



Sample Research from the Kids Integrated Data System (KIDS)

2011

The following are samples of the research that has been produced using KIDS. Individual data systems involved include the School District of Philadelphia, Department of Health, Department of Human Services, Office of Supportive Housing, and Community Behavioral Health.

Studies of Individual-level Risk and Protective Factors in Prek-to-Elementary School using KIDS

Fantuzzo, J. W., Rouse, H. L., McDermott, P. A., Sekino, Y., Childs, S., & Weiss, A. (2005). **Early childhood experiences and kindergarten success: A population-based study of a large urban setting.** *School Psychology Review, 34*, 571-588.

Awarded the "Article of the Year" from the National Association of School Psychologist's archival journal, *School Psychology Review*, this study was the first examination of children's early care and education experiences using a newly developed structured interview at kindergarten entry (ECEI). This study examined the unique protective influence of center-based early care and education experiences on kindergarten outcomes for children entering public school kindergarten. The 3,969 participants were geographically and demographically representative of an entire kindergarten cohort in a large urban school district. Child age, gender, ethnicity, family poverty, low maternal education, and neighborhood were found to be risks for academic and behavioral adjustment upon kindergarten entry. Controlling for these risks, formal, center-based experiences were related significantly to higher levels of Language Arts, Mathematics, Social Knowledge, Motor Skills, and Work Habits performance assessments and attendance in kindergarten. Initial advantages associated with center-based early care and education were sustained across the kindergarten year.

Fantuzzo, J. W. & Perlman, S. (2007). **The unique impact of out-of-home placement and the mediating effects of child maltreatment and homelessness on early school success.** *Children and Youth Services Review, 29*, 941-960.

This study used KIDS to examine the unique impact of out-of-home placement and the mediating effects of child maltreatment and homelessness on the academic achievement and school adjustment of an entire cohort of second grade children in a large urban school district. Data on birth risks, placement history, child maltreatment, and homelessness from birth through second grade were integrated across municipal agencies for over 11,000 second grade students. Multiple Logistic Regression analyses demonstrate that children with a history of out-of-home placement were at increased risk for poor literacy and science achievement controlling for demographics and birth risks. These children also evidenced significantly higher levels of behavior problems and school suspensions than children with no out-of-home placement history. Maltreatment and homelessness were found to have significant mediating effects on the relationship between out-of-home placement and children's educational well-being. Implications for policy and practice were discussed.

Rouse, H.L., & Fantuzzo, J. (2009). **Multiple Risks and Educational Well Being: A Population-based Investigation of Threats to Early School Success.** *Early Childhood Research Quarterly, 24*, 1-14.

This study used a developmental-epidemiological approach to examine the prevalence and impact of multiple risks on educational outcomes for an entire population of second grade children in a low-income, urban public school system. KIDS provided information about children's entire histories of involvement with public services from birth through the end of second grade. Multiple logistic regression analyses revealed the differential impacts of *type* and *amount* of risk on multiple academic and behavioral outcomes. Findings emphasized the disproportionate educational challenges that fall squarely in the purview of other publicly funded service providers outside the education system. Implications of this study include increasing the collaborations between early childhood educators and public service systems such as child welfare and homelessness.

Rouse, H., Fantuzzo, J., & LeBoeuf, W. (in press) **Comprehensive Challenges for the Well Being of Young Children: A Population-based Study of Publically Monitored Risks in a Large Urban Center.** *Child and Youth Care Forum* DOI: 10.1007/S10566-010-9138-Y

This population-based study used KIDS to examine the relations between type and amount of publically monitored risks and academic and behavioral outcomes. An entire cohort of over 10,000 third-grade students in a large urban public school system participated in this study. Findings showed high rates of child maltreatment, homelessness, lead exposure, low maternal education, and birth risks (preterm or low birth weight) in this population of children. Birth risks and lead exposure were related solely to academic outcomes, whereas family risks (maltreatment, homelessness, and low maternal education) were related to both academic and behavioral outcomes. The amount of risk experiences was related to academic and behavioral outcomes. Implications of the findings for interagency collaboration and public policy were discussed.

Perlman, S., & Fantuzzo, J (2010) **Timing and influence of early experiences of child maltreatment and homelessness on children's educational well-being.** *Children and Youth Services Review, 32*, 874–883

This study examined the timing and influence of first experiences of substantiated child maltreatment and homelessness on children's academic achievement and attendance at the end of second grade for an entire cohort of 12,045 second grade students in a large, urban school district. Information on first experiences of substantiated child maltreatment and homelessness, birth risks, demographics, and academic achievement and attendance outcomes was obtained and linked through KIDS. Event history analyses were used to examine the timing of first experiences of homelessness and substantiated child maltreatment in early childhood. A series of multiple regression models was used to examine the relationship between first experiences of child maltreatment and homelessness on second grade academic achievement and attendance, when controlling for demographics, poverty, and birth risks. Results showed that after controlling for birth risks, poverty, and demographics, different patterns emerged for the influence of timing of first substantiated child maltreatment and homelessness on academic achievement and attendance.

Fantuzzo, J., LeBoeuf, W., & Chen, C., Rouse, H.L., Culhane, D. (2010). **McKinney Vento Homelessness Act and Educational Well-Being: The Unique and Combined Effects of Homelessness and Social Mobility on the Educational Outcomes of Young Children.** *Manuscript in preparation.*

In response to the educational risk for homeless children, Congress created the Education for Homeless Children and Youth program as a part of the McKinney-Vento Homelessness Assistance (MVHA) Act (U.S. Congress, 2002). The present study sought to address limitations in the research literature to inform MVHA by investigating homelessness and school mobility in an entire population of young children enrolled in a large urban public school district. Data were provided by two public service systems that were charged with monitoring the well-being of these children. The U.S. Department of Housing and Urban Development (HUD) instituted the Homelessness Management Information Systems (HMIS), (HUD, 2010) and administrative data from a large urban public school district. Specifically, this study used these two data resources through the Kids Integrated Data System (KIDS). The primary purpose of the study was to examine the unique and combined effects of homelessness and school mobility on young children's academic achievement and social/behavioral adjustment to school.

Study of High School Dropout Predictors using KIDS

Neild, R.C., & Balfanz, R.H. (2006) **Unfulfilled Promise: The Dimensions and Characteristics of Philadelphia's Dropout Crisis, 2000–2005**. Report published by *Philadelphia Youth Network, Johns Hopkins University & the University of Pennsylvania*

This report outlines a study of students enrolled in the 6th through 12th grades in the School District of Philadelphia between 2000 and 2005 to examine educational outcomes and predictors of graduation and dropout. The researchers found that in a single school year (2003-2004) approximately 6% of the students in grades 6-12 dropped out. An additional 4% were absent nearly half the time, qualifying as “near-dropouts.” Almost two-thirds of the students were in grade 10 or lower; about one-third were in grade 9 or lower. Twenty percent of the Latino students were either dropouts or near-dropouts, as were 18% of African American students, 15% of White students, and 12% of Asian students. Males were more likely to be dropouts or near dropouts than females. Four-year (“on-time”) graduation rates ranged from 45% to 52%. The six-year graduation rates are 54% to 58%. Two 8th grade factors gave students at least a 75% probability of dropping out of school: attending school less than 80% of the time in 8th grade and receiving a failing final grade in mathematics and/or English in 8th grade. Almost half of the dropouts in the city’s public schools can be identified in 8th grade. Eighty percent of the students who dropped out of school were either at-risk 8th graders or at-risk 9th graders. Finally, students involved with public agencies such as the Department of Human Services had especially high rates of dropout. Fully 90% of the students who had a juvenile justice placement during high school ultimately dropped out. About 70% of the students who had a substantiated case of abuse or neglect during high school, had a foster care placement, or who gave birth within four years of starting high school, became out-of-school youth. Implications for policy were discussed.

Investigation of School-level Risks using KIDS

Fantuzzo, J. W., Rouse, H. L., & LeBoeuf, W.A., McDermott, P.A.). **What’s Behind Being Behind: Effects of School Concentrations of Student Risk Experiences on Early Academic Achievement and Attendance**. *Under review*.

Schools need information about how they vary based on the needs of the population of children they are serving. This study investigates beyond-the-classroom realities of neighborhood schools that account for variance in children’s outcomes. Findings indicate that there is significant risk for poor academic achievement that is associated with concentrations of students in schools who experience specific types of risk. Concentrations of students who were homeless or whose mothers did not graduate high school were found to be the strongest school-level predictors of Reading and Mathematics achievement and school attendance.

Neighborhood-level Research using KIDS

McWayne, C.M., McDermott, P.A., Fantuzzo, J.W., & Culhane, D.P. (2007). **Employing community data to investigate social and structural dimensions of urban neighborhoods: An early childhood education example**. *American Journal of Community Psychology*, 39, 47-60.

This study sought to define neighborhood context by examining relationships among data from city-level administrative databases at the level of the census block group. The present neighborhood investigation included 1,801 block groups comprising a large, northeastern metropolitan area. Common factor analyses and multistage, hierarchical cluster analyses yielded two dimensions (i.e., Social Stress, Structural Danger) and two typologies (i.e., Racial Composition, Property Structure Composition) of neighborhood context. Simultaneous multiple regression analyses revealed small but statistically significant associations between neighborhood variables and academic outcomes for public school kindergarten children.

Gross, K., & McDermott, P.A. (2008). **Use of city-archival data to inform dimensional structure of neighborhoods.** *Journal of Urban Health.*

A growing body of research has explored the impact of neighborhood residence on child and adolescent health and well-being. Most previous research has used the US Census variables as the measures of neighborhood ecology, although informative census data are not designed to represent the sociological and structural features that characterize neighborhoods. Alternatively, this study explored the use of large-city administrative data and geographical information systems to develop more uniquely informative empirical dimensions of neighborhood context. Exploratory and confirmatory structural analyses of geographically referenced administrative data aggregated to the census-block group identified three latent dimensions: social stress, structural decline, and neighborhood crime. Resultant dimensions were compared through canonical regression to those derived from US Census data. The relative explanatory capacity of the city-archival and census dimensions was assessed through multilevel linear modeling to predict standardized reading and mathematics achievement of 31,742 fifth- and 28,922 eight-grade children. Results indicated that the city archival dimensions uniquely augmented predictions, and the combination of city and census dimensions explained significantly more neighborhood effects on achievement than did either source of neighborhood information independently.

Homelessness Research using KIDS

Culhane, D. P., Metraux, S., Park, J. M., Schretzmen, M. A., Valente, J. (2007). **Testing a typology of family homelessness based on patterns of public shelter utilization in four US jurisdictions: implications for Policy and Program Planning.** *Housing Policy Debate*, Volume 18, Issue 1.

This study tests a typology of family homelessness based on patterns of public shelter utilization and examines whether family characteristics are associated with those patterns. The results indicate that a substantial majority of homeless families stay in public shelters for relatively brief periods, exit, and do not return. Approximately 20 percent stay for long periods. A small but noteworthy proportion cycles in and out of shelters repeatedly. In general, families with long stays are no more likely than families with short stays to have intensive behavioral health treatment histories, to be disabled, or to be unemployed. Families with repeat stays have the highest rates of intensive behavioral health treatment, placement of children in foster care, disability, and unemployment. The results suggest that policy and program factors, rather than family characteristics, are responsible for long shelter stays. An alternative conceptual framework for providing emergency assistance to homeless families is discussed.

Interaction Between Children with Behavioral Health Care Needs and Special Education

Mandell, David S., Davis, Jasmine K., Bevans, Katherine, Guevara, J.P. (2008). **Ethnic Disparities in Special Education Labeling Among Children With Attention-Deficit/Hyperactivity Disorder.** *Journal of Emotional and Behavioral Disorders*, 16 42-51.

The authors examined disparities in special education labeling among children diagnosed with attention-deficit/hyperactivity disorder (ADHD) by merging calendar year 2002 special education records and Medicaid mental health claims for 4,852 children who had been diagnosed with ADHD in Philadelphia, Pennsylvania. Thirty-eight percent were receiving special education services. In adjusted analyses, Black children were less likely than White children to receive these services (odds ratio [O.R.] = 0.78); among the children in special education, Black children were more likely to have the emotional disturbance (ED) label (O.R. = 1.40). There was a significant interaction between ethnicity and receipt of behavioral health and rehabilitation services (BHRS): White children with BHRS were more likely to be in special education than were White children without BHRS or Black children. Among the children in special education, White children with BHRS and Black children were more likely than White children without BHRS to be labeled ED. The results indicate ethnic disparities in special education labeling among children with similar clinical profiles and that mental health and education services are substituted for each other differently based on ethnicity. Possible reasons include under-treatment of ADHD, differential interpretation of associated behaviors, and differences in parents' ability to advocate for children's educational and mental health needs.

Mandell, D.S., Machefsky, A., Rubin, D., Feudtner, C., Pita, S., Rosenbaum, S. (2008) **Medicaid's Role in Financing Health Care for Children With Behavioral Health Care Needs in the Special Education System: Implications of the Deficit Reduction Act.** *Journal of School Health, 78*, 532-538.

Recent changes to Medicaid policy may have unintended consequences in the education system. This study estimated the potential financial impact of the Deficit Reduction Act (DRA) on school districts by calculating Medicaid-reimbursed behavioral health care expenditures for school-aged children in general and children in special education in particular. Medicaid claims and special education records of youth ages 6 to 18 years in Philadelphia, PA, were merged for calendar year 2002. Behavioral health care volume, type, and expenditures were compared between Medicaid-enrolled children receiving and not receiving special education. Significant overlap existed among the 126,533 children who were either Medicaid enrolled (114,257) or received special education (27,620). Medicaid-reimbursed behavioral health care was used by 21% of children receiving special education (37% of those Medicaid enrolled) and 15% of other Medicaid-enrolled children. Total expenditures were \$197.8 million, 40% of which was spent on the 5,728 children in special education and 60% of which was spent on 15,092 other children. Medicaid-reimbursed behavioral health services disproportionately support special education students, with expenditures equivalent to 4% of Philadelphia's \$2 billion education budget. The results suggest that special education programs depend on Medicaid-reimbursed services, the financing of which the DRA may jeopardize.