

Academic Risk and Resilience in the Context of Homelessness

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ABSTRACT—Family homelessness in the United States has increased over the past two decades, raising concerns about associated risks for child development. In this article, we describe a translational research program focused on academic risk and resilience in homeless and highly mobile children. We find that although these children share many risk factors with other disadvantaged children, they are higher on an underlying continuum of risk. Additionally, marked variability has been observed among chil-

dren who experience homelessness, both in risk level and achievement, with many children manifesting resilience. We discuss implications for research and efforts to address disparities in achievement.

KEYWORDS—homeless; mobility; cumulative risk; resilience; achievement gap

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The authors are deeply grateful to families and community collaborators who contributed to this research, which was funded by the Center for Urban and Regional Affairs, the Eunice Kennedy Shriver National Institute of Child Health and Human Development, the National Institute of Mental Health, the National Science Foundation, the Sauer Children's Renew Foundation, and the University of Minnesota. Preparation of this article was supported by the Institute of Education Sciences (IES), U.S. Department of Education (R305A110528; Masten, Zelazo, & Carlson, PIs), the Center on Personalized Prevention Research (NIMH P20 MH085987, G. August PI), and a William T. Grant Scholars Award to Obradović. The opinions expressed are those of the authors and do not represent views of the IES, the U.S. Department of Education, or other funders.

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Child Development Perspectives © 2014 The Society for Research in Child Development

DOI: 10.1111/cdep.12088

During the 1980s, homelessness surged among families in the United States in conjunction with changing patterns of poverty, housing, unemployment, public assistance, and related policies (Masten, 1992; National Research Council, 1988). Communities scrambled to respond to the crisis of low-income parents and children lacking stable homes, while state and federal authorities enacted laws and policies intended to address the housing, education, and health needs of these families (Samuels, Shinn, & Buckner, 2010).

At the time, it was hard to imagine the crisis would continue. Growth in family homelessness eventually slowed, but then rose again with the Great Recession. By the 2010–2011 school year, the number of students identified as homeless or highly mobile under U.S. Department of Education criteria exceeded 1 million nationwide for the first time, a 13% increase over the previous school year (National Center for Homeless Education, 2012).

The rise in homelessness among American families with children is alarming. Adverse experiences in early childhood can threaten brain development, learning, and lifelong health (Shonkoff et al., 2012). Homelessness is associated with many risk factors for health and behavior problems in children (Miller, 2011; Samuels et al., 2010; Tobin & Murphy, 2013). Moreover, both family homelessness and residential mobility disrupt schooling for children, undermining academic achievement (National Research Council, 2010).

In this article, we highlight results from more than 20 years of our research on academic risk and resilience among children



experiencing family homelessness. Children in families are a distinct subgroup of homeless individuals, differing in many ways from unaccompanied youth as well as single adults (Toro, 2007). Our research has focused primarily on families in emergency shelters and students identified by school districts as “homeless or highly mobile” (HHM) under guidelines of the U.S. Education Department (discussed later).

First, we review origins and early results of our work and then findings on achievement patterns among HHM students compared to their peers. Subsequently, we describe translational research on malleable processes of risk and resilience, concluding with implications for addressing achievement disparities.

BEGINNINGS AND EARLY FINDINGS

Our research began, as resilience research often does, with concerns in a local community. In 1988, the lead author was asked by the Amherst H. Wilder Foundation to learn about homeless families locally and nationally. The crisis of homelessness was making news, with families appearing on magazine covers and publication of Kozol’s (1988) powerful book, *Rachel and Her Children*, depicting the plight of homeless families in New York City. After learning how little was known about children in these families, the author began research on homelessness with students and community collaborators. Early aims were ascertaining the nature of risks faced by children and identifying protective factors to guide educators and community agencies. This descriptive work was typical of first-generation research on risk and resilience more broadly (Masten, 2011, 2014).

Early results documented adverse life experiences and socio-demographic risks among homeless families. Although children from housed families of comparable background shared similar lifetime exposure to risk, children currently residing in shelters had more recent stressful experiences (Masten, Miliotis, Graham-Bermann, Ramirez, & Neemann, 1993). Children experiencing homelessness were higher on an underlying *continuum of risk*, an observation that would be corroborated by later studies. Children in shelters also had more disrupted schooling and friendships, and more negative expectations for the future than children who were not homeless. Moreover, we observed risk gradients for children in shelters, indicating variability in risk and *cumulative risk (dose) effects*, where children who experienced more risk factors had more behavior problems (Masten & Sesma, 1999). These findings fit observations that risk factors tend to co-occur and accumulate in the lives of disadvantaged children and families (Evans & Kim, 2012; Obradović, Shaffer, & Masten, 2012).

Educational risk was evident in high rates of missing school and grade retention, low scores on standardized tests of achievement, and high rates of attention problems interfering with cognitive performance (Masten & Sesma, 1999; Masten et al., 1993; Masten et al., 1997). Achievement and attendance issues were related to other problems, particularly in health and behav-

ior. However, children with close parent–child relationships and high parent involvement in education succeeded in school, academically and behaviorally (Miliotis, Sesma, & Masten, 1999).

This initial research was instrumental for developing appropriate research protocols and community partnerships. In choosing and administering measures, it was crucial to consider the level of family stress, as well as educational and cultural diversity. Many parents were interested in the research and the opportunity to discuss their children.

A BIG-PICTURE PERSPECTIVE ON ACHIEVEMENT GAPS

Services for homeless children and families continued to improve as a new century arrived, largely as a result of efforts by dedicated staff members in schools and shelters supported by government funding, and of laws ensuring rights of access to education, namely, the McKinney-Vento Homeless Assistance Act (reauthorized as Title X of the No Child Left Behind Act; see Samuels et al., 2010). The Minneapolis Public School (MPS) district, like many others, began systematically identifying HHM students and providing more services to them. Their Research, Evaluation, and Assessment Department conducted annual districtwide testing with high-quality achievement tests designed to evaluate individual student progress over time. With time, our MPS–University of Minnesota team analyzed de-identified longitudinal data on the entire student body of this diverse, urban district, painting an overall picture of achievement disparities as well as individual variation in achievement growth among HHM students.

Initially, most students in MPS were identified as HHM when they entered shelters. With shelters increasingly full to capacity, growing numbers of students now are identified when school staff learn of other family situations meeting McKinney-Vento criteria. HHM status includes children living (a) in a shelter, motel, vehicle, or campground; (b) on the street; (c) in an abandoned building, trailer, or other inadequate accommodations; (d) doubled up with friends or relatives due to lost housing, economic hardship, or similar reasons; or (e) awaiting foster-care placement.

In 2009, we published the first of our growth studies drawing on MPS data (Obradović et al., 2009). We analyzed three waves of data (tests from spring 2004 and 2005, and fall 2005) for all students initially in Grades 2–5 on a nationally norm-referenced achievement test. The district shifted their testing time from spring to fall in 2005, allowing us to observe a classic summer effect in the data, with students (especially low-income students) losing ground from spring to fall, indicating decelerated learning.

Our work revealed two major findings that we later replicated. First, we observed a risk gradient that persisted or steepened over time, with HHM students achieving at significantly and persistently lower levels, on average, in math and reading than

other groups of students, including low-income children eligible for subsidized meals but not identified as HHM. Second, individual achievement growth curves in math and reading revealed tremendous variability *within* the HHM group, with a sizable portion of the children succeeding academically. Status on other administrative variables, such as attendance, ethnicity, special education, and English language learner services, while related to achievement in expected ways, did not account for most of the large achievement gaps among groups.

In 2012 and 2013, we published two additional analyses of the MPS district achievement data for subsequent years (Cutuli et al., 2013; Herbers et al., 2012). This time, we pooled test data spanning third to eighth grades to evaluate group and individual growth from 2005–2006 to 2009–2010. Cumulatively, close to 14% of more than 26,000 MPS students were identified as HHM at least once during the span of school years the study considered. We also differentiated two levels of eligibility for the National School Lunch Program: free meals (FM; 130% of poverty line) and reduced-price meals (RM; within 185% of poverty line).

Again, we observed a persistent continuum of risk, with HHM students achieving at significantly and persistently lower academic levels than other low-income children. Figure 1 shows the results for reading achievement. On average, HHM students scored around the 12th percentile in third grade compared to the 21st percentile for stably housed students eligible for FM. The HHM students on average did not reach the third-grade reading level of the students who were neither low income nor HHM until they were in the seventh grade. Growth curves in math showed similar gaps that widened over time, with children in the FM and HHM groups decelerating in achievement in higher grades relative to test norms and more advantaged groups.

Thus, HHM status at any time during the study appeared to be an index of high chronic risk for learning. Additionally, we found that students achieved at lower levels in years immediately following identification as HHM than at other times, consistent with acute effects of HHM status. Growth or gains in math achievement, but not reading, also *slowed* in the year following HHM identification, again suggesting acute effects of HHM experiences in addition to chronic academic risk associated with cumulative poverty and associated adversities. Math learning may be more sensitive than reading to acute disruptions associated with homelessness.

Nevertheless, we again observed resilience. The achievement of individuals in the HHM group varied widely for math and reading, and 45% of these students performed consistently within the average range or higher. Our most recent growth analyses implicated reading as an important early predictor of subsequent achievement levels and growth rates in third grade and beyond (Herbers et al., 2012). Reading scores in first grade predicted later achievement in math and in reading, and more so for the two most disadvantaged groups (FM and HHM). Thus,

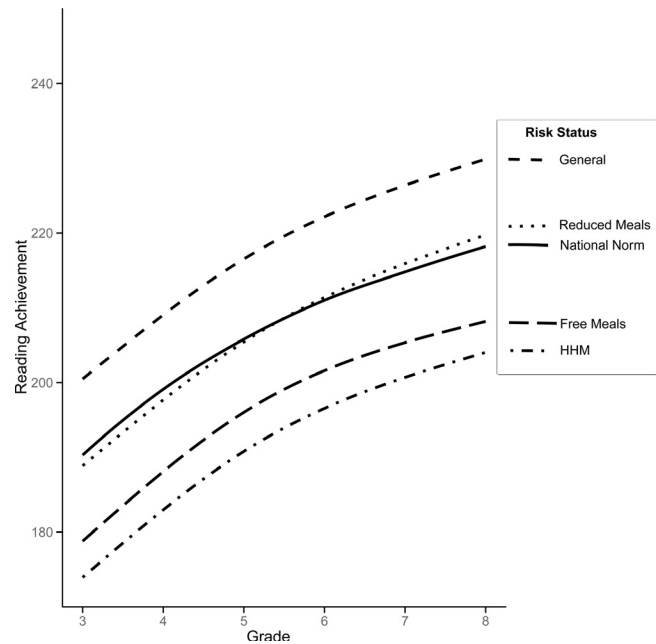


Figure 1. A risk gradient for reading achievement, showing scores over time on a standardized test for 26,501 students in an urban school district from 2005–2006 through 2009–2010 divided into four groups: students identified as homeless or highly mobile at any time during the 6 years preceding the 2009–2010 school year (HHM; 13.8% of the students), students eligible for free lunch but not identified as HHM (free meals, 57.2%), students eligible for reduced fee lunch but not free lunch or HHM (reduced meals, 3.7%), and other students (general, 25.3%). The national average on the test is shown as a solid line. The average third-grade achievement levels by group represented the following norm-referenced percentile scores: 12% for HHM, 21% for reduced meals, 46% for free meals, and 75% for the general group. From Cutuli et al. (2013) © 2012 The Authors. *Child Development* © 2012 Society for Research in Child Development, Inc. Reprinted with permission from Wiley-Blackwell.

a good early start in reading may play a protective role for later math and reading achievement.

IN SEARCH OF MALLEABLE RISK AND PROTECTIVE PROCESSES

As time passed and homelessness endured and became more pervasive, calls for a deeper understanding of risk and resilience intensified. To supplement the analyses conducted with administrative data gathered by public schools, we conducted studies that could inform interventions to promote school success, launching a search for malleable protective processes. Preventing homelessness and associated adversities is crucial but difficult to achieve for a host of structural, political, and economic reasons in American society. Many schools, community agencies, and shelters need strategies to promote success among children currently in their systems while longer term solutions are implemented. Thus, our group and other investigators across the country have undertaken translational research to understand how to protect children experiencing

homelessness. Our goal is to identify potential targets for change and subsequently test efforts to reduce risk, promote resilience, or both.

In 2006, we initiated a set of shelter-based studies focused on three interrelated domains of functioning we viewed as both malleable and central to risk and resilience of children in homeless families: executive function (EF), parenting, and stress. Our task was twofold: basic research to understand whether and how these processes may harm or protect children and intervention studies to test theories of change for programs based on these processes.

A central focus of our research involves EF or cognitive self-control skills. EF skills encompass a broad set of neurocognitive processes that enable individuals to direct their attention, memory, and behavior to adapt effectively. EF skills can be improved, are important for school readiness and resilience, and rely on brain development that can be harmed by experiencing more frequent psychosocial stress (Diamond & Lee, 2011; Evans & Kim, 2012; Obradović, Portilla, & Boyce, 2012; Zelazo & Carlson, 2012).

In a series of studies (e.g., Masten et al., 2012; Obradović, 2010), we found that EF skills measured during a child's stay in an emergency shelter forecast school success in kindergarten and first grade. These skills predict child outcomes over and above more traditional measures of intellectual function (IQ tests), both for academic achievement and for getting along well in the classroom, in terms of good behavior and relationships with teachers and peers. EF skills differentiated resilient students (those doing well in many areas) from less adaptive HHM students (Obradović, 2010).

EF skills also related to good parenting quality (Herbers et al., 2011; Herbers, Cutuli, Supkoff, Narayan, & Masten, 2014). One of the ways good parenting may "go to school" is through its influence on self-regulation skills. Parenting quality moderated the relation of cumulative risk and academic achievement in children entering kindergarten and first grade (Herbers et al., 2011). For children at high risk, good parenting appeared to protect achievement. In contrast, when parents expressed negative emotions and criticism about their children, the children showed more problems at school (Narayan, Herbers, Plowman, Gewirtz, & Masten, 2012; Narayan, Sapienza, Monn, Lingras, & Masten, 2014).

Given the importance of parenting for resilience suggested by our own and other studies, we have focused increasingly on different methods of assessing parenting, including observational measures. Observational measures provide the opportunity to record and later code important processes in parenting and parent-child relationships. Detailed coding of parent-child interactions filmed on site in shelter contexts shows how effective parents keep their children's emotions and behaviors on track, through positive guidance and expectations balanced with sensitivity and responsiveness, avoiding negative exchanges (Herbers et al., 2014). Children whose parents are positive, sensitive, and

responsive during interactions stay on task and also perform well on tests of EF and other skills.

In concert with basic research on malleable protective factors, we began designing and testing interventions to promote resilience. Our initial focus targeted EF skills that are developing rapidly in preschool-aged children, providing a window of opportunity to support school readiness. Working closely with collaborators and parents, we developed a program for children in preschools that serve HHM groups, designed to boost EF activities in the classroom and in the family, through combined strategies and an iterative process of refinement (see Casey et al., 2014). Our theory of change involves reflection training at the level of the child, parent, and classroom to enhance EF skills and related behaviors in young children. Parents and teachers are enthusiastic and early pilot results show promise, but we need to further refine and rigorously test intervention components.

We also have expanded our focus to include biomarkers in an effort to deepen our knowledge of risk and resilience processes (Obradović, 2012). This shift, too, parallels the evolution of resilience research toward a multiple-level approach (Masten, 2011, 2014). Initial results suggested complex connections among caregiving, adversity, physiological stress, and EF skills (Cutuli, 2011; Cutuli, Wiik, Herbers, Gunnar, & Masten, 2010). Exposures to more negative life events and less sensitive parenting were related to higher levels of salivary cortisol, whereas more effective child EF was related to lower cortisol levels. We are working on identifying how risks associated with homelessness could "get under the skin" to affect gene expression, stress physiology, and neurodevelopment. At the same time, we recognize that children vary in their biological sensitivity to contextual influences (Obradović, Bush, Stamperdahl, Adler, & Boyce, 2010), and we are interested in understanding how the interplay between children's biology and experience can inform interventions tailored to individual needs of children.

CONCLUSIONS

Children and families experiencing homelessness show remarkable resilience as well as problems, providing a context for understanding adaptation in progress as well as the stress and developmental costs of poverty and inequality in the United States. Our research corroborates high overall risk levels for children who experience homelessness while also indicating they share many risk factors with other very low-income children. Those risks encompass multiple system levels, including biology, behavior, family, school, neighborhood, and health care.

Our research reveals high risk for academic problems among students with histories of homelessness, consistent with an increasing body of related evidence (e.g., Cutuli & Herbers, 2014; Masten, 2012; Miller, 2011; Samuels et al., 2010). Analyses of district-level achievement data suggest that we should consider residential instability in efforts to address intransigent

income-related achievement gaps found in many large, urban U.S. school districts. HHM students comprise a substantial and still-growing portion of the overall student body.

Mobility poses a challenge for place-based initiatives to promote academic achievement, such as the Promise Neighborhoods inspired by the Harlem Achievement Zone (Tough, 2009). The Northside Achievement Zone in Minneapolis is striving to address this challenge by providing stable housing for families with a history of mobility and reaching out to those who use temporary shelters outside the intervention zone, in addition to their comprehensive cradle-to-career support for achievement (see northsideachievement.org for more information).

Striking individual differences among children who have experienced homelessness in the United States indicate that many children show resilience, and those who do appear to have more resources and protective factors in their lives. Our findings implicate familiar promotive and protective influences observed in diverse studies of resilience (Masten, 2014), including involved and supportive parents as well as cognitive skills and self-control in the children. Despite past and present challenges, children are manifesting resilience in their families and at school, drawing on adaptive capacity across many systems that support positive development, from both internal systems and interactions with other people and the larger ecology. Their resilience depends on the resilience of other systems that support children, including families, communities, and schools. Some children may be able to sustain adaptive behavior, but others may falter if the current level of stress continues or increases. Preventing homelessness is vitally important but particularly challenging in times of economic crisis. For children who face homelessness, it is imperative to reduce overall risk levels, in addition to boosting resources and adaptive capacity.

In these efforts, we should consider evidence from other nations and cultures, keeping in mind that homelessness must be considered in a larger sociocultural and historical context, and may take diverse forms in the wake of war, disaster, chronic poverty, and economic crisis. Many nations—including other economically developed nations—have struggled with family homelessness (Le Mèner & Oppenchain, 2012; Shinn & Greer, 2011; Toro, 2007). We can share lessons across context and nationality on the short- and long-term consequences of homelessness for child development, and also on evidence-based policies and interventions that prevent exposure, reduce risk, and promote resilience.

To summarize, more than two decades of research on school adjustment of children experiencing family homelessness or housing instability have yielded a consistent pattern of findings but also a host of questions for research. Results corroborate the idea of a risk continuum, wherein HHM students show greater risk than other low-income students with more stable housing. However, more study is needed on the degree to which this risk is chronic and tied to deep poverty, or is acute and tied to the disruptions of mobility, or likely both, as our district data sug-

gest. Unresolved questions remain about the timing of homelessness as a threat to learning and individual differences in sensitivity to its effects. Most important, we know little about the most beneficial and cost-effective interventions at any level—child, family, school, community, or national—to promote school success among children in families currently homeless or facing residential instability. Nonetheless, research provides important clues to processes with translational promise.

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