

## Peer play interactions and readiness to learn: A protective influence for African American preschool children from low-income households.

By: Rebecca J. Bulotsky-Shearer, Patricia H. Manz, Julia L. Mendez, Christine M. McWayne, Yumiko Sekino, John W. Fantuzzo

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### Abstract:

Guided by a strengths-based resiliency framework, this article reviews a body of research on the positive influence of interactive peer play for African American preschool children from low-income households. This literature provides evidence for positive associations among interactive peer play experiences at home and in school, and children's early childhood social and academic skills. It presents the development and validation of three distinct dimensions of interactive peer play with African American children attending Head Start. It reviews research examining associations between these 3 dimensions and children's academic and social outcomes, as well as evidence-based interventions designed to foster interactive peer play for this population. It highlights challenges and directions for future research, with emphasis on the likely research needed to extend our understanding of interactive peer play experiences for Latino and Asian American children and the complex mechanisms through which positive peer interactions during early childhood may support children's early learning and development.

**Keywords:** interactive peer play | school readiness | resilience | child development | child psychology | psychology

### Article:

Although socioeconomic disadvantage affects U.S. children from all ethnic and racial backgrounds, African American children continue to be disproportionately vulnerable to poverty. Recent statistics indicate that 66% of African American children below the age of 6 live in low-income households (Seith & Isakson, 2011) and are disproportionately exposed to multiple ecological risks to their health and educational well-being, in addition to discrimination and limited access to resources to support their early learning (Currie, 2005; Magnuson & Waldfogel,

2005; McLoyd, 1998). National efforts to narrow the achievement gap between African American and White students, in particular, are sobered by the persistence of poor academic outcomes for African American students, particularly within urban school districts serving large concentrations of children living in poverty (Vanneman, Hamilton, Baldwin Anderson, & Rahman, 2009).

To mitigate the negative influence of early risks on educational outcomes, developmental scholars have turned to a resilience-oriented framework to identify, promote, and strengthen naturally occurring protective mechanisms within early learning contexts (Lamb-Parker, LeBuffe, Powell, & Halpern, 2008; Luthar, Cicchetti, & Becker, 2000; Tucker & Herman, 2002). One such mechanism identified within early childhood is children's active engagement in high-quality social interactions with peers (Hamre & Pianta, 2007; Mashburn & Pianta, 2006; National Association for the Education of Young Children, 2009). Both developmentally appropriate practices in early childhood education and developmental theory support the notion that positive engagement with peers is a primary way preschool children learn (Zigler, Singer, & Bishop-Josef, 2004).

Interactive peer play experiences are universal: Preschool children from all backgrounds naturally play with one another (Zigler et al., 2004). However, developmental ecological theory acknowledges the central role of culture in children's socialization experiences, particularly as children are socialized within families and schools (Bronfenbrenner & Morris, 1998; Ogbu, 1999; Rogoff, 2003). This model views cultural influences as variable and dynamic, rather than monolithic or static (Korbin, 2002). In addition, researchers point out that although there is variability among cultural groups, there also is substantial variability within groups of culturally diverse children. The field must consider this in order to understand fully the nature and function of children's interactive peer play or "normative development in context" (Harkness & Super, 1994; Quintana et al., 2006). For example, research with African American and Latino families suggests that factors such as economic constraints, cultural norms, level of acculturation, and religious practices strongly influence parental beliefs about play and how parents encourage play for their children (Fogle & Mendez, 2006; Fuller & Garcia Coll, 2010; Garcia Coll et al., 1996; Slaughter-Defoe, 1995). In turn, parental beliefs influence the opportunities for interactive peer play experiences they provide children during early childhood that can serve as potential protective mechanisms for learning.

Early childhood educational programs (such as Head Start) that serve culturally diverse groups of low-income children have a critical opportunity to capitalize on and foster naturally occurring peer play interactions as protective mechanisms. Unfortunately, our knowledge base is too limited to inform culturally relevant evidence-based intervention practices. A recent literature

review found that of the 75 published studies examining associations between preschool interactive peer play and school outcomes (between 1960 and 2006), only 13 (17%) included samples of low-income, ethnic minority children (Sekino, 2007). Of these 13 studies, 9 included largely African American children and only 2 exclusively focused on African American children. Therefore, much of what is known about the developmental salience of interactive peer play comes from studies of White and middle-income children. Scholars and interventionists (Fuller & Garcia Coll, 2010; Garcia Coll et al., 1996; Quintana et al., 2006) have called for a new direction for child development research: the intentional study of specific cultural groups, not for purposes of comparison, but to examine normative processes within groups, to inform culturally valid and responsive strengths-based assessment and intervention practices.

In response to this call from the field, the purpose of this review is to synthesize a body of research documenting the positive influence of interactive peer play experiences for low-income African American preschool children. First, we review empirical research on the development and validation of three dimensions of interactive peer play experiences within the proximal contexts that exert the most direct influence on the developing child: the home and the school. Second, we review several within-group studies examining associations between these dimensions of interactive peer play and social and academic outcomes. Third, we highlight evidence-based interventions that emerged from the study of interactive peer play for a low-income, African American population. We conclude with implications for future research, policy, and practice concerning the positive influence of peer play interactions not only for African American children but also for other groups of ethnic minority children (such as Latino and Asian American children) during early childhood.

### Interactive Peer Play at Home and School: Associations With School Readiness for Low-Income African American Children

A primary step in understanding within-group variability is to ensure the validity of constructs for a given group. During the 1990s, researchers, with the help of Head Start teachers and parents, conducted careful observations of African American children's interactive play behaviors at home and in Head Start classrooms. These observations used behaviors that reliably distinguished successful from unsuccessful peer play interactions to create a rating system for use by parents and teachers. Subsequent studies validated a 32-item Likert scale for use in the home and the classroom (Penn Interactive Peer Play Scale [PIPPS]; Fantuzzo, Coolahan, Mendez, McDermott, & Sutton-Smith, 1998; Fantuzzo, Mendez, & Tighe, 1998). Incorporating teacher and parent input into developing the measure allowed for sufficient sensitivity to features

of children's play within the home and school that adults closest to the child could observe and report on (Fantuzzo et al., 1998).

Three dimensions differentiated children with positive interactions from those who experienced difficulty during play. Play interaction indicated children's strengths and reflected prosocial, creative, and cooperative behaviors that facilitate successful peer play. Play disruption captured aggressive or oppositional behaviors, and play disconnection indicated withdrawn and avoidant behaviors that interfered with initiation of engagement in positive peer interactions. A series of studies have identified associations among these three constructs and social and academic outcomes, specifically for African American low-income children.

### Interactive Peer Play at Home

Social interactions within the home are integral to early learning and are precursors to play behavior in school (Bronfenbrenner & Morris, 1998). Fantuzzo and McWayne (2002) examined parental reports of children's interactive peer play competencies at home and found that they were associated with a range of teacher-reported and independently observed behaviors in preschool. Teachers noted that children who showed frequent interactive play at home, in conjunction with less disruptive or disconnected play, were motivated, autonomous, and attentive, and they displayed a positive attitude toward learning. In contrast, children who engaged in negative play at home tended to have difficulty regulating their emotions in preschool. In a related study, Mendez and Fogle (2002) showed that parental reports of interactive peer play at home were positively associated with higher receptive vocabulary scores at the end of the year, whereas ratings of disconnected and disruptive play were moderately and negatively correlated with direct assessments of both expressive and receptive vocabulary.

### Interactive Peer Play at School

Other studies have examined the role of interactive peer play in early schooling and children's social adjustment, approaches to learning, and engagement in learning. This research consistently identifies children who play effectively and cooperatively with peers as resilient, highly engaged in classroom learning activities, and leaders among their peers (Coolahan, Fantuzzo, Mendez, & McDermott, 2000; Fantuzzo, Manz, Atkins, & Meyers, 2005; Mendez, Fantuzzo, & Cicchetti, 2002). Positive peer interactions are associated with the development of many social and regulatory skills that promote learning, such as initiative, competence motivation, attention and persistence, ability to approach new situations, and emotion regulation. They also appear to reduce behaviors that interfere with learning, like aggressive, inattentive, shy, and withdrawn

problem behavior (Coolahan et al., 2000; Fantuzzo, Sekino, & Cohen, 2004; Zigler & Bishop-Josef, 2006).

In addition, several studies provide evidence for positive relations among classroom interactive peer play experiences and academic outcomes for African American Head Start children. For example, Fantuzzo et al. (2004) found that classroom interactive peer play skills were associated with higher direct assessments of receptive vocabulary, teacher-reported literacy and mathematics skills, and observed language interactions. Research conducted with independent samples across several urban sites has shown, however, that children with difficulties engaging in classroom peer play demonstrate poorer language skills (Cohen & Mendez, 2009; Fantuzzo et al., 2004; Mendez & Fogle, 2002). For example, Mendez et al. (2002) identified profiles of competence within a sample of 141 Head Start children. Those children with adequate language skills exhibited the highest levels of peer play interaction skills, whereas two thirds of the children who demonstrated disruption or disconnection with peers exhibited dysregulation, inattentiveness, and/or reluctance to communicate in the classroom (Mendez et al., 2002).

Although this research clearly identifies positive associations among children's interactive peer play, academic, and social skills, it is important to acknowledge the potential transactional and bidirectional nature of these associations. Children's initiation into reciprocal and positive peer play interactions might initially be supported by self-regulatory, language, or cognitive skills, which then are fostered through these exchanges. Facilitating children's peer play in the classroom likely depends on individual differences in language and regulatory abilities; however, successful interactive peer play might help refine these skills during preschool.

Consistent with a transactional approach, there is also evidence that positive peer experiences in preschool continue to be associated with social and academic competence as African American children from low-income families enter formal schooling. In a sample of low-income African American children, Hampton and Fantuzzo (2003) found that positive and cooperative interactions with peers in kindergarten were moderately and positively correlated with children's first-grade report card grades in across all academic disciplines. Similarly, Sekino (2007) identified a resilient group of children who demonstrated interactive peer play strengths within the Head Start classroom, engaging in cooperative problem solving, asking questions, and sharing ideas with peers. In third grade, these children had fewer adjustment problems and performed better on standardized mathematics tests. In contrast, children with high levels of disconnection from peers demonstrated the lowest levels of reading, language, and mathematics achievement in third grade (Sekino, 2007). These longitudinal studies provide evidence that as

children enter formal schooling, positive associations remain between early interactive peer play experiences and school outcomes.

### Interactive Peer Play as a Mediator of Early Learning

Developmental science increasingly recognizes the importance of an integrative view of school readiness (McWayne, Fantuzzo, & McDermott, 2004; Snow, 2007). This integrative model promotes a holistic view of the child, considering multiple school readiness domains including social-emotional, learning behaviors, cognitive, and physical development (National Education Goals Panel, 2000) to be dynamically interrelated and mutually influencing, rather than operating in isolation. Child-level competencies, such as interactive peer play skills, can be conceptualized as domain-general skills that may influence the development of specific skills in other readiness domains (Wentzel, 1993). Positive and prosocial peer play interactions are naturally occurring opportunities within the classroom through which peers can support, model, and extend early language, literacy, or mathematics skills (Mendez & Fogle, 2002; Nicolopoulou, McDowell, & Brockmeyer, 2006). Such experiences therefore are important mechanisms and potential targets of early intervention within preschool classrooms.

Two recent studies conducted with predominantly African American Head Start samples provide evidence that interactive peer play mediates engagement in learning within the classroom. In a short-term predictive study, Bulotsky-Shearer, Bell, Romero, and Carter (in press) examined whether interactive peer play mediated the relations between early classroom problem behavior and learning outcomes among 507 predominantly African American low-income children. Findings suggested that children's ability to engage in positive peer interactions early in the Head Start year fully mediated the effects of both externalizing and internalizing classroom problem behavior on literacy and mathematics outcomes. Similarly, McWayne and Cheung (2009) found that for a sample of 168 urban, primarily African American students, preschool social and learning competence (including interactive peer play skills) mediated the relation between preschool problem behavior and children's first-grade social and academic adjustment. Both of these studies tested an alternate mediation model (that problem behavior might mediate the relation between interactive peer play and learning outcomes), and neither supported this alternate model. These studies provide additional evidence that preschool interactive peer play competencies may be important protective mechanisms that continue to influence learning experiences in elementary school.

## Evidence-Based Interventions to Support Positive Peer Relationships

Within a resilience-based intervention framework, Fantuzzo and colleagues have sought to develop interventions that foster children's interactive peer play as a naturally occurring protective mechanism. A primary goal of these Head Start-based interventions was to develop collaborative partnerships with parents and teachers from within the child's community, who actively participated in developing and implementing support for positive peer interactions within the classroom (Fantuzzo, Bulotsky-Shearer, & McWayne, 2006; Lamb-Parker et al., 2008). First, the resilient peer treatment (RPT; Fantuzzo et al., 1996, 2005) was designed to promote positive peer play interactions for socially isolated children in preschool. Embedded in the natural structure of Head Start, this intervention involved pairing socially competent children (play buddies) with those who were socially isolated (play partners). A key component of this intervention was the nurturing of natural helpers (child play buddies within the classroom) as well as community helpers (adult classroom volunteers from the local Head Start community of parents) to provide a safe and supportive context to encourage children's interactive play. Randomized field tests of RPT showed improved interactive play and decreased solitary play among play partners when they were paired with the play buddy during treatment sessions (Fantuzzo et al., 1996, 2005). Further, generalization of play partners' improved interactive peer play was evident in direct observations as well as teachers' ratings of social competence.

Although this intervention was effective and used natural resources available in the Head Start environment, it was still not fully integrated into the teachers' daily, weekly, or yearly routines. The demands placed on programs such as Head Start and the limited resources available called for researchers to develop more realistic evidence-based programming (McCall, 2009). In response to this need, Fantuzzo and colleagues developed and tested a comprehensive program that integrated peer play and group learning interventions with routine mathematics, language, and literacy activities: the Evidence-based Program for Integrated Curricula (EPIC; Fantuzzo, Gadsden, & McDermott, 2011). Randomized control trials have demonstrated that EPIC enhanced children's academic skills while fostering protective social skills and approaches to learning. Furthermore, EPIC included a dynamic, weekly Home Connection that allowed family members to use their influence and home-based involvement to maximize the benefits of the children's emerging social and cognitive competencies.

Although there are no home-based interventions specifically designed for interactive peer play, there are models of intervention that focus on building parent-child interactions as a foundation for developing social competence among low-income ethnic minority children. These include home-visiting programs fundamental to the Early Head Start program (Chazan-Cohen et al.,

2009; Roggman, Boyce, & Cook, 2009), as well as interventions that intentionally foster home-school connections to support social competence, such as the Getting Ready intervention (Sheridan, Marvin, Knoche, & Edwards, 2008) and the Companion Curriculum, which uses a series of parent involvement workshops for low-income, African American families (Mendez, 2010).

## Future Directions

This literature review highlights the role of positive peer interactions in supporting low-income African American children's readiness to learn. This research is grounded in a strengths-based, developmental ecological framework that values within-group variability (Luthar et al., 2000). The studies we reviewed complement current empirical and theoretical work substantiating the belief that "play = learning" in early childhood classrooms (Hirsh-Pasek, Golinkoff, Berk, & Singer, 2009). However, much more research is necessary to expand our understanding of the mechanisms through which positive and productive peer interactions can support ethnic minority children's learning in preschool and across critical transition points such as kindergarten entry. Future research efforts should extend beyond African American families to examine the unique strengths and resilience of fast-growing, pan-ethnic groups of Latino and Asian American children. Theory-driven studies must examine how interactive peer play influences the development of preschool children from diverse cultural, ethnic, and linguistic backgrounds (Quintana et al., 2006; Wang & Sue, 2005).

Examples of recent within-group studies of Latino children have advanced our understanding of unique variation in children's social behaviors that comparative research might overlook. Using the nationally representative ECLS-K (Early Childhood Longitudinal Study's Kindergarten Cohort) sample, Galindo and Fuller (2010) found that within Latino subgroups in kindergarten, there were differences across five measures of children's social competency: approaches to learning, self-control, interpersonal skills, and internalizing and externalizing problem behaviors. Cuban and South American children displayed higher social competencies across all measures, whereas Puerto Rican children demonstrated significantly lower scores on each of the measures. Galindo and Fuller also found generational and class differences among Latino children. First-generation immigrant Latino children displayed lower scores for approaches to learning and interpersonal skills than did later-generation children. Other research, however, identifies an "immigrant paradox" favoring first-generation children (Fuller & Garcia Coll, 2010; Suárez-Orozco & Carhill, 2008; Suárez-Orozco et al., 2010). These findings suggest the need to more closely examine how factors such as national origin, cultural beliefs, and parenting practices may influence Latino subgroups differently.



For groups of Asian children, studies by Chen and colleagues have advanced our understanding of the cultural meaning of these behavioral constructs. Specifically, this research provides evidence for cultural variations in the development of withdrawn and shy behavior among Chinese children (Chen, Chen, Li, & Wang, 2009; Chen & Tse, 2010; Chen et al., 1998). For example, Chen et al. (2009) found that although inhibition was associated with maternal rejection in a sample of White Canadian 2-year-olds, the same behavior observed among Chinese children was associated with positive maternal attitudes like warmth, support, and acceptance. This finding is consistent with socialization goals in Chinese society to foster behaviors that are conducive to group functioning, such as self-control, obedience, and compliance (Chen et al., 1998). In addition, in a longitudinal study, inhibition served as a protective factor. Compared to uninhibited Chinese children, children with higher inhibition at age 2 demonstrated greater social and academic adjustment and fewer behavioral and learning problems at age 7 (Chen et al., 2009). Chen and Tse (2010) found generational differences within a Canadian sample of elementary school children, such that teachers and peers viewed more recently immigrated Chinese children as less sociable and cooperative, but with fewer behavioral problems. However, these sociability issues diminished as immigrant Chinese children improved communication skills, gained English proficiency, and actively participated in social activities.

### Challenges for the Field

Early childhood professionals and scholars recognize the importance of continuity in high-quality educational experiences from the prekindergarten years through third grade (Bogard & Takanishi, 2005; Reynolds, Magnuson, & Ou, 2006). Our literature review points to the value of recognizing and intentionally supporting positive peer interactions for groups of children who may be at risk for later school difficulties. The message is clear: Positive peer experiences are important during the preschool period and beyond. Unfortunately, current ideological approaches to educating our nation's most at-risk children promote rote academic learning rather than "playful learning" through peer interactions (Fisher, Hirsh-Pasek, Golinkoff, Singer, & Berk, 2011; Nicolopoulou, 2010). This inequity in educational practice undoubtedly contributes to the inequity apparent in disparate outcomes. Developmental science provides a wealth of knowledge about what is best for children during early childhood; however, we struggle to actualize best practices that support high-quality experiences for all children. Despite national policy mandates and incentives aiming to achieve equity in education, significant achievement gaps are present as early as preschool (Aber, Jones, & Raver, 2007; Tucker & Herman, 2002). To address these gaps, within-group studies hold promise to advance our understanding of protective mechanisms such as interactive peer play that can support positive learning experiences within community

settings for ethnic minority children (Griffin, 2010; McCall, 2009; U.S. Department of Education, 2010).

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