-academic outcomes at age four were examined as potential correlates of father-child interaction. Because these variables may interact differently for boys and girls, associations were examined separately for each sex.

Method

The ECLS-B is a longitudinal study of a nationally representative sample of 14,000 children. Data were collected when the children were approximately 9-months,

2-years, and 4-years. The current study uses data only from cases that included a residential father at 9-months, resulting in 8,450 children (4100 girls, 4350 boys) representing diverse backgrounds (49.1% white, non-Hispanic; 8.2% African American, non-Hispanic; 19.6% Hispanic; 12.1% Asian, non-Hispanic; 3% Native American, Alaskan Native, Native Hawaiian or other Pacific Islander; 7.9% more than one race). The vast majority (8,300 or 98.2%) of the residential fathers at 9-months was the children's birth father; the fathers ranged in age from 15 to 75 years (*mean* = 32.1). At the 2-year follow-up, data were collected from the residential fathers of 7,800 children (3800 girls; 48.8% white, non-Hispanic). At the 4-year follow-up, data were collected from residential fathers of 7,050 children (3,450 girls; 48.3% white, non-Hispanic). Of this group, 4,550 of the children (2,200 girls; 51.3% white, non-Hispanic) had sufficient data for preschool caregiver measures. Sample sizes are rounded to the nearest 50 per data use guidelines.

Measures

Father's reports were used to compute father involvement in *instrumental* activities (e.g., feeding, diapering) at 9-months (11 items, α = .86), 2-years (10 items, α = .83), and preschool (5 items, α = .83) and *enrichment / play* activities (e.g., read books, play peekaboo, play chase) at 9-months (8 items, α = .62), 2-years (12 items, α = .78) and preschool (5 items, α = .67).

Direct child assessments using the Bayley Short Form- Research Edition (BSF-R) were used to assess children's *mental ability* and *motor ability* at 9-months and 2-

years. Preschool teachers provided measures of children's *peer competence* (e.g, accepted by other children, makes friends easily; 6 items, α = .81) and pre-academic *kindergarten readiness* skills (e.g., knows colors, alphabet; 8 items, α = .84).

Results

Results indicate considerable stability in father involvement in both instrumental and enrichment/play activities with both boys and girls from 9-months to 2-years to 4-years (see Table 1). For boys, father enrichment/play at 9-months was significantly associated with both mental and motor skills at 9-months and 2-years. Boys' kindergarten readiness was associated with fathers' participation in instrumental activities at 9-months, 2-years, and 4-years. Preschool teacher ratings of boys' peer competence were significantly associated with father play/enrichment at 9-months, 2-years, and 4-years. For girls, 9-month father play/enrichment was associated with 9-month motor and mental skills, and 2-year father play/enrichment was associated with 2-year motor and mental skills. Table 2 presents associations between father-child interaction and child outcomes. For boys, father enrichment/play at 9-months was significantly associated with both mental and motor skills at 9-months and 2-years. Boys' kindergarten readiness was associated with fathers' participation in instrumental activities at 9-months, 2-years, and 4-years. Preschool teacher ratings of boys' peer competence were significantly associated with father play/enrichment at 9-months, 2-years, and 4-years. For girls, 9-month father

play/enrichment was associated with 9-month motor and mental skills, and 2-year father play/enrichment was associated with 2-year motor and mental skills.

Follow-up regression analysis were conducted to examine the input of cumulative vs. concurrent levels of father-child play in predicting boys' peer competence (see Table 3). Results suggest that concurrent levels of play are more important predictors of boys' peer competence than cumulative.

Discussion

Results from this study suggest that residential fathers may have meaningful impact on young children's competence with peers. This study is limited by reliance on an existing data set, and so only measures that were originally included in the ECLS-B investigation could be utilized. Thus, as with all studies involving secondary analysis of data, the validity of the measures is jeopardized. However, this study benefits from the large, representative sample made available by the ECLS-B, which benefits the generalizability of findings. Further research is necessary to document linkages between residential father involvement and children's peer-based behavior, particularly the mechanisms that may account for such linkages.

Table 1:

Continuity in residential father-reported involvement with child in play / enrichment activities and instrumental caregiving activities from 9-months to 4-years for boys and girls.

	9-month Play	9-month Instrumental	2-year Play	2-year Instrumental	4-year Play	4-year Instrumental
BOYS						
9-month Play	1.0					
9-month Instrumental	.50**	1.0				
2-year Play	.51**	.33**	1.0			
2-year Instrumental	.33**	.55**	.56**	1.0		
4-year Play	.38**	.28**	.47**	.30**	1.0	
4-year Instrumental	.27**	.43**	.31**	.44**	.52**	1.0

GIRLS						
9-month Play	1.0					
9-month Instrumental	.47**	1.0				
2-year Play	.50**	.38**	1.0			
2-year Instrumental	.31**	.58**	.59**	1.0		
4-year Play	.36**	.25**	.31**	.47**	1.0	
4-year Instrumental	.22**	.38**	.47**	.33**	.52**	1.0

Note: ** = $\underline{p} < .01$.

Table 2: Associations between residential father-reported involvement with child and measures of children's outcomes.

	9-month Play[1]	9-month Instrument[1]	2-year Play[2]	2-year Instrument[2]	4-year Play[3]	4-year Instrument[3]
BOYS						
9-month Motor	.05**	.04*				
9-month Mental	.05**	.03				
2-year Motor	.04*	.00	.06**	.04*		
2-year Mental	.04*	.01	.05**	.05*		
Peer Competence	.09**	.05*	.09**	.04	.08**	.03
Kindergarten Readiness	-.01	.07**	.04	.07**	.02	.06*
GIRLS						
9-month Motor	.07**	-.01				
9-month Mental	.08**	.01				
2-year Motor	.03	-.03	.05*	.01		

2-year Mental	.03	-.04*	.04*	.01		
Peer Competence	.04	.02	.04	.01	.04	.01
Kindergarten Readiness	-.01	-.02	.03	.01	-.01	-.03

Notes: [1] includes all cases in which a residential father reported at 9-months; [2] includes cases in which the same residential father reported at 9-months and 2-years; [3] includes cases in which the same residential father reported at 9-months, 2-years, and 4-years; * = p< .05, ** = p < .01.

Table 3

Regression predicting boy's four-year-old peer competence from father-child play at 9-months, 2-years, and 4-years.

Variables Entered	R2	β	p
9-month play		.04	.18
2-year play		.03	.39
4-year play	.02*	.09	.01

Notes: * = p < .05

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