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Family and social risk, and parental investments during the early childhood years as predictors of low-income children's school readiness outcomes

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ABSTRACT

Using data from the National Early Head Start (EHS) Research and Evaluation Project ($N = 1851$), the current study examined relations among cumulative family and social risk, assessed during infancy and the preschool years, and children's prekindergarten achievement, self-regulatory skills, and problematic social behavior, testing if these associations were mediated through two sets of family processes–responsive parenting practices and the provision of language stimulation and literacy practices. Structural equation modeling results highlight the significance of the timing of children's experience of risk in predicting school readiness competencies. Risk exposure during infancy was observed to be most detrimental for children's school readiness skills and was partially mediated by risk exposure during the preschool years and family processes, assessed during toddlerhood and the preschool years. Moderation analyses revealed no difference in the strength of relationships among the study variables by EHS assignment or by race/ethnicity.

According to recent estimates, at kindergarten entry, children who exhibit multiple family and social risk factors (e.g., low maternal education, welfare receipt, single parent household) fare less well than children experiencing fewer risk factors in assessments of early reading and math skills and general knowledge (Zill & West, 2001). Kindergarten teachers also rate children from families with higher levels of risk as being less socially adept and more aggressive as compared to children from families experiencing lower levels of risk (Ryan, Fauth, & Brooks-Gunn, 2006; Zill & West, 2001). Furthermore, children who enter school without the requisite academic or socioemotional skills exhibit greater academic and behavioral difficulties during kindergarten and beyond as compared to their more "school ready" peers (Konold & Pianta, 2005; Raver, 2002; West, Denton, & Germino-Hausken, 2000).

For the current study, we examined the extent to which children's early exposure to family and social risk factors affects their school readiness competencies using data from a sample of predominantly low-income, ethnically-diverse families. As such, our focus was not on comparing differences in children's level of school readiness across poor and non-poor families. This link is well established in the literature—the higher a family's level of socioeconomic resources, the more likely it is that a child will be "ready" for school (Barbarin et al., 2006; Duncan & Magnuson, 2005; Magnuson, Meyers, Ruhm, & Waldfogel,

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2004). Instead, this investigation attends to *variations* in school readiness skills exhibited by a sample of low-income children and the predictors of this variability. Although low-income children face significantly higher odds of experiencing school-related difficulties, not all fare poorly in school. Indeed, many children from low-income families and under-resourced schools and communities remain engaged in and complete high school despite the adversity they face at home and at school (Garmezy, 1991; National Center for Education Statistics, 2004). Clearly then, it is important – both theoretically as well as for policy and practice – to identify not only the factors that place children at risk for poor cognitive, academic, and social competence but also protective factors that enable children from at-risk contexts to enter school ready to learn (Meisels, 1999; Pianta & Rimm-Kaufman, 2006).

We assess differences in children's school-related outcomes across three developmental domains: cognitive/academic achievement, attention/behavioral regulation, and social behavior. Despite an emphasis in the National Education Goals Panel's (1995) report on both academic and socioemotional preparedness, a recent evaluation of the content of state-level early learning standards determined that standards continue to emphasize children's learning with respect to language and cognitive domains, with less emphasis on other domains of development, including physical health and fitness and socioemotional well-being (Scott-Little, Kagan, & Frelow, 2006). Researchers have argued for greater assessment and evaluation of children's socioemotional preparedness to start school (Raver, 2002). The call for more investigative work on the extent to which children's socioemotional capacities, including regulatory skills, enhance or detract children's engagement in schooling is concordant with kindergarten teachers' reports of behavioral difficulties (e.g., the inability to sit still, difficulties working in a group, trouble following directions) as some of the most disruptive factors impeding early school adjustment (Rouse, Brooks-Gunn, & McLanahan, 2005). Such reports are corroborated by findings from several recent studies assessing children's school readiness capabilities, predictors, and consequences (e.g., Hair, Halle, Terry-Humen, Lavelle, & Calkins, 2006; Konold & Pianta, 2005; Lengua, Honorado, & Bush, 2007).

1. Background

Conceptually, the current investigation is informed theoretically by cumulative risk (Sameroff, Seifer, Baldwin, & Baldwin, 1993; Sameroff, Seifer, Zax, & Barocas, 1987) and ecological (Bronfenbrenner, 1979; Bronfenbrenner & Morris, 1998) perspectives. These complementary perspectives emphasize the interrelated nature of contextual factors and interpersonal relationships within which development occurs. Cumulative risk models incorporate testing of principles from ecological frameworks, which specify joint consideration of the demographic, family, and social influences on children's developmental outcomes (Lengua et al., 2007). Ecological models, in turn, permit tests of the proximal processes (e.g., parent–child relations, parenting practices) through which more distal indicators (e.g., family and social risk factors) are proposed to affect development (Bronfenbrenner, 1979).

1.1. Cumulative risk index

By current estimates, more than 13 million children in the U.S. live in households with incomes at or below the federal poverty threshold ($21,834 for a family of four in 2007; DeNavas-Walt, Proctor, & Smith, 2008), and many more live in families whose income level is no more than twice the poverty threshold (Gershoff, Aber, & Raver, 2005). Children in poverty often face multiple risks, including inadequate and crowded living conditions; few material resources; depleted and often dangerous neighborhoods; inadequate schools; limited access to health care, childcare, and other community services and resources; lack of stimulation at home; parental psychological distress; and harsh and restrictive parenting (McLoyd, 1998).

Children facing multiple sociodemographic and family risk factors have, in turn, been shown to fare less well developmentally (Burchinal, Roberts, Zeisel, Hennon, & Hooper, 2006; Gutman, Sameroff, & Cole, 2003; Rauh, Parker, Garfinkel, Perry, & Andrews, 2003; Rouse & Fantuzzo, 2009). Researchers have conceptualized risk in a number of ways and examined its relation to a range of developmental outcomes. One of the most widely identified perspectives is the cumulative risk index, as proposed by Sameroff et al. (1987) and Sameroff et al. (1993), which draws attention to both the quantity and quality of the family and social risk factors experienced by children across childhood. In their initial studies, Sameroff and colleagues highlighted the importance of a set of family (e.g., parents' mental health, parenting practices and child rearing attitudes) and sociodemographic (e.g., low maternal education and occupational skills, single parent household status, large family size) risk factors in accounting for children's cognitive development during early and middle childhood. Importantly, they noted that above and beyond the influence of any of these individual risk factors, cumulative risk (i.e., the sum across the individual factors) was a more robust predictor of development.

A key advantage of the cumulative risk approach is its simplicity—calculation of an index that captures meaningful differences in the range of children's risk-related experiences, based on a large number of individual factors, in a single score (Burchinal, Roberts, Hooper, & Zeisel, 2000). Furthermore, given the co-occurrence of many risk factors, cumulative risk approaches negate the problem of multicollinearity inherent in multiple regression approaches to assessing risk-child outcome associations. And finally, decisions regarding appropriate criteria for defining risk within a cumulative risk framework are typically informed by empirical evidence more so than in other risk approaches (see Burchinal et al., 2000 for discussion of various approaches).

Support for the cumulative risk perspective has been steadily building, with recent studies incorporating additional developmental domains (i.e., socioemotional), individual and community level risk factors, and assessing the influence of