

STUDENT MOBILITY

Exploring the Impacts of Frequent Moves on Achievement

Summary of a Workshop

Alexandra Beatty, Rapporteur

Committee on the Impact of Mobility and Change on the
Lives of Young Children, Schools, and Neighborhoods

Board on Children, Youth, and Families
Division of Behavioral and Social Sciences and Education

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This summary has been reviewed in draft form by individuals chosen for their diverse perspectives and technical expertise, in accordance with procedures approved by the Report Review Committee of the National Research Council. The purpose of this independent review is to provide candid and critical comments that will assist the institution in making its published report as sound as possible and to ensure that the report meets institutional standards for objectivity, evidence, and responsiveness to the charge. The review comments and draft manuscript remain confidential to protect the integrity of the process. We thank the follow-

ing individuals for their review of this report: Martha J. Cox, Center for Developmental Science, University of North Carolina at Chapel Hill; Lisa A. Gennetian, Economic Studies, The Brookings Institution; Arthur J. Reynolds, Institute of Child Development, University of Minnesota; and Russell W. Rumberger, Gevirtz Graduate School of Education, University of California at Santa Barbara.

Although the reviewers listed above provided many constructive comments and suggestions, they were not asked to endorse the content of the report, nor did they see the final draft of the report before its release. The review of this report was overseen by Aletha Huston, Human Development and Family Sciences, University of Texas. Appointed by the National Research Council, she was responsible for making certain that an independent examination of this report was carried out in accordance with institutional procedures and that all review comments were carefully considered. Responsibility for the final content of this report rests entirely with the author and the institution.

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1

Introduction

Residential mobility in the United States is associated with highly prized concepts such as freedom, opportunity, and entrepreneurship. Yet the circumstances surrounding a move, and the reasons for it, make a profound difference in how it affects families, especially young children. For example, when a family moves to a new neighborhood or across the country to be nearer to extended family, to allow a parent to pursue a better job, or to allow the children to attend a better school, children may benefit, even if their lives are temporarily disrupted. On the other hand, frequent moves for reasons such as family turmoil, a house foreclosure, or other economic disruption, particularly if these moves also require frequent changes in schools, are more likely to have a negative impact on young children. The concepts of residential mobility (frequent household moves) and school mobility (frequent school moves that are not the result of promotion to the next grade) overlap significantly in the context of concern about students' welfare, in part because frequent school mobility is often brought about by family residential mobility. Although these are distinct phenomena, both can have adverse consequences on children's development and academic progress, and it is these effects that are the focus of this report.

Policy makers and educators have long worried about the negative consequences of residential and school mobility but have lacked a clear and detailed picture of their effects. Collecting information about the hard-to-reach population of mobile children and families presents methodological challenges, and it has been unclear how the effects of mobility

might be disentangled from associated factors—including the factors that lead to the mobility—that also have negative effects on young children. Still more challenging is to establish causal mechanisms to explain apparent connections between school and residential mobility and negative outcomes for some children.

The Board on Children, Youth, and Families, with the support of the Strategic Knowledge Fund, a partnership of the Foundation for Child Development and the W.K. Kellogg Foundation, and the Annie E. Casey Foundation, held a workshop in June 2009 to examine issues related to mobility and to highlight the principal themes in the available research.¹ The goal for the workshop was to “review research on the patterns of change and mobility in the lives of young children (ages 3 to 8 years) and to examine the implications of this work for the design of child care, early childhood and elementary educational programs, and community services for neighborhoods and vulnerable populations that experience high rates of mobility.” The workshop focused primarily on young children. This stage is often overlooked by researchers and policy makers, compared with early childhood and adolescence, yet the first few years of school set the stage for later academic development and are critical to children’s life prospects. The workshop also focused particularly on educational outcomes for children at risk because of poverty, homelessness, and other factors; it did not address health or social service issues or socioemotional development.

It is important to note that this report documents the information presented in the workshop presentations and discussions. Its purpose is to lay out the key ideas that emerged from the workshop and should be viewed as an initial step in examining the research and applying it in specific policy circumstances. The report is confined to the material presented by the workshop speakers and participants. Neither the workshop nor this summary is intended as a comprehensive review of what is known about student mobility, although it is a general reflection of the literature. The presentations and discussions were limited by the time available for the workshop. A more comprehensive review and synthesis of relevant research knowledge will have to wait for further development.

This report was prepared by a rapporteur and it does not represent findings or recommendations that can be attributed to the committee members who planned the workshop. The workshop was not designed to generate consensus conclusions or recommendations but focused instead on the identification of ideas, themes, and considerations that contribute to understanding the impact of frequent moves on student achievement.

¹Papers commissioned for the workshop and speaker presentations are available at http://www.bocyf.org/children_who_move_workshop_presentations.html.

The first part of the report (Chapters 1 through 3) describes the scope of the issue, the circumstances that influence the effects of mobility on children, what is known about the consequences of mobility, and approaches to supporting vulnerable children who move. Chapter 4 describes some of the methodological issues related to disentangling the effects of mobility itself from the many other factors likely to influence the lives of disadvantaged children. The report closes with a discussion of potential policy directions and priorities for future research, looking first at the scope of the problem and then the potential impact of mobility in the context of young children's development. Appendix A provides the workshop agenda and list of participants. Appendix B is a selected bibliography of relevant literature.

RESIDENTIAL MOBILITY

Residential mobility rates in the United States are high compared with those of other industrialized nations (Reynolds, Chen, and Herbers, 2009a), but definitions and measures of mobility are not consistent, and there is no single source for data on the numbers of young children who experience high rates of mobility. It is also not always obvious when children's education and well-being are at risk because of their mobility, in part because there are so many different reasons why children and their families move. In addition, highly mobile children are frequently omitted from research studies and administrative data sets. Nevertheless, a variety of indicators suggest that residential mobility affects many children.

First, it is clear that housing instability is a continuing problem for low-income families. According to data collected by the federal government, nearly half (43 percent in 2007, up from 40 percent in 2005) of households with children have at least one significant housing problem. These problems include housing that is physically inadequate or crowded and housing that costs more than 30 percent of household income (Federal Interagency Forum on Child and Family Statistics, 2009).² Although the percentage of homes that are physically inadequate or overcrowded has remained stable or even decreased slightly, the percentage of households paying more than half their income for housing has increased from 6 to 16 percent since 1978.

These indicators, which extend through 2007, may look even worse

²Physically inadequate housing is defined as housing with "severe or moderate physical problems"; housing is classified as crowded if it is occupied by more than one person per room. The U.S. Department of Housing and Urban Development uses a general standard of 30 percent of income to define affordable housing, which is the amount the recipients of most types of housing subsidies are required to pay.

when they are updated to reflect the effects of the 2008-2009 housing crisis and recession. Information is emerging on how the lack of affordable housing is affecting families with young children (Roy, Maynard, and Weiss, 2008). A surge of foreclosures has stressed low-income families and pushed many into an expensive rental market; in some of the most populous states, housing costs have risen much more sharply than national averages. In 15 states, more than 20 percent of children under age 6 live in households that spend more than half their income on rent.³

What index should be used to identify potentially problematic mobility rates? In general, the U.S. population is quite mobile (U.S. Census Bureau, 2004). Although the rates of mobility have decreased slightly in recent years, approximately 40 million people in the United States, or 14 percent of the population, moved between 2002 and 2003. Among the segment of the population living below the poverty level, 24 percent moved that year. This translates into high rates of school mobility for children in certain population groups—as high as 100 percent in some schools and neighborhoods (Roy, Maynard, and Weiss, 2008). Anecdotal accounts suggest that foreclosures and unemployment have triggered surges of homelessness and mobility in individual counties that have severely stressed the systems designed to support children in these circumstances (Eckholm, 2009).

SCHOOL MOBILITY

Measuring residential mobility may be somewhat easier than measuring school mobility, as discussed in Chapter 2, but it is likely that significant numbers of the children whose families move because of housing pressure and other economic stresses are compelled to change schools. As a starting point for discussion of ways to measure school mobility—as many of the presenters took pains to explain—it is important to distinguish among several types of school mobility:

- Residential moves that necessitate a school move and may occur for positive reasons or negative ones, such as job loss, a family breakup, domestic violence, eviction, foreclosure, condemnation of housing, or other disruptions.
- Normative or structural school mobility—school moves that occur because of school system structural requirements, such as when children advance from elementary to middle school.

³The states are Alaska, Arizona, California, Florida, Hawaii, Louisiana, Maine, Michigan, Minnesota, New Jersey, New York, Rhode Island, Vermont, Washington, and West Virginia.

- School changes instigated by parents seeking better school quality or a better fit for their children, such as a language immersion or particular academic programming, which may or may not also involve a residential move.
- School mobility related to children's behavior—even very young children sometimes exhibit behavior problems that lead to dismissal or a change in placement.
- Mobility related to special education placement, for example to a setting designed to handle students with particular needs.
- Displacement caused by a natural disaster or moves parents make in search of safety from a dangerous neighborhood.

It would be difficult to estimate how many children experience each of these types of move, although it is clear that many children in the United States are affected by school changes that are not the result of structural requirements (moves made because the student's school does not offer the next grade). Jane Hannaway reported that, according to a U.S. General Accounting Office report (1994), approximately one-sixth of the nation's third graders had attended at least three different schools since their first grade year. Data collected by the National Assessment of Educational Progress show that, in 1998, 34 percent of fourth graders, 21 percent of eighth graders, and 10 percent of twelfth graders had changed schools at least once in the previous two years. These percentages do not indicate the extent to which these moves independently contributed to academic disruptions or other difficulties for children, although they do suggest the importance of understanding how such moves may influence educational outcomes or the effectiveness of the resources and services designed to support families. These issues are discussed further below.

DEVELOPMENTAL PERSPECTIVE

It is easy to imagine why mobility might cause problems, particularly for children who move multiple times in the early grades. Children who move may need to adjust to a new curriculum, new teachers and peers, and a new physical environment. Participants also pointed out that schools with high mobility rates may cause problems for the school itself, teachers, and other students. Teachers must respond to every new student and be flexible enough to adjust plans and expectations, even as they struggle to maintain some sense of what their students already know. Students who remain in place may experience disrupted relationships, repetition, and frequent changes in the planned curriculum. A clear understanding of how school or residential mobility can affect children—either disrupting or enhancing their development—provides the foundation for thinking

about possible policy responses, and Anne Masten offered an overview of early childhood development in the context of mobility.

She looked first at the question of developmental timing, noting that “it’s different to move an infant than it is to move a 2-year-old, a 6-year-old, a 13- or 14-year-old, or a senior in high school.” Children’s body function, brain development, capacities for dealing with stress, and behavior change over time, and these variations may make them more or less vulnerable to—or able to withstand—the effects of mobility. Parents as well as children may perceive and handle a move differently depending on the child’s developmental stage. During early childhood, for example, children experience rapid physical growth as well as brain development. They rapidly increase their motor, social, and language skills and develop increased executive function skills, which allow them to direct their attention, control their impulses, wait their turn, and so forth. During these years, children are expected to reach progressive milestones, such as forming attachment bonds with caregivers and obeying simple commands, and, as they move into school, getting along with teachers and peers, learning to read, and meeting other expectations.

Achieving developmental milestones in social, emotional, and cognitive functioning is fundamental for learning and adaptation, both providing the basis for future growth and development and preventing future problems. As Masten put it, “competence begets competence,” and she suggested that the importance of this stage explains why there is such a high return on investments in the development of competence in the early years of life.

Disruptions in this development can have a snowball effect, which explains how mobility has the potential to harm children. She mentioned ongoing research on the influence of early experience on brain development, which has shown, for example, that children who grow up in chaotic, disadvantaged environments, such as orphanages, often fail to develop effective stress regulation capacities. One possible explanation is that the presence of unusually large amounts of stress hormones, such as cortisol, can affect the development of the brain. Furthermore, children adapt and develop skills for the circumstances in which they find themselves. Thus, Masten explained, children “living in chaos adapt for chaos.” But the skills needed to deal with constant instability and threat may be maladaptive in the context of the structured classroom, causing children problems with focusing their attention or controlling their behavior. These difficulties may, in turn, inhibit their capacities to develop relationships with teachers and peers and succeed academically.

Young children depend on their caregivers and other adults for secure attachments, stability, and guidance in self-regulation. Thus, any threat to the caregiving relationships—inconsistent care, a parent who is not

functional for any reason, abusive or unresponsive care by adults who are overwhelmed or depressed, for example—is also likely to disrupt early development. Mobility can disrupt these relationships.

Mobility is a single word for a complex set of possible events and circumstances, although many kinds of mobility have the potential to disrupt children’s routines, the consistency of their care, their connections with people outside the family (or within it), their schooling, and other aspects of their lives that are important to development. Specifically, mobility (particularly repeated mobility) can disrupt children’s routines, the consistency of their care and health care, and their relationships, as well as learning routines, relationships with teachers and peers, and the curriculum to which they are exposed. Less directly, family stresses that accompany many moves and the disruption of family supports can exacerbate all of these problems. At the same time, many kinds of mobility are markers for other risks, such as poverty or family violence, and these circumstances are likely to interact to exacerbate problems. Moreover, when mobility occurs during key points of developmental transition, such as transitions into school or into adolescence, its impact is likely to be greater. Participants also noted that mobility that involves a transition to a different culture, particularly across international borders, adds an additional set of challenges.

Frequent mobility in the context of high stress and few resources may pose serious threats to children’s development. But mobile children vary, and they have diverse needs for learning and educational success. Masten described the theoretical basis for approaches to minimizing the harm that mobility can cause. She suggested that focusing on the factors that boost children’s resilience offers the greatest potential for helping them. These factors include nutrition and health care, positive preschool experience, stable connections with high-quality teachers, instructional continuity, opportunities to develop mastery, and, for older children, friendships with prosocial peers.

Translating these factors into strategies to prevent problems for highly mobile children, she suggested:

- Reducing risk and stress—preventing homelessness and housing loss, reducing student and teacher turnover, teaching stress management skills, and providing crisis services, such as transition planning.
- Providing concrete resources, such as nutrition programs, health care, affordable housing, and recreational opportunities.
- Providing educational supports for mobile students, such as preschool, tutoring, summer programs, transportation within high-mobility zones, improved accessibility of records, increasing sta-

bility of key aspects of curriculum within and across jurisdictions, and reducing nonessential structural mobility.

- Mobilizing adaptive systems, by supporting parenting skills, fostering bonds with other competent and caring adults, fostering school engagement, nurturing brain development and self-regulation skills, and supporting cultural traditions and organizations that support child development and provide opportunities for children to connect with prosocial adults and peers.

Mobility is a complex phenomenon. Understanding its extent and nature, and particularly its effects on children's educational progress, can help policy makers identify appropriate responses. A central question is whether mobility independently contributes to negative outcomes for certain groups of children and, if so, whether there are strategies that can reduce the negative effects. But as Cindy Guy noted in her opening remarks, mobility is a moving target; patterns may change over time and moves may have different effects in different circumstances. She and Ruby Takanishi both stressed that improved understanding of mobility and its effects are important because so many interventions designed for vulnerable children are place-based. The variation in mobility suggests not only a need for flexibility in the design of interventions, but also the importance of balancing the value of broad-based regional policies against the value of narrowly focused neighborhood or school-based interventions. With that context in mind, workshop participants turned to a close look at data on the children affected by mobility.

2

Which Children Are Most Affected by Mobility?

Common sense suggests that mobility is more likely to be a problem for children who move for negative reasons, such as family disruption or economic stress, than for those whose families are seeking better schools or employment. Families experience a broad range of difficulties that may result in residential or school instability. Researchers and policy makers have sought a greater understanding of which children are most negatively affected and the sequence of circumstances that lead to academic and other problems. Tracking mobility and its effects is difficult because it requires collecting accurate longitudinal data on families and children. Relatively few studies have provided such data, but workshop presenters described a variety of ways to examine the role that mobility plays in the lives of particular groups of children.

RESEARCH OVERVIEW

Arthur Reynolds provided a synthesis of the research on the effects of mobility on educational progress. He began with data from the National Assessment of Educational Progress (NAEP), shown in Figure 2-1, to illustrate the importance of the number of moves children make.

He also described two studies of students in Baltimore and Chicago, respectively, in which the researchers controlled for other risk factors in an effort to isolate the effects of mobility itself (Alexander, Entwisle, and Dauber, 1996; Temple and Reynolds, 1999). Both showed a reduction in achievement test scores of approximately one-tenth of a standard devia-

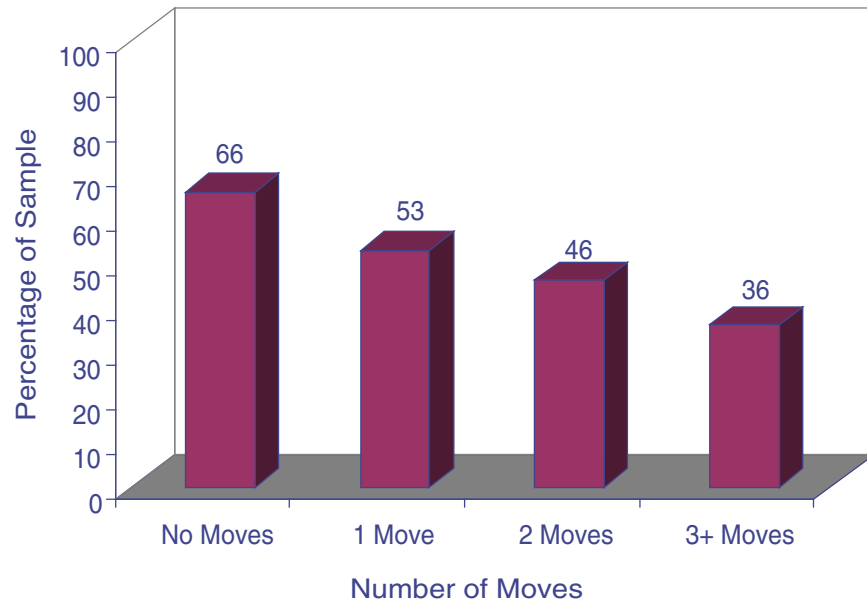


FIGURE 2-1 Mobility and fourth grade achievement at basic or above on the NAEP reading test, 2000.
SOURCE: Reynolds, Chen, and Herbers (2009a).

tion for each move a child makes, after other factors are accounted for. In other words, the effect of mobility is consistently negative and increases with the frequency of moves, although it is smaller than the effect of other factors, such as the family’s socioeconomic status or home environment. To explore the question further, Reynolds conducted a meta-analysis of research conducted since 1990 that examined the effects of school or residential mobility on achievement or dropout rates (Reynolds, Chen, and Herbers, 2009b). His goal was to consider impacts that are evident in the early school years as well as those that linger through high school, especially dropout rates.

The 16 studies Reynolds identified measured nonstructural school moves across grades K-12. Each had measured premobility achievement levels and also included a full set of control variables, and each provided measures of reading and mathematics achievement as well as school dropout. Nevertheless, the studies that met Reynolds’s criteria still varied in many ways, using different covariates and measures of achievement, for example, and investigating different sorts of moves, made at different points in children’s lives. Only five of the studies examined outcomes for students more than three years after their school

moves, so longitudinal conclusions are limited. Five of the studies used national probability samples; Reynolds and his colleagues identified 9 of the 16 studies as methodologically strong (see Reynolds, Chen, and Herbers, 2009b, for methodological details).

Compiling the data from all of the studies included in the meta-analysis, Reynolds and his colleagues found a significant relationship between mobility and both lower school achievement and dropping out. The data available on student achievement are stronger overall than the data for dropout rates, but the impact on dropout rates was the largest. The effects increase with number of moves—as shown in Figure 2-2, the effects are significantly more pronounced for students who make three or more moves.

Looking at just the impact on dropout rates, Reynolds found that the effects of mobility varied somewhat with its timing: both early mobility and mobility during high school had the greatest impact. The studies varied in the magnitude of the impact they found. Because they differed in methodology, it was difficult for Reynolds to calculate a mean effect, but in some cases the increase in dropout rate associated with mobility was as large as 30 percent.

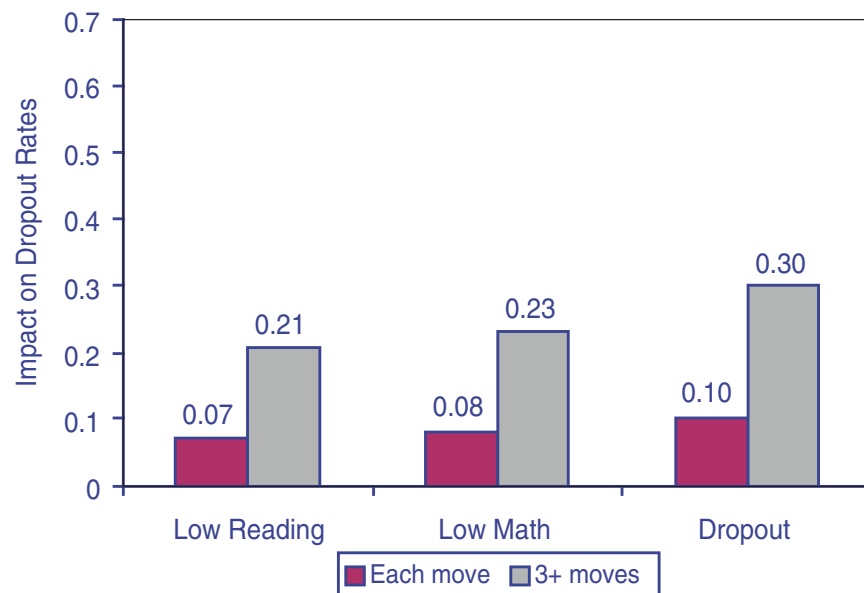


FIGURE 2-2 Effects of mobility on school achievement and dropping out (adjusted mean effect sizes, standard deviation units).

SOURCE: Reynolds, Chen, and Herbers (2009a).

Reynolds made a few observations about this body of work. Questions about mobility received increasing attention over the time frame he studied, and the overall quality of the studies increased. He noticed a certain fragmentation, however, with researchers identifying themselves with different fields, such as sociology, child development, or education; in many cases they reviewed only the existing literature in their own tradition.

While the studies as a group supported the general finding of impact, Reynolds found that the precision of the measures varied considerably and that many possible differences among students (such as student and family characteristics) were not adequately examined. Other important questions deserve further exploration, he suggested, including threshold effects, long-term effects, and interactions among effects.

To characterize the overall findings, Reynolds used a comparison with public health studies of the effects of smoking. Compared with the very strong conclusions researchers have drawn about the relationship between health and smoking, the mobility research is “middling,” he suggested. The number of studies is low, and although they are fairly consistent in finding effects and in the magnitude of the effects, the mechanisms are not fully described, and they do not provide a coherent picture of how mobility affects outcomes for children in the long term. However, several of the studies overcontrolled for differences between mobile and nonmobile groups, and Reynolds suggested that the findings are likely to be conservative—that is, that negative effects of mobility are actually more pronounced than the studies show.

One participant observed that it might be possible to use the literature on the predictors of dropping out—such as disruptive or aggressive behavior or problems with self-regulation early in development—as a starting point for researching the mechanisms that connect mobility to dropping out. Reynolds concurred, noting that other research suggests interactions among mobility, involvement with the juvenile justice system, and lower academic achievement, but these processes and relationships are not well understood.

Another participant pursued the question of a cumulative effect of multiple moves, asking whether it could be the case that “kids who are destined to have frequent moves are also destined to experience a variety of other problems in their family situations or in their personal situations, and that these other changes [over time] are confounded with [the effects of multiple moves].” Reynolds agreed that although his review controlled for selected factors that are likely to confuse the results in this way, other unreported factors, such as mental health and problems in the home environment, may be present in a consistent way. He and his colleagues conducted some additional analysis, looking at measures of development

and academic achievement prior to the first move, and concluded that there was still a likely effect of mobility. This issue is discussed in greater detail in Chapter 4.

NATIONAL PICTURE

Valerie Lee, David Burkam, and Julie Dwyer used national longitudinal data to search for patterns in mobility and its effects. They examined evidence from the Early Childhood Longitudinal Study—Kindergarten (ECLS-K) Cohort to explore the experiences of children in kindergarten through third grade (Burkam, Lee, and Dwyer, 2009).¹ This data set, a project of the National Center for Education Statistics, includes data collected from parents, teachers, and school personnel on a nationally representative sample of the 1998-1999 kindergarten class. The children were also tested in reading and literacy skills and mathematics.

Lee and Burkam, who presented this analysis, pointed out that there are important differences in school changes that take place between school years and those that take place during the academic year. The ECLS-K data allowed them to examine children's status at four points—at the beginning and end of the kindergarten year, the end of first grade, and the end of third grade—so they could search for the impact of moves at some of the possible school change points.² Given this array of information, the team explored four questions:

1. Who changes schools and who does not (national snapshot)?
2. What is the broad nature of school moves (during the school year, between school years, structural reasons, family reasons)?
3. What is the impact of changing schools on children's reading and mathematics learning?
4. Is that cognitive impact conditioned by other characteristics of the child or family, such as gender, race/ethnicity, or social class?

Lee and Burkam assumed that the impact of mobility would vary with the characteristics of children and families and with the reasons for the move, so they used a regression model to isolate different factors, including outcomes (reading and mathematics scores), type and number of moves, and covariates (family characteristics, prior achievement,

¹Burkam, Lee, and Dwyer (2009) include more detailed analyses than those addressed in the workshop presentation.

²The ECLS-K includes data on parent-assessed, teacher-assessed, and rater-assessed social and school behaviors, but Lee and Burkam did not find these data to be complete and did not include them in their analysis.

academic status). Their analysis produced a portrait of mobility at the national level, beginning with the frequency of different sorts of moves, as shown in Table 2-1. The primary distinction they focused on was between structural moves, which occur when a child must change schools when the next higher grade is not available, and nonstructural moves, which occur for a wide variety of reasons.

The data did not allow Lee and Burkam to distinguish types of non-structural moves, except by inference. However, they were able to look at how mobility rates vary by gender (little difference), race, and socioeconomic status (SES). Black children had the highest mobility rates, with only 45 percent enrolled for third grade in the same school they attended during kindergarten, compared with 54 percent for Hispanic children and nearly 60 percent for white and Asian third graders. Children from low-SES homes were also more likely to move than their more affluent peers, especially during the first two years of schooling.

In terms of the impact of mobility, the researchers found that children who change schools during kindergarten (though relatively few in number) ended up behind their peers in literacy skills, even when their prior achievement levels are taken into account; this effect is strongest for low-SES children. While there is no overall negative impact for mathematics achievement, there is a negative effect for low-SES children that lingers

TABLE 2-1 School Mobility at the National Level

Frequency of School Change	Percentage
During kindergarten (n = 17,745)	
Remain in same school	93.0
Change schools (family reasons)	7.0
End of kindergarten to end of first grade (n = 14,943)	
Remain in same school	77.1
Change schools (structural reason)	5.2
Change schools (family reasons)	17.7
End of first grade to end of third grade (n = 11,975)	
Remain in same school	72.5
Change schools (structural reason)	3.1
Change schools (family reasons)	24.4
Beginning of kindergarten to end of third grade	
Remain in same school	55.7
Change schools once	35.9
Change schools twice	8.1
Change schools three times	0.3

SOURCES: Burkam, Lee, and Dwyer (2009); Lee, Burkam, and Dwyer (2009).

at least through the primary grades. In addition, these children were at greater risk of being retained in grade—overall there is a small negative effect on achievement for them. Moves made at any point between kindergarten and third grade similarly had greater impact for children receiving special education services, children whose first language is not English, and children from low-SES families. Looking at just the number of moves children made during this time period, Lee and Burkam found that while a single move had no impact, two or more moves were associated with somewhat lower achievement in third grade—and again the effects were stronger for some children, such as those receiving special education services.

Reflecting on what they had found, Lee observed that the effects of mobility seem to be small, but the available data do not yet provide a complete picture of school moves in the early primary grades. Longitudinal data, they suggest, provide the most useful tool, but do not currently allow a close look at different types of moves (e.g., structural or family reasons) or at noncognitive impacts. The problem is exacerbated because the ECLS-K data are often least complete for mobile students, in part because only a subsample of children who changed schools was followed in the data collection effort, and perhaps also in part because teachers have less information about those students. Moreover, teacher assessment data on mobile children are limited because of the difficulty of tracking these students. Yet the circumstances of the move and its noncognitive impacts, Lee and Burkam suggest, may be more important factors than background family characteristics in outcomes for children who move.

What these data show, Burkam explained, is that the impact of school mobility appears benign when one looks at the overall effects for the entire population. A more complex picture emerges when one looks at conditional effects and the ways in which the impact is different for different children. Participants concurred, noting that some data sets may lose children because of attrition, and that they may be most likely to lose, for example, children who make multiple moves during the first few years of school—such disproportionate attrition can make it difficult to draw accurate conclusions from the data. Moreover, others observed, longitudinal data collection efforts may miss information because they sample only at intervals (perhaps chosen with other goals in mind) that do not allow them to capture all student moves. Participants also pointed out that weighting procedures may allow researchers to compensate for some missing information, but that it is still difficult to capture the most disadvantaged populations.

FOCUSING ON PLACE

Data on housing stress and mobility in general suggest, as Chapter 1 discusses, that circumstances may vary significantly by region, county, or city or town. Local circumstances may influence the causes and the effects of mobility, and communities may respond to these stresses very differently. Jane Hannaway, Lavan Dukes, and Amy Ellen Schwartz explored patterns of student mobility in three places: North Carolina, Florida, and New York City.

North Carolina

Student mobility rates are higher in North Carolina than in the nation as a whole (17 compared with 14 percent), Hannaway reported.³ She suggested two factors that offer at least a partial explanation: a dramatic increase in the immigrant population (274 percent between 1990 and 2000) and an increase in options for public schooling, such as charter schools and school choice programs.⁴ Using state administrative data that included information on free and reduced-price lunch status, ethnicity, sex, English language proficiency, special education status, and achievement, Hannaway developed a picture of mobility among elementary and middle school students in the state and its effects on their academic achievement.

She cautioned that she was unable to determine the percentage of the mobility that involved both a school and a residential move or to characterize the differences in the character of the neighborhoods students moved to and from. Moreover, it is likely that the data underestimate the number of moves because they do not capture all of those made during the school year. She had no information on reasons for moves, nor was she able to distinguish among those made during or between school years. The data offered only a once-per-year look at students' moves. They covered public school mobility within the state and did not include mobility out of the state or among private schools. However, the data cover large numbers of students over a long period (1997 to 2005) and made it possible to control for student fixed effects (i.e., to conduct the analysis holding certain variables, or attributes of the students, constant so that these

³Hannaway based this comparison on census data that show a national average annual mobility rate of 13.9 percent in 2005 (and 11.9 percent in 2008; see <http://www.census.gov/population/socdemo/migration/tab-a-1.xls>) and a calculation using American Community Survey data showing that the annual mobility rate in North Carolina has remained above 17 percent.

⁴Hannaway credited colleagues Zeyu Xu and Stephanie D'Souza, who collaborated with her in conducting this research.

variations will not disguise any differences that may exist among students with different mobility rates).

The data available included yearly cross-sections of all third through eighth graders in the state, as well as cohorts of third graders who were followed for six consecutive years. During the time covered by the study, overall enrollment increased by 15 percent, the percentage of the student population who were Hispanic tripled to reach 8 percent, and the percentage of students who were English language learners doubled, reaching 4 percent. The percentage of students eligible for free and reduced-price lunch increased from 38 percent in 1999 to 47 percent in 2005.

At the same time, North Carolina schools saw increased numbers of students changing schools (turnover rates). Overall, the turnover rate increased between 3 and 4 percent, but in urban schools it increased by 33 percent and in rural schools by 16 percent. Charter schools saw an increase of more than 30 percent, and, in general, the schools with greater percentages of minority students and students eligible for free and reduced-price lunch saw higher turnover rates.

Mobility rates varied significantly for North Carolina students in different subgroups, as shown in Table 2-2.

Among all North Carolina students in grades 3 through 8 who had moved at all, between 36 and 38 percent had changed schools twice or more. At the same time, students whose parents had higher incomes and levels of education—and white students—were the most likely to move to a school of higher quality, as measured by test scores.

TABLE 2-2 School Mobility in North Carolina, 1997-2005

Student Characteristics	Percentage Who Moved, 1997 Cohort	Percentage Who Moved, 2000 Cohort
Eligible for FRPL	44	46
Not eligible for FRPL	25	24
<i>Difference between FRPL and not-FRPL (gap increasing)</i>	19	22
Black	46	50
White	28	29
<i>Difference between white and black (gap increasing)</i>	18	21
Hispanic	43	39
White	28	29
<i>Difference between white and Hispanic (gap decreasing)</i>	15	10

NOTES: Percentage of third grade students in North Carolina public schools who have ever made a nonpromotional move over a six-year period, by race/ethnicity, cohort, and FRPL eligibility. FRPL = free and reduced-price lunch.

SOURCE: Xu, Hannaway, and D'Souza (2009).

What are the effects of North Carolina students' mobility? The administrative data allowed Hannaway to examine the end-of-grade assessment results in reading and mathematics for the students who moved twice or more. She also compared results for students who moved within a district (these moves are associated with more negative reasons, such as family disruption or job loss) with those who changed districts (cross-district moves associated with positive reasons, such as job opportunity).

In general, the North Carolina data seem to reinforce the conclusions Lee and Burkam described about differing impacts for different groups of children. Hannaway reported that these data show fairly consistent negative effects of moving within a district on mathematics test performance, but little effect for moving across districts. For reading there is little effect from moving within a district (and in some cases a benefit to moving across districts). (This finding differs from that of Lee and Burkam, who found a smaller effect for mathematics than for reading.) Hannaway suggested that mathematics learning may be more school-dependent than the development of reading. Hannaway and her colleagues also investigated the effects of the number of moves on math achievement (see Figure 2-3). She pointed out that a significant number of black students in North Carolina are making multiple school moves, and that once students make two or more moves, the negative effects on their mathematics test performance escalate sharply.

Florida

Florida is another very mobile state and a diverse one, Lavan Dukes reported. Looking just at Florida children in kindergarten through third grade in the 2007-2008 school year (about 900,000 children), the population is 43.3 percent white, 23.3 percent black, 26.2 percent Hispanic, 2.4 percent Asian, 0.2 percent American Indian, and 4.6 percent multiracial. Using administrative data, Dukes was able to capture information about all the school moves children enrolled in public schools in the 2007-2008 year had made since the start of kindergarten, regardless of the time of year of the move (he excluded structural moves).⁵ He was able to link this information to student background information and to scores on the Florida Comprehensive Assessment Test (FCAT). The data did not allow him to examine mobility outside the state.

Mobility rates for these students vary by subgroup. The differences are apparent in kindergarten, as shown in Table 2-3. Not only have nearly half of all Florida students made at least one nonstructural move between

⁵Dukes noted that the mobility of students who leave the state and return (during the time they are absent) is not captured.

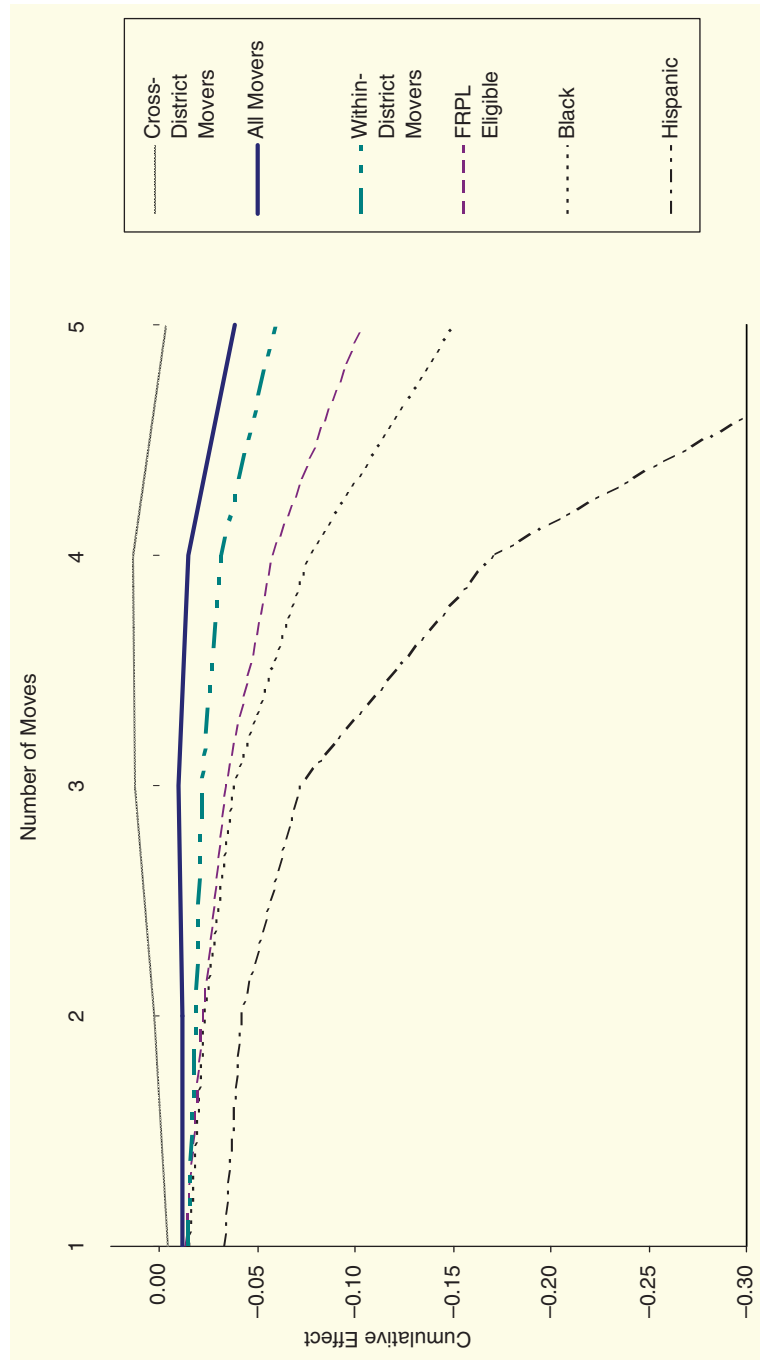


FIGURE 2-3 The effect of multiple moves on mathematics achievement in North Carolina.

NOTE: FRPL = free and reduced-price lunch.

SOURCE: Xu, Hannaway, and D'Souza (2009)

TABLE 2-3 Frequency of Kindergarten Mobility in Florida

	No Moves (%)	Moved Once (%)	Moved More Than Once (%)
White	43.27	33.54	30.43
Black	21.78	29.86	28.46
Hispanic	27.12	29.26	33.65
Asian	2.62	1.73	1.26
American Indian	0.28	0.26	0.25
Multiracial	4.93	5.34	5.96
Eligible for free and reduced-price lunch	84	14	2
Students with disabilities	78	18	4
English language learners	87	11	2

SOURCE: Dukes (2009). Data from Florida Department of Education, DOE Information Database.

TABLE 2-4 Frequency of Mobility by Third Grade in Florida

	No Moves (%)	Moved Once (%)	Moved More Than Once (%)
White	48.47	37.65	32.66
Black	19.39	26.98	33.52
Hispanic	25.10	28.54	27.29
Asian	2.57	2.25	1.29
American Indian	0.29	0.29	0.26
Multiracial	4.19	4.29	4.97
Eligible for free and reduced-price lunch	48	33	20
Students with disabilities	47	32	20
English language learners	49	34	17

SOURCE: Dukes (2009). Data from Florida Department of Education, DOE Information Database.

kindergarten and third grade, but the variation by subgroup is even greater by the time they reach third grade, as shown in Table 2-4.

Dukes also found evidence that the impact of mobility on students' FCAT scores increased as the number of moves went up. There is little impact on outcomes for children who have moved once, but scores creep down as students reach three to five moves. The impact of mobility on FCAT scores was most pronounced for children who moved seven or more times by third grade, with more than half scoring below the profi-

cient level. Dukes observed that, as with other data sets, the interesting patterns emerge in the analyses of specific groups of children.

New York City

Amy Ellen Schwartz presented similar results for students in New York City public schools. The largest school district in the country, New York City serves more than 1.1 million students in more than 1,400 schools, which range in size, character, and quality. There are schools with as few as 100 students and schools with more than 4,000, Schwartz explained, and some serve almost exclusively poor students, while others serve very few of them. The student population is also very diverse. More than a third of the students are black, one-third are Hispanic, many are recent immigrants, and many qualify for free and reduced-price lunch. Schwartz and her colleagues used longitudinal data collected by the Institute for Education and Social Policy beginning in the 1995-96 school year to examine the rates and effects of mobility of New York City students.⁶

In general, students in the city move frequently: 83 percent of all students in the district in grades 1, 2, and 3 attend the same school for those three years. Approximately 50 percent of the students who start in first grade are in the same school (or cluster) by eighth grade. Students in subgroups associated with disadvantage move the most, with rates highest for African American students and poor students.

The data set allowed Schwartz and her colleagues to examine student characteristics, in some cases following them all the way to college enrollment. They also had data on schools, such as spending levels and programs offered, and on teacher characteristics, housing, neighborhoods, and property values. Among their key findings about students in grades K-5:

- Black students had the highest rate of change (12 percent), and whites had the lowest (7 percent): 80 percent of white students attended the same school for grades 1 through 5, but fewer than two-thirds of black students reported this degree of stability. Hispanic students' mobility rates were slightly below those of black students, and those of Asian students were very similar to those of white students.
- Poor students had an 11 percent rate of change, and nonpoor students, 7.5 percent. Poor students were significantly more likely

⁶Schwartz credited Leanna Stiefel and Luis Chalice, who collaborated with her in preparing the presentation. For more information about the data on which the presentation was based, see <http://steinhardt.nyu.edu/iesp/>.

than nonpoor students to move during the school year and to move multiple times.

- There was little difference between rates of change for foreign-born and native-born students.
- Significant numbers of children moved during the school year. The rates range from a low of 3.2 percent for Asian third graders to a high of 7.9 percent for black fifth graders. And 56 percent of all first graders moved during that school year, with minority students most likely to move.

Schwartz used a variety of regression models to calculate the effect of mobility on children's performance in schools, using data from testing conducted in the third and fifth grades. Overall, she found that "for every move a kid makes across school years between first and third grade, their performance declines [in English language arts] by 0.08 of a standard deviation in the third grade." For mathematics, the decline was 0.11 standard deviation. Taking the results up to fifth grade, she found that the detrimental effect continued in a "monotonic way." That is, each additional move had a cumulative impact. Moreover, not only were black, Hispanic, and poor children more likely to move, the moves these children made had a greater negative impact on their academic progress. Schwartz acknowledged, in response to a participant's comment, that it is difficult to discern whether the multiple moves were progressively harmful in themselves, or whether they are simply an indicator that students are experiencing high levels of adversity outside school.

Schwartz and her colleagues, using test score data to assess the quality of the schools to which students go when they move, found (looking just at third graders) that 66 percent of black children who moved went to a lower quality school and 33 percent to a better school. Conversely, 60 percent of white students who moved went to a better school. Another participant pointed out that high mobility rates within a school tend to foster more mobility, because "the higher the mobility in the school, the more likely it is that there will be a seat open at any given time for an incoming student." Thus a district may be more likely to place an incoming mobile student who arrives in the middle of the year in a school with more frequent openings than in a stable school.

For Schwartz, these results highlight the importance of using district policy both to minimize the number of structural moves children make (by, for example, structuring schools to cover grades K through 8) and also to direct academic supports to the groups most likely to move repeatedly and to suffer for it academically. She also noted that housing policy (addressed in Chapter 6) offers opportunities to limit children's school mobility. Her work focuses on the circumstances and needs of students in

the New York City schools, and, because of its size, that school district is in some ways unique, Schwartz observed. Nevertheless, she said, “poor kids in New York look pretty much like poor kids in other cities.”

PATTERNS OF RESIDENTIAL MOBILITY

Another way to explore children’s mobility is through the family circumstances that lead to frequent moves. Residential mobility may influence families, children, and neighborhoods in many ways. Several participants explored the ways residential mobility relates to school mobility and the groups who are at highest risk for disruption. Again, the presenters used data from particular places, but the focus of the conversation shifted from general demographic characteristics to analyses of selected groups, such as poor and homeless children, who are found in many places.

Urban Homelessness

Families who are homeless face clear challenges in providing continuity in their children’s education, and John Fantuzzo pointed out that there are many reasons why research on this group is difficult. The difficulty of sampling this highly mobile group and the risk families may perceive in reporting events, such as domestic violence, are just two of the research challenges. He described a unique partnership in Philadelphia that has created an integrated data set known as the Kids Integrated Data System (KIDS). This system was designed to support research that identifies risk and protective factors among cohorts of children from birth to age 21 using administrative data from multiple public agencies, including the School District of Philadelphia, the Department of Child Health and Welfare, and homeless shelters. The data housed in this system allow researchers to study the relationships among homelessness, school mobility, and educational well-being in this large urban setting.

Fantuzzo presented information about a third grade cohort for whom state proficiency data were available. The cohort included children who were born in Philadelphia, entered the school system, and remained in the county through the end of third grade—a group of about 12,000 children who were predominantly from minority and low-income families. To put this cohort into a national context, Fantuzzo noted that Philadelphia is the poorest of the 10 largest cities in the United States, with 24.5 percent of the households living in poverty. Among the cohort studied, however, the poverty rate was 70 percent—just under three times the rate for the municipality as a whole. Only 42 percent of this third grade cohort met state standards for reading proficiency and 59 percent met mathematics standards. During the third grade year,

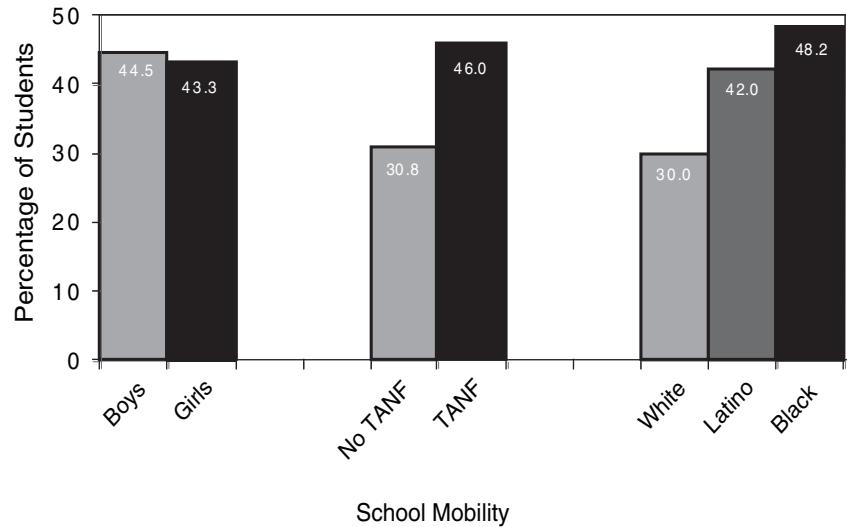


FIGURE 2-4 Intradistrict school mobility* in Philadelphia.
*Mobility was defined as at least one move any time between kindergarten and the end of third grade.
NOTE: TANF = Temporary Assistance for Needy Families.
SOURCE: Fantuzzo, Rouse, and LeBoeuf (2009).

34 percent of the cohort was classified by the district as truant and 1 in 10 children was suspended.

Fantuzzo and his colleagues used KIDS data, including administrative records from multiple city agencies together with school outcome data, to study the prevalence and impact of publicly monitored risks. They found that the rate of homelessness among these children, at 9.2 percent, was three times higher than the national average for elementary-age students. Figure 2-4 shows the rates of intradistrict school mobility for this cohort, by gender, participation in the Temporary Assistance for Needy Families (TANF) Program (a federal program that provides support to low-income families), and race. Mobility was defined as at least one move from kindergarten through third grade.

Fantuzzo and his colleagues also used multiple regression models to discern the increased odds of students in this cohort having poor academic and behavioral outcomes as a result of being in one of the following categories: only homeless, only school mobile, or both homeless and school mobile. They found that, compared with children who had experienced neither homelessness nor a school move, those who had experienced one or both had a significantly higher risk of poor academic and behavioral

outcomes. Homelessness was associated with greater odds of poor academic achievement and classroom engagement, whereas school mobility was associated with increased risk for truancy and suspension. Across all outcomes, the greatest impact was found for students who experienced both homelessness and school mobility.

The next step, Fantuzzo explained, was to look in greater detail at the experiences of the mobile and homeless children in the cohort, particularly the co-occurrence of other publicly monitored risk factors. Table 2-5 shows the levels of risk for four categories among the third grade cohort (school mobile only, homeless only, both, or neither) compared with national rates. This table shows that homeless children, including those with and without school mobile experiences, were also most likely to experience every other risk in the analysis.

Fantuzzo and his colleagues have explored questions about the timing of adverse events, such as becoming homeless, as well as patterns across schools and neighborhoods that could identify contributing factors and opportunities for interventions. They found, for example, that among the homeless children, 95 percent first experienced homelessness before they entered first grade. Homelessness also tends to be highly concentrated in particular neighborhoods and schools: the average across schools is 9 percent, but the range is from 0 to 32 percent.

TABLE 2-5 Co-Occurrence of Mobility and Homelessness with Multiple Risks in Philadelphia

	Philadelphia				
	National	Not Homeless or Mobile	Only Mobile	Only Homeless	Both Homeless and Mobile
Inadequate prenatal care	4	30	36	53	52
Preterm/low birth weight	3	20	21	30	23
High lead exposure	4	17	24	31	38
Teen mother	12	21	28	31	31
Low maternal education	12	24	27	36	38
Child maltreatment	1	7	11	34	37

NOTE: Numbers in this table represent percentages of the third grade cohort.

SOURCE: Fantuzzo, Rouse, and LeBoeuf (2009).

Fantuzzo described several goals for data collection that could improve this portrait of mobility and homelessness, including analysis of more frequent data points to measure school mobility (e.g., between report card periods) and longitudinal analyses of students' academic trajectories across the first through third grades. Partnerships among shelters and city agencies might expand opportunities to collect information about hard-to-reach children and families and their residential changes. Fantuzzo stressed that other cities (Cleveland, for example) are making similar efforts.

Anne Masten also took a close look at homeless families, noting that, even among families facing significant disruption and possessing few resources and protections, there is "a striking variability of risk" in children. She presented data on risk factors among children ages 8 to 10 living in shelters, which show that the higher numbers of risk factors in a child's life are associated with higher rates of behavior problems (see Obradovic et al., 2009). And, on average, homeless, highly mobile children perform less well on academic achievement tests than their peers. Yet, Masten pointed out, there is surprising variation even in these groups—with some children with multiple risk factors faring very well, and some highly mobile children scoring very high on achievement tests.

Rural Poverty

Fantuzzo focused on homelessness in an urban setting, but disadvantaged children in rural or small-town settings may have somewhat different experiences. Kai Schafft synthesized a range of empirical studies and other work to shed light on residential mobility and student transiency in nonurban contexts (Schafft, 2005, 2006, 2009; Schafft and Prins, 2009; Schafft, Killeen, and Morrissey, 2010). His focus was on the community contexts in which transience occurs because it is his view that much of the scholarship on the issue is "analytically circumscribed by individual outcomes or the walls of the classroom or school." His research often relies on qualitative or mixed-method approaches, owing to the difficulty of examining community characteristics using the available large data sets. Specifically, he has explored such questions as why people in rural settings move, when and where they move, what guides their decision making, and how schools and other community institutions support, or fail to support, mobile families and children. He used a profile of a woman who grew up in homelessness to highlight the interconnected nature of the problems mobile families face.

Based on empirical data he collected on student transience in approximately 300 upstate New York rural districts, Schafft found that mobility tends to be greatest in the poorest districts and that many families are

highly mobile within a fairly small area. He used the term “rural mobility sheds” to suggest a comparison with the way various environmental forces and local topographical features interact to affect the quantity and flow of water in the region surrounding a body of water. Similarly, he suggested, social and institutional features of communities may shape the flow of low-income movers.

The key reasons families move are social and economic insecurity, exacerbated by the lack of safe, adequate, and affordable housing. Schafft observed a self-reinforcing cycle of poverty, residential mobility, and community disadvantage, illustrated in Figure 2-5. This cycle tends to contain the mobility within communities with high unemployment, high percentages of rental housing stock, and high poverty. Long-term economic decline is followed by out-migration, particularly of younger and more educated residents. Housing is devalued, and single-family homes are converted into multiple rental units. Low-income families remain, in circumstances of increasing economic insecurity.

Looking at a particular district in which this cycle had developed, Schafft described a student population of which 46 percent were eligible for free and reduced-price lunch, and in which an average of 1.6 middle school students per day entered or left their schools, for a turnover rate of 29 percent. Approximately half the moves took place within the district, and the median distance between students’ new and old schools was

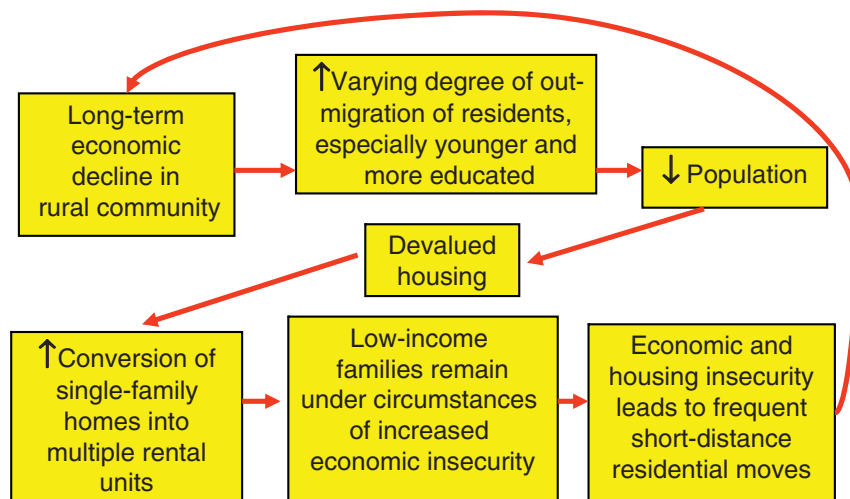


FIGURE 2-5 The cycle of poverty, residential mobility, and community disadvantage.
SOURCE: Schafft (2009).

11 miles. In order to gain insight into why and where these families were moving, Schafft conducted interviews with 22 parents of children who had made unscheduled moves within the district and developed detailed histories of the five years that preceded the move for each family.

He found that these 22 households had made 109 residential moves during the five-year period, 91 percent of which occurred in upstate New York. Thirty-one percent were within the same municipality, and 31 percent did not require a school change for the children. Most of the families lived in 3 to 8 different places, although some lived in as many as 10 to 13 places in that five-year period. Families reported moving because of a combination of social, economic, and housing problems, and in nearly every instance Schafft was able to identify a main precipitating reason or proximate factor for each move.

The overwhelming majority of moves resulted from push factors, rather than pulls. That is, the families were impelled to leave their place of residence as opposed to seeking a better situation somewhere else. Moreover, he noted, "while human capital theories of migration and mobility might lead us to believe that most mobility is primarily economically motivated," just 3 of the 109 moves were made as a result of a job opportunity. The residential push factors included eviction, condemnation of a property, and overcrowding.

Schafft stressed not only that transience and chronic mobility are problems in rural as well as urban areas, but also that the consequences may be different in these settings. Improved understanding of the patterns that are common in urban and rural settings, for example, can help school administrators and others develop strategies to support mobile students. The administrator of the district Schafft had profiled used the maps of mobility patterns he had developed to plan ways to coordinate services with neighboring districts, because the maps made it clear that they were sharing many students back and forth. This sort of effort is particularly important, Schafft suggested, because transient students are not identified with migrant or homeless children and they are thus a large population of students at risk who are "flying under the radar."

Schafft closed with two points. First, although most research on student transience focuses on urban settings, the problem occurs widely across economically disadvantaged areas in both urban and rural areas. Student transience in rural areas has often been overlooked by both researchers and policy makers. Second, Schafft has found that transience is not simply an academic issue, but is closely linked to broader questions about family and community disadvantage. Thus he advocates multidisciplinary and multimethod research, applied in the pursuit of questions that look beyond the school, as the best analytic approach to the problems faced by highly mobile families.

Neighborhood Contexts

Robert Sampson also used the social context as a focus for understanding student mobility, highlighting the urban neighborhood rather than the rural county. He described a collaborative study in Chicago called the Project on Human Development in Chicago Neighborhoods (PHDCN), which began in 1995.⁷ The study's purpose was to investigate the influence of the structural and neighborhood context on children's development through multiple research methods that included community surveys, video records, talks with neighborhood leaders, and local archives. At the same time, the researchers studied a cohort of children from birth, collecting data at three-year intervals. They used a stratified random sample of neighborhood clusters to make sure they captured the economic and social diversity of Chicago's neighborhoods in the population they studied.

Sampson and his colleagues hoped to explore the nature of mobility, what predicts it and influences it, and how it influences the environment in which it takes place. They found a great deal of mobility in Chicago neighborhoods, and its nature and impact varied significantly by group. Figure 2-6 shows the changes in median income for different groups of Chicago residents who moved within Chicago or out of the city or who stayed in place. The data show both whites and minorities becoming more prosperous as they move away from the city, although, as Sampson noted, much of the change is "in essence, leading to a new kind in inequality," in that income gaps among the groups remain even as the overall income levels rise.

In general, Sampson found, white residents and those who are more educated, wealthier, and in stable relationships, as well as those who own their homes, are more likely to move out of Chicago. As Schafft had found in rural New York, families in poverty in Chicago tend to move frequently but do not move far. Many Chicago neighborhoods are highly segregated, and white and Latino residents seem to be more influenced by moves in their own neighborhoods—particularly changes in the racial composition of the neighborhood—to make a move out of the city. At the same time, rates of both upward and downward mobility differ across population subgroups.

DISCUSSION

Looking across the data about student mobility in different places and circumstances, participants had various detailed questions about the col-

⁷Details about the study can be found at <http://www.icpsr.umich.edu/PHDCN/>.

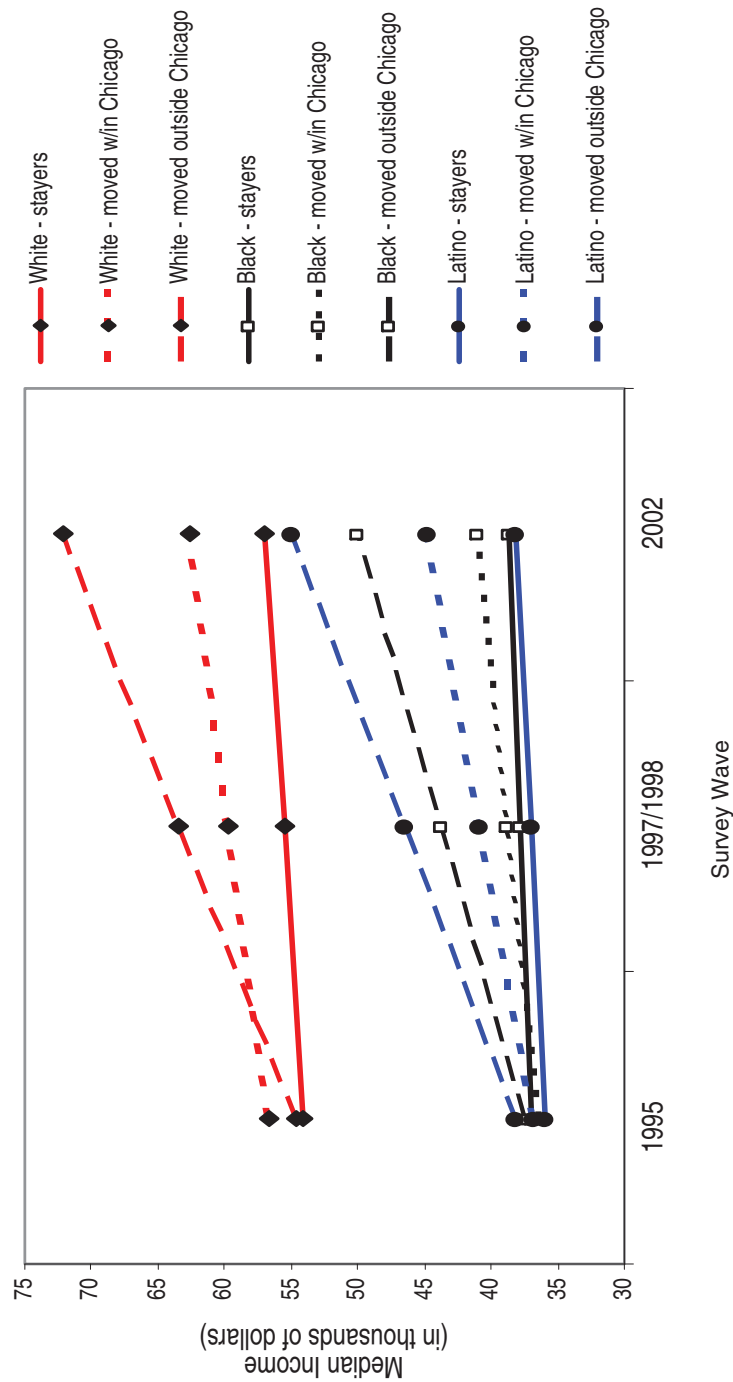


FIGURE 2-6 Unadjusted trajectories of neighborhood median income among stayers, movers within the city, and movers out of Chicago, by race and ethnicity.
 SOURCE: Sampson et al. (2009). Reprinted with permission from Sampson and Sharkey (2008). Copyright 2008 by the Population Association of America.

lection and analysis of mobility data, and particularly about the interactions among the many factors that influence families' circumstances and their decisions. Nevertheless, some clear patterns were apparent in the available evidence, as Stephen Raudenbush pointed out:

- Studies of the average effect of mobility in the population of all students suggest that mobility has a negligible effect.
- Analyses of disadvantaged groups—particularly low-income children and minorities—suggest that they move more often and appear to experience more negative consequences from moving than do other children.
- The contexts in which children move seem to provide a useful predictor of whether or not the outcome will be detrimental, one that comports with common sense. That is, children in families who are economically stressed and downwardly mobile, whether in urban or rural settings, are at the greatest risk of both high rates of, and negative effects from mobility.
- Homeless children appear to be at particularly high risk, not only because they are highly mobile but also because they have numerous other risk factors, such as family disruption, prolonged economic distress, and lack of social, community, and other resources.
- More negative effects may be associated with moves within a school district than moves between districts, and with moves that take place during the school year, compared with those that occur between school years.
- Multiple moves appear to be cumulatively detrimental, particularly after a threshold of three to four moves or more.
- Evidence suggests that when schools experience high rates of mobility, particularly during the school year, achievement levels diminish. Thus, high school-level mobility rates negatively affect the achievement of levels of nonmobile children.

With those points in mind, the group's attention turned to questions about the ways in which mobility harms children and what can be done to minimize the harm.

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Methodological Issues

Mobility is a complex phenomenon to study. Directly or indirectly, each of the presenters highlighted some of the methodological challenges in collecting and analyzing data that would enable them to make solid inferences about the effects of mobility on children's development and the effectiveness of possible interventions. Mobility is not a single event that happens at a particular point in time, but a series of processes and changes that may have complex and cumulative effects—and these effects are likely to vary with the characteristics of the children who experience the mobility. Eric Hanushek and Jens Ludwig provided two perspectives on ways of identifying and assessing the impact of mobility.

ISOLATING THE EFFECTS OF MOBILITY ON INDIVIDUALS AND SCHOOLS

Hanushek began with the point that had emerged so clearly from the data already discussed—that although national residential mobility rates may have declined, they are consistently highest among low-income families. The challenge is to distinguish between positive moves, made in search of better schools and neighborhoods, and moves that are made because of some sort of disruption and that cause harm. Disentangling the effects of these two kinds of moves is difficult because researchers lack reliable measures of school quality and of family choices and behaviors, and because ways of observing the causes of mobility are limited. Never-

theless it is important to identify possible negative effects of mobility, both for individual students and the schools into and out of which they transition.

To address this need, Hanushek and his colleagues attempted to hold all other factors (e.g., family and neighborhood characteristics) constant and examine the independent effect of changing schools. They developed a model that uses measures of achievement growth to examine the different ways in which mobility might affect individual students and schools.¹ Achievement is the product of many factors, so they made a few assumptions to simplify the analysis. First, they assumed that achievement during the school year prior to a move was not unusually bad or good. Second, they assumed that students are generally on a growth path, and that this path is likely to follow a particular trajectory, assuming a constant school quality from grade to grade. That is, if a student is learning at grade level, he or she is likely to continue at that level after moving, assuming the new school is of similar quality. Finally, they assumed that the disruption that caused the move (e.g., divorce, economic upheaval) lasted only for the year in which the move took place. These assumptions allowed them to isolate any changes in school quality that students experienced when they moved.

Hanushek and his colleagues applied the model to data from the Texas Schools Project, which provided attendance and mathematics achievement data for three cohorts of students in grades 4 through 7. For the general student population, including students who move for different reasons, they found that the move itself had little effect on the students' academic trajectory (past the disruption in the year of the move). In other words, Hanushek said, "if they're in a bad situation, the move has very little marginal effect on their bad situation." More challenging was to discover whether high mobility has a measurable effect on peers, teachers, and the quality of the schools into and out of which students move. To do this, they compared student achievement among, for example, fourth graders in consecutive years, and used the differences in mobility rates "to see whether mobility shows up in differences in achievement, other things being equal." They found that "higher student mobility in a school during the school year really hurts everybody, and it hurts people in a fairly dramatic way."

Hanushek emphasized that for people in high-mobility schools these effects persist throughout their school careers. Moreover, African American students in the Texas sample had much higher mobility rates than other children, and they also tended to go to schools with much higher mobility. Hanushek and his colleagues estimated that the difference in mobility rates between white and African American students in Texas

¹The model is described in detail in Hanushek, Kain, and Rivkin (2004).

“can explain about 15 percent of the achievement gap by grade seven.” Participants questioned the representativeness of the Texas study, and particularly the assumption in that study that the effects of mobility are temporary.

Hanushek concluded that understanding the impact of mobility is difficult because measuring the characteristics of schools and families that make a difference is so difficult. But, by isolating individual fixed effects, they were able to show that while the effects of mobility on individuals are fairly small, the effect on schools is quite large.

SEEKING CAUSALITY

Jens Ludwig described the methodological challenges associated with estimates of the effects of residential mobility on outcomes for children. As others had already discussed, there are numerous ways in which mobility might affect development, positively or negatively. Moving may be disruptive, and it also changes the social networks, routines, and perhaps the available coping strategies in a child’s life. After a move, a child may have more, fewer, or simply different community, social, institutional, and physical resources. Because the reasons for a move and its consequences are so varied, it is difficult to think about a single effect of moving. The implications for child development and schooling are likely to depend in significant ways on the motivation, circumstances, and options facing a family that moves.

Thus, to understand the effect of a move, it is necessary to understand the circumstances the family might have experienced if they had not moved—or the “counterfactual” condition. For example, if the head of a household loses his or her job, the family is evicted from their home, and they move in with relatives, should the counterfactual be identified as the scenario in which the job was not lost, the job was lost but the family had the wherewithal to avoid eviction, or the family was evicted but moved into a different sort of neighborhood? Alternatively, if a head of household receives a promotion and a raise in pay and moves the family to a wealthier neighborhood, is the counterfactual the adult is not getting the promotion, the family not moving, or the family not moving but sending their children to private school?

In seeking the correct counterfactual, one might consider the various constraints on the choices families are making. A family that experiences a loss of income may or may not move, but it will have to adjust in some way, and most of the possible adjustments could affect children’s development. So, Ludwig suggested, from a social science point of view, one important implication is that in conducting statistical analyses it is possible to “overcontrol” as well as to “undercontrol” for relevant confounding factors. That is, some of the explanatory variables researchers

include in their models may be factors that families would be forced (or able) to adjust whether or not they chose to make a move. The most promising way to understand the messy world of people's choices can best be studied in terms of questions about how they respond to particular interventions, whether they are policy interventions or natural experiments that are induced by changes in the economy or the housing market. If one begins with this sort of policy evaluation question, it can be researched using a variety of observational approaches, in which two groups that naturally experience different treatments (without intervention) are compared and the researcher controls for factors other than the treatment that might have affected the outcome. Alternatively, one might use a randomized approach, in which subjects are randomly assigned to different treatment groups, or so-called natural or quasi-experiments, in which the treatment is "assigned" by a change of policy or other factor beyond the control of subjects.

These distinctions have stimulated passionate disagreements about establishing causation in many contexts, and, Ludwig noted, an empirical literature has emerged that describes ways of using nonexperimental estimation when a randomized study is not feasible. For example, Robert LaLonde (1986) developed an influential approach to evaluating estimation methods. Researchers who have data from a randomized experiment, and therefore know the "right" answer regarding the effect of a policy intervention on particular outcomes, can then try to use different observational methods to see if it is possible to reproduce the results that were obtained experimentally. "The answer that LaLonde got," Ludwig explained, was that there were big differences between the two sets of results, a finding that "was shockingly grim and has had a profound influence on the field of empirical economics and applied statistics."²

This approach was initially developed for research on employment, but it has been used to examine education questions as well. Although the results of nonexperimental estimates vary in practice, depending on the context and the quality of the available data, Ludwig has found that, on average, they do not look particularly impressive. He described a comparison between experimental and nonexperimental results related to mobility to illustrate the problem, using 1990s data from the U.S. Department of Housing and Urban Development's (HUD's) Moving to Opportunity (MTO) study. In that study, a total of 4,600 families in 5 cities were recruited to participate and randomly assigned to 1 of 3 groups. Two of the groups received different sorts of housing vouchers designed to help them move to neighborhoods with lower poverty rates, and the

²Other researchers have done similar work with somewhat different results (see Dehejia, 1999; Heckman, 2008; Smith and Todd, 2005).

control group received no voucher. Thus, Ludwig explained, “the random assignment resulted in nontrivial differences in the average neighborhood environment for otherwise similar types of families.” These results could be used to compare the effects of different specific neighborhood characteristics and mobility on outcomes for children.

To develop a nonexperimental estimate for comparison with the empirical results of the randomized experiments, researchers can use different methods, such as standard regression analysis and its close cousin, propensity score matching, in which certain variables are held constant and others are varied with the goal of isolating a particular effect. The ability of these sorts of nonexperimental or observational approaches to reproduce the experimental answer probably depends on the quality of the data that are available, so it is important that a fairly rich set of background characteristics are available for the families and children in the MTO study, including demographics (e.g., age, household size), socioeconomic data (e.g., income, parental employment, history of public assistance), housing and mobility history, perceptions of the baseline neighborhood (e.g., having local family or friends, perception of safety), and, perhaps most important, the family’s motivation for wanting to move and past experiences in different types of neighborhoods.

Figure 3-1 shows the results of the comparison between the empirical results of the randomized experiment and the estimated results of applying nonexperimental methods to the MTO data on the effects of housing vouchers. The light gray bars, labeled OLS, are the estimated, nonexperimental results for various outcomes, and the dark gray bars, labeled IV, are the experimental results. The estimated results indicate, for example, that boys who live in high-poverty areas are slightly less likely to be involved in risky behavior than boys who live in low-poverty areas. However, the darker bar indicates that the experimental results were quite different. This result occurs, Ludwig suggested, because factors not observed in the study lower the likelihood that these boys would engage in risky behaviors. In his view, the stark disparity on the outcomes for the two different approaches to examining mobility in this context makes clear that the nonexperimental method rested on assumptions that the empirical evidence indicates were wrong. However, he pointed out, randomized or natural experiments can reduce the selection bias that limits the usefulness of the estimates, but they also limit the range of questions that can be explored.

Ludwig argued that the research portfolio regarding the factors that determine mobility is currently out of balance. He suggested that randomized and natural experiments should make up a larger proportion of the research portfolio than they do now. At the same time, rich descriptive

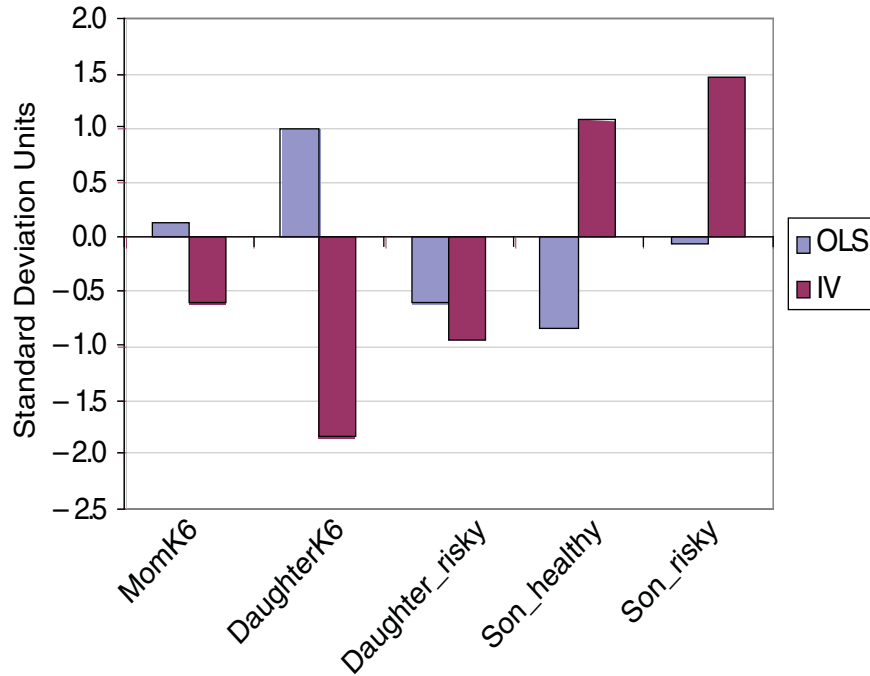


FIGURE 3-1 Comparison between empirical and estimated results.
NOTE: OLS = the estimated, nonexperimental results for various outcomes;
IV = the experimental results.
SOURCE: Adapted from Kling, Liebman, and Katz (2007).

studies would support the design of better experiments down the road, by highlighting possible mechanisms and other researchable questions.

Participants generally liked his approach, although several reiterated the point that using strict randomly controlled trials to study families' housing decisions and other questions related to mobility is often not feasible and perhaps unethical. Moreover, recent improvements in non-experimental methods mean that more feasible alternatives exist.³ Several stressed the value of natural experiments, looking at, for example, the impacts of foreclosures on students' academic achievement. Another suggested that, given the practical and ethical difficulties of randomly controlled studies, the solution is to seek "overwhelming data of the

³Nonexperimental research designs that might be used when randomized controlled studies are not feasible include more qualitative approaches, such as case studies or ethnographic surveys; longitudinal studies; correlational studies; and statistical analyses, such as regression discontinuity, use of instrumental variables, or propensity score matching.

weaker kind that [describe how] a process works in the natural world.” These discussions suggest that a combination of rich qualitative reports, studies using the weaker regression design, and a theoretical model about the mechanisms through which an intervention works might be very compelling.

Ludwig acknowledged the point, adding that because so many families who would be eligible for housing assistance are not receiving it, there are multiple opportunities for comparing outcomes among different groups. Ludwig stressed that answering questions about causation is most important at the point when policy makers are contemplating a specific intervention. The key concern with nonexperimental methods, he suggested, is that they can give a misleading reading on the size or even the existence of key causal relationships. More important, he said, “We currently do not have very good methods for determining how well our nonexperimental approaches are working. If we cannot be sure that our nonexperimental estimates are close to the truth we must be appropriately cautious in basing policy decisions on such results, and continue to push harder to develop a body of evidence that gives us greater confidence that we understand what the consequences of different policy decisions will be.”

Reflecting on the state of mobility research in light of the methodological issues that had been raised, Stephen Raudenbush offered several observations. First, he noted that the field has benefited recently from a body of carefully done empirical studies that represent an important step forward. These studies have established a strong basis for conclusions about which children are exposed to the most mobility and which children seem to be at greatest risk for harm from mobility. But the causal questions are complex, and the interpretations of what these data mean are less straightforward.

Raudenbush highlighted the value of Hanushek, Kain, and Rivkin’s approach and Ludwig’s challenge. Their model bypassed the lack of complete data to show the short-term disruptive effects of a move in a way that takes into account the effects of the new school and neighborhood of a move. It also has a useful way to reframe the causal question by looking for the impact of attending a school that is characterized by high levels of mobility. This is valuable, Raudenbush observed, because it demonstrates the need for a policy intervention based on the results of this causal question. For his part, Ludwig challenged researchers and policy makers not to take shortcuts on causal questions. Strong design considerations—either randomized experiments, regression discontinuity studies in which the selection process is fully known, or natural experiments in which there is a clear instrumental variable—are needed to support causal interpretations.

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4

Policy and Programmatic Responses

The workshop discussions converged on the idea that children who are affected by instability in their housing, their schooling, their families, and their families' livelihoods are at risk for academic difficulty and other problems, and that when those children move frequently the problems are exacerbated. We saw in Chapter 2, for example, that mobility patterns are different for homeless children, minority children, and children from low-income families than for many others, most likely because mobility can exacerbate already precarious family situations. While it is difficult to disentangle the unique effect of mobility from the effects of other cascading, associated risks, Stephen Raudenbush observed, there is ample theoretical reason and some empirical evidence for viewing the problem of frequent mobility among the most disadvantaged families as a significant concern for public policy. The workshop turned next to the question of what policy makers and others can do about this problem. Presenters discussed policies and programs designed either to reduce mobility for this vulnerable population or to buffer children against its impact, including both ideas that have been implemented and ideas still in the potential stage.

POLICY PERSPECTIVES

Two primary avenues for policy interventions that could help highly mobile children are housing and education. Sandra Newman provided a primer on housing policies and the possibilities they offer in cases in

which housing problems (as opposed to other family disruptions) are the direct cause of the mobility. She described some research on the outcomes for children whose families received housing vouchers. David Johns provided a national perspective on education policy, with a focus on policies related to homeless children.

Housing Policy

Three kinds of housing assistance are available for low-income families, Newman explained. Public housing—there are approximately 1.2 million units nationwide—is perhaps the best known. Another is private assisted housing, an arrangement through which a private-sector developer receives advantageous financing from the government in return for a time-limited commitment to keep rents affordable. There are about 1.5 million units of this type of housing nationwide. The largest category is housing vouchers, which are currently assisting about 2 million households. She stressed that, unlike the food stamp or Medicaid programs, housing assistance is not an entitlement—only about one-third of families whose income makes them eligible receive any housing support. She also noted that the United States spends three times more money on tax benefits to homeowners as it does on assistance to low-income households, primarily in the form of mortgage deductions.

Several requirements govern housing assistance. Housing units must meet physical quality standards. Both public housing and private assisted housing must meet site and neighborhood standards, although these requirements do not apply to housing units offered to voucher holders. Families generally pay approximately 30 percent of their income for these units, although voucher recipients may choose to pay a higher percentage.

Newman suggested that the voucher program is often viewed as the centerpiece of housing policy. It is the least expensive approach, and some analyses show that families have greater choice as to where they will live when they use vouchers. On average, there is less neighborhood distress where voucher units are located, compared with neighborhoods where public housing is located. She focused on vouchers as perhaps the most useful window into housing policy and residential mobility.

Vouchers are interesting in this context in part because they are designed to foster mobility by helping families move to higher quality neighborhoods. Indeed, one criterion used to evaluate voucher programs is whether they have successfully helped families move to better neighborhoods or whether they are insufficient to overcome obstacles to that sort of move. This focus for voucher programs was in part a response to research on the effects of neighborhoods on families and children,

although Newman said that the results of this research are somewhat mixed. The median length of time that families remain in their voucher residence is about two years, but the impact of the change on families and children is not straightforward.

She described a study of the effects of housing vouchers on children's moves conducted from 2000 to 2004 in six cities (Atlanta, Augusta, Fresno, Houston, Los Angeles, and Spokane) (Gubits, Khadduri, and Turnham, 2009). The researchers found a dramatic decline in homelessness (36 percent) among those who used the vouchers. In terms of reducing mobility, the study found significant results only for families who started out in their own residences (in contrast to those who had been living in public housing or had been sharing space in someone else's home). Those who started out in their own residence had 1.3 fewer moves during the study period if they received vouchers. The voucher recipients experienced only a slight overall increase in neighborhood quality, and most of this improvement was for families who had begun in public housing, which is typically located in high-poverty neighborhoods.

Mysteriously, Newman noted, a substantial share of those of those who received vouchers relinquished them, even though they continued to qualify for this assistance. The study results indicate that a variety of family experiences may account for this phenomenon. Many families reported being overwhelmed by the rules and paperwork, having difficult interactions with landlords related to the voucher, and having trouble finding housing that would qualify. There are no baseline differences between those who did and did not relinquish their vouchers, Newman explained, so this finding is probably not a selection issue. However, the voucher is a very large subsidy, and those who held on to their vouchers were in more favorable economic circumstances by the end of the study than those who relinquished them.

Newman drew a few conclusions from these data.¹ First, she said that performance incentives for the program's administrators would encourage them to do a better job helping families. In particular, they could provide more detailed and useful assistance in searching for housing that will qualify for the program. At the same time, as a participant pointed out, the waiting lists for this program can be years, and in many cities they are actually closed because the demand is so high. Baltimore, Newman noted, closed its list at 18,000 names several years ago.

¹Newman cited Gubits, Khadduri, and Turnham (2009) and De Souza Briggs (2008).

Education Policy

David Johns provided an insider's view of ways that Congress has addressed the issue of school mobility through education policy. He reviewed legislation and funding priorities that affect children, families, and education, such as the Kennedy Serve America Act, the Child Abuse Prevention and Treatment Act, the Family Violence Prevention Act, and others. At the time of the workshop, legislative efforts in development included programs related to early learning, workforce investment, and universal literacy. More directly related to mobility, however, is the McKinney-Vento Homeless Assistance Act, which addresses the education of homeless children and youth in U.S. public schools. This act was adopted in 1987 in response to data showing that up to 50 percent of homeless children were not enrolled in school. It was subsequently reauthorized as part of the No Child Left Behind Act of 2001.

The law provides funds to support staff liaisons to homeless families who are responsible for ensuring that homeless children are enrolled in school and for addressing problems that arise in relation to their education. For example, the liaison may help to resolve a dispute or ensure that a student remains enrolled through periods of homelessness. Liaisons may also address problems with transportation or other obstacles to regular attendance. It also establishes the right for homeless children to remain in the school they attended prior to becoming homeless and requires the school district to provide transportation.

The federal government recently invested \$70 million in McKinney-Vento services, as part of the American Recovery and Reinvestment Act of 2009, which, Johns explained, doubled the size of the program. Nevertheless, fewer than 10 percent of school districts that receive Title I funds² currently receive McKinney-Vento funds as well. Perhaps more important, Johns indicated, are ongoing efforts in the House and Senate to educate senators and representatives about the needs of homeless students and others highly mobile students, which has become a particular focus since the 2008-2009 recession began.

Many of the needs he highlighted relate to imperfect understanding of the needs of different groups and their interactions with other groups and schools. Sometimes issues related to the jurisdiction of different committees impede comprehensive support for all who need it. As one presenter suggested, the data indicate that large numbers of children and youth fall outside the most vulnerable groups, but they still need support

²Title I funds are distributed by the U.S. Department of Education to schools and districts serving high percentages of students from low-income families to be used to support the academic achievement of those students.

that can help prevent them from falling into those acute-risk groups, such as the homeless.

It is therefore important to make sure that regulations and programs addressing the needs of particular children are not working at cross-purposes, so that eligibility for one type of support or program will not make children ineligible for another. Formal definitions of categories, such as homeless youth, are also important in this context, as they may exclude segments of the population that also need support. The definition of homeless youth in the context of education (“lacking a fixed, regular, adequate night time residence”) was designed to include children who are staying temporarily with relatives, living in motels or shelters, and so forth. Yet many children still fall through the cracks, and the definition used by federal housing programs, he said, is less inclusive. Johns suggested that other programs, such as those related to workforce development, could help link job training and placement opportunities to housing assistance opportunities and related support services.

At the same time, there are many opportunities for the federal government to offer practical assistance. For example, many districts have struggled to provide the transportation that can make it possible for homeless and transient young people to stay enrolled in their original school. Lack of adequate funding for this frequently large expense, as well administrative and other obstacles to transporting children within or across districts, can be a daunting problem. Some districts are spending all of their McKinney-Vento funding on transportation because they have no other way to cover this necessity. This problem is not just an administrative one, but also relates to the issue of schools with high mobility raised earlier. For example, if homeless children in a district tend to be housed in a particular shelter and enrolled in the nearest school, their mobility is likely to affect the quality of that school. Johns observed that flexibility in Title I regulations, as well as other programs related to infrastructure and transportation, may provide means of supporting districts facing this problem.

Perhaps more important are recent initiatives, he suggested in response to another participant, such as the 2009 Homelessness Prevention and Rapid Rehousing Program, that are designed to reduce homelessness, rather than simply to ameliorate its discomforts. He noted that 20 or 30 years ago it was rare for a homeless person to report having grown up homeless, but today it is more common. Homelessness has become an intergenerational problem; when part of an 18-year-old’s exit interview from foster care includes instructions on how to locate emergency shelter, he said, it is clear that policy is not adequately addressing the problem.

Finally, he noted that the Senate, seeking better data about the problems associated with homelessness and mobility, has recently requested a

new study from the U.S. Government Accountability Office. The request covers connections among homelessness, mobility, achievement, and development, as well as better measures of the children affected and the impact. Johns closed with a request that the research community help policy makers by “speaking in very clear understandable ways about the issues facing this population.”

PROGRAMMATIC RESPONSES

Presentations on individual programs and policies based in schools, communities, and the U.S. Department of Defense provided a close look at how some of these issues are addressed.

Advocacy and Community Action

If a school has a high classroom turnover rate, Chester Hartman commented, “It’s chaos. It makes all the reforms—smaller classes, better trained teachers, better facilities—irrelevant.” He noted that in some classrooms in low-income and minority neighborhoods turnover rates as high as 50 to 75 percent are not uncommon, and that this situation affects not only those mobile students, but the others—and their teachers—as well. He highlighted the reasons why the problem is so complex, alluding to the many subgroups already discussed and also noting some that had not been mentioned, such as children whose families are fleeing international upheaval and survivors of natural disasters, such as Hurricane Katrina.

Hartman also described some of the lessons that can be drawn from work published in a focused issue of *The Journal of Negro Education* (Hartman and Franke, 2003), which examined community-based efforts to support various groups of children in need. For example, the children of migrant workers, who may work on farms, in dairy or meat production, or similar fields, have problems that include cultural isolation and often linguistic isolation in addition to many of the problems that affect other transient children. Many education programs for migrants have used technology effectively to provide distance learning to these children, as well as to make their academic and health records more accessible to the adults who work with them.

Other approaches that have been successful include an intense focus on intake procedures when new families enter a school. This may include taking a family history, conducting academic testing, offering a classroom buddy system, providing health services and family counseling, and follow-up to monitor new students’ progress. Other districts have had success with developing community schools, in which the facility is available in the afternoons, evenings, and weekends so it can house health

services, English classes, job counseling services, and so on. Coordination between housing officials and educators is also useful because the primary trigger of classroom instability is housing instability. For example, families can be encouraged to time moves to fit children's schedules, whenever possible. Hartman highlighted the need for laws and programs that support residential stability, and suggested that an adequate supply of decent, affordable housing should be treated as a right. If that were a policy priority, in his view, it would go a long way toward reducing school mobility.

A School District Addresses Student Mobility

The Arlington, Virginia, public school system has made reducing school mobility and supporting mobile students a priority, Judy Apostolico-Buck explained. The 20,000-student district has high percentages of minority and low-income students but a generous budget, so they have been able to make a significant investment in a preschool program. It conducted an evaluation of its 37-year-old Montessori preschool program during the 2001-2002 school year.

Using the Phonological Awareness Literacy Screening (PALS) assessment to collect data on students' readiness for kindergarten in the fall, the evaluation team found that children who had attended preschool had a significantly higher pass rate than those who had not (see Figure 4-1). Apostolico-Buck noted the particularly sharp differences among the children who qualify for free and reduced-price lunch.

These results showed the district the value and importance of preschool experience for all students, so they conducted focus groups with parents in the groups most in need, primarily African American and Hispanic families. These parents cited a variety of concerns related to cost, location and convenience, extended hours, and so forth. Although the district had already tried to address many of these issues, it adopted a plan to guide the work of the school board and the early childhood office. The recommendations included providing access to a pre-K program for all 4-year-olds who qualify for lunch subsidies located in the public schools and to provide pre-K options in every Arlington elementary school, which allowed parents to choose an option close to their workplace or a relative's home. The district also provided transportation and extended hours and allowed children to remain in the same program even if they moved within the county. The district made sure that the curriculum was consistent across the preschool programs and was designed to address the full range of children's needs. Children were also provided with access to health and dental care and other family resources. Home

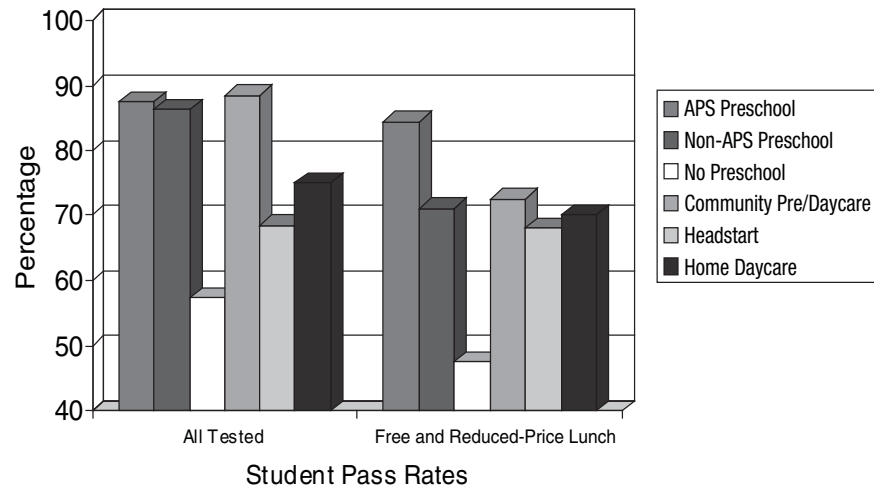


FIGURE 4-1 Literacy pass rates for kindergarten readiness in Arlington, Virginia, 2001-2002.

NOTE: APS = Arlington Public Schools.

SOURCE: Apostolico-Buck (2009).

visits, multiple parent-teacher conferences, and parent education are also prominent aspects of the program.

In 2007 and 2008 the county again collected data on the effectiveness of the preschool program, using the PALS assessment, work samples, teacher observations, and other summative instruments. Table 4-1 shows the more recent PALS results.

In general, Apostolico-Buck reported, economically disadvantaged children who attended Arlington's preschool program had sustained gains that have lasted at least through fifth grade (the district will continue to follow their progress). She suggested that the experience of success in kindergarten is extremely important because it shapes both children's and parents' expectations about school, and they take the expectation of success with them as they progress.

State Support for Highly Mobile Families

Linda Schmidt highlighted the importance of bridging the gap between research and practice in describing the work of the Family Resource Centers operated by the Michigan Department of Human Services. These centers were developed to provide supplementary services to schools that

TABLE 4-1 APS Kindergartners Meeting or Exceeding the PALS-K Benchmark (percentage)

	APS Pre-K	Non-APS Pre-K	No Pre-K
Eligible for free and reduced-price lunch	83	71	54
Not eligible	93	98	92

NOTE: APS = Arlington Public Schools, PALS-K = Phonological Awareness Literacy Screening (for students in kindergarten).

SOURCE: Apostolico-Buck (2009).

were failing to meet adequate yearly progress (AYP) targets under the No Child Left Behind Act. The state hoped to focus on the needs of families that are affected by multiple kinds of risks and negative circumstances and are not as well served as they could be by an array of programs that are underfunded and can be difficult to navigate. Michigan policy makers had conducted a survey to ascertain its citizens' highest policy priorities and were surprised by some of the results. For example, a surprising number of survey respondents asked for more security in terms of basic needs, such as running water and indoor plumbing. Approximately half of the people in Michigan who were eligible for Temporary Assistance for Needy Families were not receiving it.

The Family Resource Centers are located in schools and offer support to eligible persons in gaining access to services offered by the Department of Human Services, such as cash assistance, food assistance, emergency relief, and access to Medicaid. The theory behind these centers is that family functioning is a key predictor of academic success, that security in meeting basic needs is absolutely essential for school attendance and academic achievement, and that the Department of Human Services is the main provider of family supports. Schools are also logical places for the centers because parents are already required to ensure that their children are attending school in order to receive public assistance. Moreover, although schools and service agencies were often serving the same families, they did not always have the same information about the families, or perhaps even the same goals.

Eliminating homelessness and poverty has been a state policy goal, and housing has been an important element of the program. Among the specific supports offered through the Family Resource Centers was collaboration among the Michigan State Housing Development Authority and other partners to address families' housing needs (the Genesee Scholars Program, located in the city of Flint). Landlords were offered economic

inducements to work with families to avoid eviction and to make needed improvements to rental units, for example.

The state has not been able to secure funding for a comprehensive evaluation of the program, but it has analyzed its administrative data and compared schools that were and were not selected to house family resource centers. Although the schools selected are very high-poverty schools (in many, 98 to 100 percent of students are eligible for free and reduced-price lunch), all the schools in the comparison group were high-poverty and had difficulty meeting AYP requirements. They found that the schools with centers were four times more likely to meet AYP targets in subsequent years. This is important, Schmidt stressed, because the schools were not necessarily offering new programs that were previously unavailable—they were simply colocating and coordinating services in order to make them more accessible and to reach the neediest families. Attendance also improved in the schools with centers, and pass rates on state tests for children in host schools more than doubled.

Schmidt acknowledged that it would be difficult for a researcher to parse out the impacts of the program on particular outcomes because, he said, “as policy makers we tend to go for the most bang for the buck and are not thinking about the best way to eventually research the results.” Moreover, the groups reached by the program tend to be “cycling into worse and worse situations so that any intervention would be likely to have a big return.” She closed with an echo of Hartman’s comments, “there is a reason why poverty is so connected to [each of these problems]. It would make sense to target poverty instead of skirting the issue.”

Supporting Mobile Children in Military Families

One group of highly mobile children—hardly mentioned at the workshop—has been the focus of special attention designed to mitigate the risks of frequent school changes. The U.S. Department of Defense, Kathleen Facon explained, has made a concerted effort to provide supports and safety nets for service members and their families. Nevertheless, these families still need support from state and local governments as well. A total of 92 percent of military children attend schools outside military installations (the remaining 8 percent are educated at Department of Defense schools). The average military child will encounter six to nine different school systems between kindergarten and twelfth grade.

The Department of Defense has taken a number of steps to help military families provide an excellent education for their children. One important step was the development, with the Council of State Governments and the National Governors Association, of an interstate compact to address the educational transition of military children, which has been

adopted in 23 states. The compact addresses such issues as class placement, records transfer, immunizations, graduation requirements, exit testing, and extracurricular opportunities, with the goal of achieving uniform treatment of mobile military children at the state and local levels.

Another step was 2007 legislation that set up the Defense Education Activity (DEA), a body that works with school systems in which military children are enrolled. The DEA is particularly interested in working with districts and schools that are not performing well; it provides supports such as curriculum development, professional development for teachers, and distance learning courses. It also awards grants to needy districts.

Several studies have expanded understanding of the needs of military children (U.S. Department of Defense Education Activity, 2009; Military Child Education Coalition, 2010), and Facon highlighted several key points. A focus on the transition to postsecondary education, for example, called attention to the importance of the last year of high school; the Department of Defense implemented a policy of allowing service members with children at that stage flexibility in responding to transfer orders so they can avoid moving children during that year. Distance learning programs and a Department of Defense Virtual School have been helpful with credit recovery and other transition-related problems. Programs targeting the needs of mobile students with special needs, programs designed to build connections among families and between families and schools, and mental health programs have also been important supplements to the academic supports.

Student Mobility: Exploring the Impact of Frequent Moves on Achievement: Summary of a Workshop
<http://www.nap.edu/catalog/12853.html>

Directions for Future Research

In his concluding remarks, Stephen Raudenbush highlighted several important messages from the data presented, as well as from the administrators of programs that target the needs of highly mobile students. Although the data are neither complete nor conclusive, he identified these propositions as emerging strongly from the workshop discussions:

- **Mobility is highest and likely to be most harmful among particular subgroups.** Poor families move more than nonpoor families. Hispanic and particularly African American families move most frequently of all. There are consistent negative associations between moving and achievement and other outcomes for disadvantaged children, which are most pronounced for the children who move most and for special education students and English language learners.
- **Some kinds of mobility are more harmful than others.** Moves made within districts are most likely to be harmful, as are moves made during the school year, rather than between grades. However, the reasons people move vary, as do their destinations. Mobility could have positive effects in some situations and negative ones in others. For this reason, the effects tend to average out in the context of large data sets, suggesting that mobility has little effect when averaged over heterogeneous populations. However, the impact may be quite significant for subgroups, even though these effects can be difficult to capture.

- **The greatest harm is associated with multiple moves.** Children who moved three or more times in the first few years of school show the most negative associations. However, there is good reason to regard multiple moves over time not only as a clearly defined variable but also as a marker for a cluster of developmental problems and other risk factors. A high rate of mobility could be a contributing factor on its own, but it is consistently accompanied by other risks, such as family disruption, homelessness and economic disruption. It is difficult to disentangle the factors; for example, if a highly mobile child is also frequently absent from school, is that because of the mobility, or is it a sign of other underlying problems in the family?
- **High mobility in schools affects everyone.** The best available evidence suggests that all children in highly mobile schools experience negative effects, even if they do not move themselves. The churning of students is likely to make instruction more difficult, to interfere with the continuity of programming, to necessitate more review, and to disrupt social networks.

Given this picture, Raudenbush said, “it is time to get past the question of whether moving by itself has an average effect in the total population of U.S. families.” Reasons for moving and circumstances are so heterogeneous that a fresh research agenda is needed to focus on the subgroups most likely to make the sorts of moves that have negative effects. The research priorities he listed are rigorous evaluation of interventions designed to: stabilize housing and therefore to prevent excessive residential mobility, to support school stability when many short-distance moves affect students, and to protect children against the negative impacts of residential and school mobility. Promising interventions need to be evaluated to make sure they can be faithfully implemented and their effects should be assessed, preferably using randomized experiments. Rent subsidies, adjusting school policies to help children stay in a school even when they move a short distance, coordination of instruction across local schools, coordination of family services, perhaps using the school as a central source—all look like promising approaches that merit detailed evaluation, he observed.

RESEARCH ISSUES

With that overview on the table, several presenters offered their perspectives on the major research questions, the methodological approaches they would use to answer those questions, and the strengths and limitations of those approaches.

Longitudinal and Early Childhood Data Sets

Donald Hernandez focused on what could be learned from new research with three large, nationally representative longitudinal data sets on early childhood—the Early Childhood Longitudinal Study-Kindergarten (ECLS-K), the National Longitudinal Survey of Youth (NLSY), and the Panel Study of Income Dynamics (PSID)—although he suggested that his observations could apply to other data sets as well. As mentioned in Chapter 2, the ECLS-K data cover the kindergarten class of 1998-1999, and a second round will sample the kindergarten class of 2010-2011. The NLSY sampled women ages 14 to 21 in 1979 and, later, the children born to those women. It collected information about variables including employment, education, training, fertility, health, attitudes, marriage and cohabitation, mobility, and crime. The PSID sample began with a sample of families in 1968 and has followed their children and grandchildren since then. The data collection focuses on income, employment, expenditures, housing, and program participation.

Each of these surveys allows for measures of mobility on a wave-to-wave basis, based on different data collection points. All three capture the number of moves reported between data collection points, the number of schools attended, residential histories, and addresses. Each covers somewhat different time spans in the lives of the children sampled, yet all collect extensive information about their education, achievement, socio-emotional functioning, behaviors, and health. Information about parents, demographic characteristics, and school environment is also included. The NLSY and the PSID also have data covering those sampled into their 20s and 30s.

Hernandez suggested that this wealth of information would be useful for moving beyond basic questions about the overall impact of mobility, as Raudenbush had suggested, to focus on processes that illuminate how and why mobility matters and for whom. High-priority research issues include

- Whether and how a strong preschool foundation can moderate negative consequences of later mobility.
- How socioemotional development and physical health are affected by mobility, and how these outcomes relate to cognitive development.
- How a full range of ecological conditions, such as family composition, employment, parent-child interactions, school context and processes, and neighborhood context, interact with one another to influence outcomes for children in both positive and negative ways.

- How the processes by which mobility influences important outcomes for children differ across population subgroups, including racial/ethnic groups, immigrant children from different countries, and socioeconomic groups.
- How sophisticated statistical analysis might improve understanding of the effect of moves at different points in children's development and multiple moves.

These three data sets, Hernandez explained, measure many of the variables of interest across large national samples, and they provide the basis for a new generation of intergenerational studies, in which state-of-the-art statistical methods can be used to build on the existing knowledge base. They have several limitations, however, Hernandez explained. The time period between data collections is sometimes long—two years or more—significant time gaps in the lives of young children. Even these large national samples are too small to study many racial, ethnic, and immigrant groups. These studies sample households and thus are likely to miss the homeless population. As with all longitudinal studies, these samples are likely to be affected by differential attrition of movers. Hernandez also emphasized that these surveys need to be augmented by qualitative ethnographic studies, comparative case studies, and place-based experiments, which are especially useful for studying the effectiveness of policy and programmatic interventions.

He closed with a reminder that large numbers of children in every social and economic group in the United States experience high mobility rates, and that longitudinal data sets have enormous promise for helping to make life better for them.

Using Qualitative Research

Greta Gibson echoed Hernandez's final point, suggesting that small-scale qualitative and mixed-method studies can complement large-scale quantitative ones by isolating the risk factors for mobile children and the ways these factors interact in families, schools, and communities. "What, specifically," she asked, "is bad about mobility for subgroups of students? What exactly goes on in their schools?" Her research, which is primarily on migrant students, has focused on what schools can do to support them. Schools that serve migrant children are often themselves low-performing schools that serve large proportions of low-income, students with limited English proficiency and limited resources. So it is important to understand and describe the differences between settings that promote inclusion and engagement and those that do not. Other important questions include

- What characteristics of teachers foster success in meeting the needs of mobile students from linguistically and culturally diverse backgrounds?
- Can whole schools or specific programs be identified that are successful in supporting mobile children—what are they doing, and would it be possible to replicate their success?
- What is most important to creating a sense of belonging and community for students? Is it caring teachers, positive relationships, access to social capital, adults at school who serve as mentors or who forge links with families?

Gibson described her research with the federal Migrant Education Program. She noted that although the program has existed for 40 years, surprisingly little research has been conducted on its effects. She has followed a cohort of migrant students from ninth grade through high school completion. Questions about the definition of migrant, as well as these students' mobility, made it difficult to maintain complete data. She found that the migrant students she followed have significantly lower achievement and graduation rates than nonmigrant students, and she used qualitative methods to explore their perceptions of school, sources of support, and other aspects of their lives in an effort to pinpoint the reasons for their academic difficulties.

Through this work, it has been possible to identify schools and programs that have been successful in supporting mobile children and to note that migrant education programs tended to “create spaces of belonging and connection that reinforce both academic success and identity.” Study of successful programs suggests that they had teachers who developed caring relationships with their students, served as role models, helped to bridge gaps between home and school, and acted as liaisons to other resources for migrant students. Gibson pointed out that these findings are consistent with the literature on social capital. However, opportunities for the kind of work she described have been limited, and she closed with a plea for more qualitative study of migrant students' lives.

Using Administrative Data

Dennis Culhane, who studies homelessness, made the case for the value of administrative data. Primary data are very useful, he observed, but by the time one obtains funding, collects the data, analyzes them, and writes a paper, the policy questions may have changed. Administrative data may have selection issues, but one can study large numbers of observations and subjects longitudinally and can control for many factors. For example, the Kids Integrated Data System in Philadelphia, discussed

in Chapter 2, provides school, birth, and other administrative records for approximately 20,000 children up to age 19. With these data it is possible to follow the subjects through every public system they have touched; in the future, data about their earnings and postsecondary education will be collected as well.

Vast quantities of administrative data are collected every day, as part of the operations of various public services and institutions, and the kinds of data public agencies collect are generally applicable to policy questions. These data are generally more reliable than the self-reports that are used in many studies, and this is particularly important in the study of homelessness, because the kinds of information researchers want—about hospitalizations, days of truancy, and so forth—are particularly difficult for people to recall accurately.

One important disadvantage to using administrative data is access. A variety of federal laws govern the protection of individuals' privacy in the context of schooling, social services, and health care. However, there are strategies to use the data effectively while observing these rules and protecting privacy, Culhane observed. There are also scientific challenges with these data, which are not collected for scientific purposes. Quality control measures are not the same as they would be in a major research effort, so data are often incomplete and inaccurate. Education data may not include private or parochial schools, for example, and it may be difficult to trace individuals' trajectories as they move in and out of a jurisdiction.

Nevertheless administrative data provide an excellent way to track residential moves, homelessness and use of residential facilities, attendance patterns, use of special education services, disciplinary actions, achievement data, and school-based health records, for example. Even greater benefits come when these kinds of data can be linked with other social welfare data, such as foster care, juvenile justice, public assistance, mental health, and data on parents' involvement with these systems. Such data can be used to develop a picture of individual risk factors, as well as to create aggregate measures of exposure to risk for children in a particular area. This is illustrated in Figure 5-1, which shows the results of a factor analysis that included crime, social stress, and structural decline (e.g., housing abandonment) in Philadelphia, providing a visual representation of the concentration of risk factors facing families in particular neighborhoods.

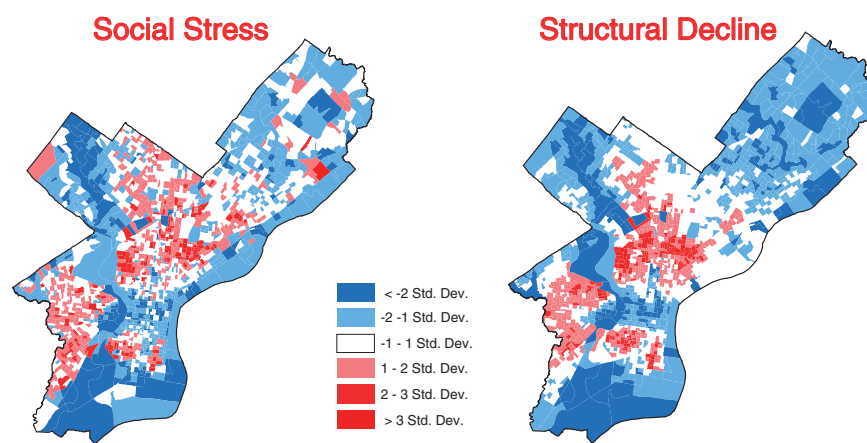


FIGURE 5-1 Factor analysis showing concentration of risk factors by neighborhood.

SOURCE: Culhane (2009). Adapted from Gross and McDermott (2008).

Evaluating Interventions That Aim to Reduce Mobility

Arthur Reynolds proposed a list of important research questions:

- What are the basic predictors or determinants of different kinds of moves?
- How do the impacts of mobility vary for different types of moves and by population subgroup, family structure, age of the child at the time of the move or moves, poverty status, and so on?
- What are the long-term effects of mobility, for example, on dropout and later adult outcomes?
- What is the nature of the relationship between mobility and outcomes—linear or nonlinear? Is there a threshold effect?
- What is the effectiveness of such interventions as mentoring programs, changes in school district policies, and extra instructional support?

He used an example from the Chicago Longitudinal Study data (described in Chapter 2) to illustrate research that he believes is particularly valuable. He and his colleagues were examining the effect of number of moves on reading achievement, looking at achievement thresholds on the state eighth grade reading assessment. They found that one move cost students about two months' worth of achievement, and that students who made three or more moves were five to six months behind their peers.

The study controlled for variables that might also affect achievement, and the findings were stable across a variety of model specifications. This threshold effect is also evident in long-term data, Reynolds observed, with students who had moved three or more times ending up by age 25 with a third of a year less education than their peers, even with other factors controlled. He suggested that the threshold effect of multiple moves—which shows up in many studies—is one of the fundamental issues that deserves further exploration.

Another issue suggested by several studies is that of developmental continuity. Preschool arrangements are often fragmented, for example, and the vast majority of children must change schools when they move from preschool to kindergarten. Other structural arrangements exacerbate mobility, rather than working to reduce it. Locating preschools in elementary schools and aligning the curricula, leadership, and supports has shown promise as a way of reducing children's total moves during the early years of school. He also noted that cost-benefit analyses estimate a 15 percent return on investment (by age 26) for interventions that reduce mobility.

The bottom line for Reynolds was that annual data collection on school mobility at both the national and state levels would be a valuable tool for understanding mobility.

CONCLUDING THOUGHTS

The volume of information and ideas that were aired in the course of the two-day workshop was almost overwhelming, one participant observed. Many added their research priorities to the discussion, and one suggested a theme for considering the way forward: capacity building. While each aspect of researching and addressing mobility that was discussed holds promise, all seem to require further development or more resources. Social agencies need to do a better job delivering high-quality integrated services; schools need to provide programs and opportunities for hard-to-serve students. Parents and teachers need support to help stabilize children's lives and enhance their resilience when they are forced to move. Researchers need not only funding but also, in many cases, increased technical capacity to use sophisticated, perhaps mixed-method designs to tackle the difficult questions that don't fall neatly into place. This might include designs that consider multiple levels of analysis such as exploring the effects of individual child mobility as well as classroom-level mobility.

Others built on this theme, suggesting, for example, the need for a national mandatory administrative data set. Also cited was the importance of embedding top-quality research in real-world settings: "A disap-

pointing amount of child development research has led us astray because it has taken place in university labs and lab schools that are completely unrepresentative of the general population.”

A related point was the need not only for interdisciplinary research, but also for cross-cutting system solutions. One participant observed that “our education systems are set up in districts, our health systems are set up in counties. We have all these little boundaries and though the mobile families are not even going very far, they are just drifting around across the boundaries.” The methodology for measurement is another research capacity that was identified as needing strengthening. As someone noted, “We are talking as if we could easily, given unlimited funds, go out there and measure kids really effectively. But it is kind of difficult to measure preschool development. There isn’t a strong consensus on how to do that.” At the same time, many of the measures that are typically used with language-minority and immigrant families have never been validated on these samples.

And from a policy perspective, there was a plea for additional data on the magnitude of the problem of mobility. “It would be really interesting to see, for example, what portion of Title 1 schools have 20 percent or more of students who are highly mobile.” Research that more fully documents the impacts of mobility in the older years could encourage policy makers to develop a balanced view of the entire developmental trajectory.

After the more free-ranging discussion of research priorities, Russell Rumberger and Sandra Newman offered their concluding thoughts. Rumberger observed that better methodologies, techniques, and statistical modeling are necessary to identify causal effects. At the same time, it is difficult to isolate mobility as an independent factor. It’s as much a symptom as a cause, he suggested, “and it’s when you study families that you discover the complexity of the phenomenon.” Many of the developments in families that become visible to researchers when some or all of the family relocates cannot be detected using most of the approaches discussed at the workshop. Turning the question around, to consider the many sources of instability in a child’s life and look for ways to deflect them, might be more productive than working endlessly to isolate mobility as an individual factor. For example, if one views mobility as an individual problem for families and children, it is easy to overlook the very important roles that school policies (such as attendance and discipline policies, school closures, and so forth), housing policy, and other institutional decisions play in undermining family stability. Similarly, focusing on broader, more long-term developmental and health outcomes helps to open up understanding of mobility as part of a bigger picture of the factors that affect family stability.

Newman reiterated some of the key findings from the workshop: that moves are not all equal, that the timing of the move seems to matter, and that subgroups experience and react to moves differently. Departing to some degree from Rumberger's comments, she suggested that the question of whether mobility itself is a unique cause of negative outcomes for some students, net of other factors, is not yet a settled question. For her, the key will be to make further progress in understanding the mechanisms by which mobility causes harm and the conditions in which it is most harmful. It is important to fully examine each aspect of the contexts in which distressed children live. Otherwise, the risk is that "big investments are made in improving the quality of schools in poor communities but the community remains distressed and poor, unsafe, and not a good environment for children." She ended with a point very similar to Rumberger's: that to make a difference in children's lives it will be necessary to address every aspect of their circumstances.

A few final comments brought the discussion to a close. The research on mobility is provocative, rich, and complex. It is emerging, but is still in a fairly immature stage of development in that it lacks rich, robust theories, tailored measurement tools, and sample populations that target the most important questions. Nevertheless, there is a compelling interest in using the research to shape policy and practice. Mobility as a phenomenon has been everywhere and nowhere—there is no single agency that has the lead role in addressing it. Indeed, mobility has in a sense often gone by another name in research and policy discussions: attrition. Children who are missing are difficult to track and to measure.

There is a tension between viewing the glass as half empty or as half full. Policy makers may be poised to address what is clearly a significant problem for large numbers of children and families. For that audience it is important, perhaps, to use the best available knowledge from research. There is indeed a great deal of information about mobility, and policy makers have been slow to recognize the multiple needs of these children and young people. At the same time, however, researchers recognize that many questions still await answers.

References

- Alexander, K.L., Entwisle, D.R., and Dauber, S.L. (1996). Children in motion: School transfers and elementary school performance. *Journal of Educational Research*, 90, 3-12.
- Apostolico-Buck, J. (2009). *Policies and Practices to Mitigate the Negative Effects of Student Mobility: Observations from Arlington Public Schools*. Presentation at the Workshop on the Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods, June 29-30, National Academies, Washington, DC. Available: http://www.bocycf.org/apostolico-buck_presentation.pdf [accessed March 2010].
- Burkam, D., Lee, V., and Dwyer, J. (2009). *School Mobility in the Early Elementary Grades: Frequency and Impact from Nationally Representative Data*. Paper prepared for the Workshop on the Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods, June 29-30, National Academies, Washington, DC. Available: http://www.bocycf.org/children_who_move_burkam_paper.pdf [accessed March 2010].
- Culhane, D.P. (2009). *Value of Administrative Data for Measuring School and Residential Mobility and Related Services Use*. Presentation at the Workshop on the Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods, June 29-30, National Academies, Washington, DC. Available: http://www.bocycf.org/culhane_presentation.pdf [accessed March 2010].
- De Souza Briggs, X.N. (2008). *Democracy as Problem Solving: Civic Capacity in Communities Across the Globe*. Cambridge, MA: MIT Press.
- Dehejia, R. (1999). *Does Matching Overcome Lalonde's Critique of Non-Experimental Estimators? A postscript*. Available: <http://www.nber.org/~rdehejia/papers/postscript.pdf>.
- Dukes, G.L. (2009). *Student Mobility in Primary Grades in Florida*. Presentation at the Workshop on the Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods, June 29-30, The National Academies, Washington, DC. Available: http://www.bocycf.org/dukes_presentation.pdf [accessed March 2010].
- Eckholm, E. (2009, September 5). Surge in homeless pupils strains schools. *New York Times*.

- Fantuzzo, J., Rouse, H., and LeBoeuf, W. (2009). *Homelessness, School Mobility, and Educational Well-Being in a Large Urban School System*. Presentation at the Workshop on the Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods, June 29-30, The National Academies, Washington, DC. Available: http://www.bocycf.org/fantuzzo_rouse_presentation.pdf [accessed March 2010].
- Federal Interagency Forum on Child and Family Statistics. (2009). *America's Children: Key National Indicators of Well-Being, 2009*. Washington, DC: U.S. Government Printing Office.
- Gibson, M.A. (2009). *Utilizing Qualitative Research*. Presentation at the Workshop on the Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods, June 29-30, The National Academies, Washington, DC. Available: http://www.bocycf.org/gibson_presentation.pdf [accessed March 2010].
- Gross, K.S., and McDermott, P.A. (2008). Use of city archival data to inform dimensional structure of neighborhoods. *Journal of Urban Health: Bulletin of the New York Academy of Medicine*, 86, 161-182.
- Gubits, D., Khadduri, J., and Turnham, J. (2009). *Housing Patterns of Low-Income Families with Children: Further Analysis of Data from the Study of the Effects of Housing Vouchers on Welfare Families*. Prepared by Abt Associates for the Joint Center for Housing Studies Rental Housing Dynamics Initiative with support from the John D. and Catherine T. MacArthur Foundation. Cambridge, MA: Harvard University.
- Hanushek, E.A., Kain, J.F., and Rivkin, S.G. (2004). Disruption versus Tiebout improvement: The costs and benefits of switching schools. *Journal of Public Economics*, 88, 1721-1746.
- Hanushek, E.A., Kain, J.F., and Rivkin, S.G. (2009). *Student Mobility and School Outcomes*. Presentation at the Workshop on the Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods, June 29-30, The National Academies, Washington, DC. Available: http://www.bocycf.org/hanushek_presentation.pdf [accessed March 2010].
- Hartman, C., and Franke, C.M. (2003) Student mobility: How some children get left behind. *Journal of Negro Education*, 72(1), winter issue. Available: <http://www.prrac.org/jne.pdf>.
- Heckman, J.J. (2008). Econometric causality. *International Statistical Review*, 76(1), 1-27.
- Hernandez, D. (2009). *Longitudinal and Early Childhood Datasets*. Presentation at the Workshop on the Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods, June 29-30, The National Academies, Washington, DC. Available: http://www.bocycf.org/hernandez_presentation.pdf [accessed March 2010].
- Killeen, K., and Schafft, K.A. (2008). The organizational and fiscal implications of transient student populations in urban and rural areas. In H.F. Ladd and E.B. Fiske (Eds.), *Handbook of Research in Education Finance and Policy* (pp. 631-650). New York: Routledge.
- Kling, J., Liebman, J., and Katz, L. (2007). Experimental analysis of neighborhood effects. *Econometrica*, 75(1) 83-119.
- LaLonde, R. (1986). Evaluating the econometric evaluations of training programs with experimental data. *American Economic Review*, 76(4), 604-620.
- Lee, V.E., Burkam, D.T., and Dwyer, J. (2009). *School Mobility in the Elementary Grades: Frequency and Impact from Nationally-Representative Data*. Presentation at the Workshop on the Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods, June 29-30, The National Academies, Washington, DC. Available: http://www.bocycf.org/lee_burkam_dwyer_presentation.pdf [accessed March 2010].
- Ludwig, J. (2009). *Methodological Considerations in Assessing Causality in Studies of Residential Mobility*. Presentation at the Workshop on the Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods, June 29-30, The National Academies, Washington, DC. Available: http://www.bocycf.org/ludwig2_presentation.pdf [accessed March 2010].

- Masten, A. (2009). *Early Development in the Context of Mobility: Conceptual Perspectives*. Presentation at the Workshop on the Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods, June 29-30, The National Academies, Washington, DC.
- Military Child Education Coalition. (2010). *Secondary Education Transition Study*. Harker Heights, TX: Author. Available: <http://www.militarychild.org/coalition/secondary-education-transition-study/>.
- Newman, S.J. (2009). *Residential Mobility of Children: The Housing Policy Context*. Presentation at the Workshop on the Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods, June 29-30, The National Academies, Washington, DC. Available: http://www.bocvf.org/newman_presentation.pdf [accessed March 2010].
- Obradovic, J., Long, J.D., Cutuli, J.J., Chan, C.-K., Hinz, E., Heistad, D., and Masten, A.S. (2009). Academic achievement of homeless and highly mobile children in an urban school district: Longitudinal evidence on risk, growth, and resilience. *Development and Psychopathology*, 21, 493-518.
- Reynolds, A.J., Chen, C.-C., and Herbers, J.E. (2009a). *Evidence on Prevention*. Presentation for the Workshop on the Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods, June 29-30, The National Academies, Washington, DC. Available: http://www.bocvf.org/reynolds2_presentation.pdf [accessed March 2010].
- Reynolds, A.J., Chen, C.-C., and Herbers, J.E. (2009b). *School Mobility and Educational Success: A Research Synthesis and Evidence on Prevention*. Paper prepared for the Workshop on the Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods, June 29-30, The National Academies, Washington, DC. Available: http://www.bocvf.org/children_who_move_reynolds_paper.pdf [accessed March 2010].
- Roy, J., Maynard, M., and Weiss, E. (2008). *The Hidden Costs of the Housing Crisis: The Long-Term Impact of Housing Affordability and Quality on Young Children's Odds of Success*. Washington, DC: Partnership for America's Economic Success.
- Sampson, R.J., and Sharkey, P. (2008). Neighborhood selection and the social reproduction of concentrated racial inequality. *Demography*, 45(1), 1-29.
- Sampson, R.J., Graif, C., Owens, A., and Sharkey, P. (2009). *Patterns and Structure of Neighborhood Mobility Among Families in Chicago*. Presentation at the Workshop on the Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods, June 29-30, The National Academies, Washington, DC. Available: http://www.bocvf.org/sampson_presentation.pdf [accessed March 2010].
- Schafft, K.A. (2005). The incidence and impacts of student transiency in upstate New York's rural school districts. *Journal of Research in Rural Education*, 20(15), 1-13.
- Schafft, K.A. (2006). Poverty, residential mobility and student transiency within a rural New York school district. *Rural Sociology*, 71(2), 212-231.
- Schafft, K.A. (2009). *Poverty, Residential Mobility, and Student Transiency Within Rural and Small Town Contexts*. Presentation at the Workshop on the Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods, June 29-30, The National Academies, Washington, DC. Available: http://www.bocvf.org/schafft_presentation.pdf [accessed March 2010].
- Schafft, K.A., and Prins, E.S. (2009). Poverty, residential mobility and persistence across urban and rural family literacy programs in Pennsylvania. *Adult Basic Education and Literacy Journal*, 3, 3-12.
- Schafft, K.A., Killeen, K., and Morrissey, J. (2010). The challenges of student transiency for U.S. rural schools and communities in the era of No Child Left Behind. In K.A. Schafft and A. Jackson (Eds.), *Rural Education for the Twenty-First Century: Identity, Place, and Community in a Globalizing World*. (Rural Studies Series). University Park: Pennsylvania State University Press.

- Schmidt, L.S. (2009). *Michigan's Family Resource Centers: The Role of Public Human Services in Promoting Student Stability*. Presentation at the Workshop on the Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods, June 29-30, The National Academies, Washington, DC. Available: http://www.bocycf.org/schmidt_presentation.pdf [accessed March 2010].
- Schwartz, A.E., Stiefel, L., and Chalico, L. (2009). *The Multiple Dimensions of Student Mobility: Evidence from NYC*. Presentation at the Workshop on the Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods, June 29-30, The National Academies, Washington, DC. Available: http://www.bocycf.org/schwartz_presentation.pdf [accessed March 2010].
- Smith, J.A., and Todd, P.E. (2005). Does matching overcome LaLonde's critique of non-experimental estimators? *Journal of Econometrics*, 125(1-2), 305-353. Available: <http://www.sciencedirect.com/science/article/B6VC0-4CXTY59-1/2/06728bd79899fd9a5b814dfea9fd1560>.
- Temple, J.A., and Reynolds, A.J. (1999). School mobility and achievement: Longitudinal findings from an urban cohort. *Journal of School Psychology*, 37(4), 355-377.
- U.S. Census Bureau. (2004). Geographical mobility: 2002-2003, population characteristics. *Current Population Reports*, March.
- U.S. Department of Defense Education Activity. (2009, March). *Student Mobility Rates Within DoDEA*. Research brief, DoDEA Research and Evaluation Branch. Washington, DC: Author.
- U.S. General Accounting Office. (1994). *Report, Elementary School Children: Many Change Schools Frequently, Harming Their Education*. GAO/HEHS-94-45. Washington, DC: Author.
- Xu, Z., Hannaway, J., and D'Souza, S. (2009). *Student Transience in North Carolina: The Effect of School Mobility on Student Outcomes Using Longitudinal Data*. Presentation for the Workshop on the Impact of Mobility and Change on the Lives of Young Children, Schools, and Neighborhoods, June 29-30, The National Academies, Washington, DC. Available: http://www.bocycf.org/hannaway_presentation.pdf [accessed March 2010].

Appendix A

Workshop Agenda and Participants

AGENDA

Monday, June 29, 2009

- 8:15-8:30 Welcoming Remarks
Stephen Raudenbush, planning committee chair
Ruby Takanishi, Foundation for Child Development
Cindy Guy, Annie E. Casey Foundation
- 8:30-9:15 Early Childhood Development in the Context of Mobility:
Conceptual Perspectives
Moderator: Carl Haywood, Vanderbilt University, and
committee member
Presenter: Ann Masten, University of Minnesota, and
committee member
Discussion
- 9:15-10:00 School Mobility and Educational Success: A Research
Synthesis
Moderator: Mariajosé Romero, Columbia University,
and committee member
Presenter: Arthur Reynolds, University of Minnesota
Discussion

10:00-10:10 Break

10:10-12:45 Panel 1: School Mobility Analyses
Moderator: Russell Rumberger, University of California,
Santa Barbara, and committee member

Panelists:

School Mobility in the Early Elementary Grades: Frequency and Impact from Nationally Representative Data, David T. Burkam, Valerie E. Lee, and Julie Dwyer, University of Michigan

Student Mobility in North Carolina, Jane Hannaway, Urban Institute

Preschool and Elementary School Mobility in Florida, Garnet L. (Lavan) Dukes, Florida Department of Education

The Mobile Experience in New York City: A Special Focus on Immigrant Students, Amy Ellen Schwartz, New York University

Discussion

12:45-1:45 Lunch

1:45-3:30 Panel 2: Residential Mobility and Neighborhood/Family Disruption
Moderator: Claudia Jane Coulton, Case Western Reserve University, and committee member

Panelists:

A Population-Based Investigation of School Mobility, Family Disruption, and Homelessness in Philadelphia, John Fantuzzo and Heather Rouse, University of Pennsylvania

A Qualitative Perspective: Poverty and Residential Mobility in Rural and Small Town Contexts, Kai Schafft, Pennsylvania State University

Patterns and Structure of Neighborhood Mobility Among Families in Chicago, Robert Sampson, Harvard University

Discussion

3:30-3:40 Break

3:40-5:00 Panel 3: Methodological Issues Concerning Causal Inferences

Moderator: Stephen Raudenbush, University of Chicago, and planning committee chair

Panelists:

Identifying the Causal Impacts of School Mobility, Eric Hanushek, Stanford University and Texas Schools Project at University of Texas–Dallas

Methodological Considerations in Assessing Causality in Studies of Residential Mobility, Jens Ludwig, University of Chicago

Discussion

5:00 Closing Remarks and Adjournment
Stephen Raudenbush

Tuesday, June 30, 2009

8:30-8:45 Welcoming Remarks
Stephen Raudenbush

8:45-10:55 Panel 4: The Policy and Programmatic Context of Mobility
Moderator: A. Wade Boykin, Howard University, and committee member

8:45-9:25 *Part I: The Policy Context*

Housing Policy Considerations, Sandra J. Newman, Johns Hopkins University, and committee member

Education Policy Considerations, David Johns, Office of Senator Edward Kennedy

Discussion

9:25-10:55 *Part II: Programmatic Responses Panel*
Respondents address the following questions in light of the policy context and their perspective:

- *What are the key elements of your program and what are you trying to accomplish?*
- *What are the key lessons learned from your program that might inform future policy directions or program and research designs?*
- *What successes or challenges have been encountered in responding to or reducing mobility?*
- *What are the unintended consequences of program/program components?*

Respondents:

Advocacy and Community Action for High-Risk Children, Chester Hartman, Poverty and Race Research Action Council

Policies and Practices to Mitigate the Negative Effects of Student Mobility: Observations from Arlington, VA Public Schools, Judy Apostolico-Buck, Arlington, VA, Public Schools

Rent Supplements and Family Support for Highly Mobile Students, Linda Schmidt, Michigan Department of Human Services

DoDEA Partnership Programs and Policies That Support Military/Mobile Children, Kathleen Facon, Department of Defense Educational Activity Partnership

Discussion

10:55-11:05 Break

11:05-12:45 Panel 5: Directions for Future Research

Moderator: Stephen Raudenbush

Summary of Major Research Questions, Stephen Raudenbush

Respondent Panel

Respondents address the major questions and research/methodological approaches they would use to answer the questions, and the strengths or limitations of that approach.

Longitudinal & Early Childhood Datasets, Donald Hernandez, SUNY Albany

Utilizing Qualitative Research, Margaret (Greta) Gibson, University of California, Santa Cruz

Utilizing Administrative Data, Dennis Culhane, University of Pennsylvania

Evaluating Interventions That Aim to Reduce Mobility, Arthur Reynolds, University of Minnesota

Discussion

12:45-1:45 Lunch

1:45-2:45 Workshop Wrap-Up

Moderator: Stephen Raudenbush

Summative Comments: Russell Rumberger and Sandra Newman

Discussion

2:45 Closing Remarks and Adjournment
Stephen Raudenbush

3:00 Adjourn

PARTICIPANTS

Committee Members

- Stephen W. Raudenbush** (*Chair*), Department of Sociology, University of Chicago
- A. Wade Boykin**, Department of Psychology, Howard University
- Claudia Jane Coulton**, Mandel School of Applied Social Sciences, Case Western Reserve University
- H. Carl Haywood**, Vanderbilt University (emeritus)
- Ann S. Masten**, Institute of Child Development, University of Minnesota
- Sandra J. Newman**, Institute for Policy Studies, Johns Hopkins University
- Mariajosé Romero**, National Center for Children in Poverty, Columbia University
- Russell W. Rumberger**, Gervirtz Graduate School of Education, University of California, Santa Barbara

Other Workshop Presenters

- Judy Apostolico-Buck**, Arlington, VA, Public Schools
- David Burkam**, University of Michigan
- Garnet L. (Lavan) Dukes**, Florida Department of Education
- Julie Dwyer**, University of Michigan
- Dennis Culhane**, University of Pennsylvania
- Kathleen Facon**, Department of Defense Educational Activity Partnership
- John Fantuzzo**, University of Pennsylvania
- Margaret (Greta) Gibson**, University of California, Santa Cruz
- Cindy Guy**, Annie E. Casey Foundation
- Jane Hannaway**, Urban Institute
- Eric Hanushek**, Stanford University and Texas Schools Project at University of Texas–Dallas
- Chester Hartman**, Poverty and Race Research Action Council
- Donald Hernandez**, State University of New York, Albany
- David Johns**, Office of Senator Edward Kennedy
- Valerie E. Lee**, University of Michigan
- Jens Ludwig**, University of Chicago
- Arthur Reynolds**, University of Minnesota
- Heather Rouse**, University of Pennsylvania
- Robert Sampson**, Harvard University
- Kai Schafft**, Pennsylvania State University
- Linda Schmidt**, Michigan Department of Human Services

Amy Ellen Schwartz, New York University
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Diaa Ahmed, Utrecht University
Efua Andoh, American Psychological Association
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Jennifer Brooks, Administration for Children and Families
Stephanie Burres, Altarum Institute
Priscilla Carver, Westat, Inc.
Gregory Cook, Military Child Education Coalition
Gretchen Cruz-Figueroa, American Psychological Association
Priscilla Dass-Brailsford, Georgetown University
Jamie Davis, Altarum Institute
Antoinette DeSalvo-Alvano, American Psychological Association
Brooke Donley, First Focus
Payal Doshi, Institute for Integrative Nutrition
Noelle Ellerson, American Association of School Administrators
Christine Emmons, Yale University
Yeetey Enuameh, Drexel University
Margaret Feerick, Center for the Study of Traumatic Stress
Sue Ferguson, National Coalition for Parent Involvement in Education
Martha Ferretti, University of Oklahoma Health Sciences Center
Michael Feuer, National Research Council
Rebecca Fitch, U.S. Department of Education
Denise Forte, Education and Labor Committee
Evelyn Frankford, University of Massachusetts Boston
Sarah Friedman, CNA Corporation
Astrid Gamez, Family Services Network
Lisa Gennetian, Brookings Institution

James Griffin, National Institute of Child Health and Human Development, National Institutes of Health
Jennifer Guimond, Center for the Study of Traumatic Stress
Jeanette Guyton-Krishnan, U.S. Department of Health and Human Services
Teri Hamlin, Military Child Education Coalition
David Heppel, Maternal and Child Health Bureau
Lee Herring, American Sociological Association
Allison Holmes, Administration of Children and Families, Office of Planning, Research and Evaluation
Eric Howard, SERVE Center at the University of North Carolina at Greensboro
Phyllis Johnson, Wilkinsburg School District
Alima Kamara, Poverty & Race Research Action Council
Rhondavena LaPorte, United States Marine Corps, Marine and Family Readiness, Family Support Programs
Andrea Lash, WestEd
Joy Lesnick, Chapin Hall at the University of Chicago
LaTosha Lewis, Consortium of Social Science Associations
Stephanie Liotta, American Psychological Association
Laura LoGerfo, National Center for Education Statistics
Phillip Lovell, First Focus
Ashlee Lybrand, National Institute on Drug Abuse
Katherine MacTavish, Oregon State University
Joseph Mais, Office of Representative Raul M. Grijalva
Bruno V. Manno, Annie E. Casey Foundation
Nancy Geyelin Margie, Office of Planning, Research, and Evaluation
Mary Ann McCabe, Society for Research in Child Development
Peggy McCardle, National Institute of Child Health and Human Development
Annie McConnell, ICF Macro
John McLaughlin, U.S. Department of Education
Wakili McNeill, Zawadi Arts and Leadership Training Institute
Stephanie Melmed, Youth and Family Services, Young Men's Christian Association, Linkages to Learning
Ku'ulani Miyashiro, Public Education Network
Jan Moore, National Center for Homeless Education
Christine Nord, Westat, Inc.
Johanna Olexy, American Sociological Association
Pamela Roddy, Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Prevention
Bella Rosenberg, Broader, Bolder Approach to Education
Marina Schwartz, University of California, San Francisco

Howard Silver, Consortium of Social Science Associations
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Michael Spittel, National Institute of Child Health and Human
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Meagan Steiner, Public Education Network
Mary Tatra, Kwizera Mukisa Co. Advocates
Colin Taylor, Education Policy Office of Senator Kennedy
Philip Tegeler, Poverty & Race Research Action Council
Brett Theodos, Urban Institute
Jennifer Turnham, Abt Associates Inc.
Diana Tyson, Office of the Assistant Secretary for Planning and
Evaluation
Kahni Ward-Uzzell, Military Child Education Coalition
Melissa Welch-Ross, National Research Council
Elijah Wheeler, Jr., Linkages to Learning/Montgomery County Public
Schools

Student Mobility: Exploring the Impact of Frequent Moves on Achievement: Summary of a Workshop
<http://www.nap.edu/catalog/12853.html>

Appendix B

Selected Bibliography on Student Mobility

ANALYSES OF MOBILITY IN SPECIFIC SCHOOL SYSTEMS

- Alexander, K.L., Entwisle, D.R. et al. (1996). *Children in motion: School transfers and elementary school performance*. *Journal of Educational Research*, 90(1), 3-12.
- Alvarez, R. (2006). *The Effect of Mobility on Texas Assessment of Knowledge and Skills Test Scores*. William Howard Taft University, Santa Ana, CA. Available: http://eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/1b/e5/4e.pdf.
- Brent, G., and DiObilda, N. (1993). Effects of curriculum alignment versus direct instruction on urban children. *Journal of Educational Research*, 86(6), 333-338.
- Center for Urban and Regional Affairs. (1998). *A Report from the Kids Mobility Project*. ERIC No. ED453326. Minneapolis: Family Housing Fund.
- Conger, D., Schwartz, A.E., et al. (2007). Immigrant and native-born differences in school stability and special education: Evidence from New York City. *International Migration Review*, 41(2), 403-432.
- Gibson, J.P. (1990). *School Size, Socioeconomic Status, and Mobility as Predictors of Achievement Among Washington State Fourth-, Eighth-, and Tenth-Grade Students*. Seattle University, WA.
- Grishen, C. (2001). The effects of attendance and mobility on the reading performance of elementary students in the Minneapolis public school district (Minnesota). *Dissertation Abstracts International Section A: Humanities and Social Sciences*.
- Hanna, W.J. (2003). Mobility and the children of Langley Park's immigrant families. *Journal of Negro Education*, 72(1), 63-78.
- Heinlein, L.M., and Shinn, M. (2000). School mobility and student achievement in an urban setting. *Psychology in the Schools*, 37(4), 349-357.
- Houchens, P. (2004). Longitudinal investigation of Florida ninth-graders reveals factors affecting high school outcomes. *ERS Spectrum*, 22(4), 25-35.
- Kariuki, P., and Nash, J. (1999). *The Relationship Between Multiple School Transfers During Elementary Years and Student Achievement*. Paper presented at the Annual Conference of the Mid-South Educational Research Association, Point Clear, AL, November 17-19. Available: http://eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/15/f7/f6.pdf.

- Kerbow, D., Azcoitia, C. et al. (2003). Student mobility and local school improvement in Chicago. *Journal of Negro Education*, 72(1), 158-164.
- Liechty, S.J. (1994). The effects of mobility on fourth grade students' achievement, attendance, and behavior. Doctoral dissertation, Drake University. *Dissertation Abstracts International*, 56(10), 3890A.
- Masten, A.S., Heistad, D., Cutuli, J.J., Herbers, J.E., Obradovi, J., Chan, C-KL., Hinz, I., and Dong, J.D. (2008). School success in motion: Protective factors for academic achievement in homeless and highly mobile children in Minneapolis. *CURA Reporter*, 38(2), 3-12. Available: <http://www.cura.umn.edu/reporter/08-Summ/Summ-08-issue.pdf>.
- Rumberger, R.W. (1999). *The Educational Consequences of Mobility for California Students and Schools*. Berkeley: Policy Analysis for California Education.
- Stewart, J.G. (1991). *The Effects of Mobility on Students in a Department of Defense High School as Perceived by Students, Parents, and Professional Educators*. George Peabody College for Teachers of Vanderbilt University, Nashville, TN.
- Texas Education Agency. (1997). *A Study of Student Mobility in Texas Public Schools*. Statewide Texas Educational Progress Study Report No. 3 and Supplementary Data Report No. 3A, Division of Research and Evaluation. Austin: Author.
- University of the State of New York. (1992). *Student and Teacher Mobility: Impact on School Performance in New York City Public Schools*. Albany: State Education Department, Office for Planning, Research and Support Services.
- Williams, S.D. (2007). *Factors Affecting Academic Achievement of Elementary Students in the Metropolitan Nashville Public Schools (Tennessee)*. Tennessee State University, Nashville, TN.

APPROACHES TO MITIGATING EFFECTS OF MOBILITY

- Audette, R., and Algozzine, B. (2000). Within district transfers and student achievement: Moving ahead by staying in one place. *Special Services in the Schools*, 16(1-2), 73-81.
- Audette, R., Algozzine, R., et al. (1993). Mobility and school achievement. *Psychological Reports*, 72(2), 701-702.
- Bayer, P.J. (2001). *Household Mobility, School Choices, and School Outcomes*. Proceedings from the 93rd Annual Meeting of the National Tax Association, Santa Fe, NM, November 9-11. Prepared by the National Tax Association, Washington, DC.
- Black, S. (2006). Stabilizing schools with kids on the move. *Education Digest*, 72(3), 46-51.
- Brown, P.J.M. (2005). *A Different View of Student Mobility: An Examination of Two Schools' Perspective of and Response to Mobile Students' Transitioning*. University of Utah, Salt Lake City.
- Capps, W.R., and Maxwell, M.E. (2002). Mobility. *American School Board Journal*, 189(5), 26-29.
- Conger, D., and Finkelstein, M.J. (2003). Foster care and school mobility. *Journal of Negro Education*, 72(1), 97-103.
- Demie, F., Lewis, K., et al. (2005). Pupil mobility in schools and implications for raising achievement. *Educational Studies*, 31(2), 131-147.
- Fisher, T.A., and Matthews, L. (1999). *Examining Interventions for Highly Mobile Students and Their Families*. Paper presented at the Annual Meeting of the American Educational Research Association, Montreal, Canada, April 19-23.
- Fisher, T.A., Matthews, L., et al. (2002). School personnel's perceptions of effective programs for working with mobile students and families. *Elementary School Journal*, 102(4), 317-333.
- Fowler-Finn, T. (2001). Student stability vs. mobility. *School Administrator*, 58(7), 36-40.
- Franke, T.M., Isken, J.A., et al. (2003). A pervasive school culture for the betterment of student outcomes: One school's approach to mobility. *Journal of Negro Education*, 72(1), 150-157.

- James, B.W., and Lopez, P.D. (2003). Transporting homeless students to increase stability: A case study of two Texas districts. *Journal of Negro Education*, 72(1), 126-140.
- Julianelle, P.F., and Foscarinis, M. (2003). Responding to the school mobility of children and youth experiencing homelessness: The McKinney-Vento Act and beyond. *Journal of Negro Education*, 72(1), 39-54.
- Lennon, J., and Markatos, B. (2002). *The Same High Standards for Migrant Students: Holding Title I Schools Accountable*. Volume II. *Title I Schools Serving Migrant Students: Recent Evidence from the National Longitudinal Survey of Schools*. Washington, DC. Planning and Evaluation Service, U.S. Department of Education.
- Miller, L.S., Fredisdorf, M., and Humphrey, D.C. (1992). *Student Mobility and School Reform*. New York: Council for Aid to Education.
- Nakagawa, K., Stafford, M.E., et al. (2002). The "city migrant" dilemma: Building community at high-mobility urban schools. *Urban Education*, 37(1), 96-125.
- Paik, S., and Phillips, R. (2002). *Student Mobility in Rural Communities: What Are the Implications for Student Achievement?* North Central Regional Educational Laboratory, Naperville, IL.
- Palmer, R. (1991). Sustained effects evaluations of a Chapter 1 program. *Early Child Development and Care*, 73, 73-86.
- Popp, P.A. (2004). *Reading on the Go! Students Who Are Highly Mobile and Reading Instruction*. Prepared for the National Center for Homeless Education, The College of William and Mary, Greensboro NC.
- Popp, P.A., Stronge, J.H., et al. (2003). *Students on the Move: Reaching and Teaching Highly Mobile Children and Youth*. Urban Diversity Series, National Center for Homeless Education, Greensboro, NC.
- Reynolds, A.J., Ou, S.-R., et al. (2004). Paths of effects of early childhood intervention on educational attainment and delinquency: A confirmatory analysis of the Chicago Child-Parent Centers. *Child Development*, 75(5), 1299-1328.
- Rumberger, R.W. (2002). *Student Mobility and Academic Achievement*. ERIC Clearinghouse on Elementary and Early Childhood Education, Champaign, IL.
- Skandera, H., and Sousa, R. (2002). Mobility and the achievement gap. *Hoover Digest: Research and Opinion on Public Policy*, 3, 1-5.
- Smrekar, C.E., and Owens, D.E. (2003). "It's a way of life for us": High mobility and high achievement in Department of Defense schools. *Journal of Negro Education*, 72(1), 165-177.
- Temple, J.A., Reynolds, A.J., et al. (1998). *Can Early Intervention Prevent High School Dropout? Evidence from the Chicago Child-Parent Centers*. Madison: Institute for Research on Poverty, University of Wisconsin.
- Walls, C.A. (2003). Providing highly mobile students with an effective education. *ERIC Digest*. Available: http://www.eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/29/d7/b0.pdf.

FACTORS ASSOCIATED WITH MOBILITY

- Astone, N.M., and McLanahan, S.S. (1994). Family structure, residential mobility, and school dropout: A research note. *Demography*, 31(4), 575-584.
- Bower, B.A. (1995). *Effects of Mobility and Family Environment on High-Risk Behaviors of Early Adolescents*. University of Louisville, KY.
- Brigham, M.F. (1994). *The Effects of Mobility, Intelligence and the Interaction of These Two Variables on Sixth Graders' Achievement Test Scores*. Campbell University, Buies Creek, NC.

- Cole-Henderson, B. (2000). Organizational characteristics of schools that successfully serve low-income urban African American students. *Journal of Education for Students Placed at Risk*, 5(1, 2), 77-91.
- Crowley, S. (2003). The affordable housing crisis: residential mobility of poor families and school mobility of poor children. *Journal of Negro Education*, 72(1), 22-38.
- Eckenrode, J., Rowe, E., et al. (1995). Mobility as a mediator of the effects of child maltreatment on academic performance. *Child Development*, 66(4), 1130-1142.
- Engec, N. (2006). Relationship between mobility and student performance and behavior. *Journal of Educational Research*, 99(3), 167-178.
- Fauth, R.C., Leventhal, T., et al. (2005). Early impacts of moving from poor to middle-class neighborhoods on low-income youth. *Journal of Applied Developmental Psychology*, 26(4), 415-439.
- Gruman, D.H. (2004). *Individual Growth Curve Analysis of the Effects of Student Mobility on Measures of Elementary School Adjustment*. University of Washington, Seattle.
- Hanushek, E.A., Kain, J.F., et al. (2004). **Disruption versus Tiebout improvement: The costs and benefits of switching schools.** *Journal of Public Economics*, 88(9-10), 1721-1746.
- Heywood, J.S., Thomas, M., and White, S.B. (1994). *Achievement and Classroom Mobility in Urban Schools*. Milwaukee: Urban Research Center, University of Wisconsin.
- Heywood, J.S., Thomas, M., et al. (1997). Does classroom mobility hurt stable students? An examination of achievement in urban schools. *Urban Education*, 32(3), 354-372.
- Jacob, B.A. (2007). The challenges of staffing urban schools with effective teachers. *Future of Children*, 17(1), 129-153.
- Jennings, T.A., Kovalski, T.M., et al. (2000). *Predicting Academic Achievement Using Archival Mobility Data*. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA, April 24-28.
- Johnson, R.A., and Lindblad, A.H. (1991). Effect of mobility on academic performance of sixth grade students. *Perceptual and Motor Skills*, 72(2), 547-552.
- Johnson-Struempfer, K.M. (2006). *An Examination of the Impact of Student Mobility on the Achievement of 6th Grade Elementary Students*. University of Oregon, Eugene.
- Kainz, K., and Vernon-Feagans, L. (2007). The ecology of early reading development for children in poverty. *Elementary School Journal*, 107(5), 407-428.
- Lash, A.A., and Kirkpatrick, S.L. (1990). A classroom perspective on student mobility. *Elementary School Journal*, 91(2), 177-191.
- Lebesse, S.M. (1994). *A Comparative Study of the Coping Ability of Mobile and Nonmobile Elementary Pupils*. Western Michigan University, Kalamazoo.
- Lyle, D.S. (2006). Using military deployments and job assignments to estimate the effect of parental absences and household relocations on children's academic achievement. *Journal of Labor Economics*, 24(2), 319-350.
- Malmgren, K.W., and Gagnon, J.C. (2005). School mobility and students with emotional disturbance. *Journal of Child and Family Studies*, 14(2), 299-312.
- Mantzicopoulos, P., and Knutson, D.J. (2000). Head Start children: School mobility and achievement in the early grades. *Journal of Educational Research*, 93(5), 305-311.
- Martin, A.J. (2004). *An Ecological Investigation of Social Systems and Student Mobility: Policy Implications for School Practices*. University of Missouri at Kansas City.
- Mehana, M., and Reynolds, A.J. (2004). School mobility and achievement: A meta-analysis. *Children and Youth Services Review*, 26(1), 93-119.
- Mueller, E.J., and Tighe, J.R. (2007). Making the case for affordable housing: Connecting housing with health and education outcomes. *Journal of Planning Literature*, 21(4), 371-385.
- Murk, D.A. (1993). *The Relationships Between Geographic Mobility, Academic Achievement, Self-Esteem and Stress among Inner City Second Graders*. University of Maryland, College Park.

- Neighbour, M. (2000). *Developing an Understanding of Transient Pupils*. Whangerei, New Zealand: Te Tai Tokerau Education Centre.
- Nelson, P.S., Simoni, J.M., et al. (1996). Mobility and school functioning in the early grades. *Journal of Educational Research*, 89(6), 365-369.
- Nichols, L., and Gault, B. (2003). The implications of welfare reform for housing and school instability. *Journal of Negro Education*, 72(1), 104-116.
- Offenberg, R.M. (2004). Inferring adequate yearly progress of schools from student achievement in highly mobile communities. *Journal of Education for Students Placed at Risk*, 9(4), 337-355.
- Partnership for America's Economic Success. (2008). *The Hidden Costs of the Housing Crisis*. Research brief no. 7. Washington, DC: Author.
- Ream, R.K. (2005). Toward understanding how social capital mediates the impact of mobility on Mexican American achievement. *Social Forces*, 84(1), 201-224.
- Ream, R.K. (2005). *Uprooting Children: Mobility, Social Capital, and Mexican American Underachievement*. New York: LFB Scholarly.
- Reynolds, A.J. (1991). Early schooling of children at risk. *American Educational Research Journal*, 28(2), 392-422.
- Reynolds, A.J. (1999). Educational success in high-risk settings: Contributions of the Chicago Longitudinal Study. *Journal of School Psychology*, 37(4), 345-354.
- Rhodes, V. (2005). Kids on the move: The effects of student mobility on NCLB school accountability ratings. *Penn GSE Perspectives in Urban Education*, 3(3).
- Rhodes, V. (2007). Student mobility: The elephant in NCLB's living room. *ERS Spectrum*, 25(1), 1-10.
- Rumberger, R.W. (2003). The causes and consequences of student mobility. *Journal of Negro Education*, 72(1), 6-21.
- Schafft, K.A. (2003). *Low-Income Student Transiency and Its Effects on Schools and School Districts in Upstate New York*. Paper presented at a national research workshop Promoting the Economic and Social Vitality of Rural America: The Role of Education, New Orleans, LA, April 14-15.
- Schafft, K.A. (2006). Poverty, residential mobility, and student transiency within a rural New York school district. *Rural Sociology*, 71(2), 212-231.
- Simpson, G.A., and Fowler, M.G. (1994). Geographic mobility and children's emotional/behavioral adjustment and school functioning. *Pediatrics*, 93(2), 303-309.
- South, S.J., Haynie, D.L., et al. (2007). **Student mobility and school dropout**. *Social Science Research*, 36(1), 68-94.
- Stoneman, Z., Brody, G.H., et al. (1999). **Effects of residential instability on Head Start children and their relationships with older siblings: Influences of child emotionality and conflict between family members**. *Child Development*, 70(5), 1246-1262.
- Temple, J.A., and Reynolds, A.J. (1999). School mobility and achievement: Longitudinal findings from an urban cohort. *Journal of School Psychology*, 37(4), 355-377.
- Tucker, C.J., Marx, J., et al. (1998). **Moving on: Residential mobility and children's school lives**. *Sociology of Education*, 71(2), 111-129.
- U.S. General Accounting Office. (1994). *Elementary School Children: Many Change Schools Frequently, Harming Their Education*. HEHS-94-45, February 4. Washington, DC: Author.
- Weckstein, P. (2003). Accountability and student mobility under Title I of the No Child Left Behind Act. *Journal of Negro Education*, 72(1), 117-125.
- Wintroub, F.K. (1997). *The Effects of School Mobility in an Urban Setting on Children of Lower Socioeconomic Status*. University of California at Los Angeles.
- Wood, D., Halfon, N., et al. (1993). Impact of family relocation on children's growth, development, school function, and behavior. *Journal of the American Medical Association*, 270(11), 1334-1338.

INTERNATIONAL ARTICLES

- Bernard van Leer Foundation. (1994). Mobility and young children. *Bernard van Leer Foundation Newsletter*, 76.
- Demie, F. (2002). Pupil mobility and educational achievement in schools: An empirical analysis. *Educational Research*, 44(2), 197-215.
- Machin, S., Telhaj, S., et al. (2006). The mobility of English school children. *Fiscal Studies*, 27(3), 253-280.
- McKenna, G., and Goddard, J.T. (2002). Student mobility: An exploratory study of mobility trends and effects on literacy in an urban elementary school. *Exceptionality Education Canada*, 12(1), 37-50.
- Sorin, R., and Iloste, R. (2006). Moving schools: Antecedents, impact on students and interventions. *Australian Journal of Education*, 50(3), 227-241.
- Strand, S. (2002). Pupil mobility, attainment and progress during key stage 1: A study in cautious interpretation. *British Educational Research Journal*, 28(1), 63-78.
- Strand, S., and Demie, F. (2006). Pupil mobility, attainment and progress in primary school. *British Educational Research Journal*, 32(4), 551-568.
- Strand, S., and Demie, F. (2007). Pupil mobility, attainment and progress in secondary school. *Educational Studies*, 33(3), 313-331.
- Wasserman, D. (2001). *Moving Targets: Student Mobility and School and Student Achievement*. Edmonton: Alberta Learning.