IDENTIFYING BEST PRACTICES FOR HOMELESS STUDENTS

By

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To all my families:
one I was born into,
one I married into,
one Stephen and I created.

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CHAPTER I

INTRODUCTION

Homelessness is a difficult topic to study. Definitions are elusive, populations difficult to estimate, and effects hard to isolate. Nonetheless, researchers agree that the face of homelessness in the United States has changed dramatically in the past half century: once comprised primarily of single men, the homeless population now includes a significant number of families with children. Though its definitions are contested, the National Law Center on Homelessness and Poverty (2004) suggests that families with children make up nearly half of the homeless population; others state that children are its fastest-growing segment (Anooshian, 2005; Merves, 1992; National Center on Family Homelessness (NCFH), 2009; Popp, 2004; Rubin et al., 1996). The economic downturn and foreclosure crises of the past three years seem to have worsened the situation, with public schools across the nation reporting dramatic increases in the numbers of students that they have enrolled since 2007 who are experiencing homelessness (National Association for the Education of Homeless Children and Youth (NAEHCY), 2010).

However difficult it is to operationalize and measure, homelessness is believed to affect children in profound ways, possibly different from the ways they are touched by poverty writ large. Many studies have found that in addition to logistical and procedural barriers to school access, homeless children experience physical, developmental, mental health, and educational problems at much greater rates than national norms. Although research is inconclusive on whether students experiencing homelessness fare worse than their housed peers from low socioeconomic status backgrounds (Buckner, 2009), schools need strategies to help support these

vulnerable students. Research has demonstrated repeatedly that the returns to education are high and increase as more education is attained; the prospects for homeless students and their similarly disadvantaged housed peers are limited if they do not succeed in school. Lack of education can have long-term effects on employment and social integration (Janus et al., 1987; Obradovic et al., 2009; Powers & Jaklitsch, 1993). In short, "the educational deficits that homeless youth develop are serious economic, social, and health handicaps for their reintegration into society as they become adults" (Shane, 1996, p. 32).

My dissertation seeks to identify those practices schools use to promote the academic achievement of homeless students.[1] Although literature exists which recommends ways in which schools can help these students, it is by and large comprised of advocacy and single case-study research, lacking evidence to support the efficacy of the promoted practices (Mawhinney-Rhoads & Stahler, 2006). My work aims to identify strategies supported by empirical evidence, by looking at schools whose homeless students perform well and comparing their practices to those at schools whose homeless students test poorly. Though there are limitations to this approach, which will be discussed in detail later, this work nonetheless stands to contribute knowledge to the field and uncover topics for future research.

This study addresses the following research questions:

1) Is housing status a predictor of student achievement in a large urban district, even after controlling for common correlates like income and race?

2) At which schools do homeless students perform better and worse?

3) How do these schools serve their low-SES students?

[1] Although I prefer to refer to "students experiencing homelessness," rather than to characterize children by their housing status the way "homeless children" does, I often rely on the latter term for its conciseness.

4) What programs and practices are employed to support homeless student learning by high- and low-performing schools?

5) Are certain practices unique to schools where homeless children are relatively high-performing?

Organization of the Dissertation

This dissertation contains five chapters. The present chapter provides an introduction to the issue of homelessness and achievement test scores. It offers some descriptive data, acknowledges some of the challenges of defining and measuring homelessness, and gives an overview of what we know about how homelessness relates to children's academic outcomes. The chapter then reviews the issues potentially impacting those outcomes across four broad domains: logistical and procedural barriers, physical health problems, mental health issues, and educational readiness deficits. Because homelessness is interrelated with poverty, this chapter also reviews the literature on how race and class are thought to impact educational outcomes and offers a context for understanding how this relates to the study of homeless children.[2]

Chapter II provides an in-depth review of the literature on homeless children's academic outcomes. The chapter begins with an exploration of research indicating that students experiencing homelessness have lower grades and test scores, as well as higher rates of grade retention, than middle-class children and, in some cases, than their housed low-income peers. The chapter then explores the domains described above: logistical and procedural barriers, physical health problems, mental health issues, and educational readiness deficits. Again, homeless children are shown to experience challenges in these areas far exceeding those faced by

[2] Although there is extensive literature on the academic challenges and needs of unaccompanied homeless adolescents, this study focuses on younger children who are homeless with their families. The two populations are so different that to try to study them together would be unwieldy.

the average American child; research is inconclusive on how homeless children compare to housed poor children. Chapter II concludes by reviewing the literature on how schools are legally required to accommodate homeless students as well as the strategies scholars suggest can help improve their academic outcomes.

In Chapter III, I explain in detail the data and methods used in the study. I describe the population studied and the variables used, as well as the quantitative and qualitative methods I employed. Basic descriptive statistics are presented in this chapter as well.

Chapter IV provides an in-depth exploration of the results of my analyses. It proceeds through each of the five research questions, detailing quantitative findings as well as providing a synthesis of qualitative interview data collected from principals, teachers, and other personnel at low- and high-performing schools.

The final chapter describes the significance of my study. Although all can agree that children experiencing homelessness are a vulnerable population in need of support, there are some who contend that because we cannot be sure that homelessness has greater effects on children's schooling than the already well-known effects of poverty and high mobility, studying homeless children as a group may deflect attention from the pressing needs of all low-income students. On the other hand, there are those who believe that the comparison is irrelevant: homeless children are worthy of attention in and of themselves. Taking a position that borrows from both stances, I explain how studying homeless children's academic needs stands to benefit both the homeless subgroup and low-income children as a whole. I also explain how my findings provide a direction for future policy, practice, and research.

Defining and Measuring Homelessness

Homelessness is difficult to quantify because of its dynamic nature. At both the societal and individual levels, homelessness is a fluid state that can take many forms. Homeless families and individuals vary in where they reside, the length of time they go without homes, how often they experience homelessness, the quality of temporary housing they encounter, and the qualitative aspects of life without shelter. Other family characteristics – parental age, family size and composition, mental health and substance abuse issues, previous involvement with child protective services – vary widely within the population as well (Culhane, Metraux, Park, Schretzman, and Valente, 2007). Despite this variation among homeless families, researchers have tried to explore and describe some common experiences. Family homelessness has been called "a composite of many conditions and events, such as poverty, changes in residence, schools, and services, loss of possessions, disruption in social networks, and exposure to extreme hardships" (Rafferty & Shinn, 1991, p. 1170).

In order to determine eligibility for programs, laws and agencies that serve the homeless need specific definitions, though these can be difficult to come by (Cordray & Pion, 2003). Is a person or family homeless after going without a home for a day, a week, a year? Is someone homeless after losing a home and moving in with another family? Are children awaiting foster care placement homeless? Answers to such definitional questions are needed to determine demographics. There are also different ways to count the homeless: point in time counts look at how many people are homeless on a single night, while period prevalence counts estimate how many people experience an episode of homelessness within a year or even a lifetime (National Coalition for the Homeless, 2007b). Although definitions can be contested and numbers are difficult to determine, it is nonetheless instructive to examine common working definitions and

varying population estimates from the last two decades.

The United States Department of Housing and Urban Development (HUD) has traditionally defined as homeless "an individual who lacks a fixed, regular, and adequate nighttime residence" who resides in a "supervised publicly or privately operated shelter designed to provide temporary living accommodations" or "a public or private place not designed for, or ordinarily used as, a regular sleeping accommodation for human beings" (HUD, 2010b). The Department of Education's definition, as expressed in the McKinney-Vento Homeless Assistance Act, is broader, including HUD's definition plus "children and youth who are sharing the housing of other persons due to loss of housing, economic hardship, or a similar reason…abandoned in hospitals; or awaiting foster care placement" (National Center for Homeless Education [NCHE], 2010). The primary distinction between the two definitions is consideration of those who have no home but double up with friends or other family members – these individuals are labeled homeless by the Department of Education, but not by HUD. The Homeless Emergency Assistance and Rapid Transition to Housing (HEARTH) Act, passed in 2009, potentially expands HUD's definition to include those who are doubled up, but the specifics have not yet been settled (HUD, 2010b). Further complicating the process of counting the homeless is the fact that most counts are shelter-based and are likely underestimates (National Coalition for the Homeless, 2007b). The United States Conference of Mayors (2006) reported that more than a quarter of all families were turned away from shelters due to lack of space, forcing them to reside in places unsuitable for human habitation such as sidewalks and cars, and also placing them outside the view of researchers using shelter-based counting approaches. Likewise, counts also often miss those who are doubled up with other families.

In its most recent annual report, HUD reports that 344,495 children resided in homeless

shelters at some point during 2009 (HUD, 2010a). However, many homelessness researchers and advocates assert that government counts are low: "on any given day, at least 800,000 people are homeless in the United States, including about 200,000 children" (Burt, 2001, p. 1). Some research indicates that as many as 3.5 million people, 1.35 million of them children, will experience homelessness in a given year (National Law Center on Homelessness and Poverty, 2007). The National Center for Homeless Education estimates that 794,600 school-aged children were homeless, according to the broader Department of Education definition, in 2009 (NCHE, 2009). These numbers may be low, since schools are required to provide services to students identified as homeless, possibly providing them an incentive to underreport. Since homelessness rates are also higher among pre-school aged children (Culhane & Metraux, 1999), it is possible to extrapolate that, if there were 794,600 homeless children enrolled in school over a year, the number would be close to 1.2 million for all children. My study looks at children in elementary school. In some cities, as many as five percent of all poor children will experience an episode of homelessness between the ages of five and nine (Culhane & Metraux, 1999).

Society-level economic factors change homelessness trends as well (Buckner, 2008). In times of relative prosperity at the societal level, homelessness mostly affects those families who suffer persistent severe poverty. These families often end up living in temporary shelters or transitional housing. Research indicates that the vast majority (72-80 percent) of families who end up in shelters have only one stay of relatively short duration, but as many as 20 percent experience a long stay, and between two and eight percent experience repeated episodes of homelessness (Culhane et al., 2007).[3] In addition, at a time like the present, with unemployment close to nine percent (United States Bureau of Labor Statistics, 2011), the risk of losing a home

[3] It is important to note here that the overwhelming majority of homeless single-parent families are headed by mothers (HUD, 2009).

extends up the income ladder. Many so-called "near poor" and lower middle class families end up in danger of losing their homes. These families may be more likely to double up with relatives or friends (National Alliance to End Homelessness (NAEH), 2010), making them nearly invisible to researchers. Whether these families will be likely to experience recurring homelessness episodes remains to be seen.

Not surprisingly, homeless counts across the United States have increased since the financial and housing crises of 2007. In 2010, the National Association for the Education of Homeless Children and Youth reported a 41percent increase over the 2007-2008 and 2008-2009 school years, bringing the total to 956,914 homeless children enrolled in schools across the country (NAEHCY, 2010). And 70 percent of districts surveyed also indicated that their numbers had grown in the 2009-2010 school year, with 39 percent of those districts reporting that they had enrolled more new homeless children in the first six months of school than in the entire previous school year (NAEHCY, 2010). As the homeless population continues to grow, schools will be pressed to serve an increasingly large group of students whose needs far exceed schools' traditional offerings.

The Effects of Homelessness on Children's Education

Experiencing homelessness is undoubtedly difficult for adults, but research demonstrates that it can be devastating for children. Particularly in the area of educational outcomes, research has shown again and again that test scores (e.g., Dworsky, 2008; NCFH, 2009; Robertson, 1992; Rubin et al., 1996) and grades (e.g., Rubin, et al., 1996) are lower for homeless students, while dropout rates are higher (Masten et al., 1997; Rouse & Fantuzzo, 2009; Tucker, 1999). Homeless children are also more likely than the general population to be retained (Bassuk &

Rubin, 1987; Hart-Shegos, 1999). Some studies have found that homeless children are worse off in these domains than extremely poor housed children as well (e.g., Buckner, Bassuk, & Weinreb, 2001).

In general, the effects of homelessness on children can be separated into four categories. In the spirit of Stronge's (1993) suggestion that educational needs cannot be addressed until students' emotional needs are met, I present these categories in a Maslow-like order of descending importance, implying that the most basic needs must be satisfied before the others can be addressed (Maslow, 1943). First and foremost, homeless children are commonly faced with logistical and procedural barriers to enrolling in school. Next, they are plagued by physical ailments. Homeless children also suffer from mental health issues at greater rates than children in the general population. Finally, homeless children often face educational readiness challenges.[4] These factors come together to decrease the likelihood that homeless children will attain school success.

Logistical and Procedural Issues

Although the McKinney-Vento Homeless Assistance Act of 1987 (described in detail in Chapter II) attempts to remove them, logistical and procedural barriers can keep homeless children from enrolling in school (Stronge, 1993). Schools and districts before the McKinney-Vento Act commonly denied homeless students access to school if they or their parents could not produce proof of permanent residence within the district, and there is evidence that this issue persists to this day (Pennsylvania Legal Aid, 2010). Likewise, children doubled up with friends or family while their parents were in the shelter system were often prevented from enrolling

[4] Although there is an extensive body of work detailing the developmental delays homeless children often suffer, this topic falls outside the scope of my dissertation, which is restricted to third, fourth, and fifth graders.

because they did not have a legal guardian available to complete paperwork. Homeless families often lose track of important documents like immunization records and birth certificates, and have been denied the right to enroll children in school without them. Finally, transportation is a challenge, especially for students attending a school in the district where they lived before they became homeless. Although the law requires schools to be flexible with residency, guardianship, and paperwork requirements, and to provide transportation, some homeless students are still faced with some of these issues (Samuels et al., 2010).

In addition to these legal issues, there are some logistics that plague students experiencing homelessness, such the loss of school supplies or adequate clothing during their relocation (Gewirtzman & Fodor, 1987). Homeless students may be unable to complete homework because of crowded and noisy shelter living conditions (Buckner, Bassuk, Weinreb, & Brooks, 1999; Lubell & Brennan, 2007). The state of homelessness itself creates challenges for students.

Physical Health

Children who are experiencing homelessness are likely to suffer both chronic and acute health problems (Books, 2004). The unsanitary shelter conditions in many cities, exposure to weather and extremes of temperature, and lack of regular medical care that often accompany homelessness leave children vulnerable to a host of illnesses. Although some cities have made great strides in the last decade to create and sustain supportive family shelter systems that protect children from these problems (Gewirtz, Hart-Shegos, & Medhanie, 2008), this is not the case everywhere. Infestations and infections (Hudson et al., 2010; Ringwalt, Greene, & Robertson, 1998), asthma (Barry, Ensign, & Lippek, 2002; Karabanow, 2004; Williams, 2003), and

thermoregulatory disorders such as heat stroke and hypothermia (National League of Cities, 2004; Ropers, 1988) are common among homeless children.

In addition to other physical ailments, many children without homes experience hunger and malnutrition. Malnutrition is particularly problematic because without proper nourishment, children's brain development is challenged, potentially leading to life-long learning issues (NCFH, 2009). Children who are not adequately nourished and who are often ill may miss school and, when they do attend, find it difficult to pay attention to lessons (Hart-Shegos, 1999). Hunger has a devastating impact on children (Weinreb et al., 2002). It affects their growth and physical health, leading to potential mental health and behavior problems (Rafferty & Shinn, 1991).

Mental Health

Children experiencing homelessness are also likely to suffer from mental health and behavioral issues (Lubell, Crain, & Cohen, 2007). Girls tend to evidence internalizing problems like anxiety and depression, whereas boys more often exhibit externalizing problems like aggression (Bassuk & Rosenberg, 1990; Buckner et al., 1999). Other behavioral issues are also common in this population (Masten, et al., 1997), such as shyness, sleep problems, and attachment issues (Bassuk & Rubin, 1987). Yu, North, LaVesser, Osborne, and Spitznagel (2008) found that many more homeless than housed children were likely to have disruptive behavior problems that affected their schooling.

Likely owing to behavioral problems like those mentioned above, homeless children are more likely than housed students to be suspended or expelled from school (Better Homes Fund, 1999). Children often suffer social isolation and withdrawal in school as well (Horowitz,

Springer, & Kose, 1988). When students who are disruptive in class miss out on the transmission of lesson content or are excluded from class as punishment, their learning suffers. Additionally, homeless students' anxieties, depressive thoughts, and social concerns may lead to inattentiveness, causing them to be unable to absorb the material being taught (Stronge, 1993).

Educational Readiness

Attendance is reported by many as a challenge for homeless students. Research in the New York City (United Way of New York City, 2002) and Chicago (Dworsky, 2008) public schools revealed that homeless students had high rates of absenteeism. After the passage of the McKinney-Vento Homeless Assistance Act in 1987, which included provisions for the education of children, absenteeism for homeless students seemed to decline (Stronge, 1993), though recent reports are mixed (e.g., Dworsky, 2008).

Homeless children are also more likely than their peers to qualify for special education services but concomitantly less likely to receive them (Duffield, Heybach, & Julianelle, 2007), perhaps owing to their high mobility (Medcalf, 2008; Nunez & Collignon, 1997), which interferes not only with delivery of education but also with the continuity needed for the lengthy special education referral process (Emerson & Lovitt, 2003; Stronge, 1993). In short, homeless children experience a range of educational challenges that may affect their academic achievement.

Homeless children suffer in all main areas of academic performance including standardized test scores and IQ test scores, grades, and rates of retention. Obradovic and team (2009) found that the homeless students in their study scored significantly lower in reading and math than stably-housed poor children. The homeless students in Yu and colleagues' (2008)

study had significantly lower scores on a standardized measure of intelligence. Many studies of school performance, usually measured by grades, have found that homeless students underperform when compared to their housed low-income peers as well as middle-class children (e.g., Nunez & Collignon, 1997; Rubin et al., 1996). Studies also find higher rates of grade retention for homeless than middle class and housed low-income children (e.g., Shinn et al., 2008).

Poverty

Complicating the study of homeless children and their experiences in school is the well-established association between poverty and educational outcomes. In the United States, it has become common knowledge in the past half-century that children from high-poverty backgrounds score significantly lower on standardized academic assessments than their peers from higher-income backgrounds (for example, Low & Clement, 1982; Vanneman, Hamilton, Baldwin Anderson, & Rahman, 2009). Socioeconomic status (SES), which contains measures of family income, parental education, and parental occupation levels, has been shown to be a strong predictor of academic scores (Bradley & Corwyn, 2002). In short, "the consistent finding is that the higher the family's social status the more likely the child is to be successful in school" (Epps, 1990, p. 597).

Compounding the issue even further is race: African American and Latino students score lower than white students, on average, even after controlling for income (Jencks & Phillips, 1998). Researchers have noted that, "poor minority children are undereducated in disproportionate numbers across the country. Academically, such children may lag behind the national average by up to two years" (Comer, 1988, p. 42). Fifty years of research and national

conversation on these inequalities, often termed "achievement gaps," have unfortunately found few solutions, and the gaps have not gotten smaller since 1990 (Gamoran & Long, 2006). Thus, it is often difficult to disentangle the effects of homelessness on children from the effects of poverty (Masten et al., 1993). "Many children living in economically depressed circumstances suffer from below-average intelligence, delayed academic achievement, and significant problems in adjustment" (Rescorla, Parker, and Stolley, 1991, p. 219), whether or not they have housing.

Research has consistently shown that socioeconomic status and race predict school scores in this country. As Alexander, Entwisle, and Horsey (1997) explain:

> Race, gender, and social class locate individuals and families in society's stratification system, and conditions surrounding these statuses and roles help determine exactly how the slate is filled in. They begin to shape children's academic prospects long before school enters the picture, and they continue to weigh on children's development throughout their schooling. (p. 98)

Particularly because homeless children are likely to come from low-income backgrounds before losing their homes and are also likely to be children of color (Rubin et al., 1996), a summary of the research on income, race, and educational outcomes is of crucial importance to the issue of homeless students' academic scores. "Inner city children from minority families are known to have a very high base rate of the very medical, educational…and psychiatric problems so common in homeless youngsters" (Rescorla et al., 1991, p. 211).

Socioeconomic Status

Although SES is usually quantified using family income and parental education and occupation information (Bradley & Corwyn, 2002) there are other characteristics correlated with SES that may impact educational outcomes. The exact mechanisms that cause lower test scores for low-income children of color have not been established conclusively, but research has been

able to shine some light on possible reasons for these educational outcome inequalities. Increased exposure to lead, less home-based cognitive stimulation, lower teacher expectations, poorer academic readiness skills, and harsh, inconsistent parenting have all been suggested as possible mechanisms through which children from low SES backgrounds arrive at lower cognitive and academic outcomes (McLoyd, 1998). Studies have shown that home factors known to vary among SES levels, such as family structure and size, parents' attitudes and values, and summer child care arrangements, as well as personal factors like behavior and control orientation, are strong predictors of school outcomes (Alexander et al., 1997). Other factors that vary with SES, like access to adequate nutrition, vision correction, and other aspects of physical health are likewise correlated with academic scores (Rothstein, 2004).

Neighborhoods, too, seem to play a role, though it is small: students living in disadvantaged neighborhoods tend to do worse in school (Leventhal & Brooks-Gunn, 2004). Growing up in a high SES neighborhood predicts a higher expectation of educational attainment, even when controlling for family characteristics (Jencks & Mayer, 1990). Researchers believe that this is caused by a combination of peer effects, implied socialization, and explicit guidance from adults. Other possible mediators of academic scores in low-SES children that have gotten increasing attention in recent years are mobility (Wood, Halfon, Scarlata, Newacheck, & Nessim, 1993) and stress (Buckner et al., 1999), which will be explored in detail in the next chapter.

Race and Ethnicity

The association between race and educational outcomes is even more difficult to explain. It is believed by some that the black-white test score gap and the overrepresentation of African

Americans in poverty are vestiges of the chattel slavery system, particularly its compulsory ignorance laws (Menchaca, 1997). Others trace the roots of these inequalities to the segregated school era when African Americans were only allowed to attend inferior schools (Ladson-Billings, 2006). Some have attributed the relatively low academic success of African Americans and Latinos to a so-called *culture of poverty* that does not place a high value on education (for example, Lewis, 1998; Moynihan, 1965). Still others believe that a culture of opposition has arisen among students of color that causes them to reject academic success for fear of seeming too white (Fordham & Ogbu, 1986). Disparities in wealth, as opposed to income, between racial groups is also thought to explain the persistent racial achievement gaps (Orr, 2003). Many researchers note the role of institutionalized racism in both the test-score gap and the overrepresentation of children of color in the homeless population (Ziesemer, Marcoux, & Marwell, 1994).

Conclusions

Whatever the cause, it is clear that our schools have not been successful in raising the academic scores of African American and Latino students, or students from low SES backgrounds, to the levels of their more affluent white peers (Gamoran & Long, 2006). Because homeless children are likely to be children of color from low SES backgrounds, it can be difficult to disentangle the effects of homelessness on academic scores from the effects of race and poverty. Indeed, a number of studies of homeless children's educational outcomes find no significant differences between their scores and those of housed low-SES children (e.g., Ziesemer et al., 1994). Others find a homelessness effect over and beyond the impact of poverty, perhaps owing to stress or displacement, with homeless students scoring lower than their housed

peers. My dissertation first seeks to establish whether homelessness, above and beyond poverty, is a predictor of test scores, then looks at how schools serve their homeless students. If homeless students do not fare worse than housed low-SES students, it is nonetheless instructive to see how schools serve this population; it is possible that strategies used to support homeless students could also support low-income students who are housed.

CHAPTER II

HOMELESSNESS AND EDUCATION

Homeless children fare worse on educational outcome measures than middle-class children, and in some cases, even worse than their housed low-SES peers. Many scholars assert that children in chronically homeless families are likely to experience risks such as hunger, multiple school placements, and exposure to violence and maltreatment (Anooshian, 2005). This chapter reviews the literature on homelessness and education. In it, I examine academic outcomes, review educational challenges, and explore the role of the school in supporting homeless students. Because many early studies suffered methodological challenges, I make note of the more rigorous studies in each section, following the analysis by Buckner (2008). His review identified three types of studies: those using nationally-normed instruments, those using housed low-income comparison groups, and those employing both norms and comparison groups, with the latter being the most helpful in isolating the effects of homelessness on children. One major limitation suffered by almost all of the published studies is that they are shelter-based, making selection bias likely. Often, the neediest families are unable to access temporary shelter (Duffield & Lovell, 2008; Weinreb & Buckner, 1993), so to exclude them from analyses potentially underestimates the deleterious effects of homelessness. Researchers also suspect that the majority of homeless children are doubled up, but not counted; their omission from analyses likely skews results. Likewise, the tendency to focus on children whose families reside in temporary housing limits their generalizability to other types and experiences of homelessness.

Educational Outcomes

Homeless elementary school children experience academic problems such as low test scores, low grades, and high rates of grade retention.[5] Masten and team's (1997) study looked at standardized test scores, teacher ratings, and cumulative school records of 73 homeless children in Minneapolis and concluded that they experienced substantial academic delays at rates well above national norms. Likewise, an examination of school data showed that 156 homeless children in and around Boston had greater rates of school failure than national norms (Bassuk & Rubin, 1987). Researchers are generally in agreement that homeless children are more likely than their middle class peers to score low on tests, to experience school failure, and to be held back to repeat a grade.

Though homeless children have been shown consistently to experience greater academic problems than middle class children, the first researchers to examine this issue had difficulty determining if they also fared worse than never-homeless low SES children. "[T]he absence of a comparison group of poor housed children [was] a common methodological problem in studies" of this type (Zima, Bussing, Forness, & Benjamin, 1997, p. 239) and "few studies…compared homeless children with youngsters from a comparable SES background who live in homes, [so] it is not clear what interventions are specifically needed to help homeless children, as opposed to poor children in general" (Rescorla et al., 1991, pp. 211-212). Some more recent studies have begun to employ control groups of low-SES children, but evidence from these studies is mixed.

Test Scores

Most studies of homeless children's academic outcomes rely on standardized tests, such

[5] Although my focus is on homeless students in elementary school, it is worthy of note that older homeless students are also plagued by very high rates of dropout before graduation. National Center on Family Homelessness (2009) reports that fewer than 25 percent of homeless children graduate from high school.

as those administered by states and cities to school students, and/or IQ tests of the sort usually administered to individual children by psychologists. Homeless children consistently score below norms on standardized tests, and often worse than their housed low-income peers. Results on IQ tests are less straightforward.

Standardized tests. Studies of standardized test scores over the years across the country have found homeless children's scores well below city, state, and national norms. In perhaps the most sophisticated study, Rubin and colleagues (1996) performed multivariate analysis to compare 102 homeless children with 178 housed children from the same classrooms in New York City and found that homeless children performed significantly worse on tests of reading, spelling, and math. The large sample size and use of a classroom-based control group improves internal validity of the study. Using this matching technique controls for classroom, teacher, and school effects. Though their sample size was smaller, Shinn and colleagues (2008) conducted a rigorous longitudinal study and found that, compared to a never-homeless control group, students in the midst of an episode of homelessness scored one third of a standard deviation lower on tests, a finding which was statistically significant. Buckner, Bassuk, and Weinreb (2001) studied children in 220 homeless and 216 low-income housed (never homeless) single-parent families in Worcester, Massachusetts, and found no significant differences between the academic scores of homeless and housed poor students once attendance had been controlled for.[6]

Less sophisticated studies have turned up similar results. In one of the first studies of New York City, only 42 percent of homeless children were found to perform at or above grade

[6] It is interesting to note that not only was housing status not a significant predictor of test scores in this study, but that housed low-SES students and homeless students scored *at* national norms on the Kaufman Brief Intelligence Test (K-BIT) Matrices subtest, which is believed to be a culturally-neutral IQ test (Buckner, Bassuk, & Weinreb, 2001). Buckner, Bassuk, and Weinreb (2001), like Masten and colleagues (1994) and Ziesemer, Marcoux, and Marwell (1994), expound on the possible role of race and racism in the findings of low-income children of color as lacking at school.

level on the Degrees of Reading Power test, compared with a citywide pass rate of 68 percent; results on the Metropolitan Achievement Test of mathematics were similarly disparate, with 28 percent of homeless children scoring at or above grade level, while 57 percent of children were at grade level citywide (Rafferty & Rollins, 1989). Rafferty (1990) examined test scores of 9659 homeless school-aged children in New York City and found that they had significantly lower scores not only than citywide averages, but also the average scores of the 73 schools with highest low-income student enrollment.

IQ. One of the earliest studies of the educational scores of homeless children was undertaken by the St. Louis Children's Project in the 1980s. Researchers administered the Slosson Intelligence Test – Revised to 107 homeless children and found that 45 percent of them – three times the proportion of the overall population – scored in the borderline/"slow learner" category (Whitman, Stretch, & Accardo, 1987). The Peabody Picture Vocabulary Test–Revised yielded similar results: 89 percent of the children fell at or below the 50th percentile (Whitman et al., 1987).

Unfortunately, while pointing to lower average IQ scores for homeless children than national norms, this work did not offer the opportunity for comparison with housed extremely poor children. The most recent and rigorous studies have not found any differences in IQ score between homeless and housed low-income children. Rubin and colleagues (1996) found that homeless students and the housed low-SES classroom comparison group had equivalent scores on verbal and non-verbal IQ tests, as did Shinn and her team (2008).

In their study of 83 children living in 13 shelters across Philadelphia, Rescorla and team (1991) used a housed low-SES comparison group and determined that the school-aged homeless children scored significantly lower on the Weschler Intelligence Scale for Children (WISC)

vocabulary test, which measures knowledge gained as a result of environmental experience. However, the comparison group of housed poor children was half the size of the homeless group, and the sampling method is problematic. Housed poor families were recruited at a local health clinic, introducing potential bias. Some unobserved family factor may influence both children's IQ score and the parents' propensity to seek health care at a clinic. These issues make this study less reliable than those finding no differences in IQ between housed and homeless low-income children.

Performance

School performance is another area in which homeless children fare worse than middle-class children and, in some cases, even their housed low-SES peers. Its operationalization differs from study to study: some use parent reports of students' grades, others use teacher reports, and still others look at nebulously-defined "grade levels" as measures of school performance. Although Rafferty, Shinn, and Weitzman (2004) found no differences in homeless and housed low-income students' academic scores before the former group's homelessness or five years after their re-housing, they did find that students' scores dropped below the control group's during the episode of homelessness. Hart-Shegos (1999) reviews literature and concludes that three quarters of homeless children perform below grade level in reading and half perform below grade level in mathematics.

Though they rely on parent or teacher report rather than more objective measures, some other studies support the same conclusions. Maza and Hall (1988) studied 340 children in 163 families served by Traveler's Aid agencies in eight major cities and found that 30 percent were reported by their parents as being behind grade level in school. Bassuk and Rosenberg (1990)

studied families in six Boston shelters along with a housed low-income control group and found that 41 percent of homeless mothers reported that their children were failing in school, compared with only 23 percent of the housed comparison group. Zeisemer and colleagues (1994) found no significant differences between 169 homeless and 167 highly mobile housed low-SES students in Madison, Wisconsin on measures of academic functioning based on teacher reports.

Retention

Studies of homeless children have generally found that they are more likely than other children to repeat a grade in school (Bassuk & Rubin, 1987; NCFH, 2009), sometimes dramatically so. Rafferty (1990) found that homeless students in New York City had a rate of retention (15 percent) more than twice that of the city average (7 percent). Rubin and colleagues' (1996) study of 102 homeless children in the Bronx and Manhattan comparing them to a classroom-based control group of 178 housed children determined that the homeless children were 4.8 times more likely to have repeated a grade than their housed classmates. Hart-Shegos (1999) postulates that this often happens for non-academic reasons like absenteeism and mobility.

Summary

Researchers generally agree that homeless children are more likely than their middle class peers to score low on tests, experience school failure, and be held back to repeat a grade. In some cases, they are also more likely to experience these school-related problems than their housed low-income peers.

Educational Challenges

The mechanisms through which homelessness might present academic challenges for students have been hypothesized by numerous scholars (Murphy & Tobin, 2011). Homeless students have traditionally had problems gaining access to school due to logistical and procedural barriers. Even when access to school is not a problem, homeless students are likely to suffer other challenges. Malnutrition and other physical health issues, high rates of mental health and behavior problems, frequent absences, and high school mobility can also interfere with educational continuity and success. Homeless children have high rates of suspension from school. They also have high rates of special education diagnosis often coupled with low rates of receipt of special education services.

Logistical and Procedural Barriers

The first challenge homeless students face with regard to education is gaining access to the school building. In the past, homeless families often had difficulty producing the documents necessary to enroll children in school, such as birth certificates, immunization histories, and records from previous schools (Mihaly, 1990). The McKinney-Vento Homeless Assistance Act of 1987, presented in detail later in this chapter, attempts to deal with these issues, giving students the right to be enrolled while parents make arrangements to locate documents. There is evidence that this barrier has been significantly reduced though not eliminated (Samuels et al., 2010; Stronge, 1993).

Many homeless students have also been prohibited from enrolling in school without proof of permanent residence or guardianship (National Coalition for the Homeless, 1987). Although the McKinney-Vento Act requires districts to allow students to enroll without such evidence,

adherence to the law has not been quick or universal. In 1991, Mihaly documented that 30 of the 50 states still used illegal residency requirements. And there is some suggestion that these problems persist even two decades later – for example, in the fall of 2009, four students in Pennsylvania were denied access to their school when they lost their home and stayed in a shelter outside the district (Pennsylvania Legal Aid, 2010) – though its extent is difficult to gauge.

Most research finds that the 1987 McKinney-Vento legislation largely achieved its goal of increasing homeless students' ability to enroll in school (Anderson, Janger, & Panton, 1995; Masten, et al., 1997; Stronge, 1997). Masten and colleagues (1997) looked at the educational outcomes of 73 children in a Minneapolis shelter between the ages of 6 and 11 and found that enrolling in school was not a problem. Stronge (1993) asserts that by the early 1990s, homeless students nationwide had begun to attend school at rates similar to the general student population, and a national evaluation of the Education for Homeless Children and Youth program found that over 85 percent of homeless students were attending school regularly (Anderson et al., 1995).

Unfortunately, enrollment in school does not guarantee attendance (Biggar, 2001). Another major logistical barrier homeless students face is transportation to and from school. In 1982, educational leaders in 22 states identified transportation as the major reason for homeless children's absences (Mihaly, 1991). The National Center for Homeless Education reported in 2009 that Local Educational Agencies continued to identify transportation as the number one problem for homeless students (as cited in Samuels et al., 2010). Even if they can enroll and do have transportation, homeless students may have problems with excessive absence for other reasons. They may be reluctant to attend because they lack proper clothing (Gewirtzman & Fodor, 1987) and school supplies or because they have been stigmatized by classmates and even teachers unaware of their circumstances (Gewirtzman & Fodor, 1987; Nunez & Collignon,

1997). Parents may opt to keep children home from school to protect them from another temporary experience, or for fear of being located by an abusive partner (Mihaly, 1991). Other researchers suggest that the chaotic experience of homelessness itself sometimes prevents parents from being able to focus on getting students to school consistently (Nunez & Collignon, 1997).

Because of these continued problems getting to school once they are enrolled, homeless children still have attendance problems. Zima and colleagues (1997) studied 118 families with 169 children in shelters in Los Angeles and found that although the majority were enrolled in school, 39 percent had missed more than a week of school in the preceding three months. In a review of research from across the country, Molnar, Rath, and Klein (1990) found that attendance was poor, with only between 43 percent and 57 percent of homeless children attending school regularly. Rafferty and Rollins (1989) found that, in New York City, not only did homeless children have worse attendance rates than city averages, but that their attendance got worse as they got older at a higher rate than for children overall. Rubin and colleagues (1996) found, similarly, that the homeless students in their study missed significantly more days of school than the students in the housed classroom-based comparison group. Harpaz-Rotem, Rosenheck, and Desai (2006) found that maternal homelessness was associated with lower attendance in school. In one study, homeless children's absences are tested for their relationship to academic problems. "Days absent from school was hypothesized as the mediating link between homelessness and academic achievement" (Buckner, et al., 2001, p. 45).

Physical Health

Physical health, the one arena where research nearly conclusively finds that homeless

children are worse off not only than middle-class children but also their housed low-SES peers (Jahiel, 1992; Buckner, 2008), is also thought to be a mediating factor between homelessness and school success. The physical maladies that plague homeless children are well documented (e.g., Books, 2004; Grant et al., 2007b; NCFH, 2009) and are believed to stem from lack of access to acute and preventative health care as well as unhealthy conditions in some shelters and other temporary living situations.

Most school-age children suffer acute infections and illnesses, but homeless children are more likely to have these types of minor medical issues, as well as more serious chronic health problems, and to fall ill more often (Grant et al., 2007b). The National Health Care for the Homeless Project studied 19 major U.S. cities and found homeless children twice as likely as a national sample to be treated for respiratory and ear infections, three times as likely to be treated for gastrointestinal issues, four times as likely to suffer skin problems, and ten times as likely to have dental problems (Molnar et al., 1990). The same project discovered that homeless children were almost twice as likely as the national sample to suffer chronic health problems like cardiac disease and neurological disorders, and these results are supported by smaller studies in Seattle and New York City (Alperstein, Rappaport, & Flanigan, 1988; Molnar et al., 1990). Mihaly (1991) reported that homeless children had twice the rate of asthma of other poor children, and a more recent study by Grant and team (2007a) finds that homeless children still suffer extremely high rates of asthma.

Because they have difficulty accessing health care and health insurance (Wright, 1993), homeless children's minor health issues often become serious and take more time away from school. Likewise, homeless children are three to four times less likely than their housed low-SES counterparts to be immunized on schedule, leaving them vulnerable to more serious

illnesses (Acker, Fierman, & Dreyer, 1987; Alperstein et al., 1988). In addition, research has shown that homeless children have higher exposure to lead than housed low-income children (Alperstein, et al., 1988), and lead exposure has been linked to cognitive and behavior problems (Needleman et al., 1979). Both chronic and acute illness can impact children's school performance by causing absences. And even when they are in class, physically ill children can reasonably be expected to experience listlessness, withdrawn behavior, and exhaustion, none of which is conducive to learning (Powers & Jaklitsch, 1997).

In addition to the above-noted health challenges, homeless children are likely to suffer from hunger and malnutrition (Powers & Jaklitsch, 1997; Rafferty, 1990; Rafferty & Rollins, 1989), often because shelters lack cooking facilities, forcing parents to resort to fast food or junk food, which does not provide necessary nutrients (Molnar et al., 1990). Homeless families are likely to experience the food insecurity that leads to hunger: more than a third of homeless children report having to skip meals (NCFH, 2009). One fifth of homeless parents interviewed in a Los Angeles study said that they were forced to let their children go hungry because of lack of food, compared with four percent of housed low-SES parents, and 21 percent of the homeless parents reported they had been unable to feed their children sufficiently at least four days in the previous month (Mihaly, 1991). Although many homeless children and their families qualify for federal nutrition assistance like the Supplemental Nutrition Assistance Program, up to half of those eligible for the programs may not actually receive the benefits (Kiesler, 1991). School breakfast programs have been shown to have a positive effect on short-term memory and some learning skills, as well as on attendance (Cueto, 2001), but school meal programs provide only breakfast and lunch, not dinner, and do not provide meals on weekends or school holidays. Indeed, food banks and school districts across the nation are being forced to devise ways to send

enough food home with students on Friday to last the weekend (Greene, 2010). In one study of children in Worcester, MA, researchers found that hunger was common among school-aged homeless children and linked to illness and anxiety (Weinreb et al., 2002).

Like hunger, malnutrition is dangerous. It can lead to stunted growth, iron and other mineral deficiencies, and other "lifelong repercussions" (Molnar et al., 1990, p. 111), including negative effects on students' learning (Olson, 1999). Alaimo, Olson, and Frongillo (2001) showed that, even controlling for other confounding poverty-related variables, math scores were significantly lower among elementary-school children with food insecurity, and these children were also more likely to have repeated a grade. Owing to food security and other health challenges, homeless children are likely to be tired, sick, or hungry and have trouble concentrating and completing classroom tasks. These make it difficult for them to develop new knowledge and skills (Hart-Shegos, 1999). Without these skills and content knowledge, students' scores predictably drop. Furthermore, homeless children suffering malnutrition and lead poisoning may suffer lasting cognitive damage (Gordon, 2003) that can hurt academic performance.

Mental Health

Other explanations for homeless children's lowered academic outcomes might be related to mental health issues, including behavior and stress. Since the earliest studies of homeless children, researchers have employed nationally-normed diagnostic tools to measure homeless children's mental health: the Child Depression Inventory (CDI), the Child Behavior Checklist (CBCL), and the Diagnostic Interview Schedule for Children (DISC), which allows for formal classification using the Diagnostic and Statistical Manual of Mental Disorders (DSM), are

commonly used. Although the nature of some of these measurement tools complicates drawing conclusions about mental health conditions (Rafferty & Shinn, 1991), homeless children are believed to experience some mental health problem more frequently than middle-class children and, in some cases, than their housed low-SES peers (Buckner et al., 1999; Grant et al., 2007b; Lubell, Cohen, & Crain, 2007; Menke & Wagner, 1997). Anxiety and depression have been measured at rates much higher than national norms (Molnar et al., 1990). One review found that a third of homeless children have at least one mental health problem that interferes with daily activities and nearly half (47 percent) have problems with anxiety, depression, or withdrawal, compared to 18 percent of other school-age children (Hart-Shegos, 1999, p. 8). Additionally, homeless children may suffer greater behavior challenges in the classroom (Masten et al., 1997) and more stress (Buckner et al., 1999).

Anxiety and depression. Researchers regularly report that homeless children suffer more mental health issues than middle-class children generally do. Bassuk and Rubin (1987) were among the first researchers to detail the mental health and emotional challenges faced by homeless children. When they administered the CDI to the school-aged homeless children in their study, they found that more than 50 percent scored above the cutoff for psychiatric referral, and a majority of children answered, "I think about killing myself but I would not do it" to a question regarding suicide (Bassuk & Rubin, 1987, p. 8). Further tests indicated that the homeless children in the study had greater anxiety than national norms. Schmitz, Wagner, and Menke (1995) found that the homeless children in their study had high anxiety, and that grade point average was impacted by it. Furthermore, they stated, "the most direct relationship existed between anxiety and current domicile status. Consistent with findings from previous studies homeless children exhibited higher levels of anxiety" (Schmitz et al., 1995, p. 313).

Unfortunately, studies have also found that although they are more likely than middle-class children to have mental health issues, homeless children are unlikely to receive professional mental health treatment (Bassuk & Rubin, 1987; Better Homes Fund, 1999).

Homeless students have been shown in some studies to evidence greater mental health challenges than housed poor children as well, but results are inconclusive. The CBCL relies on parent or teacher reports of child behavior to assess children's mental health, introducing several problems. Teachers and parents each use their own subjective lenses to view children's behavior, and children may behave differently in and out of school. Rescorla and colleagues (1991) used the parent version and found higher rates of emotional maladjustment in homeless school-aged children than the housed clinic-drawn sample. It is important to note the small size of their samples, however, with the comparison group of 45 barely half the size of the homeless group. Zeisemer, Marcoux, and Marwell (1994) used the teacher version of the CBCL and found no significant differences between the 142 housed and 145 homeless children in their study. Shinn and colleagues' (2008) study of 388 children between birth and age 17 found that the homeless children had significantly more mental health problems than the comparison group of housed poor children only in the four- to ten-year-old age range. Buckner and and Bassuk (1997), using the strict criteria in the Diagnostic Interview Schedule for Children to report DSM-III diagnoses, found that housing status was not related to depression or anxiety in their study comparing homeless and housed low-income children in Worcester, Massachusetts.

The effects of family homelessness are not limited to children, and impaired parental mental health may affect students' school outcomes. Boxhill and Beaty (1990) found that living in a shelter or hotel negatively affected parent-child relations. Bassuk and Rubin (1987) note that the homeless mothers in their sample also evidenced higher rates of mental health issues

than the general population, concluding that "the data describing the homeless mothers and the children suggest an intergenerational cycle of family disruption and emotional difficulties" (p. 284). Sustained parental depression has been shown to have negative consequences for homeless children (Molnar et al., 1990). Hart-Shegos (1999) expounds on this link between mothers' and children's mental health by explaining the role of anxiety and worry in the lives of homeless children, who "worry about their families: their parents, whose stress and tension is often shared with the children, and their siblings, for whom they see themselves as primary care givers" (p. 7).

Behavior. In addition to diagnosable conditions like depression and anxiety, many homeless children also suffer from non-clinical behavior issues that may impact their classroom experiences. "Teachers have reported listless, apathetic, and tearful behavior" (Gewirtzman & Fodor, 1987, p. 241). Based on structured diagnostic interviews, Yu and colleagues (2008) found that the 157 homeless children in their study had more disruptive behavior problems than the 61 housed children. Internalizing (e.g., withdrawal) and externalizing (e.g., aggression) behavior problems may be up to four times more likely in homeless children than national norms (Zima et al., 1997). Children in Bassuk and Rubin's (1987) study in Boston demonstrated more behavior issues than the general population on the Simmons Behavior Checklist, such as sleep problems, shyness, withdrawal, and acting out. They also indicated low frustration tolerance, with only 37 percent of the children in the study manifesting age-appropriate responses to challenging tasks (Bassuk & Rubin, 1987). These behavioral problems can interfere with students' readiness to learn and can lead to higher incidence of removal from the classroom for disciplinary reasons. One recent study suggests that behavior problems may be worse when children first enter the shelter, but get better over time (Buckner, Weinreb, Rog, Holupka, & Samuels, in press).

Explanations for these behavioral challenges generally point to increased exposure to stressful events and lessened social ties.[7] Masten's team (1993) notes that the homeless children in their study were significantly more likely to have experienced friendship disruption than the housed comparison group, which the researchers expect to have an impact on psychosocial functioning, particularly increased social isolation. They found that academic scores were related to behavior and adaptive functioning in the classroom in their study; behavior and academic problems co-occurred (Masten et al., 1997).

Some studies, however, do not find that homeless children experience more behavioral problems than their low-SES peers. Buckner and colleagues (1999) found that homelessness was initially associated with internalizing problems, but after three to four months, the effect tapered off. They hypothesized that children may, over time, acclimate to homelessness and unpleasant shelter conditions. Housing status was not associated with externalizing problems in the children they studied, but they acknowledge the weakness of using a shelter-based sample: many shelters turn away children who have behavior problems, possibly leading to selection bias that obscures the real incidence of these issues in homeless children (Buckner et al., 1999).

Although Ziesemer and her team (1994) found homeless students in Madison, Wisconsin, had higher rates of behavioral problems than a national sample of low-SES children, with one quarter of the homeless students having enough behavioral problems to warrant further assessment and an additional 10 percent with scores indicating "severe behavioral deviance" (p. 663), homelessness was not identified as the only predictive factor. Their team made strides to improve the comparison group by looking at 145 sheltered homeless children and 142 low-SES

[7] The ways in which homeless children's social ties suffer is worthy of more attention than space provides here. Homeless children's relationships with parents may be prone to deterioration due to stress and role confusion. They may also have lessened ties to peers because of frequent moves and emotional responses to stress that put strain on friendships.

children who also experienced high residential mobility, and found no differences in behavior or adaptive functioning drawn from teacher responses on the CBCL between the two groups (Ziesemer et al., 1994). Buckner and team (1999) also found that residential instability did not predict behavior problems, concluding that children might habituate to frequent moves and be less affected by moving than children who previously had stable housing.

Stress. Children experiencing homelessness are more likely than their housed low-SES peers to have certain types of stress (Grant et al, 2007b). They are more likely to have been separated from their families and involved in the foster care system at some point in their lives (Hart-Shegos, 1999; Mihaly, 1991). Family members may be forced to separate in order to get housing because many shelters only accept women and young children (Duffield & Lovell, 2008; Mihaly, 1991). The 1990 report of the United States Conference of Mayors reported that 62 percent of families surveyed had had to break up before entering the shelter system. Some parents choose to place their children with relatives or friends before seeking temporary shelter to spare them the experience (Mihaly, 1991). If relatives or friends are not able to offer housing, children whose parents lose their housing may be placed in foster care (National Black Child Development Institute, 1989), where they are likely to have very negative experiences (Fox & Duerr Berrick, 2007). Children may also have spent time in foster care because of abuse: although both low-SES housed and homeless children are likely to have been exposed to family violence, the homeless children in Buckner and colleagues' (1999) study had significantly higher rates of lifetime sexual abuse and foster care involvement, leading researchers to conclude that homeless children had greater exposure to stressors than their housed low-SES counterparts. Similarly, Alperstein and colleagues (1988) found that homeless children suffered higher rates of

abuse than housed low-SES children, and more recent studies confirm this finding (e.g., Anooshian, 2005; Gewirtz & Edleson, 2007).

On top of the extreme familial stressors homeless children are likely to suffer, the very experience of homelessness itself adds the stress of disruption and loss (Coles, 1970; Rafferty & Shinn, 1991). Losing one's home means losing treasured possessions; relocating means severing social ties and routines (Mihaly, 1991), all of which extract an emotional toll. Citing McCollum (1990) and Puskar (1989), Schmitz and colleagues (1995) state, "moving creates a situational crisis which can result in increased stress, anxiety, anger, sadness, and a lowered sense of competence" (p. 313). Children in homeless families may also be forced early into adult roles of helping to care for younger children, to find food, and to secure lodging, and this disruption of child and parental roles can cause stress and tension within the family (Gewirtzman & Fodor, 1987; Mihaly, 1991; Nann, 1982). Two thirds of homeless children worry about having enough to eat (NCFH, 2009), a distinctly stressful and very adult concern.

Moreover, shelters themselves can present emotionally taxing living conditions: crowded and noisy congregate living quarters[8] cause stress for parents and children. Though many cities have improved their shelter systems for homeless families, congregate shelters still exist in some places. "Most mothers are acutely stressed while living in a shelter and their scores on measures of psychological distress are comparable to those of psychiatric outpatients" (Buckner et al., 1999, p. 246). Mihaly (1991) explains that there is an "unquantifiable loss of family cohesion and parental authority when meals are no longer prepared and eaten together" (p. 5), as is often the case in temporary shelters. Boxhill and Beaty (1990) interviewed homeless mothers in Atlanta and reported that many were upset by having their roles as the primary nurturer,

[8] There are two main types of homeless shelter for families: congregate shelters where families stay in large rooms with other families, and apartment-style housing where families live independently in the same building. Some cities also place families in single room occupancy hotels (Ropers, 1998; Williams, 2003).

provider, and decision-maker for their families taken over by shelter policies, procedures, and personnel, leading them to lose confidence in their parenting abilities. Gewirtzman and Fodor (1987) remind us, citing Kliman (1968), that maternal stress leads to decreased time and attention to devote to parenting, increasing children's stress. Lupien and team (2005) found a significant correlation between maternal depression and children's stress level. And Rubin and team (1996) found that maternal depression and length of homeless episode appear to be underlying mechanisms influencing test scores.

Beyond the relatively clear connection between stress and mental health problems, research shows that children who experience a great deal of stress may also have profound difficulties learning. It has been well-known for years that children from low-SES backgrounds have elevated exposure to acute and chronic stressors (McLoyd, 1998), but until recently no causal mechanism had been discovered between stress and academic functioning. However, in 2009, Evans and Schamberg combined studies of neurocognition and physiological stress and postulated a link between SES, stress, and memory function in children that might help explain the income-test score gap and shed light on the problems homeless children experience in school. Their groundbreaking study demonstrated that children from low-SES backgrounds in the sample had significantly higher allostatic loads (a physical measure of the body's chemical response to stress) than children from high-SES backgrounds and that allostatic load was correlated with working memory. The highly-stressed children from low-SES backgrounds in the study could hold significantly fewer items in their working memory than those from high-SES homes (Evans & Schamberg, 2009). If, as this research suggests, the increased stress of growing up in poverty leads to chemical changes in the brain that affect working memory (Evans & Schamberg, 2009), low-SES children may literally have a harder time learning. This

complements earlier work by Noble, McCandiliss, and Farah (2007), wherein SES was found to be a significant predictor of working memory in first graders. Lupien and team (2005) also found that the low-SES children in their study had higher levels of cortisol (the so-called "stress hormone") and manifested differences in cognitive function. Earlier studies established that children growing up with environmental stress (e.g., noise) had higher blood pressure and less capacity to discriminate between relevant and irrelevant tasks, a measure of the selective attention that is crucial to learning (Cohen, Glass, & Singer, 1973). It is possible that growing up in poverty causes children to be less able to learn than their less-stressed high-SES peers. This could also help explain why homeless children in some cases have worse school performance than their housed low-SES peers, as some studies have identified that homeless children are likely to have been exposed more recently to major stressors like moving or abuse (Buckner et al., 1999). "Even among very poor families, homelessness appears to be associated with lower income and more recent adversity" (Masten et al., 1993, p. 341).

Educational Issues

In addition to the logistical barriers homeless children may face gaining access to the school building, their physical health issues and social and mental health problems, homeless children also experience other challenges to their education. Mobility – frequent changes in residence and school – seems to place homeless children at a distinct disadvantage. Increased suspensions from school and special education needs coupled with low rates of receipt of special education services also create obstacles to homeless children's academic performance.

Mobility. Homeless and housed low-SES children are likely to experience higher rates of residential and school mobility than middle-class children (Evans, Eckenrode, &

Marcynyszyn, 2010). Whether it is a marker of risk or an actual cause of problems, mobility is very common in homeless children (Nunez & Collignon, 1997). In one study, 41 percent of homeless children had attended two schools in the same year, and 28 percent attended three or more (Hart-Shegos, 1999). Dworksy (2008) studied homeless children in Chicago and discovered that they had changed schools an average of three times per year, with 60 percent of these changes taking place mid-year. Masten and colleagues (1993) found that homeless children in their studies were more likely than housed extremely poor children to have changed schools. In a New York City study, the previously-homeless children had experienced more school mobility in the five years after they were re-housed than the never-homeless low-SES comparison group (Shinn et al., 2008).

Whether changing residence or changing schools, moving frequently is associated with problems in school (Lubell & Brennan, 2007; Wood, Valdez, Hayashi, & Shen, 1990). Moves may temporarily increase absences: Rafferty and Rollins (1989) found that the children in their study missed an average of five days of school every time they changed shelters. The negative effects of moving appear to be worse for elementary school students than those in upper grades (Hart-Shegos, 1999).

Mobility also causes problems by interrupting schooling processes. "School transfers result in discontinuous instruction that requires remedial instruction to address academic deficits" (Powers & Jaklitsch, 1993, p. 402). The National Center for Homeless Education (2006) estimates that a student loses four to six months of learning with every change in school.

In their 2001 review, Scanlon and Devine found that residential mobility was negatively associated with academic performance; Jelleyman and Spencer (2008) found that moving was correlated with behavioral problems as well. Particularly if changes happen mid-year (Samuels

et al., 2010), school mobility has negative effects on achievement (Duffield et al., 2007; Dworsky, 2008). However, studies comparing student outcomes before, during, and after moves (Buckner et al, 2001; Heinlein & Shinn, 2000) have not found a direct link between school mobility and changes in academic test scores: "school mobility…may be a marker of a constellation of adverse conditions rather than an independent cause of poor outcomes" (Samuels et al., 2010). Mobility is also linked to low test scores in many studies of homeless children. Rubin and colleagues (1996) reported that the effect of housing status on reading test scores was mediated by the number of school changes a child had experienced in the previous two years. Buckner and colleagues (2001) determined for their sample that having changed schools frequently was a greater predictor of school outcomes than housing status. Some scholars have suggested that mobility is so disruptive that it may be more appropriate to examine homeless and highly mobile children together, comparing them to stably-housed low-income children. "Among socio-economically disadvantaged children, compelling data suggest that homeless and highly mobile (H/HM) children fall at the high end along a continuum of risk for academic problems and related psychopathology" (Obradovic et al., 2009, p. 493). One longitudinal study of homeless and highly-mobile children in Minneapolis found that as a group, these students evidenced greater educational risk over time than housed poor children (Obradovic et al., 2009).

Suspensions. Because they cause students to miss class time and because they are indicative of behavioral issues that may cause ongoing interference with instructional delivery, school suspensions are an additional hypothesized link between homeless children and their academic outcomes. Buckner and colleagues (2001) found that more homeless children (22 percent) in their Worcester, MA sample had been suspended from school than their low-income housed peers (13 percent). A study of children in supportive family housing across the

Minneapolis metropolitan area found that 28 percent of children ages five to eleven, and 52 percent of children ages 11 to 18, had been suspended from school (Gewirtz et al., 2008). The Better Homes Fund (1999) found that twice as many homeless children had been suspended from school than housed children.

Special education. Homeless children qualify for special education services at school at up to twice the national average (Gargiulo, 2006; NCFH, 2009). Nunez (1994a) reports that homeless children are more than three times more likely than their housed peers to be referred for special education services. Dworksy (2008) found that 22 percent of the homeless children in her Chicago study were identified as needing special education intervention. One quarter of the homeless children in Bassuk's Boston study were in special education classes (as cited in Molnar et al., 1990). In Rubin and team's (1996) study, eight percent of the homeless children were enrolled in special education classes, compared with only one percent of the housed comparison group.

However, while homeless children are likely to qualify for special education services, they are also much less likely to receive them (Buckner et al., 2001; Duffield et al., 2007; Hart-Shegos, 1999; NCFH, 2009). Zima and colleagues (1997) examined the need for special education evaluation of 169 homeless children in Los Angeles and found that the children in their study were four times more likely to have symptoms of a behavior disorder, three times more likely to exhibit a learning disability, and eight times more likely have mental retardation than the general population of school-aged children. Unfortunately, though 45 percent of the school-aged homeless children in their study merited a special education evaluation, only 23 percent of those with a disability had ever received special education testing or been in special education classes (Zima et al., 1997). This disconnect between need and services may be caused

by the lengthy special education referral process, which commonly takes between three and four months – students with high school mobility may not be with the same teachers long enough to have their needs identified and evaluated (Emerson & Lovitt, 2003). The length of the special education referral process "run[s] counter to the immediate service needs of homeless students" (Stronge, 1993, p. 344). Students' high mobility is a challenge not only for them, but for teachers and school administrators as well (Eddowes, 1993), possibly causing the latter to be wary of investing the time and resources for special education evaluation on children likely to leave the school before it is complete.

Summary

The reasons for homeless children's poor academic outcomes are hypothesized to fall into four categories: logistical and procedural barriers, physical health issues, mental health and behavior problems, and learning readiness challenges like frequent absences, high school mobility, and high rates of suspension from school. They also have high rates of special education diagnosis but low rates of receipt of special education services, creating additional challenges to their school success.

The Role of the School in Supporting Homeless Students

There is a great deal of literature promoting the enormous potential of schools to "provide developmental havens of safety, stability, and care for children living in poverty whose lives are complicated by homelessness or residential instability" (Masten et al., 1997, pp. 43-44). The National Association for the Education of Homeless Children and Youth (2010) asserts that "school is a refuge for homeless children…providing safety, structure, and services" (p. 2). And as Zima and team note, "the structured environment of a school program fosters the child's

concept of personal place and may be a main source of stability for a homeless child." (Zima et al., 1997, p. 236). Although "schools cannot be expected to address the societal level economic and socio-cultural problems that may underlie" homelessness, they can be part of the solution (Masten et al., 1997, p. 43).

It seems that homeless children themselves also see a positive role for school in their lives. Horowitz and colleagues (1988) compared homeless and housed children in the same classes and found that the homeless children were more likely to express positive feelings toward school. "Findings from this study suggest that [homeless] children, given the extremely stressful events surrounding their home life, maintain a positive attitude toward school…the school environment may function in facilitating [their] adaptation" (Horowitz et al., 1988, p. 36). Likewise, Zeisemer and team (1994) found that "the children in this study also evidenced a strong belief in the value of academics and good behavior" (p. 666), leading researchers to conclude that "one of the clearest social policy implications of [our] research is of a pressing need for children who are homeless to be enrolled in a stable and supportive school program" (Rescorla et al., 1991, p. 219). Scholars in this area generally issue a call to action along the lines of that stated by Masten, et al. (1997): "while additional research is necessary, schools can use the knowledge that has accumulated to develop and evaluate programs to foster educational success in these children" (p. 43).

Although there is little empirical research to back up most of the claims – "many…efforts have been implemented, though little evaluation appears to have been done" (Masten et al., 1997, p. 43) – researchers and advocates have compiled a relatively consistent set of recommendations for schools to use in supporting the social and academic learning of homeless students (Murphy & Tobin, 2011). The roles of the school range from those which are legally required by the

McKinney-Vento Act, such as removing transportation and documentation barriers, to those hypothesized to improve service delivery and facilitate academic and emotional success. These can be divided into the four main categories of removing logistical and procedural barriers, meeting children's physical needs, promoting homeless children's mental health, and addressing their specific learning readiness challenges. This section explores the research and literature on strategies in these domains. This literature includes research, advocacy, and conceptual analyses, complicating the issue of finding empirical support for suggested strategies.

Removing Barriers: The McKinney-Vento Homeless Assistance Act of 1987

As discussed in earlier sections, homeless children have historically faced logistical and procedural barriers to schooling. They have been denied the right to enroll in school because of missing documentation like immunization records and proof of residence (Stronge, 1993). Additionally, homeless students face issues with transportation to and from school. Although its name has changed slightly throughout its re-authorizations, the aims of The McKinney-Vento Homeless Assistance Act (PL100-77), signed into law by Ronald Reagan on July 22, 1987, have remained consistent. Subtitle B, the Education for Homeless Children and Youth (EHCY) program, laid out guidelines for states to ensure children have "access to a free, appropriate public education which would be provided to the children of a resident of a State" (sec. 721[1]).

As the law exists today, Title VII deals with the education of homeless children and youth. It specifies that homeless children have a right to be educated with their classmates, not segregated in special classes or programs (Funkhouser, Riley, Suh, & Lennon, 2002). It also makes clear that districts have a responsibility to make efforts to identify homeless children so they can receive the services for which they are eligible (Stronge, 1993) and to make available to

children and parents information about the rights of homeless children in school (PL100-77; Samuels et al., 2010). It creates a system of district and state education agency coordinators responsible for the planning and execution of delivery of services, and provides funding structures.

The right to enroll. The McKinney-Vento Act requires states to "review and undertake steps to revise…laws" to ensure that homeless children are able to enroll in school (sec. 721[2]). Specifically, it requires states to determine whether it is in the child's best interest to remain in the district where s/he attended school before losing housing (the district "of origin"), or to be transferred to the district where s/he currently resides (sec. 722[e][A][B]). The law also stipulates that guardianship requirements be made flexible for students as well, since children placed with family or friends while parents enter the shelter system do not have guardians, per se, to enroll them in school (National Coalition for the Homeless, 1987).

The McKinney-Vento Act has been reauthorized several times, each time expanding the scope and strengthening the provisions of the original legislation (National Coalition for the Homeless, 2006). The amendments have specified more clearly how districts should prevent procedural barriers from impeding homeless students' enrollment. Such paperwork requirements as immunization records, birth certificates, or previous school records (Swick, 2004) are required to be made flexible; students can enroll immediately even without them (Tierney, Gupton, & Hallett, 2008). In the 1994 amendments, parents and students were given a voice in school placements (National Coalition for the Homeless, 2006). In cases where families and schools disagree about whether the school of origin or the school where a student is currently residing is the best choice, the school the family prefers must enroll the student while the dispute is resolved and if the two schools are in different districts, the two districts must determine between them

how transportation will be provided for the student (James & Lopez, 2003).

Transportation. Transportation has long been the most significant logistical barrier to enrollment documented by homeless education analysts (Rafferty, 1995). The McKinney-Vento Act requires that school districts provide transportation for homeless children to and from school (Samuels et al., 2010). This includes cases where a student stays in a shelter outside the district but remaining in his/her school of origin is found to be in his/her best interest. In such cases, school districts must provide transportation across district lines. Unfortunately, McKinney-Vento has been underfunded since the beginning, so provision of such transportation can be problematic. In a 1995 evaluation of the Education for Homeless Children and Youth program, researchers concluded that "state coordinators and local school district administrators have worked hard, with limited resources, to ensure homeless children's and youth's access to a free, appropriate education" (National Coalition for the Homeless, 2006, pp. 5-6) but that the resources allocated to the McKinney-Vento programs are insufficient to meet demand, and that lack of adequate funding limits the programs' success (Anderson et al., 1995). In 2010, the National Association for the Education of Homeless Children and Youth reported that homeless education liaisons still report transportation to school of origin as a major barrier confronting homeless children.

Meeting Physical Needs

Many researchers have pointed out how physical issues, both health problems and access to physical resources like food, clothing, and school supplies (Medcalf, 2008; Shane, 1996; Swick, 2009), interfere with homeless children's attendance, learning, and school success. These scholars point to the role of the school in ensuring that children's basic physical needs are met

(Nunez & Collignon, 1997). "If education is to be meaningful in their lives and in the lives of their families, basic human physical…needs must be addressed" (Stronge, 1993, p. 355). First and foremost, schools can provide basic school supplies like backpacks, notebooks, and pencils (Delmore, 2004). Second, schools can see to it that students have access to clean and appropriate clothing, without which students may fear social ostracism (Penuel & Davey, 1998). Some schools even make these supplies available to all children so as to remove the stigma associated with homelessness (Yon, Mickelson, & Carlton-LaNey, 1993) – and because they recognize that housed low-income children may also have trouble accessing basic amenities (Gonzalez, 1990).

Transportation assistance. Schools may also need to provide transportation assistance above and beyond what is required in the McKinney-Vento Act. If students are given passes for riding public transportation, for example, schools can ensure that students are shown how to read local transit maps and know how to get from school to home and back (Delmore, 2004). Parents, too need to be oriented to the transportation so they can help support their children's school attendance (Hart-Shegos, 1999). Recently, school districts have been able to use American Reinvestment and Recovery Act funding to provide transportation and related services (NAEHCY, 2010).

Food. As we have seen, the amount and quality of food is often a significant issue for homeless children (Quint, 1994. Homeless students have a demonstrated need to participate in free breakfast and lunch programs at school. Students can be enrolled without filling out paperwork (Duffield et al., 2007) and are expected to be given access to these programs immediately (Delmore, 2004; Hart-Shegos, 1999). Teachers can also make snacks available in the classroom (Reed-Victor, Popp, & Myers, 2003). Schools may also explore methods of providing food for students to take home over the weekend. Additionally, parents should be

provided with information about how they can get food for themselves and their families either on site at the school or through connections with community programs (Hart-Shegos, 1999).

Medical services. Because homeless children are likely to be behind on immunizations and often lack needed health services, scholars recommend that schools take immediate steps to screen and immunize them (Hart-Shegos, 1999; Johnson, 1992). Some schools provide clinic hours on site for children and have a school nurse review medical issues with children and parents on the first day of school (Gonzalez, 1990). Gewirtzman and Fodor (1987) point out that schools have greater access to children than community organizations and so have the potential to deliver health services quickly and effectively.

Promoting Mental Health

Students experiencing homelessness are, as previous sections have shown, likely to be experiencing mental health problems. Either because they have familial stresses common to low-SES children but often occurring more frequently in homeless families, or because the very experience of losing one's home and being forced to relocate is traumatic, these students have emotional needs that scholars agree must be met by schools. As Stronge (1993) notes, "educators may not be able to bring into focus academic goals for [homeless] students until pressing social and psychological needs have been addressed" (p. 345). Gonzalez (1999) concurs: "the psychological needs of the children…are as important as their instructional needs because these children suffer the combined effects of poverty, anxiety, and depression" (p. 787).

Sensitizing school staff. Perhaps the most prevalent recommendation for schools found in the literature on supporting homeless students is the provision of training for teachers and other school personnel on the needs and challenges of students in this position (for example,

Powers & Jaklitsch, 1993; Williams & Korinek, 2000). Gewirtzman and Fodor (1987) assert, "the first step in working with these children is understanding the conditions in which they live" (p. 242). Because they have the most interaction with students, teachers are the focus of recommendations for sensitivity training (Nunez & Collignon, 1997). "[T]eachers can play a crucial role in providing a safe and secure learning environment.... By educating their colleagues about the issues of homelessness, informed teachers…minimize the ostracism and pressures experienced by homeless students" (Powers & Jaklitsch, 1993, p. 406). However, researchers note that all the adults in a school building can benefit from gaining understanding of the issues homeless children face (Gewirtzman & Fodor, 1987; Morris & Butt, 2003).

Most see this sensitization taking place in professional development or other training provided by school social workers or counselors, though Stronge and Hudson's (1999) study recommended that "awareness-raising activities" might be more broadly construed (p. 10), including training on how to recognize the signs that indicate a student may be experiencing homelessness (Duffield et al., 2007; Gargiulo, 2006). Housed students, likewise, stand to benefit from education about the issues their homeless classmates face (Noll & Watkins, 2003); some researchers (e.g., Nunez) have gone so far as to publish children's picture books about homelessness for use in the elementary school classroom. Ziesemer and colleagues (1994) recommend that social workers conduct education and sensitivity training for teachers and students around race and class issues, including homelessness. Shane (1996) notes that teachers are under-informed about not only the problems faced by homeless students, but also the best strategies they can employ to support them. Teachers can be a strong and positive force with the right preparation (Duffield et al., 2007; Swick & Bailey, 2004).

Establishing a safe and caring environment. Once teachers and other school staff have been made aware of the challenges their homeless students face, the focus turns to using that knowledge to create an atmosphere in the school and classroom that communicates security and caring. The first task in the classroom is to "establish a stable, nonthreatening environment" where students feel welcome (Duffield at al., 2007), a culture that can "provide a respite from the turmoil of uncertainty in the lives of homeless children" (Gewirtzman & Fodor, 1987). That the school and classroom should be "trustworthy" is echoed in many recommendations (Eddowes, 1993, p. 384; Gewirtzman & Fodor, 1987). This trustworthy climate, scholars agree, should come in the form of a secure, structured, and predictable atmosphere replete with competent and caring adults (Eddowes, 1993; Hart-Shegos, 1999; Neiman, 1988). "A sense of 'family' is what these children chiefly need" (Gonzalez, p. 787), in a place "where opportunities exist for supportive adult relationships" (Ziesemer et al., 1994, p. 667) and students can expect the "discipline as well as love and attention" (Stevens et al., 1991) that is often lacking in their lives. Some authors advocate for the creating of mentoring programs for homeless children (Tierney et al., 2008; Swick, 2000). Neiman (1988) asserts that these programs can foster students' ability to weather crises by providing them with strong adult role models.

Schools should help displaced children feel safe and accepted by fostering peer connections. "Extraordinary efforts need to be made to foster a sense of membership in the school community" (Ziesemer et al., 1994, p. 666). Eddowes (1993) highlights the active role that sensitive teachers can take in promoting friendships and helping homeless students integrate socially, even though it may be hard for students who move around to forge relationships. Ziesemer and team (1994) recommend social skills development groups for homeless students. "Schools are the child's second most important environment after the family, and the one in

which peer relationships are developed" (Ziesemer et al., 1994, p. 667). The Park City elementary school in Dallas, Texas, which consistently has high proficiency scores despite having the most mobile population in the district coupled with the sixth highest poverty rate, uses a "buddy" system where newly enrolled students are assigned to a friend in the classroom to show them around (Delmore, 2004; Gonzalez, 1990). This can help counteract the social isolation homeless students often experience, as well as orient them to a new situation. Cooperative learning may also help facilitate the social integration of students into the new classroom (Eddowes, 1992; Korinek, Walther-Thomas, & Laycock, 1992). Quint (1994) recommends the creation of leadership roles for homeless students, fostering social connections and improving students' sense of empowerment.

Also recognizing that many homeless students will struggle with mental health challenges like depression and anxiety as well as problems with withdrawal and aggression, schools should anticipate a need for counseling (Gonzalez, 1990; Swick, 2000), either by school counselors (Johnson, 1992) or by referral to outside agencies (Delmore, 2004; Nunez & Collignon, 1997). Provision of appropriate social and emotional support services, including anger management (Delmore, 2004) and mental health service referrals for their parents (Stronge, 1993), can help improve the emotional state of children experiencing homelessness. Ziesemer and colleagues advocate for teachers to take a role in assisting homeless children and their peers in dealing with loss that comes with high mobility. Kliman (1968) recommends that students be given the chance to express their fears and concerns, because this type of open communication can protect them from stress. Beyond its intrinsic values, improved mental health also increases children's readiness to learn.

Improving Learning Readiness

When they interviewed homeless elementary school children, Horowitz and her team (1988) and Ziesemer and colleagues (1994) found these students enjoyed attending school and took pride in their academic accomplishments. Researchers conclude that schools should take advantage of this positive attitude toward school and channel it into academic success by applying appropriate strategies. "Schools might capitalize on such interest in scholastic competence by communicating high expectations and providing appropriate instruction to achieve those expectations" (Ziesemer et al., 1994, p. 666). Though there is little empirical evidence to support specific academic approaches, there are some themes found in the literature that can guide teachers' actions in the classroom.

Academic program. The most important step in beginning a homeless child's journey to school success is appropriate assessment. Many homeless children struggle with the effects of inappropriate educational placement (Stronge, 1993). "Teachers should be skilled in diagnosing and planning for each student's needs," particularly because homeless children's needs can be difficult to diagnose" (Eddowes, 1993, p. 384). Some schools accomplish this via a comprehensive intake interview conducted with students and parents on the first day a student starts at a new school. The intake can include questions designed to elicit from parents whether students received special education support or were involved in special education evaluation at their former school(s) (Delmore, 2004). Johnson (1992) and Duffield and colleagues (2007) recommend an expedited special education evaluation process along with close monitoring by school personnel to ensure that homeless students do not get put at the bottom of waiting lists.

Likewise, the literature suggests that schools should be prepared to provide a continuum of educational options because of the diverse needs of this population, particularly because

children experiencing a short episode of homelessness and those who have been without housing for extended periods may have very different needs (Stronge, 1993; Ziesemer et al., 1994), as might shelter-based children and those who are doubled up. Delmore (2004) recommends that schools address the challenge of grade placement by putting children in the correct grade for their ages and then offering extra academic support to bring them up to grade level. Nunez and Collignon (1997) recommend that students who arrive academically behind be given accelerated, rather than remedial, instruction. However, others recommend focusing on basic skill development (Gonzalez, 1990).

Several researchers recommend special academic support programs for homeless children (Hart-Shegos, 1999; Nunez & Collignon, 1997). Although the McKinney-Vento Act prohibits schools from segregating homeless children in their own classes,[9] it is nonetheless possible to provide extra services that help enrich their academic skills. "The school must provide a level of support necessary to make learning enjoyable" (Gonzalez, 1990, p. 786). This can take the form of special learning communities or tutoring offered by community volunteers, older students, and/or teachers (Delmore, 2004; Gonzalez, 1990; Rubin et al., 1996). Collaborative teacher planning and continuous assessment of student' progress can also help accelerate homeless students (Delmore, 2004; Gonzalez, 1990). Close relationships between teachers and students are essential in helping ensure that students' needs do not go unnoticed (Hart-Shegos, 1999).

There is widespread mention in the literature of using an IEP-style approach where homeless children's academic programs are highly tailored to their individual needs (Eddowes, 1993; Gonzalez, 1990; Powers & Jaklitsch, 1993; Ziesemer & Marcoux, 1992) as well as their strengths (Noll & Watkins, 2003). Gewirtzman and Fodor (1987), citing research by Coles

[9] Although schools cannot force children to segregate in this manner, it is worthwhile to note here that many of the most well-regarded programs in the country are, indeed, schools specifically for homeless students, who segregate by definition.

(1976) note that highly mobile children tend not to finish tasks, recommend that instruction be broken down into "small, manageable tasks that children can handle with success" (p. 243). Nunez and Collignon (1997) describe an instructional process where learning is delivered in short cycles. Ziesemer and colleagues (1994) recommend that schools "offer special instruction to fill academic gaps, communicate high expectations, and provide teaching in small blocks to ensure completion before departure" (p. 667).

Providing enrichment. The literature on supporting homeless students' education makes frequent mention of providing supportive services after and before school for both tutoring and recreational purposes. Summer programs have been shown to increase homeless students' academic success as well (Sinatra, 2007). In addition to providing students an alternative to spending time on the street or in the shelter (Stevens, Tullis, Sanchez, and Gonzalez, 1991), before and after school programs can provide crucial academic support, as well as a structured place to complete homework. Because "homeless students have trouble keeping up with work due to the unfavorable study conditions at the shelters" (Gonzalez, 1990, p. 787), scholars believe that having an afterschool program where they can simply have space and quiet time to complete assignments is crucial for improving students' performance (Rafferty, 1995). Tutors in these programs can also help fill in gaps in students' knowledge (Hart-Shegos, 1999). In addition to the potential for direct academic impact, before and after school programs can provide children with meals (Eddowes, 2004), recreational activities (Gewirtzman & Fodor, 1987), and allow them to build bonds with significant adults. "Extracurricular activities…are particularly important for children who have little access to them elsewhere" (Gonzalez, 1990, p. 787; Tierney et al., 2008). Nunez (1994a) notes the power of extracurricular recreational activities to provide homeless children with self-esteem and social experiences. Johnson (1992)

points out that these programs must be made available free of charge in order for homeless students to be able to participate.

Cross-Cutting Recommendations

Two additional sets of recommendations from researchers about how schools can support homeless children in school cut across the previous domains of supporting physical and mental health and improving learning readiness: coordinating service delivery and supporting parents. Both of these strategies can be thought to impact multiple facets of students' lives, potentially supporting their health and mental health and, directly or indirectly, facilitating their learning.

Coordinating services. The literature on supporting homeless people as a group closely parallels the literature on supporting homeless children in school, particularly with regard to the coordination of service delivery (Medcalf, 2008; Nunez & Collignon, 1997; Stronge, 2000; Tierney et al., 2008). Whether within the school or between schools, shelters, and social service agencies, scholars argue that communication and collaboration are crucial.

Communication within the school can assure that all the adults who interact with these high-need students are aware of pressing issues, both ongoing and acute (Gewirtzman & Fodor, 1987). In addition, homeless children need schools to "recognize the interrelationship among their education, social service, health, child welfare, [and] mental health…needs" (Stronge, 1993, p. 356).

Julianelle (2007) points out that "a high level of collaboration between professionals" is necessary (p. 39). Though they can take different forms, with services all occurring at school or with students the center of multi-site case management teams (Quint, 1994; Tierney et al., 2008), the purposes of these collaborative relationships between agencies are similar. They include

sharing information so as not to duplicate services (e.g., if students receive tutoring at the shelter, the school need not put energy toward finding tutoring for them) and to identify holes in existing services (e.g., if the school nurse notes a potential health issue and can communicate directly with a community health clinic, health care delivery will be more effective). Yon and colleagues (1993) recommend that collaborators establish common goals and work together to meet them. Rouse and Fantuzzo (2009) offer evidence that integrated service systems for all children are more effective then those attempting to work without collaboration, which can be extrapolated to apply to homeless children as well.

Although the effort of reaching out to shelters, service providers, and the community at large may seem burdensome or overstepping of the school's bounds, no institution is better equipped to serve this crucial role than the school (Newman & Beck, 1996). "Should schools be the main providers of services to homeless students and take on the role of service center? Perhaps not, but they most assuredly must play a fundamental role in developing and implementing integrative services if the grip of homelessness is to be broken" (Stronge, 1993, p. 357).

Supporting parents. Finally, a recommendation commonly found in the literature is that schools should reach out to the parents of homeless children (Dworsky, 2008; Quint, 1994; Swick, 2009). Researchers have found that parents of homeless children are very supportive of and concerned about their children's education (Masten & Sesma, 1999). For several reasons, supporting homeless parents is tantamount to supporting their children, and schools need to focus on making sure parents are included in the education of their children in meaningful ways (Duffield et al., 2007; Rafferty, 1995; Stronge, 2000). As noted earlier, parents' emotional health impacts their children's emotional health. Supporting parents allows them to be "more

emotionally available" for their children (Ziesemer et al., 1994, p. 667). In addition, homeless children in one Minneapolis study whose parents were involved in their education had better grades and test scores as well as fewer teacher reports of behavioral problems in the classroom (Hart-Shegos, 1999; Masten & Sesma, 1999). Mirroring the literature on low-SES students generally (Murphy, 2010), scholarship on homeless children notes the significance of parents' role in school success.

Researchers recommend that schools involve parents by establishing and maintaining good communication, and support them by being knowledgeable about and able to connect parents with medical and social service resources in the community (Gonzalez, 1990; Hart-Shegos, 1999; Myers & Popp, 2003; Stronge, 1993). Masten and colleagues (1997) remind us that teachers and school personnel need to be prepared to build rapport with parents who have no telephones or transportation and "who may be preoccupied with survival needs of their families" (p. 43). Some advise teachers to become advocates in the community for their homeless students' families and to help parents advocate for themselves (Crowley, 2003; Dworsky, 2008; Eddowes, 1993). Education for parents is believed to be particularly crucial (Swick, 2009; Nunez & Collignon, 1997) because research has demonstrated that the average homeless parent has a tenth grade education and reads at a sixth grade level (Nunez, 1994b).

Conclusions

Homeless children are faced with many issues that have the potential to interfere with their educational success. Some of these challenges are also present in the lives of housed poor children, though homeless children may experience problems at greater rates or in more depth than their housed peers. The school has several important roles to play in supporting these

students, falling into the realms of eliminating legal and procedural barriers in accordance with McKinney-Vento legislation, supporting students' physical needs, facilitating their mental health, and increasing educational readiness. Indeed, some advocates assert that schools have an imperative to provide services to homeless students. "Schools *must* take the lead in making the difference for these children" (Medcalf, 2008, p. 109, emphasis added).

CHAPTER III

DATA AND METHODS

This study blends quantitative and qualitative methods to provide a more complete picture of the practices schools use to support the learning of homeless elementary school children. This chapter describes in detail the methods used in my study.

Research Questions

This study's aim is to answer one main question: how do schools support homeless students' learning? In order to do this, it also examines several underlying questions:

1) Is housing status a predictor of student achievement in a large urban district, even after controlling for common correlates like income and race?

2) At which schools do homeless students perform better and worse?

3) How do these schools serve their housed low-SES students?

4) What programs and practices are employed to support homeless student learning by high- and low-performing schools?

5) Are certain practices unique to schools where homeless children are relatively high-performing?

Quantitative Data

I used administrative data provided by the education department of a large Northeastern city. Student test scores, demographics, and housing status data were provided for the 2007-

2008 and 2008-2009 school years. Data was provided for third through eighth grades, but only third through fifth grades will be used in the analyses. As noted earlier, the decision to focus on elementary school was made to limit the analysis to children who are homeless with their families, as opposed to unaccompanied homeless youth, who have distinct needs and characteristics (Robertson, 1992). In addition, rather than focusing on scores in the whole city, the final analysis focuses on the two sections of the city (hereafter referred to as "District A" and "District B") with the lowest median incomes and highest percentages of residents living in poverty (U.S. Census, 2010) because of the relative homogeneity and geographic proximity of their populations. Although including the entire city in the analysis would potentially make my results more generalizable, limiting it to these two districts lessens the likelihood that non-school factors like race, income, neighborhoods, and their unobservable correlates will bias the results, since Districts A and B tend to be more homogeneous than the city as a whole. They are both largely impoverished areas with a majority of students of color. If the more affluent areas of the city were included in the analysis, it is likely that schools in those areas would have higher homeless student scores for reasons not captured by administrative data and not likely related to school programs and practices.

Because the city provided information for the complete population of students in its public schools, the descriptive analysis is conducted for the full population described above. It includes students from grades three to eight though only grades three to five are used in the regression analyses. Not all records are complete, and missing data cannot be assumed to be missing completely at random (Weiner, 2003). There are three possible relationships between the missing data and test scores. One, it could be completely random, though this is unlikely. Two, students who have less housing stability might be likely both to score lower and miss

school on test administration days, biasing the effects of homelessness and making the negative impact of homelessness seem smaller than it really is. Three, those students who have the greatest and most obvious problems in school might be more likely to be identified as homeless and to receive support services from the school, the shelter, and other community agencies, making them more likely to attend school on test days. This could bias the effects of homelessness upward, overestimating the negative impact of homelessness on test scores. It is also possible that many homeless students were not tested, or that many students have not been correctly identified as homeless. This problem will be further explored in the limitations section of this chapter.

Independent Variable. In the first set of regressions, the independent variable of interest in my analysis is homelessness. The group of third through fifth graders who experienced homelessness during the 2008-2009 school year was approximately 6 percent of students in those grades. In Districts A and B, that number was over 7 percent. Some research indicates that two percent of all children, and ten percent of poor children, experience homelessness (National Coalition for the Homeless, 2007a). Table 1 shows the breakdown of housing status within the group of homeless third to fifth grade students in the city. Unfortunately, it shows that the majority (79 percent) of homeless students' residence types were unknown. Of those known and verified by the district, 16 percent were in shelters and 5 percent were doubled up with another family. These numbers are very similar in Districts A and B.

Table 1: Homeless Residence Type (Citywide)

	Shelter	Doubled up	Other
Citywide	16%	5%	79%
Districts A & B	20%	6%	74%

As reported in this data set, the district verifies address changes. When students or parents tell the school that they are in temporary housing, the verification involves contacting the shelter and making sure students are indeed living there. Because the onus for conducting this verification seems to fall on already overburdened school office staff, it is not surprising that many address changes are not verified and therefore cannot be confirmed. However, some publicly available data is available to corroborate the numbers in my dataset.

Previous research indicated that homelessness should affect five percent of some cities' populations (Culhane & Metraux, 1999), but newer estimates in this city put that number closer to ten percent (City's Homeless Services Website, 2011). Additionally, a disproportionate number of the homeless families in the city come from Districts A and B (City's Homeless Services Website, 2011). Since homelessness is correlated with poverty and these two districts also have higher poverty rates than other parts of the city, I conclude that the homeless percentage should be higher in those districts. Some research suggests an overlap between highly-mobile and homeless families (Obradovic et al., 2009), so I included students who moved more than once in the 2008-2009 school year, transforming my independent variable into homeless/highly-mobile. Doing this did not change the results of my analyses significantly, and this strategy brought the percentage students in Districts A and B coded as homeless and highly-mobile up to 8.6 of that population.

Because I also wanted to test the relationship between having been homeless the previous year (2007-2008) as well as having been homeless both years, I included these variables in the models. In order to interpret their coefficients in the models, it is important to note that the "homeless 09" variable is the effect of the current year's homelessness, controlling for having been homeless the year before and having been homeless both years. In order to get the effect of

having been homeless in 2008 and 2009, one would add together all three housing status coefficients.

Tables 2 and 3 show the percent of students in each of the categories (homeless and homeless/highly-mobile) for each year in the city and the districts, for both grades three through eight and grades three through five. The percentage of students who were homeless both years is much smaller than the percentage homeless in either single year. This is not unexpected, given that the majority of families experience only one episode of homelessness, and only eight percent are believed to experience multiple episodes (Culhane et al., 2007).

Table 2: Housing Status (Percent of Children in Grades 3-8)

	Citywide	Districts A and B
Homeless 2009	7.93	7.81
Homeless/Highly-mobile 2009	8.06	9.06
Homeless 2008	8.95	9.62
Homeless/Highly-mobile 2008	9.91	10.37
Homeless 2008 and 2009	2.04	3.39
Homeless/Highly-mobile 2008 and 2009	3.15	4.54

Table 3: Housing Status (Percent of Children in Grades 3-5)

	Citywide	Districts A and B
Homeless 2009	6.40	7.24
Homeless/Highly-mobile 2009	7.01	8.60
Homeless 2008	6.51	6.92
Homeless/Highly-mobile 2008	6.87	7.91
Homeless 2008 and 2009	1.94	2.65
Homeless/Highly-mobile 2008 and 2009	2.35	3.49

Dependent variable. Students in grades three through eight are administered two standardized tests in May of each academic year: one in language arts, and the other in mathematics. For the reasons explained above, I have chosen to focus on third, fourth, and fifth grade scores for the initial analyses. Some models are further limited to only fourth and fifth graders because they include previous achievement, and third graders do not have any test scores from the previous year.

Language arts. The language arts test used here "contains several different types of questions. Students answer multiple choice questions based on short passages they read, and write responses to open-ended questions based on stories, articles, or poems they listen to or read" (City Education Department Website, 2011). Scale scores on the test range from 400 to 800 and follow a roughly normal distribution for all third through fifth graders citywide as well as within the homeless and high-poverty subsamples and in Districts A and B (histograms for each test and subpopulation are included in Appendix A).

There is no evidence that scores are vertically equated, meaning that scores should not go up from one year to the next; however, Table 4 nonetheless gives a breakdown of average scores by grade and subpopulation in the city as a whole and also in the districts. Students citywide who took this assessment in 2009 had an average score of 661.90 (SD = 31.20); that average was lower for students eligible for free lunch (72.29 percent of the population), whose mean score was 656.06 (SD = 28.37), and lower still for homeless students (7.93 percent), who averaged 655.52 scale points (SD = 30.78). The scores of the 8.06 percent of the population coded as homeless and highly-mobile together (HL/HM) was nearly the same, at 655.66 (SD = 30.91).

Within Districts A and B, average scores in language arts ranged from 658.69 (SD = 29.72) for all students to 654.67 (SD = 27.76) for low-income students (79.52 percent) and for

653.48 (SD = 29.47) for homeless students (7.81 percent of the population). Again, when homeless and highly-mobile students' scores are considered together (9.06 percent of the population), they are very similar to the homeless group: 653.62 (SD = 29.43). Table 5 shows that scores for the previous test year follow very similar patterns.

Table 4: Mean Language Arts Scale Scores, 2008-2009

	Citywide				Districts A and B			
	Overall	Low income	Homeless	HL/HM	Overall	Low income	Homeless	HL/HM
%	100	72.29	7.93	8.06	100	79.52	7.81	9.06
Grade								
3	663.99 (35.40)	657.07 (33.59)	657.79 (35.30)	657.28 (35.89)	660.98 (34.58)	655.77 (32.82)	655.35 (34.22)	654.90 (34.42)
4	662.95 (35.02)	655.67 (33.68)	656.33 (35.61)	656.90 (35.63)	659.58 (34.02)	654.49 (32.95)	654.47 (34.70)	655.36 (34.65)
5	668.53 (32.91)	662.30 (28.93)	663.02 (31.24)	663.15 (30.85)	665.38 (31.11)	660.94 (27.90)	660.90 (29.30)	660.84 (28.73)
6	662.27 (26.08)	657.96 (22.58)	655.50 (23.27)	655.60 (23.48)	658.94 (22.85)	656.34 (21.02)	653.59 (20.76)	653.67 (21.12)
7	660.53 (25.28)	655.64 (22.76)	652.73 (24.52)	653.71 (24.99)	657.76 (23.64)	654.41 (21.66)	651.24 (23.00)	652.22 (23.59)
8	653.56 (29.23)	648.15 (27.17)	646.75 (28.01)	646.64 (28.24)	649.85 (27.53)	646.49 (25.98)	644.51 (27.22)	644.25 (26.80)
All	661.90 (31.20)	656.06 (28.73)	655.52 (30.78)	655.66 (30.91)	658.69 (29.72)	654.67 (27.76)	653.48 (29.47)	653.62 (29.43)

Table 5: Mean Language Arts Scale Scores, 2007-2008

	Citywide				Districts A and B			
	Overall	Low income	Homeless	HL/HM	Overall	Low income	Homeless	HL/HM
%	100	60.20	8.95	9.91	100	67.25	9.62	10.37
Grade								
3	659.60	652.17	654.50	654.53	655.82	650.47	650.28	648.98
	(38.51)	(36.28)	(39.23)	(31.43)	(37.36)	(35.68)	(36.79)	(35.54)
4	656.80	648.67	649.26	648.21	653.49	647.44	645.27	644.31
	(40.18)	(38.70)	(41.44)	(38.97)	(39.44)	(37.95)	(39.41)	(38.72)
5	660.67	654.98	656.29	654.88	657.54	653.22	650.60	650.22
	(31.04)	(28.80)	(31.65)	(30.54)	(30.07)	(28.42)	(28.29)	(30.17)
6	652.16	647.02	647.44	646.01	649.18	645.60	642.05	641.78
	(28.36)	(27.00)	(29.65)	(28.04)	(27.31)	(26.12)	(24.50)	(25.95)
7	655.39	650.44	650.95	650.91	652.22	649.11	646.11	645.83
	(29.28)	(28.20)	(28.96)	(27.95)	(28.24)	(27.35)	(31.51)	(30.22)
8	646.68	640.24	640.92	639.95	643.38	639.06	633.07	631.06
	(35.76)	(33.84)	(34.53)	(34.03)	(33.88)	(32.25)	(32.97)	(32.05)
All	655.16	648.87	649.88	649.08	651.90	647.45	644.86	643.67
	(34.52)	(32.71)	(34.93)	(32.21)	(33.37)	(31.88)	(33.42)	(32.43)

Mathematics. The mathematics test used by the city measures "number sense and operations, algebra, geometry, measurement, and statistics and probability [and] ways of acquiring and using knowledge [including] problem solving, reasoning, communication, connections, and representation" (City Education Department website, 2010). As noted above, the scores are not vertically equated. Also, like language arts, scale scores on the test range from

400 to 800 and follow a roughly normal distribution for all fourth grade students citywide as well as within high-poverty and homeless subsamples (Appendix A).

Table 6 shows the math scale scores by grade level and subpopulation. Across the city as a whole the mean math score in the 2008-2009 school year was 679.74 (SD = 37.27). This score was lower for low-income students (72.29 percent of the population), who had an average score of 673.29 (SD = 35.57), and lower still for homeless students (7.93 percent), whose average was 671.03 (SD = 37.26). Scores for homeless/highly-mobile students (8.06 percent of the population) were almost the same as for those coded as homeless, with a mean of 670.93 (SD = 37.00). The same patterns hold true in the two study neighborhoods. The students who took this assessment had an average score of 675.87 (SD = 36.17); that average was lower for students eligible for free lunch (79.52 percent of the population), who averaged a score of 671.49 (SD = 34.80) and even lower for homeless students (7.81 percent), who averaged 668.26 (SD = 35.73) scale points. Homeless and highly-mobile students here (9.06 percent of the population) had nearly the same average scores as homeless students, at 668.61 (SD = 35.42). Table 7 shows the score distribution for the previous year, which follows similar patterns.

A series of two-sample t-tests determined that the differences between the average score of the low-income group and the homeless/highly-mobile group were significant in the city and the districts in both subjects, making those relationships worthy of further study. Differences between homeless and HL/HM scores were not significant. Because all of the groups' scores follow a normal distribution (see Appendix A), it was not necessary to employ a range restriction correction (Linn, Harnish, & Dunbar, 1981) in my regression analyses.

Table 6: Mean Math Scale Scores, 2008-2009

	Citywide				Districts A and B			
	Overall	Low income	Homeless	HL/HM	Overall	Low income	Homeless	HL/HM
%	100	72	6.85	7.61	100	80	7.41	9.06
Grade								
3	689.48 (37.48)	683.31 (35.37)	683.15 (36.67)	682.07 (35.96)	686.56 (36.14)	682.08 (34.27)	680.09 (33.71)	680.04 (33.76)
4	688.49 (41.15)	680.68 (40.02)	679.56 (41.69)	680.36 (41.44)	684.85 (40.25)	679.50 (39.32)	679.87 (40.71)	679.45 (40.27)
5	683.43 (34.66)	676.77 (33.29)	675.95 (34.78)	675.92 (34.30)	679.58 (33.75)	674.94 (32.56)	673.67 (32.90)	673.41 (32.90)
6	674.99 (36.76)	668.74 (35.45)	663.18 (37.29)	663.27 (36.95)	669.91 (35.45)	661.01 (34.51)	659.48 (35.47)	659.78 (35.25)
7	674.35 (33.20)	668.27 (30.98)	662.60 (31.16)	663.89 (31.61)	669.94 (31.39)	666.05 (29.90)	659.06 (28.52)	660.98 (29.14)
8	668.29 (34.51)	663.98 (33.19)	658.36 (32.88)	657.65 (33.23)	664.22 (33.28)	661.07 (32.29)	655.60 (30.36)	655.14 (30.61)
All	679.74 (37.27)	673.29 (35.57)	671.03 (37.26)	670.93 (37.00)	675.87 (36.17)	671.49 (34.80)	668.31 (35.53)	668.61 (35.42)

Table 7: Mean Math Scale Scores, 2007-2008

	Citywide				Districts A and B			
	Overall	Low income	Homeless	HL/HM	Overall	Low income	Homeless	HL/HM
%	100	60.20	8.95	9.91	100	67.25	9.62	10.37
Grade								
3	686.00 (35.86)	678.92 (34.45)	679.03 (35.83)	678.91 (34.51)	682.01 (35.06)	667.33 (33.62)	676.90 (34.13)	677.89 (32.19)
4	678.75 (39.70)	671.34 (37.70)	669.96 (39.65)	669.02 (37.79)	675.03 (38.09)	669.83 (36.53)	665.40 (37.42)	662.79 (36.92)
5	676.72 (38.83)	669.29 (37.18)	669.30 (38.66)	667.96 (34.53)	672.26 (37.84)	666.72 (36.19)	665.22 (35.63)	665.01 (34.57)
6	668.65 (40.46)	661.85 (39.29)	660.87 (40.67)	661.02 (39.01)	663.32 (39.30)	658.76 (38.10)	655.07 (38.43)	653.69 (38.41)
7	664.91 (37.70)	658.96 (36.08)	656.72 (36.04)	655.88 (49.10)	659.61 (36.06)	655.95 (34.90	651.12 (34.74)	650.12 (34.04)
8	659.01 (38.99)	653.05 (37.77)	651.68 (37.57)	650.03 (37.51)	654.94 (37.70)	650.86 (36.60)	648.60 (36.94)	641.21 (39.02)
All	672.02 (39.70)	665.41 (38.10)	664.48 (39.17)	663.80 (38.21)	667.80 (38.52)	663.12 (37.11)	660.64 (37.51)	658.45 (35.42)

Control Variables. Demographic factors known to correlate with test scores and poverty/homelessness are included in the analysis. These race/ethnicity and participation in the federal free lunch program – a measure of poverty. Test scores generally vary in expected ways with respect to poverty: low-income students' scores are lower than overall norms, and homeless students' average scores are even lower. However, the sizes of these differences are very small, less than five percent of a standard deviation.

Table 8 shows that test scores vary across the demographic groups in commonly-encountered ways: students who identify as Asian and white have higher scores than those who identify as Hispanic and African American. These numbers align very closely with published statistics available on the city's website. Table 8 also shows the percentage of the homeless population comprised by children in each of the racial/ethnic categories.

Table 8: Citywide Scores and Race/Ethnicity

Race/Ethnicity	Percent of Overall Population	Percent of Homeless Population)	Average Language Arts Score (SD)	Average Math Score (SD)
African American	31%	37%	659.37 (31.41)	677.41 (35.40)
Asian	14%	10%	680.89 (36.64)	702.02 (37.30)
Latino	40%	41%	658.08 (32.07)	680.32 (35.16)
Other Race	<1%	<1%	665.55 (33.72)	685.14 (37.64)
White	14%	12%	680.79 (35.80)	710.99 (37.35)
Totals/ Averages	100%	100%	665.06 (34.62)	687.01 (38.07)

In order to construct a viable comparison group of low-income students, this study uses the well-established strategy of considering eligibility for participation in the federal free lunch program as a marker of poverty. It does not include students eligible for reduced-price lunch in the comparison group. Federal guidelines allow for students whose families earn up to 130

percent of the poverty level to be eligible for free lunch (United States Department of Agriculture (USDA), 2010).

Although I would have expected complete overlap between the homeless and low-income groups, I found that only 72 percent of homeless/highly-mobile students were also coded as free lunch recipients. If reduced-price lunch was included, 86 percent of homeless students qualified for participation in a lunch program. I suspect there is an issue of identification or enrollment driving these numbers rather than 14 percent of homeless students not meeting the guidelines for the lunch program. It is highly likely that homeless parents fail to enroll their children in the free lunch program. Schools are legally required to allow homeless students immediate participation in the free lunch program, but it is also possible that they delay in completing enrollment paperwork for these students, which would lead to a lack of free lunch identification.

Another important control variable included in the analyses is special education participation. Homeless students are actually believed to be less likely than housed students to be identified by the school as having a learning disability (Duffield, Heybach, & Julianelle, 2007), so a homeless student having a special education classification may well have been identified in a year prior to the homelessness episode. Table 9 shows the proportion of each subpopulation identified as receiving special education services.

Table 9: Participation in Special Education (Percent)

	Overall	Low Income	Homeless	HL/HM
Citywide	11.92	14.24	14.02	14.34
Districts A and B	10.83	12.24	12.78	13.01

Mediating Variables. Because the literature cited in the previous chapter indicates that attendance is one factor that might link homelessness and lower achievement (e.g., Dworksy, 2008), this variable is also included in the final model. Table 10 shows the distribution of absences across the subpopulations.

Table 10: Average Days Absent, 2008-2009

	Overall	Low income	Homeless	HL/HM
Citywide	11.41 (10.98)	13.08 (12.14)	16.28 (14.71)	18.94 (19.03)
Districts A and B	12.32 (11.49)	13.69 (12.35)	17.20 (17.01)	19.99 (19.66)

Unfortunately, the dataset does not include any measures that could be used to construct other hypothesized mediating factors (e.g., mental health). It does include suspensions, but the total number of students who were suspended, according to my data, was 67 (0.06 percent of all students). I have to assume there is an issue of reporting here, since 67 suspensions across two districts seems implausibly low. Because of this, I chose not to include suspensions in the final models.

Question 1: Is housing status a predictor of student achievement in a large urban district, even after controlling for common correlates like income and race?

Although, as Rubin and colleagues (1996) remind us, "it is well known that when using a cross-sectional study design, a causal relationship cannot be confirmed" (p. 292), it is nonetheless informative to examine relationships between housing and academic performance in

the data for correlations that point toward further study. Because students are not randomly assigned to a homeless condition and homeless students are not randomly assigned to schools, I used multiple regression to allow me to estimate the effect of housing status on test scores while controlling for factors likely to vary with both scores and homelessness: income, race, previous homelessness, and participation in special education. Previous achievement is included to account for the level at which students started the year. I also added the mediating variable of attendance to the final model, as it is suspected to be a link between homelessness and achievement. Higher absence is known to be associated with homelessness and is also believed to be associated with lower achievement. If attendance is significant in the final model and also decreases the coefficient on homelessness, this would support the idea that increased absences are one part of the homelessness experience that influence test scores; controlling for absences parses out that part of homelessness and allows us to examine its independent impact. Controlling for these variables allows me to isolate the effects of housing status and examine the role of attendance as a mediating factor. The final model of interest is estimated as follows:

$$Y_i = \beta_0 + \beta_1 H_i + \beta_2 L_i + \beta_3 R_i + \beta_4 S_i + \beta_5 P_i + \beta_6 A_i + \varepsilon_i$$

wherein Y is the dependent variable of either math or language arts test score, i indexes students, H is a vector of homelessness/high mobility, L is a marker for low income, R represents the student's race/ethnicity, S indicates whether a student has a special education classification, and P is the student's test score from the previous year. A indicates the number of days a student was absent. The βs are coefficients to be interpreted and ε is the error term.

The coefficients I am primarily interested in pertain to homelessness/high mobility. The models test three types of homeless experiences: homeless/highly-mobile only in the 2008-2009 school year, homeless/highly mobile only in the 2007-2008 school year, and homeless/highly

mobile in both years. A statistically significant negative coefficient on homelessness/high mobility in 2009, controlling for the covariates (including having been homeless the year before), would indicate that a lack of stability in 2009 housing is correlated with lower test scores in 2009. A significant negative coefficient on the homeless/highly mobile 2008 variable would indicate that the previous year's homelessness has a negative relationship with this year's scores for those students not experiencing homelessness in 2009. In order to parse out the relationship between two consecutive years of homelessness, adding all three coefficients would give the correlation between academic achievement and having been homeless in 2008 and 2009. If these coefficients on 2009's homelessness are not significant, this would suggest that each type of homelessness in the test year does not predict lower test scores, and that other variables included in the model have better explanatory power.

I am also interested in the coefficient on attendance, as a significant negative value would indicate that absences are correlated with lower achievement. If the inclusion of this variable in the model also decreases the magnitude of the homeless/highly-mobile variables, this would indicate that attendance is, indeed, one factor that mediates the achievement of homeless students. Though these findings would not establish causal relationships, they would validate the need for further study of the mechanisms through which homelessness might cause students to score lower. In addition to absences, maternal mental health or child stress are also hypothesized as possible mediators between homelessness and test scores (as discussed in Chapter II).

In order to adjust for clustering, i.e., that students within schools are likely to resemble each other in important ways (Rogers, 1993), I used a Huber-White correction to produce robust standard errors in the first four models. I also estimated a fifth model that uses school fixed effects. This model has the benefit of controlling for any unobservables at the school level, since

it is likely that there are some characteristics common to students within a school that cannot be or have not been measured. For example, if teacher quality were better in some schools than others, using school fixed effects would control for this.

Question 2: At which schools do homeless students perform better and worse?

In order to understand whether and how schools impact homeless student test scores, I employed two analyses. First, I used multiple regression of school-level data to predict test scores in much the same way as described above. Because my first set of regressions demonstrate that patterns in Districts A and B tend to mimic those of the city as a whole, all further analyses were restricted to just those two districts. I merged publicly available school-level data with my data to assemble a data set that contained both student-level variables and school-levels ones: the percentage of homeless/highly-mobile students in a school, the school's poverty rate, total enrollment, and average overall test scores. The final model used to estimate the relationship between school-level variables and homeless student test scores is as follows:

$$Y_i = \beta_0 + \beta_1 S_i + \beta_2 H_i + \beta_3 P_i + \beta_4 E_i + \beta_5 M_i + \varepsilon_i$$

As above, Y is either math or language arts test score, and i indexes students. S represents the vector of student-level variables found to be significant in the analysis in Research Question 1 (housing status, income, race, special education status, and days absent). H is the percentage of the school population coded as homeless/highly-mobile, P is the school's poverty rate, based on parent income data, E is total enrollment, and M is the average overall student test score in the given subject. Because I am interested in how school level variables might impact homeless/highly-mobile students in particular, the model includes an interaction term for each of the school-level variables and the student having been homeless/highly-mobile in the 2008-2009

school year.

I included these four school-level variables because I had reason to believe they might influence homeless students' achievement. A statistically significant coefficient on any of the interaction terms would tell me that the school factor is, in fact, correlated with homeless/highly-mobile student achievement. For example, a positive coefficient on percent homeless interacted with a student's homeless status would indicate that more homeless students in a school is related to positive outcomes for homeless students. It is also possible that the impact of the percentage of homeless students in a school could have a negative effect on non-homeless students but a positive effect on homeless students. A school's enrollment could affect scores; smaller schools might have more ability to pay specific attention to homeless students. Likewise, the poverty level of a school could negatively influence its ability to deliver services to homeless students. I included the overall average test scores to see whether a school whose students all do well might be one where homeless students are also more likely to do well.

In addition to identifying the characteristics of a school that predict homeless student success, I also wanted to identify the sample schools in my dataset whose homeless students achieved above and below their districts' means in mathematics. I chose to focus on mathematics for three reasons. First, there is presently intense focus on mathematics education in the United States and around the globe. Since the launch of *Sputnik*, mathematics and science education in the United States have become viewed as inextricably linked not only to our nation's ability to defend itself and to compete in the global market, but also to individuals' ability to attain secure and well-paying employment (Abramson, 2009). Particularly if the latter point is true, children with economic challenges maximize their potential to escape poverty by achieving in mathematics. Second, mathematics scores have been shown repeatedly to be more

vulnerable than reading scores to school effects. Phelps (2009) found the school effects on mathematics in their study to be 16 percent, while it was only 11 percent for reading. Dee and Jacob (2009) demonstrate that school reforms since No Child Left Behind have had a significant effect on fourth and eighth grade NAEP scores in mathematics, but no effect in reading. It is possible that this is because parents teach reading at home, but not mathematics. "The finding of greater school and district effects on math scores than reading scores is intuitive. Parents may spend considerable time reading with their young children, while mathematics instruction is left largely to the school system" (Phelps, 2009, p. 46). And third, though some disagree, mathematics is viewed by many as more culturally-neutral than reading; number sense seems somehow easier to divorce from its context and should therefore be easier to measure without concern for how groups outside the dominant culture are privileged by assessments (Jaworski and Phillips, 1999).

I chose a two-level random effects model for this analysis. Random effects modeling allows each school in the analysis to have its own intercept and slope, which makes a more nuanced comparison between schools possible. Rather than looking at differences in cross-sectional average scores, this approach allows me to compare how schools "affect" homeless students' scores. In the model, β_1 is the grand mean of non-homeless students, β_2 is the grand mean for homeless students. Looking at the residuals (the deviation from the grand means for each school j) allows them to be compared. If, for example, at the district level, homeless students score an average of ten points lower than non-homeless students, but at school A, homeless students score only 8 points lower than school A's non-homeless students, this school can be thought of as doing "better" than average. The model also controls for previous achievement. I estimated the model using the following equation

$$Y_{ij} = (\beta_1 + \zeta_{1j}) + (\beta_2 + \zeta_{2j})H_{ij} + \beta_3 P_i + \varepsilon_{ij}$$

which allowed the intercepts and slopes to vary over the clusters – schools, in my case – to see how each school seems to affect the scores of its homeless students (Rabe-Hesketh & Skrondal, 2008). In it, $\beta_1 + \zeta_{1j}$ is the intercept (average non-homeless student score), which is different for each school. The slope (coefficient on H, distance from the intercept to the average homeless student score), is represented by $\beta_2 + \zeta_{2j}$ and also varies by school. The model also contains a control for previous achievement, P, and an error term, ε.

In order to compare schools, I used this model to predict the slope (along with its standard error) for each school and compared each to the predicted district average slope. The difference between each school's predicted slope (the difference between homeless and non-homeless students' scores) and the average predicted slope across the district became the basis for my categorization scheme. Schools whose slope was above the district average slope were deemed "high-performing," those below, "low-performing," and those at or close to the district average "middle-performing." Limitations of this approach are discussed in detail in Chapter IV.

Because some schools had low numbers of homeless students, I made the decision to limit my analysis to those schools with at least five homeless/highly-mobile students. Removing schools with fewer than five students in this housing category reduces the chance that differences in score are due to outliers. This decision reduced the number of schools in my analysis by 10 percent in District A and almost 8 percent in District B.

Question 3: How do these schools serve their housed low-SES students?

Following the same procedure as above, I was able to calculate the difference between predicted school-specific slopes and district slopes for the subset of low-income students and

create a list similar to that of how schools serve homeless students. I was thus able to determine whether the schools whose homeless students perform best are also the schools where all low-income students perform best. Because the majority of students in these two districts are low-income, I did not run the analysis on only non-poverty students – there is not much value for my study in knowing which schools best serve middle-class students.

Questions 4 and 5: What programs and practices are employed to support homeless student learning by high- and low-performing schools? Are certain practices unique to schools where homeless children are relatively high-performing?

Once I identified the schools associated with the highest and lowest scores for homeless students in both of the neighborhoods of interest, I interviewed principals, teachers, and other personnel at those schools about the practices they use to support students' learning. The use of interviewing allowed me to access phenomena I could not realistically observe directly (Patton, 1990). From these interviews, I developed a sense of how schools address the needs of students experiencing homelessness and what they perceive to be the biggest challenges. I also surveyed schools in the middle of the distribution to determine whether they use the same strategies.

Data Collection. Using what Patton (1990) calls a "general interview guide" (p. 280), I conducted interviews at both high- and low-performing schools. I also surveyed schools in the middle of the distribution to rule out the possibility that the top-performing schools employ the same strategies as other schools in the middle and at the bottom of the distribution, potentially ascribing to those strategies a relationship they do not deserve. The interviews were recorded and transcribed.

Sampling and recruitment. I employed a convenience sample, interviewing at every school that agreed to participate. Using emails, letters, and phone calls, I invited 85 principals

(40 from the high-performing list, 45 from the low-performing list) to take part in my study. Although in-person interviews are preferable because they often allow for better rapport, I offered a phone option to allow for last-minute changes or cancellations, which I hoped would make busy principals more willing to participate. The city prohibits compensation of research subjects, but I was able to offer a nominal gift to the school. After 12 weeks of recruitment, I had an eight percent response rate (n = 7 schools). Six principals agreed to be interviewed, two of whom then arranged for me to interview other personnel – a focus group with five teachers in one school, phone interviews with a guidance counselor and parent coordinator in the other. One principal declined but arranged for me to speak to the guidance counselor. I emailed invitations for the online survey to 60 from the middle of the distribution, yielding a 13 percent response rate (n = 8 schools). Table 11 shows the breakdown of these interviews and surveys across the districts and performance categories.

Table 11: Interviews and Surveys

	High-performing (interviews)	Mid-performing (surveys)	Low-performing (interviews)	Totals
District A	3 principals, 1 guidance counselor, 5 teachers	4 principals	0	7 principals, 6 other personnel
District B	0	4 principals	3 principals, 1 guidance counselor, 1 parent coordinator	7 principals, 2 other personnel
Totals	9 interviews	8 surveys	5 interviews	14 interviews, 8 surveys

Context. In order to provide contextual information, I also collected demographic and administrative statistics about each school from information available online. I was able to look at overall school population size and racial/ethnic composition, and the number of low-income and homeless children at each school. These contextual factors, unfortunately, did not provide much insight because the demographics and administrative data were very similar for all the schools.

My role as researcher. With one exception, my role in the qualitative interviews was as a complete outsider: I did not know the subjects of my research, nor had we interacted before. The one exception was a principal of a low-performing school in District B who was the adjunct instructor of a course I took six years ago. However, since we never interacted around her practice, homeless students, or her school, and she was not yet a principal when I knew her, I do not feel this impacted my ability to interview her.

Though I am mostly unknown to the teachers and principals in the study, and they to me, I am not a true outsider when it comes to the context in which they work. I was an elementary school teacher in District B for two years, and I taught students experiencing homelessness. The challenges I faced, and how I supported the students in my classroom, could potentially have biased the questions I chose to ask. In carefully rooting my questions in the research literature and soliciting feedback from my committee, however, I believe I removed my personal experiences from the protocol to the best of my ability. In order to keep them from interfering with my analysis, I remained mindful of this connection while coding.

Survey and interview protocols. I followed three phases of qualitative interview development (Rubin & Rubin, 2005). During the first phase of my inquiry, I collected background information in the form of the research and case studies presented in my literature

review. From that information, I developed a semi-structured interview protocol that includes clear and singular (Patton, 1991) but relatively broad guiding questions (Ryan, Coughlan, & Cronin, 2009). I designed a detailed guide so that I would not miss anything important (Ryan et al., 2009), but also made sure not to plant ideas in interviewees' heads based on responses I expected from the literature and my personal experiences (Patton, 1990).

My interview protocols (Appendices A and B) start with the university-required signing of the consent form and assurances of confidentiality. Rubin & Rubin (2005) recommend beginning an interview with an introduction and background, then factual questions, then more substantive and open-ended questions, and then returning to factual questions before finishing with gratitude for the participant's time. My protocols follow this model. In order to build rapport without weakening my neutrality (Patton, 1991), my introductory script makes quick mention of my personal experiences and explains the rationale for my study in practitioner-friendly language. Both protocols then move to concrete questions about how long the respondent has been in the profession and at the school (the principal interview asks how many homeless students the school serves; I originally asked this question on the teacher protocol as well, but it was stricken by the city's institutional review board). Each then goes on to ask broader, open-ended questions about how struggling students, highly-mobile students, and homeless students are supported in the school and in the classroom. It closes with two additional factual questions about the respondent's professional background and then thanks them for taking the time to meet with me. I piloted the protocols with two principals and three teachers in other districts and made refinements based on the answers the questions elicited as well as the respondents' post-interview feedback. The online survey followed much the same format (Appendix D), with many open-ended answer choices to allow as much flexibility as possible.

Transcription. Although I took field notes during the interviews, I also had my interviews transcribed. Transcription cannot capture all the nuance of the "raw" data, but transcribed interviews more closely align with the experience than will field notes taken during or recalled after the interviews (Miles & Huberman, 1994, p.51). I also kept and re-visited the original audio recordings.

Data Analysis. The purpose of qualitative data analysis is, according to Patton (1990), "to make sense…identify significant patterns, and construct a framework for communicating the essence of what the data reveal" (p. 372). Using cross-case analysis (Patton, 1990) allowed me to identify common themes mentioned across interviews, enhancing the generalizability of my findings (Miles & Huberman, 1994). Although some have argued that this should not be the goal of qualitative research (e.g., Guba & Lincoln, 1981), my study stands to make its best contribution if I can make generalizations to guide practice and policy decisions. As Glaser & Strauss (1967) explain, the goal of studies like mine is to describe some of the circumstances under which the outcome of interest (high test scores) is most likely to occur.

Using a variable-oriented approach (Miles & Huberman, 1994), I analyzed interview transcripts using the replication strategy described by Yin (1984) wherein I analyzed one case based on the theoretical framework I developed, then compared subsequent cases to see whether they were similar. I expected teachers and principals to talk about strategies that fall into one of the categories on my tentative coding framework (Appendix D), which in turn was based on the literature review. However, as I began coding, I realized I needed to modify the framework to analyze the data using a grounded theory approach (Charmaz, 2006) and created a revised version.

As principals and teachers recounted strategies they use in the school or the classroom, I placed them into discrete categories (Miles & Huberman, 1994). For example, when a principal mentioned that the guidance counselor meets with homeless students on a regular basis to provide emotional support, I placed that in the category of supporting students' mental health, as mentioned in the literature. Additionally, I encountered strategies that cut across categories, and I grappled with how to label them. For example, many principals talked about helping students make arrangements to get to school. This seems like physical support, in the form of transportation, but could also be parental support, because it takes the place of a parental duty and ostensibly makes parents' lives easier. In such cases, I allowed for double-coding.

Using both the replication strategy and allowing grounded theories to emerge was similar to the constant comparative method described by Glaser and Strauss (1967). Each new piece of information was compared to existing categories and placed in the appropriate one until all pieces were categorized. This allowed me to identify interesting patterns outside of my main question.

Once I followed the processes described above and identified a coding scheme that allowed me to categorize all the strategies mentioned, I coded the transcripts using NVIVO software. This allowed me to determine the frequency with which each strategy appears, across the cases. It also allowed me to look for within-case patterns, e.g., whether sets of strategies tend to go together within respondents or schools. The results of the interview and survey analysis are detailed in Chapter IV.

CHAPTER IV

RESULTS

Question 1: Is housing status a predictor of student achievement in a large urban district, even after controlling for common correlates like income and race?

I ran a series of regression analyses to estimate the associations between homelessness and scores. Table 12 shows that homelessness/high mobility in the tested year (2009) is associated with math scores that are 8.19 scale points (0.22SD) lower across the city as a whole. The size of the coefficient shrinks to -6.70 points (0.18SD) when income is added in Model 2. In Model 3, when income, previous homelessness, race/ethnicity, participation in special education, and previous achievement are added, the effect of experiencing homelessness only in 2009 remains significant but shrinks to -1.60 points (0.04SD). Having been homeless only in the previous year is correlated with a drop of 2.32 points (0.06SD). In order to understand how having been homeless in the both 2008 and 2009 is related to test scores, it is necessary to add the independent effects of 2009 homelessness (-1.6 points), 2008 homelessness (-2.32 points), and the added impact of having been homeless both years (-2.90 points), which totals -6.82 points (0.21SD).

Housing status remains a significant predictor, though tiny in magnitude (-0.58 points or 0.02SD) in the final model when attendance is included as a hypothesized mediator between homelessness and achievement. The attendance coefficient seems small (-0.28 points), but when multiplied by the average number of days homeless students miss school (almost 20), it becomes more meaningful (-5.6 points or 0.15SD). The strongest predictors of math achievement in the final model are not related to housing status but to race and special education status.

Table 12: Citywide Math Scores (Homeless/Highly Mobile)

	Model 1	Model 2	Model 3	Model 4	Model 5 (Fixed Effects)
Homeless/ Highly-mobile 09	-8.19***	-6.70***	-1.60***	-0.59*	-0.58*
	(0.46)	(0.41)	(0.30)	(0.30)	(0.26)
Low income		-15.32***	-2.43***	-2.04***	-1.66***
		(0.64)	(0.25)	(0.25)	(0.16)
HL/HM 08			-2.32**	-1.03	-1.03
			(0.77)	(0.75)	(0.65)
HL/HM 08 & 09			-2.90***	-0.22	0.14
			(0.75)	(0.76)	(0.74)
African American			-11.52***	-10.61***	-9.73***
			(0.48)	(0.47)	(0.28)
Latino			-9.40***	-8.41***	-7.68***
			(0.40)	(0.39)	(0.25)
Asian			-4.14***	-2.99***	-4.01***
			(0.43)	(0.42)	(0.28)
Other race			-8.00***	-6.77***	-6.15***
			(1.05)	(1.05)	(0.88)
Special education			-13.07***	-12.21***	-12.40***
			(0.45)	(0.43)	(0.23)
Math score 08			0.66***	0.64***	0.62***
			(0.00)	(0.00)	(0.00)
Days absent				-0.28***	-0.27***
				(0.01)	(0.01)
Constant	687.59***	696.13***	247.73***	261.81***	276.17***
	(0.57)	(0.66)	(3.18)	(3.13)	(1.49)
R^2	0.00	0.04	0.58	0.59	0.61
F	321.46	388.19	3800.90	3654.05	12880.30

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 13 demonstrates similar relationships between math score and housing status in Districts A and B together. With no controls, homelessness/high mobility is associated with a 6.75 point (0.18SD) drop in scale math test score; when income is added to the model, the effect falls to -5.65 points (0.15SD). Controlling for previous homelessness, inclusion in special education, and previous achievement reduce the effect to -1.38 (0.04SD), and this effect disappears once absences are added into the model. Days absent has a small negative effect (about -0.25 points or 0.01SD) that, like above, becomes larger when multiplied by the average number of days missed by homeless children (20), rising to 5 points (0.14SD). Nonetheless, as in the city taken as a whole, race and special education status are the strongest predictors of test score in Districts A and B. In the final models, housing status has no relationship to math scores in these districts.

Although the number of observations in each regression is not reported, it is important to note that when previous achievement is added into the model, the sample size drops by close to one third, because third graders did not take a test in the 2008 school year and therefore do not have previous test scores. However, when the analysis is run on just fourth and fifth graders, the results do not chance significantly. Likewise, the tables in Appendix E demonstrate that the regression analyses run on the homeless (not homeless/highly-mobile) population produce nearly identical results.

Table 13: Districts A & B Math Scores (Homeless/Highly-Mobile)

	Model 1	Model 2	Model 3	Model 4	Model 5 (Fixed Effects)
Homeless/ Highly-mobile 09	-6.75***	-5.65***	-1.38***	-0.38	-0.39
	(0.59)	(0.52)	(0.41)	(0.41)	(0.36)
Low income		-13.50***	-2.38***	-1.84***	-1.52***
		(0.86)	(0.36)	(0.36)	(0.23)
HL/HM 08			-0.88	0.56	0.74
			(0.86)	(0.88)	(0.86)
HL/HM 08 & 09			-1.27*	-0.20	-0.53
			(0.56)	(0.56)	(0.50)
African American			-10.27***	-9.26***	-9.74***
			(0.69)	(0.68)	(0.43)
Latino			-9.26***	-8.12***	-7.99***
			(0.61)	(0.61)	(0.41)
Asian			-3.51***	-2.45***	-3.83***
			(0.61)	(0.59)	(0.45)
Other race			-6.63***	-5.69***	-5.22***
			(1.52)	(1.55)	(1.26)
Special education			-11.99***	-11.16***	-12.06***
			(0.59)	(0.59)	(0.32)
Math score 08			0.67***	0.65***	0.64***
			(0.01)	(0.01)	(0.00)
Days absent				-0.25***	-0.25***
				(0.01)	(0.01)
Constant	684.23***	692.87***	242.28***	252.48***	264.57***
	(0.71)	(0.92)	(4.45)	(4.53)	(2.09)
R^2	0.00	0.03	0.56	0.57	0.59
F	130.74	171.46	1731.49	1634.42	6888.96

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Having been homeless/highly-mobile in only the 2009 school year is a significant predictor of test scores citywide in all models, but its effect lessens once attendance is added, indicating that missing days of school may be a part of the homelessness experience that is related to low test scores. In Districts A and B, the effect having been homeless in only 2009 disappears once attendance is added. The biggest predictor of lowered test scores in all the models is participation in special education (about -12 points, or 0.32SD). Since special education status can be considered a de facto marker of academic challenge, this is not surprising. Also, given the longstanding literature on race and scores, the relatively large coefficients on Latino (close to -8 or 0.21SD), African American (close to -10 or 0.27SD), and other race (about -5 or 0.13SD) are not unexpected. The coefficients on days absent (between -0.28 and 0.25), across the models is reasonable in light of literature on the relationship between absences and lower scores. Multiplied by the average homeless student absence rate of 20 days, this amounts to about -5 points (0.15SD), less than the effects of some racial identification or special education status.

The same patterns are evident in language arts test scores. Tables 14 and 15 show the relationship between test scores and homelessness/high-mobility is negative and statistically significant citywide and in the districts until absences are included in the model. Like math scores, special education status and race are the biggest predictors of language arts scores. Not surprisingly, the coefficients on days absent are smaller in the language arts regressions: between 0.16 and 0.14 points. For the average homeless student with 20 absences, this would equal -3 points (0.10SD).

Table 14: Citywide Language Arts Scores (Homeless/Highly-Mobile)

	Model 1	Model 2	Model 3	Model 4	Model 5 (Fixed Effects)
Homeless/ Highly-mobile 09	-6.39***	-4.90***	-0.94***	-0.38	-0.35
	(0.39)	(0.35)	(0.27)	(0.27)	(0.26)
Low income		-15.42***	-3.18***	-2.95***	-2.44***
		(0.58)	(0.22)	(0.22)	(0.16)
HL/HM 08			-1.93**	-1.18	-1.07
			(0.65)	(0.65)	(0.66)
HL/HM 08 & 09			-1.43*	0.11	0.23
			(0.72)	(0.73)	(0.75)
African American			-9.17***	-8.50***	-7.32***
			(0.42)	(0.42)	(0.28)
Latino			-7.97***	-7.29***	-6.23***
			(0.40)	(0.39)	(0.25)
Asian			-2.01***	-1.26**	-2.39***
			(0.49)	(0.49)	(0.29)
Other race			-6.15***	-5.45***	-4.96***
			(0.98)	(0.98)	(0.90)
Special education			-12.07***	-11.50***	-12.09***
			(0.36)	(0.36)	(0.24)
Lang arts score 08			0.51***	0.51***	0.48***
			(0.00)	(0.00)	(0.00)
Days absent				-0.16***	-0.14***
				(0.01)	(0.01)
Constant	665.54***	674.14***	337.79***	343.01***	356.77***
	(0.49)	(0.59)	(2.46)	(2.44)	(1.39)
R^2	0.00	0.05	0.49	0.49	0.51
F	264.13	432.22	2880.22	2626.16	8458.41

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 15: Districts A & B Language Arts Scores (Homeless/Highly-Mobile)

	Model 1	Model 2	Model 3	Model 4	Model 5 (Fixed Effects)
Homeless/ Highly-mobile 09	-5.38***	-4.28***	-0.83*	-0.27	-0.17
	(0.53)	(0.46)	(0.38)	(0.38)	(0.35)
Low income		-13.59***	-2.85***	-2.51***	-2.34***
		(0.82)	(0.29)	(0.29)	(0.23)
HL/HM 08			-1.45	-0.68	-0.46
			(0.86)	(0.86)	(0.85)
HL/HM 08 & 09			-0.65	-0.03	-0.21
			(0.47)	(0.49)	(0.50)
African American			-7.85***	-7.15***	-7.63***
			(0.51)	(0.51)	(0.42)
Latino			-7.36***	-6.62***	-6.77***
			(0.50)	(0.50)	(0.40)
Asian			-0.59	0.06	-2.20***
			(0.73)	(0.73)	(0.45)
Other race			-6.19***	-5.57***	-5.77***
			(1.16)	(1.16)	(1.24)
Special education			-11.47***	-10.94***	-11.93***
			(0.51)	(0.50)	(0.32)
Lang arts score 08			0.51***	0.51***	0.49***
			(0.01)	(0.01)	(0.00)
Days absent				-0.14***	-0.13***
				(0.01)	(0.01)
Constant	662.27***	671.00***	338.94***	342.27***	354.87***
	(0.62)	(0.87)	(3.62)	(3.61)	(1.90)
R^2	0.00	0.04	0.48	0.48	0.50
F	103.84	175.97	1306.83	1196.29	4698.24

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Conclusions

Although there is a statistically significant relationship between a student's homelessness in the test year and scores for third through fifth grades across the city as well as in the study districts, ranging from approximately -1.6 to -0.83 points (<0.05SD) in both mathematics and language arts, it is very small. When I include attendance in the model, homelessness becomes statistically insignificant, except in citywide math scores, where it becomes very small (-0.58 points, 0.02SD), indicating that attendance may be a mediator between homelessness and low test scores. Special education status and race are much stronger predictors than housing status of math and language arts scores.

Question 2: At which schools do homeless students perform better and worse?

As explained in Chapter III, the answer to this question was approached on two levels.

School Level

The first analysis here examines the relationships between school-level characteristics and scores for homeless/highly-mobile students by interacting each school level factor with housing status. Though some school-level factors are significant predictors of non-homeless students' test scores, none of the school characteristics are significant when interacted with housing status, indicating that there is no relationship between the percentage of homeless/highly-mobile students in a school, the overall percentage of students in poverty, the enrollment of the school, or the overall achievement level of students at the school and homeless/highly-mobile students' math (Table 16) or languages arts (Table 17) test scores.[10]

[10] Student-level coefficients are not reported in Tables 16 and 17 but vary according to the analysis in Question 1.

Table 16: School-level Characteristics and Math Scale Scores (Districts A and B)

	Model 1	Model 2	Model 3	Model 4
Percent homeless/ highly-mobile	-0.89*	-0.52	-0.58	-0.18
	(0.36)	(0.39)	(0.39)	(0.17)
Percent HL/HM * HL/HM	0.37	0.43	0.43	0.08
	(0.25)	(0.31)	(0.31)	(0.28)
Percent poverty		-0.14***	-0.14***	0.05**
		(0.03)	(0.03)	(0.02)
Percent poverty * HL/HM		-0.02	-0.01	0.04
		(0.02)	(0.03)	(0.03)
Enrollment (hundreds)			-0.32	-0.46***
			(0.27)	(0.13)
Enrollment * HL/HM			-0.23	-0.12
			(0.21)	(0.20)
Overall math score				0.72***
				(0.03)
Overall math score * HL/HM				-0.00
				(0.00)
Constant	717.27***	726.20***	728.69***	213.43***
	(1.38)	(2.13)	(2.87)	(19.84)
R^2	0.20	0.20	0.20	0.25
F	313.29	288.48	255.65	435.24

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table 17: School-Level Characteristics and Language Arts Scale Scores (Districts A and B)

	Model 1	Model 2	Model 3	Model 4
Percent homeless/ highly-mobile	-1.07**	-0.44	-0.48	0.03
	(0.36)	(0.34)	(0.35)	(0.16)
Percent HL/HM * HL/HM	0.58**	0.39	0.39	0.20
	(0.20)	(0.24)	(0.24)	(0.22)
Percent poverty		-0.23***	-0.23***	-0.01
		(0.03)	(0.03)	(0.02)
Percent poverty * HL/HM		0.01	0.01	0.04*
		(0.02)	(0.02)	(0.02)
Enrollments (hundreds)			-0.20	-0.34**
			(0.21)	(0.12)
Enrollment * HL/HM			-0.14	0.00
			(0.17)	(0.19)
Overall lang arts score				0.67***
				(0.05)
Overall lang arts score * HL/HM				-0.00
				(0.00)
Constant	684.12***	698.53***	700.08***	235.49***
	(1.49)	(1.79)	(2.30)	(33.78)
R^2	0.20	0.21	0.21	0.25
F	334.59	306.56	272.36	329.04

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Student Level

For the student-level analysis, I used a multi-level random effects model to predict the average homeless/highly mobile student scores in each of the two study districts, as well as the average score for this group at each school, in mathematics.

By using the model to predict the residual, or difference, between each school's slope (from non-homeless scores to homeless scores) and the average slope in the district, I was able to compile a list of the highest- and lowest-performing schools. Although the ideal construction of this model would have used average gain scores, as noted in Chapter III, I could not find any evidence that the tests in this city are vertically linked, so I have no reason to believe that scores should go up from one year to the next. Instead, I controlled for the previous year's scores. I also eliminated schools with fewer than five homeless students from my analysis. Table 18 shows a sample of the top and bottom schools in District A, the difference between the distance from non-homeless to homeless scores at each school compared to that distance at the district.

Table 18: District A Top High- and Bottom Low-Performing Schools

School ID (high)	Average Difference	# HL-HM $3^{rd} - 5^{th}$	School ID (low)	Average Difference	# HL-HM $3^{rd} - 5^{th}$
1A	1.78 (.22)	19	193A	-1.06 (.20)	21
2A	1.67 (.20)	14	194A	-1.07 (.15)	16
3A	1.37 (.16)	11	195A	-1.10 (.18)	24
4A	1.27 (.17)	21	196A	-1.11 (.25)	9
5A	1.11 (.19)	20	197A	-1.26 (.20)	6
6A	1.10 (.30)	5	198A	-1.38 (.18)	16
7A	1.09 (.22)	9	199A	-1.41 (.17)	9
8A	1.02 (.25)	17	200A	-1.50 (.18)	15
9A	1.01 (.26)	8	201A	-1.50 (.19)	20
10A	1.00 (.23)	9	202A	-2.76 (.19)	12

Though the results in District A made construction of the list of "best" and "worst" schools for homeless students fairly straightforward, the size of the effects is quite small. For example, at the "best" school in District A, homeless students are predicted to gain 1.78 more points in a year than the district average gain, only 0.05SD. Also, results of an identical analysis

in District B (Table 19) yielded much larger standard errors, rendering any difference between schools effectively null. Having revisited the analysis multiple times, and left to conclude that some quirk in the data caused these large standard errors, I was left with no alternative but to use the top and bottom schools from this list to recruit schools for participation in qualitative interviews. This important limitation is discussed in a later section of this chapter.

Table 19: District B Top High- and Bottom Low-Performing Schools

School ID (high)	Average Difference	# HL-HM $3^{rd} - 5^{th}$	School ID (low)	Average Difference	# HL-HM $3^{rd} - 5^{th}$
1B	3.44 (2.64)	19	132B	-2.09 (2.42)	35
2B	2.94 (2.45)	36	133B	-2.46 (2.63)	15
3B	2.70 (2.51)	34	134B	-2.49 (2.59)	16
4B	2.64 (2.26)	37	135B	-2.68 (2.69)	8
5B	2.25 (2.40)	34	136B	-2.74 (2.60)	14
6B	2.08 (2.42)	33	137B	-2.75 (2.44)	26
7B	2.00 (2.36)	56	138B	-2.77 (2.48)	25
8B	1.92 (2.43)	22	139B	-3.08 (2.43)	32
9B	1.73 (2.38)	30	140B	-3.23 (2.37)	37
10B	1.70 (2.57)	11	141B	-3.49 (2.56)	22

Question 3: How do these "best" and "worst" schools for homeless/highly-mobile students serve their low-income student populations?

To see whether the schools where homeless and highly-mobile students performed best and worst were also the best and worst performers for low-income students overall, I also conducted the same analysis on the low-income subgroup. In District A, Schools 3A and 4A were also among the top ten scorers for low-income students, and School 199A was also in the bottom ten for low-income scores (highlighted in Table 18). Only one school in District B, 6B, was a top performer for both homeless/highly-mobile students and low-income students as a whole (highlighted in Table 19).

These few overlaps allow me to conclude that in most cases, the groups of schools I constructed as serving their homeless/highly-mobile students best and worst are distinct from those that best serve their overall low-income populations, making them worthy of further study. Indeed, one of schools categorized as high-performing in my analysis of homeless student scores received a grade of "F" in the 2007-2008 and 2008-2009 school years from the city, based on its overall student score growth. However, given the relatively small number of homeless students in many of these schools, as well as the problem of large standard errors in District B, I cannot be sure that any of the schools in my qualitative analysis really has any better or worse effects on homeless student scores than any other. This limitation is discussed in the next section.

Questions 4 and 5: What programs and practices to support homeless student learning are employed by schools along the distribution from high- to low-performing schools? Are certain practices unique to schools where homeless children are relatively high-performing?

In total, I interviewed six principals, two guidance counselors, one parent coordinator, and a focus group of five teachers in seven schools across the two districts (four in District A, three in District B), for a total of 14 interviews. Because my score analysis did not provide me a categorization scheme I am confident in, I was forced to abandon the high/low classification for the qualitative analysis.

Table 20 shows the participating schools, the difference between their average homeless student math score gains and the district homeless average gains, the percentage of students in grades three through five who were identified as homeless and highly-mobile, as well as the percent of each school considered to be living in poverty (as determined by the city) and who was interviewed. The percentage of third to fifth graders experiencing homelessness/high mobility ranged from 7.6 percent to 21 percent. The percentage living in poverty ranged from 75 percent to 99 percent. Table 21 lists each participant's position, the school where s/he works, and the number of years s/he held that position. Although one principal was in her first year, the others ranged from five to nine years' experience. Other personnel were relatively veteran as well. The guidance counselor at school 7A taught at the school for 13 years prior to becoming its guidance counselor.

Table 20: Participating Schools (Interviews)

School ID	Average Difference (Std. Error)	% Homeless/ Highly-Mobile	% Poverty	Principals Interviewed	Teachers Interviewed	Other Personnel Interviewed
1A	1.78 (.22)	17%	99%	1	0	0
7A	1.09 (.22)	7.6%	86%	0	0	1
8A	1.02 (.25)	21%	86%	1	0	0
24A	0.92 (.21)	8.5%	83%	1	5	0
137B	-2.75 (2.44)	8.5%	75%	1	0	2
138B	-2.77 (2.48)	12%	95%	1	0	0
141B	-3.49 (2.56)	9.5	89%	1	0	0

Table 21: Interview Participants

Position	School ID	Years in position
Principal	1A	6
Guidance Counselor	7A	5
Principal	8A	<1
Principal	24A	6
Teacher	24A	13
Teacher	24A	13
Teacher	24A	12
Teacher	24A	3
Teacher	24A	11
Principal	137B	9
Guidance Counselor	137B	6
Parent Coordinator	137B	4
Principal	138B	6
Principal	141B	5

Interviews

Unfortunately, only one pattern emerged when I examined patterns within cases: almost all respondents noted mental health challenges and almost all of those also offered strategies for providing mental health support. Beyond this, however, respondents were no more or less likely to mention a certain strategy based on their years of experience, other challenges they mentioned, school characteristics, or other strategies they noted.

Across the cases, responses sorted quite readily into the coding scheme I had developed from the literature, with some minor adjustments. I had not anticipated that logistical concerns like identifying students, getting them enrolled, and ensuring their attendance would warrant separate codes, but they did. I also made the decision to move "transportation" from its original place under "Physical Needs" and place it with these logistics. Also, because a clear delineation appeared in the data between coordinating services with outside agencies and within the school/district itself, I added the latter. I also added three free codes: staff unity, delegation of duties, and advocacy, though each of these only ended up being used only once. Appendix D shows the original coding scheme and the revised version.

Challenges. Before examining the strategies these schools use, I summarize the challenges that principals and personnel identified as primary in their work with homeless students. Table 22 shows the number of interviewees who noted each of five main areas of challenge: mental health issues, identification and classification of students who are homeless, absences and tardiness, supporting parents, and academic challenges. Also noted were a variety of logistics such as lack of funding and problems with registration, and trouble coordinating with other schools and agencies.

Table 22: Challenges of Educating Homeless Students

Challenge	Number of respondents (of 14 total)
Mental health issues	11
Identification/classification	8
Absences/tardiness	7
Supporting parents	7
Academic issues	6
Logistics	
Funding	6
Registration	6
Coordinating with other agencies/schools	5

Mental health concerns. The most prominent category into which interviewees' responses about challenges fell was mental health issues presented by students who are homeless. Three of five teachers, both guidance counselors, and five of six principals all mentioned some type of emotional issue that they felt was problematic. Responses sorted into three main streams: the need for emotional support, increased behavioral problems, and trouble with social integration.

Respondents who spoke about the emotional support homeless students need commonly referred to the stresses of shelter life, life without a home, and life without consistency. Ostensibly, many of these impact the lives of poor and highly-mobile children as well, but most interviewees noted these issues specific to their homeless students, above and beyond the problems suffered by their largely very low-income overall student populations. One principal

explained that "not having a permanent place to stay and not knowing where they're going to end up" results in a "constant movement of the child and then he cannot be acclimated to a school or community." At one school, the principal talked of the trauma associated with loss of housing. Another principal conveyed a sense of compassion for parents. "They basically tell me it's a nightmare to go through the [shelter] system, and this of course affects the children when they come to school…the emotional issues…the children need a lot more support than what I can actually provide to them."

In addition to needing emotional support, homeless students were noted by three teachers and two principals to exhibit behavior issues. One teacher expressed her belief that homeless students were more likely than others to fall asleep or exhibit attention problems in class. Two principals and two teachers spoke specifically of anger when explaining the behavioral problems homeless students exhibit in school. "Those children are the angriest in class…they're ready to throw down," said one teacher at a high-performing school. The principal at another school stated that many homeless students are behavior problems: "extremely distrustful…not looking to please authority figures," and concluded that "something [is] clearly off here." However, one principal supplied the opposite opinion, stating that homeless children tend to be quiet and shy instead. "The ones who are in the shelter, they're more emotionally reserved."

One principal, one guidance counselor, and two teachers also pointed out that children who are homeless have trouble integrating socially. The guidance counselor explained that homeless children feel "embarrassed of wearing probably the same clothing a few days a week, not having enough food…not having…all of what the other children have, especially during the holidays." Two teachers pointed out that homeless children have a hard time fitting in to the classroom and will often "do whatever it takes to get attention." And the principal at one school

observed that, perhaps because "they come into a situation unfamiliar…and they may not have coping skills on how to fit in," homeless students are likely to be the targets of bullying by other students.

Identification. Both knowing who is homeless and understanding what situations qualify as homeless fell into this category. Three teachers, three principals, and both guidance counselors pointed out that they do not always know which students are homeless, often relying on rumors or conversations with students and parents to estimate school numbers or target specific students for attention. One teacher stated, "it's not like we get any information from anybody…somehow we find out and that's it." One guidance counselor uses primary sources to determine which students might need services: students she recognizes coming off the "shelter buses" in the morning are those she tries to work with. And one principal stated that while about 15 percent of her students were officially registered as homeless, "we always estimate about 40 percent, based on conversations with parents."

Beyond identifying which children were in homeless situations, school personnel also expressed confusion about which situations are considered homelessness. Both guidance counselors asked me whether students doubled up with other families were considered homeless. One guidance counselor and one principal (at different schools) also expressed concern about children living with extended family: is a child living with grandparents or aunts/uncles considered homeless? The same guidance counselor expressed her opinion that children residing in shared custody of separated parents should be considered to be in "temporary housing" because of the overwhelming instability of those situations.

Attendance/tardiness. Two teachers, one guidance counselor, and four principals talked about attendance and lateness as major challenges facing them in serving homeless students.

One principal noted the connection between transitions in housing and long periods of absence, while another low-performing school's principal implied that homeless parents allow children to stay home from school. "Their parents feel terrible about the situation so they give in on a lot of things…attendance can suffer." The guidance counselor and teachers noted that children often travel long distances, causing them to be late or to miss school.

Unfortunately, the city does not collect data on tardiness, but the attendance rates were available for my analysis. At the schools whose personnel participated in my study, homeless students have higher average rates of absence, as shown in Table 23. The highlighted schools are those where interviewees mentioned attendance as a problem for homeless students. Interestingly, complaints about attendance were not specific to schools where the gap between homeless and overall attendance rates were the largest. For example, the principal at school 1A made no mention of this challenge, despite the fact that homeless and highly-mobile students in the school are absent an average of 7.45 more days than the overall school average. But this was a concern mentioned by the principal at school 138B, where homeless students are only absent, on average, 1.63 more days than students overall. However, with such large standard deviations on all these numbers, it is possible that attendance is perceived to be a bigger problem than it actually is, with students at the high end of the absence distribution making an impression on teachers and leaders that carries over mistakenly. And it is worth noting that at many of these schools, homeless student attendance is a serious problem: five of the seven schools have homeless absence averages over 20 days – one full month of instruction. Absence rates are quite high at the city and district levels as well. Across the city as a whole, the average number of days absent for all students is 11.41 (SD = 10.98), while homeless/highly mobile students miss an average of 16.24 (SD = 14.65) days. The averages in District A are 11.38 days absent (SD =

10.95) for students overall and 16.05 days (SD = 14.77) for homeless/highly-mobile students. In District B, the overall average is 13.66 days (SD = 12.08), with homeless/highly-mobile students missing an average of 18.31 days of school (SD = 15).

Table 23: Attendance at Studied Schools

School ID	Average # Days Absent (SD)	Homeless/Highly-Mobile Average # Days Absent (SD)
138B	10.43 (9.24)	12.06 (8.8)
137B	10.66 (9.24)	12.34 (9.61)
1A	14.68 (14.84)	22.13 (18.56)
24A	15.73 (12.81)	20.82 (14.85)
141B	16.6 (13.8)	21.23 (15.77)
7A	18.22 (13.89)	20.64 (12.56)
8A	19.94 (15.03)	26.31 (20.01)

Supporting parents. Five principals and two teachers also pointed out the challenges of supporting the parents of children experiencing homelessness. Though some responses seemed to blur into the challenges of working with parents generally, two principals were very specific about parents in temporary housing: one noted that the system is very difficult for parents to manage, and the other, formerly employed by HUD, expressed her impression that parents

"going through that system…[are] so alienated and angry and bitter…the problem is getting [them] to want to talk to us and interact with us." Others spoke more vaguely about "parenting skills" being affected by the difficulty of temporary housing situations.

Academic challenges. Five principals and one teacher made explicit connections between homelessness and academic problems for students. Two principals and one teacher stated that homelessness and its attendant mobility cause academic lapses. "They come in with a lot less than the other kids as far as knowledge is concerned," because "moving around a lot [causes] inconsistencies in their education" due to "different standards of excellence" at different schools. Two principals explained that academic lags are related to frequent school changes because they complicate the process of identifying where students need academic support. "They fall further and further behind, then the school that's receiving the child now has to have the kid evaluated again and the whole process begins and then the child moves again and the whole process begins again." This principal also noted that parents in homeless situations are not able to provide academic support to their children. "A parent who is constantly moving, their focus is no longer on instruction. The focus is now on survival and living."

Strategies. Because there were few challenges that respondents identified as specific to homeless children, as opposed to at-risk low income students generally, it is not surprising that few strategies noted were also intended for only those children without stable housing. The interview protocols (Appendices B & C) asked first about challenges, then about strategies, starting by asking how schools and practitioners support struggling students, then narrowing that to transient students, and further to homeless students. In this section, I first provide an overview of the most popular strategies mentioned in the interviews, in descending order based on frequency of mention (Table 24): creating a caring environment, sensitizing staff, supporting

parents, providing academic enrichment, coordinating with other agencies, handling logistical issues like attendance, and providing basic supplies. I next re-examine those strategies specific to only homeless students and incorporate the online survey data to allow me to draw some conclusions about the programs and practices common to schools along the distribution.

Table 24: Strategies for Supporting Homeless Students

Strategy	Number of respondents (of 14 total)
Creating a caring environment	11
Sensitizing staff	10
Supporting parents	10
Providing academic enrichment	8
Coordinating with other agencies	6
Handling logistics (e.g., attendance)	5
Providing basic supplies	5

Establishing a safe and caring environment. Not surprisingly, given the literature, the most popular strategy mentioned by principals (n = 5 of 6), teachers (n = 4 of 5), and guidance counselors (n = 2 of 2) was the creation of a safe and caring environment in the school and in the classroom. Only one principal spoke of this in terms of physical plant, stating "our school is very clean – we spend time picking the colors and having the furniture and everything set up" to give the school a "home-like quality" attractive to families without stable housing. Most principals described personnel actions that promoted this caring atmosphere. They talked of

making guidance counselors available to offer counseling and "resiliency groups" or just "to sit and talk," and teachers who "show they care for the kids," and "greet students with a high-five or a handshake or a hug." Only one principal stated that she did not have any idea how teachers met the needs of homeless students in the classroom. One guidance counselor offered that she takes great care to protect homeless students' housing status from other students, explaining that maintaining students' privacy is very important to helping them feel secure.

Two schools' principals spoke about school-wide initiatives that they believe benefit homeless students in particular. The principal of one school described in detail an advisory program he started two years ago, where teachers have been trained to provide a weekly "emotional support type program" to students, in lieu of the parental support that the principal feels is lacking in the lives of most of his students. Another principal described her entire school's behavior system: "we are now a Safe and Supportive School, which is a part of the initiative called Restorative Practices." When I visited this school to conduct the teacher focus group, evidence of the Restorative Practices was visible in the hallways. I saw signs posted encouraging students to "be resilient – find a teacher, coach, or other adult in the school you trust to talk to," and giving them examples of how to deal with emotions, such as "it hurts my ears when everyone is yelling," and "I would like you to stop touching my desk." I discovered that this system is supported by the International Institute for Restorative Practices (IIRP), which provides staff development on such techniques as positive behavior management and helping students identify and deal with emotions, and purports to be effective in high-poverty urban schools with discipline and violence problems (IIRP, 2009). The principal and teachers at this school were very pleased with the program, which teaches them "how [to] respond to students who have a lot of baggage coming in with them." It is interesting to note, since literature

indicates that boys and girls express their emotional reactions to homelessness in different ways, that principals in both schools with school-wide initiatives run emotional interventions that separate students by gender.

Teachers talked about how they create this "very nurturing atmosphere" in their classrooms by "being in tune to situations" and using positive behavior reinforcements. Teachers seemed almost contradictory when describing specific strategies, however. On one hand, they underscored the importance of making sure to "treat all kids as equals," holding them to the same standards and remembering that a homeless student is "a student just like the other students." But on the other, they also spoke of the need to "understand that [a homeless student may] have certain problems" and try to offer extra help and support to students who appear to need it. "The parts that we can work on, we do. You have to do what you have to do." However, the teachers did not seem to find these approaches contradictory. They saw the two working together: supporting students according to their specific needs in order to help them reach the same academic standards as students without extenuating circumstances. One teacher opined that the ability to maintain such a caring classroom is "natural…we all just kind of realize that this is what we have to do." One principal, at a low-performing school, echoed this sentiment. "Teachers show they care for the kids…and of course you can't teach that. That has to be something you naturally have."

Sensitizing school staff. Also following the literature, responses about creating a caring environment in school meshed with those about sensitizing staff to students' needs (n = 10). Again, this strategy most often extended beyond homeless students, giving a more general sense that teachers should understand the common challenges of children in high-poverty schools, including but not limited to housing instability. "I don't know that we have special professional

development about teaching homeless children, but within our professional development that is sometimes a subset of children we consider." One principal and one guidance counselor made special note of the importance of sensitizing all school personnel, including school security guards and front office staff. The guidance counselor had chosen to attend a online seminar on homeless children even though she had not been mandated to have any training regarding students without housing.

One principal stated that his teachers "not only have to provide instructional support but also be strong with the emotional and social support of the child," though he did not offer specific strategies he uses to prepare teachers for this. He stated that when he interviews teachers for positions, he stresses that his school has a 99 percent poverty rate and teachers should expect to deal with "children who are being bounced around [and who] don't have a stable [living] situation." He tells them, "our school is a very challenging school…you have to be able to respond in a very professional manner." Another principal offered that he tries "supporting my teachers on helping students become resilient," and another talked about "building capacity among teachers to have compassion," but neither elaborated on what forms those things took. One guidance counselor offered reasoning for lumping homeless and other children together: "it's just par for the course here. They are not outliers if they have that situation."

Supporting parents. The next most popular strategy, mentioned by ten respondents, was supporting parents. This support took many forms, from offering afterschool programming to give parents more time to take care of personal appointments to offering classes for parents within the school. Interviewees from three of the seven schools noted parent education offerings within their own walls. One principal stated, "we have parenting classes throughout the day and

in the evening…cooking classes, classes on nutrition, just things that will more or less help the family." Another talked of sharing school building space with community organizations that provide parenting and job-skills training for parents. One principal mentioned what she called a "family room" run by the school's parent coordinators ("parent coordinator" is a school-level paid position in this city), where "there's a lot of work on parenting skills, not from an expert but a lot of the parents share their strategies with each other, and the parent coordinators are very strong parents themselves." It is important to remember here that these strategies were offered to support all parents, not just those in homeless situations.

Other strategies of supporting parents were more hands-on: calling parents weekly to inquire about absences at one high-performing school, trying to help parents make alternate transportation arrangements at one school. "If a child is coming to school late because people aren't available or a student is oversleeping…we can look up a family in an adjacent building or in the same building…to see if they can walk that child to school too." One guidance counselor even outlined a strategy where multiple staff members place phone calls to one chronically absent student's home every morning to make sure she wakes up for school, "sort of as a snooze alarm, if you will." Others outlined strategies of communicating with parents, from using an "agenda system" for students to write down homework assignments and for parents and teachers to write notes to each other to creating specific systems of signing students in and out to let parents know they made it to school.

For their part, teachers explained that they support parents by trying to be understanding and non-judgmental: "sometimes parents are embarrassed by the fact that they are going through the shelter system and the fact that they can't provide a stable home for their child." These teachers also offered the insight that new teachers do not often know the signs and so do not

know which students are homeless. They offered the advice that such teachers should "really get to know the families and that way they're comfortable with you and…more likely to put extra effort forward to work with you" to support children's academic success. The parent coordinator explained that she supports parents by translating homework assignments into Spanish so they can help their children with homework, and she offers six parent workshops every year to show parents how to help with homework. Again, though, this was for all parents, not just homeless ones.

Academic enrichment. Four principals, three teachers, and the parent coordinator talked about supporting homeless and other at-risk students with enrichment, both during and in addition to the regular school day. Interestingly, both male principals in the study spoke at length about the athletic programs they offered to students – "lots and lots of physical activities" – while the five female principals talked about academic intervention services. In both cases, however, these programs were offered to any struggling or at-risk student, not specifically homeless children. After-school tutoring, weekend academies, special "teams" to identify students in need of targeted academic interventions, and supplemental support services were all mentioned as helping homeless students catch up in academics. These services, like the academic challenges facing homeless students detailed in a previous section, were spoken of in only very vague terms.

Coordinating with other agencies. Four teachers and two guidance counselors talked about the importance of coordinating with other agencies. One principal, mentioned previously, talked about sharing space in her school building with community-based organizations that provide "job training, social services [that] help us stabilize the families, and housing." The same principal told of partnerships with agencies that bring volunteers into classrooms, but these,

again, help all students, not just those experiencing homelessness. One guidance counselor talked about coordinating with caseworkers from ACS (the city child welfare agency), but spoke badly of the educational liaisons at the local shelter, calling them "basically useless." Two principals made positive mention of shelter liaisons, however. One said, "when we have a problem, we get in contact with the educational liaison," though she could not offer any ideas about exactly what those liaisons did. The other noted that she communicates with the shelter at least twice a month and that they provide "a lot of support" in the way of family counseling and academic programs for children. One principal also described a pilot program coordinating with outside service providers to establish a health clinic on-site. "The way I foresee it is like having a one-stop shop where you can have, like, your doctor and your psychiatrist and your psychologist in my building."

Coordinating services within the school and district. Two principals, one teacher, and two guidance counselors spoke of the importance of coordinating services within the school and the district. The districts in this city are broken down into administrative zones, and one principal spoke very highly of the support he had received from the leadership of his zone as well as the city's education department overall. He specifically mentioned the director of youth services in his zone, as did one guidance counselor in another zone. She noted a positive relationship with the youth services director in her zone as helping the schools coordinate support services for homeless students. She also stated that this person was a former principal of her school, which made for good relationships and extra attention.

Teachers and one guidance counselor were quick to note that they themselves needed to feel supported in order to support homeless children. They spoke of close-knit staffs that "look out for each other" and try to help coordinate to meet students' needs. "We all work together"

was a common refrain and seemed to help staff feel they could combine resources to support homeless and other struggling students. One guidance counselor explained that she could count on teachers to come to her for ideas on how to help students, and that the parent coordinator, attendance aide, and character education teachers all also played a large role in helping her provide emotional and logistical support to students.

Logistics. Three principals and both guidance counselors talked about needing to help students get to school and get there on time. The strategies they offered have already been noted in previous sections – calling parents to inquire about absences every week, calling students' homes in the morning to wake them up, and arranging to have neighbors walk children to school. One guidance counselor also mentioned "arranging transportation" for students who suddenly find themselves in shelters themselves outside the district, and the other guidance counselor stated that she had used personal funds to purchase public transportation passes for students in shelters. She noted that she had heard that there were McKinney-Vento funds for such things, but that "I don't know anything about that, that's the principal."

Two principals, two teachers, and one guidance counselor also noted that the staff in their schools go to special lengths to meet students' with basic needs. They mentioned free breakfast programs and afterschool programs where students could get dinner and snacks. Students in one school also receive vouchers for school uniforms. School personnel contact local community groups for donations or use their own funds to purchase school supplies – notebooks, clothing, backpacks – for students who need them.

Specific strategies for homeless students. Because so many of the responses to my questions about how schools and personnel support homeless students blurred quickly into

discussions of supporting struggling and high-need students generally, I have selected those strategies specific to homeless students for special attention here.

Sensitizing staff. One guidance counselor related that she had chosen to participate in an online seminar aimed at school personnel working with homeless students. She told me that she had learned a little bit about the McKinney-Vento law – specifically, that homeless students can stay in the school even if they move to shelters outside the zone, and that homeless students are allowed to register without the usually-required documentation – and had conveyed this information to the school secretary who handles enrollment of new students. She also encouraged the secretary to attend another similar seminar. She could not recount anything else she had learned, however, and was disappointed that the session was "wasn't inclusive and wasn't specific to [our city]…I needed more city-specific information." The other guidance counselor noted that she had attended professional development about homeless students in years past, but since the principal had designated the attendance aide as the homeless liaison at the school, the aide now attended the workshops.

Supporting parents. Although the classes are available to all parents, the three principals who spoke of offering education for parents within the school noted the importance of those classes for homeless parents in particular. One principal stated "it's [open to] any parent but we try to gear it toward those in the shelter." She also noted the importance of being upfront and assertive when giving parents options, "to build their confidence as parents. Because once that goes, then you can see the results in the students." Though lack of parenting confidence is certainly not the exclusive purview of homeless parents, previous research, as outlined in Chapter II, has noted the negative effects of temporary housing on parents' feelings about their efficacy.

Another strategy that came from teachers, one guidance counselor, and one principal had to do with protecting the privacy of parents (and students) in homeless situations, taking care not to draw others' attention to them. "Sometimes parents are embarrassed by the fact that they are going through the shelter system and the fact that they can't provide a stable home for their child." Teachers told stories of co-workers who purchase clothing and supplies for homeless families in secret, in order to allow children to participate in school functions like field trips and graduation ceremonies. "We won't let anyone stay behind because they can't afford to go."

Identifying students. Another set of strategies my interviewees offered specific to homeless students is simply figuring out who they are. One guidance counselor makes note of students she sees outside the temporary housing units she drives by on her way to work, and also tries to identify those children who arrive on "the shelter bus" early in the morning in order to target those students for attention. Teachers noted the importance of developing strong, trusting relationships with parents in order to be made privy to this information, particularly if the transition to temporary housing happens during the school year. Two principals also noted that they find out who is homeless by both looking at the codes in the attendance system and by talking to parents. Several respondents talked about open communication among staff members allowing everyone to share this sort of information about families so students can be supported.

The issue of helping families displaced by fires came up more than once in my interviews. Two teachers and one guidance counselor specifically mentioned that when there has been a fire nearby, school staff go to great lengths to see which of their students might have been displaced by it, seeming to imply that this is not an unusual occurrence. Since nearly all housing in this city takes the form of multi-family dwellings (apartment buildings), I consulted federal statistics on fires to see if fires are, indeed, more common in those types of structures. Although

the United States Fire Administration (USFA) data indicates that multifamily structures made up only 34 percent of all residential fires in 2009, only 22 percent of total housing units are multi-family (United States Energy Information Administration, 2011), indicating that fires are slightly more common there than in single-family homes (USFA, 2011). Likewise, the city's fire department statistics show that over half of structural fires in the city happen in Districts A and B, though less than half of the city's residents reside there, indicating that fires are more common in those districts than elsewhere in the city.

Advocacy. Although only one principal mentioned it directly, the strategy of being an advocate for homeless students appears in the literature as well. This principal told me that of her approximately 400 students, 200 had come in since the school year started, and an almost equal number had left. With such a high rate of transience, many homeless students (21 percent, the highest of any school in my study), and what she called "very, very poor" attendance (also the worst of the study schools), she related to me that she "made a big stink" with the superintendent of her zone that resulted in her school receiving support services from the district and the nearby shelter. "I was like, something has to be done with the kids that are in the shelters…some kind of support. And within a week, they were in my building! That's how I got the in-house family assistants, the home assistant, and the in-house family counselor." These strategies also blend a bit with the category of coordinating services within the district.

Coordinating with outside agencies. One principal stood out when it came to coordinating services with agencies specifically targeting the homeless students in the school. She described a partnership with the district's city councilwoman, a local developer, and Habitat for Humanity that brought 200 new apartments "right within our community…our school is the feeder for those. Some of our current families received apartments. I volunteered for the Habitat

for Humanity build day so that they would provide us with applications for our families." She went on to say, "I know we've helped to get parents into permanent homes, which is what's important. Who cares about schools when we don't know where we're going to sleep today?"

Survey Data

Eight principals participated in the online survey. Appendix F details the results of the survey; unfortunately, I am not able to provide specific school information because the surveys were completely anonymous. Of the eight, six had been principal fewer than seven years, with one in his/her first year. One principal had over ten years of experience. Six of eight schools reported ten or fewer homeless students, with the other two having more than 20. Most reported that their homeless students live in nearby temporary housing. The challenges these principals reported mimicked those of the interviewees – absences and lateness were the primary issues (*n* = 5 of 8) with transportation, parental involvement, and special education needs each mentioned once.

In terms of strategies, many responses were not specific to homeless students, with two respondents skipping the question and one simply noting that the strategies used were the same as those for struggling and highly-mobile students: mostly academic interventions and enrichment. The other five principals noted that they give students basic supplies and provide emotional and logistical support through parent coordinators and guidance counselors. One specifically noted "financial support" but did not elaborate on the source or the exact form of the support.

In response to the question about how teachers adjust their instruction to meet homeless students' needs, "individualize instruction," "bring supplies," and "refer students to other

supports in the school" were the most popular (in each case, *n* = 6 of 32 responses; respondents were permitted to mark more than one answer). Principals also reported that teachers provide emotional support and before/after school academic enrichment (*n* = 4 of 32 responses in each case). Three respondents said that teachers refer students to outside agencies, one stated that they teach more slowly, and one wrote in "try to involve parent." Two principals selected "teachers do not adjust their teaching for homeless students."

All eight respondents noted that guidance counselors work with homeless students, six selected the parent coordinator, five said they work with homeless students directly, and four have assistant principals work with homeless students (again, respondents could select more than one answer). Interestingly, no one selected "homeless liaison." One wrote in "academic intervention specialist." As for preparing staff for the challenges of teaching homeless students, the most popular responses were school-led professional development (*n* = 3), team meetings (*n* = 3), and professional learning communities (*n* = 2). One wrote in "conversations with school GC and SW." Three principals stated that staff are not prepared specifically to work with students who are homeless.

Overall, the survey responses did not differ noticeably from the interview responses, indicating that schools in the middle of the distribution do not employ different (or fewer) strategies than those I interviewed. As with the interviews, McKinney-Vento played no role in survey responses (only one interviewee mentioned the law, with only vague ideas about what it meant). One noteworthy difference between surveys and interviews is that although there was an option to write in a challenge, no one added "identification," though it was a prominent theme in the interviews. It is possible, though, that in talking through problems, interviewees were led to

realizing the problems they have figuring out who is homeless, and that given the same chance, survey respondents might have done the same.

Limitations of the Study

Although I believe it is an important step toward identifying the practices successful schools use to support homeless students' learning, this study suffers some limitations worthy of note.

Identification. As the literature review demonstrates, schools often have difficulty identifying students who are experiencing homelessness. Parents may be reluctant to inform the school for fear of stigmatization or because they are unaware of their legal rights to keep students in their home school even if they are in shelters outside of its zone. And because homelessness is a dynamic condition, it is possible that parents do not report housing status changes to the school because they happen frequently and the duration of the shelter stay might be quite short. Likewise, homeless children may not attend school at all. Although this problem is believed to have improved in recent decades, it likely still persists to some extent. For example, Harpaz-Rotem and team (2006) found that maternal homelessness was correlated with lack of school enrollment. For this reason, it is possible that the students identified as homeless in this data set are those who experienced homelessness for longer periods of time – long enough for schools to notice or for parents to have had the time and inclination to inform schools of their housing status – and also, possibly, that these are homeless students with the greatest need. If the students identified here are those most in need of support services, this would tend to bias coefficients downward, making the effect of homelessness seem greater than it actually is. However, it is also possible that homeless children whose parents are the best informed and most

empowered are likely to be identified in the dataset as homeless, and this might bias coefficients upward, underestimating the effect of homelessness. Unfortunately, with the data here, it is impossible to determine whether these biases are present. Most administrative data suffers this same limitation.

Schools may also be unaware of the different types of housing status encompassed by the McKinney-Vento definition. There is a real question about students who are doubled-up with friends or family: are their parents likely to share this information with schools, and are schools likely to note this in their records as an episode of homelessness? These are important issues with which future studies will hopefully be able to deal. However, because most current studies of large administrative datasets are beset with these same issues, I feel that my study represents a reasonable attempt to study this population given existing constraints.

Construction of low-income variable. Another important limitation is the construction of the low-income variable. An individual student is coded as a free lunch recipient in the dataset in one of two ways: 1) because the student individually qualifies for the program, or 2) because the student attends a school where over 75 percent of students meet income requirements and, therefore, under provision 2 of the National School Lunch Program, the entire school receives free lunch (USDA, 2010) – often colloquially referred to as a "universal free lunch school." This construction of the free lunch variable obfuscates the effects of poverty. Because students who do not meet income requirements for free lunch participation may be eligible by virtue of attending a universal free lunch school, as many as 25 percent of students in any universal free lunch school may not actually qualify for the program. And because we know that income and test scores are positively correlated, including their scores in low income group likely artificially inflates that group's scores. However, it is also possible (and likely) that many

more than 75 percent of students in many universal free lunch schools would qualify for free lunch based on their parents' income. An analysis of school-level data published by the district indicates that 30 percent of schools qualifying for universal free lunch have poverty rates over 89 percent. Unfortunately, the city-level data does not allow me to determine which of the schools that qualify for the universal free lunch program actually do participate; that is, a school can have more than 75 percent of its students living in poverty and still choose not to participate – perhaps owing to fear of stigma – though I believe this is rare.

Table 26 shows that the size of the low-income group varies depending on how I treat universal free lunch school students. If universal free lunch students are included, 72 percent of third through fifth graders citywide are considered low-income; if they are excluded, only 35 percent are included in the group.

Table 25: Free Lunch Program Participants

	Individually qualify to receive free lunch	Attend universal free lunch school	Total
Citywide	34.96%	37.33%	72.29%
Districts A and B	34.82%	44.7%	79.52%

Since there is no truly satisfactory way to solve this problem with the data provided, I ran initial regressions using each construction of the poverty comparison group to see how the coefficients on homelessness varied depending on the control used. These regressions demonstrated that including universal free lunch students in the poverty group decreased the effect of homelessness

more than leaving them out. I also found supporting documentation online which confirmed that it is city policy to construct free lunch participation by combining the two groups. Therefore, I chose to include students at universal free lunch schools in my low-income variable so as to avoid, to the greatest extent possible, inflating the effect of homelessness. This approach proved to be the best strategy after checks for robustness and given the constraints of the data. This classified 80 percent of students in Districts A and B as low-income.

Omitted variable bias. There is a substantial possibility that some important variable or variables have been omitted from my analysis. Though these models account for some common covariates of homelessness (income, attendance, and special education status), the possibility exists that there are other covariates that should be included and have been left out. This is problematic because it may cause other variables in the equation to appear to have more of an effect than they actually do. For example, if some temporary housing shelters provide academic enrichment services to students, and these students are likely to attend the same school, they might have higher scores that would appear to be caused by attending the school. The important treatment here would be happening at the shelter, so examining the school's programs and procedures would not be useful. Likewise, income might affect family size, and larger families might have trouble securing housing and leave parents less time to assist children with homework, making both homelessness and low test scores more likely. Excluding family size from the model would cause me to miss this important factor and make income appear more influential than it is.

Missing data. One of the problems with using administrative data collected by a large district is missing data. Not all records in the data provided were complete, and it is difficult to determine patterns that might account for the missing data. Citywide, 25 percent of students who

were missing a math scale score were homeless; stated another way, 8 percent of homeless students were missing a math test score, compared with only 1.7 percent of housed students. For the reading/language arts test, 6.3 percent of homeless students had missing scores, while 3.5 percent of housed students were missing scores. Only three percent homeless students were missing both math and reading scores. Although this amount of missing data is problematic, imputation is not an option because I do not believe the data to be missing at random (Sinharay, Stern, & Russell, 2001).

Size of homeless population. Many of the schools identified for further study had very small numbers of identified homeless students in attendance. I limited my analysis to schools with at least five homeless students in grades three, four, and five in order to exclude possible outliers. However, the number of homeless children in a particular school may influence how successful that school can be in meeting their needs. It is possible that a school overwhelmed with a large population from a neighboring shelter may be less able to serve its homeless students than one with few homeless students. Alternatively, a large population of students might make identification and service delivery more efficient.

Low response rate and selection bias. For my qualitative analysis, the biggest challenge was recruiting principals willing to take part in the study. Unable to offer any compensation, except at the school level, I had to rely on long-distance persistence, repeated letters, emails, and calls, which I noted above resulted in only an eight percent response rate. This led to a very small sample size for the qualitative portion of the study. This small sample size makes me concerned about selection bias: it is likely that principals who agreed to participate in my study share some common characteristics that are likely to impact student scores as well. I have no way of knowing, particularly with such a small sample, but it is

possible that there are many principals whose schools are providing cutting-edge services to homeless students who were too busy to respond to my recruitment efforts, and many whose schools are providing no services at all who did not respond because they had nothing to say. Attempts to increase sample size would lessen this problem, but there is no way to eliminate it without somehow requiring all principals to participate.

Classification scheme. Another limitation is the difficulty distinguishing whether schools are statistically significantly and/or meaningfully different in how their homeless students achieve. Even in District A, where test score analysis revealed significant differences between schools, the effect sizes were very small. It is difficult to say for sure which (if any) schools do a better job educating homeless students.

CHAPTER V

CONCLUSIONS AND IMPLICATIONS

My dissertation examines the predictive nature of housing status on student scores, how school factors predict homeless student achievement, and how school personnel say they support homeless student learning, in an attempt to advance our understanding of the topic of homeless student achievement. This chapter summarizes my findings, explains how they move the field forward, and talks about specific implications for policy, practice, and research.

Summary of Findings

In my student-level quantitative analysis, homelessness/high mobility was found to be an insignificant or very small predictor of math and language arts test scores for third through fifth graders. Race, special education status, and income were found to be stronger predictors of student achievement. The number of days a student was absent also appears to mediate the small homelessness effect, indicating that absences are one mechanism through which homelessness is related to lower test scores, but housing status in and of itself does not seem to be a reliable predictor of students' scores in this city.[11] And although my qualitative findings are weakened by the low sample size, those results support my quantitative findings as well: most of the practitioners I interviewed do not treat homeless children differently than the other low-income students in their schools.

[11] The family shelter system in this particular city is very highly-evolved, often consisting of apartment-style living in buildings in better physical condition than those available on the private rental market or in city-owned housing. It is possible that the differences between housed low-income and homeless students might be greater in a city or region where temporary housing quality is not as good.

At the school level, none of the hypothesized factors – percentage of homeless/highly mobile students in the school, the school's poverty rate, its overall enrollment, or the average test score of all students – was found to be a significant predictor of homeless students' test scores in math or language arts. Attempts to distinguish schools by how well their homeless students perform in math bore no fruit, uncovering minute differences or no differences at all between homeless students' scores in the schools in my sample.

Links to Existing Literature

My study adds to the body of work on homelessness by reifying recent findings in other cities. Early work on the academic achievement of homeless students unearthed significant differences between children without housing and middle class children. Homeless students were found to score lower on IQ tests (e.g., Whitman, Stretch, & Accardo, 1987) and school assessments (e.g., Rafferty & Rollins, 1989). These early studies did not, however, compare homeless children to housed low-income children, possibly identifying only the effects of extreme poverty, rather than housing status. More recent studies have added housed low-income control groups, and results from this latter type of study have been inconclusive. Though some (e.g., Bassuk and Rosenberg, 1990; Shinn et al., 2008) find that homeless students have lower academic achievement than their housed low-SES peers, others find no significant differences between housed and homeless low-income children (e.g., Zeisemer et al., 1994). Furthermore, Buckner, Bassuk, and Weinreb (2001) found that when there was a housing status effect, attendance was the mediating factor between homelessness and achievement in their sample.

My analysis of student-level test score data is consistent with the findings of these more recent studies, showing that homelessness is not a meaningful predictor of lower school scores,

particularly when income and race are controlled for, and that attendance mediates whatever small effect housing status does have. This is not surprising, given that "studies have generally not found significant differences between the [homeless and housed low-income children], except in health" (Ziesemer et al., 1994, p. 659; see also Molnar, et al., 1990; Rafferty & Shinn, 1991) and that much of the work of the last twenty years suggests that the line between the experiences of the two groups is blurry.

> Evidence is mounting that children who are or have been homeless have considerable school-related problems, even when barriers to educational access have been addressed. Further, there is little reason to believe that their problems are unique or largely the result of homelessness per se. Rather, homelessness appears to be a marker of very high cumulative educational risk levels likely to be shared by other children living in extreme poverty. (Masten et al., 1997, p. 43)

My findings, both quantitative and qualitative, support the idea that homelessness is not a unique identifier of children; rather, it is a marker of possible additional risk. "Homelessness is apparently not predictive of a particular narrow range of needs among children. Rather, homelessness indicates a potential risk to a child's ability to succeed in school and community environments – the risk is substantial for a majority of children" (Ziesemer et al., 1994, p 665).

In addition to my quantitative findings adding weight to the question of the independent effect of homelessness on test scores, I also unearthed qualitative interview data that is well-aligned with the literature on challenges and strategies used to support homeless students in school. My literature-based coding framework required only slight modifications; most responses fell exactly where I anticipated from the literature reviewed in Chapter II. That is, in trying to serve homeless students, schools experience logistical challenges, struggle to provide adequate academic and emotional support, find themselves wishing they could do more to support parents, and struggle with inadequate funding. The strategies school personnel offered mirrored the literature as well: creating a safe environment, sensitizing staff, offering academic

interventions and enrichment, supporting parents, and coordinating services. Though not exactly, responses followed the somewhat Maslow-like hierarchy I expected, as well: meeting students' physical and emotional needs seemed to take precedence over addressing academic concerns. My work reinforces the existing literature that suggests schools are concerned with meeting homeless students' physical needs, coordinating services within the school and between the school and the district, and protecting students' emotional wellbeing.

Implications

Though the results of my qualitative analysis show that there are no sets of strategies unique to schools in which homeless children achieve higher test scores, services that these schools provide are nonetheless important. Without them, homeless students would no doubt suffer even greater academic disadvantage. My quantitative and qualitative findings point to future directions for policy, practice, and research.

Policy Directions

One important policy implication stemming from my findings supports the nascent idea that homeless children and highly-mobile children may be alike enough to be considered together for policy purposes. Appendix D makes clear how including highly-mobile students with homeless students in my analyses changed the results barely at all, indicating that these two groups may have very similar needs. This finding supports recent work by Obradovic and team (2009), suggesting that the two groups are more like each other than they are similar to middle-class or even stably-housed low-income students. More research is needed to confirm this finding, but programs and funding aimed at homeless and highly-mobile students together might

be more effective than those aimed only at homeless students or those for all low-income students. Indeed, the inclusion of homeless/highly mobile students as a reported subgroup in the No Child Left Behind legislation would highlight the important needs of this population. Bringing this type of national policy attention to the needs of this group would help spur interventions and efforts to improve their achievement.

Another direction for policy supported by my findings is the need for policies that foster coordination between schools and districts. Currently, the onus for supporting homeless students seems to fall squarely on the backs of individual school personnel, which is not tenable: school personnel are overwhelmed and not well-situated to create coordinated systems of service delivery. One viable idea that can be borrowed from the child mental health field is the idea of "wraparound" service provision model. In such a system, children are served by teams of service providers from different agencies, who meet regularly with children and their parents to devise treatment plans; this model has proven more effective for some subgroups (e.g., children with emotional and behavioral disorders) than the scattered, disconnected array of services found in many cities (Bruns, Rast, Peterson, Walker, and Bosworth, 2006). Policy support for the wraparound model would encourage shelters, health clinics, community mental health providers, and school personnel to sit down with children and their parents to identify needs and make comprehensive plans to meet them. This could be made possible with policy and funding support, but requires first a "common shared vision and integrated plan" (Bruns et al., 2006, p. 210) based on the understanding that homeless children have a variety of needs that cannot be met by any one agency alone.

The third important implication for policy to stem from my findings is the importance of addressing how existing policy does not seem to work as efficiently as planned. The framers of

the McKinney-Vento law intended for schools to have funding to support homeless students' needs, to follow clear protocols for enrolling students, and for ensuring they have both access to school and success within its walls. Unfortunately, the findings from my study indicate that most practitioners are unaware of this existing law or how it should influence the ways in which they support homeless students. Likewise, schools struggle with identifying which students are homeless, making service delivery difficult. New policies to enhance the effectiveness of the existing law would help ensure that schools are able to meet the needs of this population. Policies that reduce the disincentive for parents to report their homeless status (for fear of having children placed in foster care, e.g.) and the disincentives for schools to seek this information (requirement to provide services but without additional funding) would help the McKinney-Vento law function as it was intended.

Practice Recommendations

Although I cannot offer empirical evidence that the strategies identified in my interviews and surveys lead to higher test scores for homeless students, it is nonetheless possible that without these interventions, homeless students' test scores would be even lower. My study therefore suggests possible directions for practitioners in schools.

Awareness and sensitivity. Perhaps one of the most troubling findings of my study was the lack of mention, on the part of all but one interviewee, of the law related to homeless students. Indeed, many respondents lamented their inability to determine who is homeless, either because housing status is not known or because they do not know which situations qualify as homeless. Particularly because the law requires that schools take steps to try to identify students who are homeless, this lack of knowledge requires remedy. Accordingly, an important practice

recommendation to come from my findings is that efforts to educate practitioners about the legal rights of homeless students and the legal responsibilities schools have to them be increased. Awareness-raising campaigns need not be costly: the Department of Education could record and distribute video trainings via the internet at very low cost. And it is important that all school personnel be trained to look for signs that students might be homeless. As interviewees pointed out, in agreement with the literature, high levels of coordination within the school can lead to better service delivery for students

Expanding the definition of schooling. The results of my qualitative interviews and my quantitative analysis suggest a need to re-frame of the scope of what schooling entails. For homeless and housed low-SES students, schools are already providing services well beyond the delivery of classroom instruction. School breakfast and lunch programs are one example of the ways in which schools have already expanded to a place that cares for children's physical needs in addition to their academic ones. The respondents to my interviews suggested even more far-reaching ways schools support the neediest students. Teachers and guidance counselors provide basic supplies like clothing and notebooks and principals try to help parents find ways to get their children to school on time.

Likewise, the importance of communication between schools and other care providers was underscored by my findings, and this represents a greater extension of the scope of schooling. For example, even when personnel spoke highly of the support their students receive from the shelters where they stay, principals and guidance counselors were unable to tell me exactly what the shelters do. And other community services (health, mental health, recreational, e.g.) seemed not to be on practitioners' radar screens. A school-based system of care model could be used to help improve communication, information-sharing, and, ultimately, coordinated

and accessible service delivery between all these providers (Whitson, Connell, Bernard, & Kaufman, 2011).

School personnel should also view advocating for their students within the district and the larger community to be part of the business of schooling. This is one way to make sure students receive the services they need to help them succeed academically. Once school staff have taken it upon themselves to become aware of the challenges facing homeless students at school, they have great potential to makes the challenges known and agitate for interventions and services to help them. Practitioners at every level – school, zone, district, city, state – can press for more support from the next highest level of administration. They can also educate themselves about services available outside of the school and work not only to link students to services, but to reach out to those providers and coordinate service delivery.

Research Forecast

Given my dissertation findings and its limitations, I see two logical extensions of this work for future research: develop new methods that would assist in making results more generalizable, and shift focus to asking new questions.

New methods. In order to produce more generalizable results, future research needs to expand the qualitative aspect of this study to a much larger sample. Because recruitment proved to be much more difficult than originally anticipated, and because the interviews did not garner significantly more detailed information than the online survey, a wise next step would be to design a study where principals and teachers in a study district are offered the chance to respond to an online survey. This type of data collection is much less time-intensive for researchers and participants, which could also make time-pressed practitioners more willing to participate.

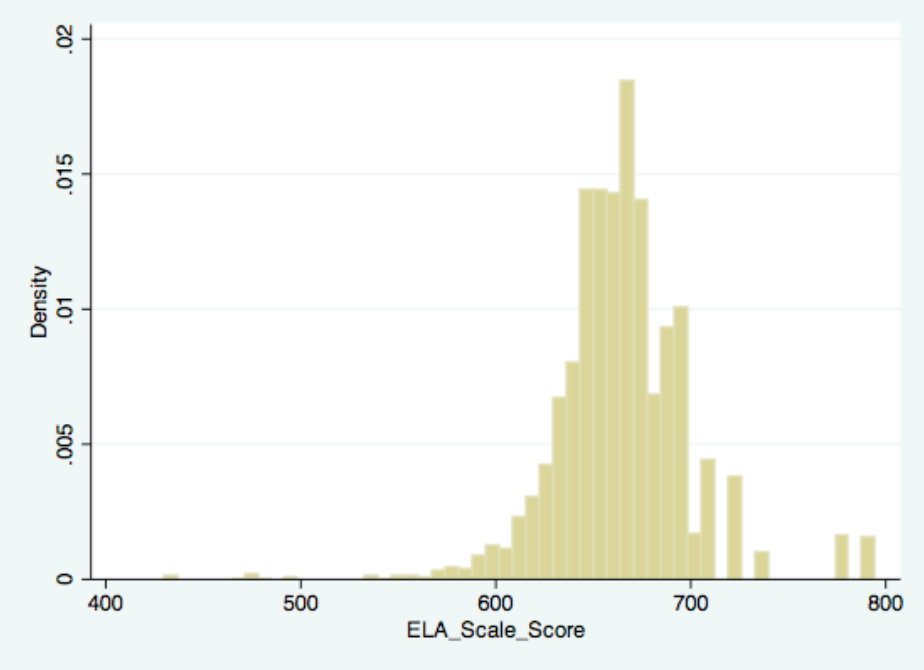
Likewise, much could be learned by replicating this type of study in a city or area without a sophisticated family shelter system, where differences between housed low-SES children and homeless children might be greater.

Once a greater sample size was established, more quantitative data might help determine a scheme for distinguishing top-performing schools from bottom- and middle-performing schools. The use of several years of quantitative data would allow for more sophisticated longitudinal analysis of the relationships between housing status and academic scores. Recent work by Obradovic and team (2009) provides a good model for using previous score levels to establish and compare predicted score trajectories for subgroups of students. This approach allows for comparison of homeless and housed students' expected growth from year to year. Combined with the school identification strategy I used, it would allow a more nuanced examination of the predicted effects of certain schools on student scores.

New questions. If new methodology like that described above were to conclude, as I did in this study, that there is no difference between how schools support homeless students and low-income students, this underscores the appropriateness of asking new questions. Because my study, like Buckner, Bassuk, and Weinreb's (2001) analysis, finds that increased absence is one mechanism through which housing status is related to test scores, the best next research step would look at how schools attempt to ameliorate this problem. One approach might use days absent as the outcome measure to identify schools where homeless students have significantly fewer absences than district average. By then using qualitative methods to investigate how these schools support attendance, studies of this type might uncover strategies best suited for helping homeless students get to school more often. And this new type of investigation could also expand the question beyond how schools support homeless students' attendance to how any and

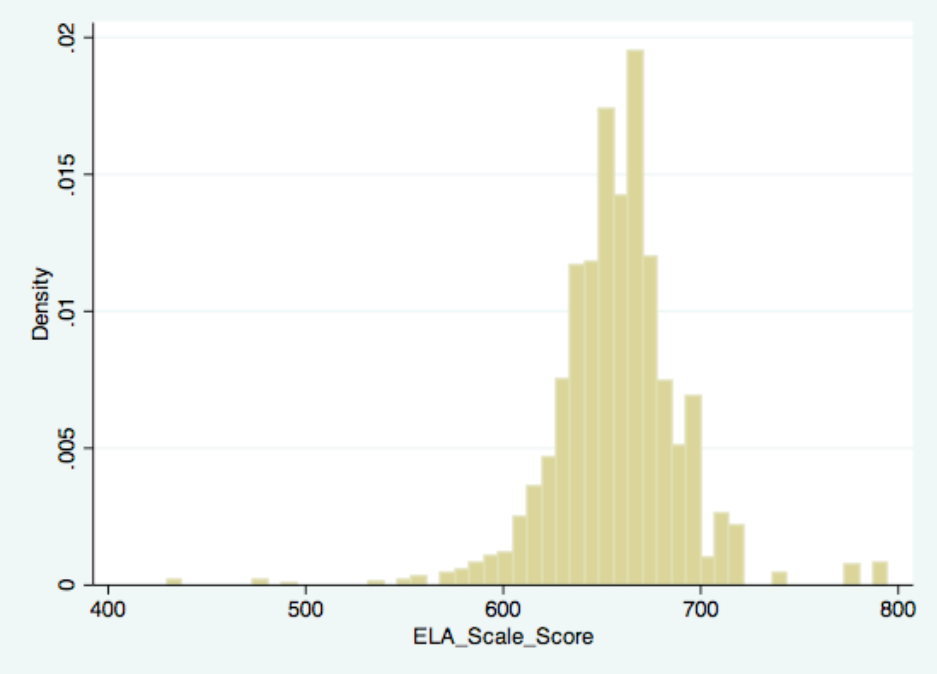
all service providers, particularly the shelters where many homeless students reside, promote attendance. This sort of investigation could also target other critical issues suspected to mediate the achievement of homeless children as well, such as mental health, in hopes of determining the best means of supporting these vulnerable students. Once established, the best practices for homeless students might also be tested for their applicability to highly-mobile or stably-housed low-income children. In much the same way that the Montessori method of education was developed for special needs children but turned out to be effective for a much larger group of learners, focusing on ameliorating the problems suffered by homeless students may well lead to solutions applicable for all low-income children.

APPENDIX A: TEST SCORE DISTRIBUTIONS



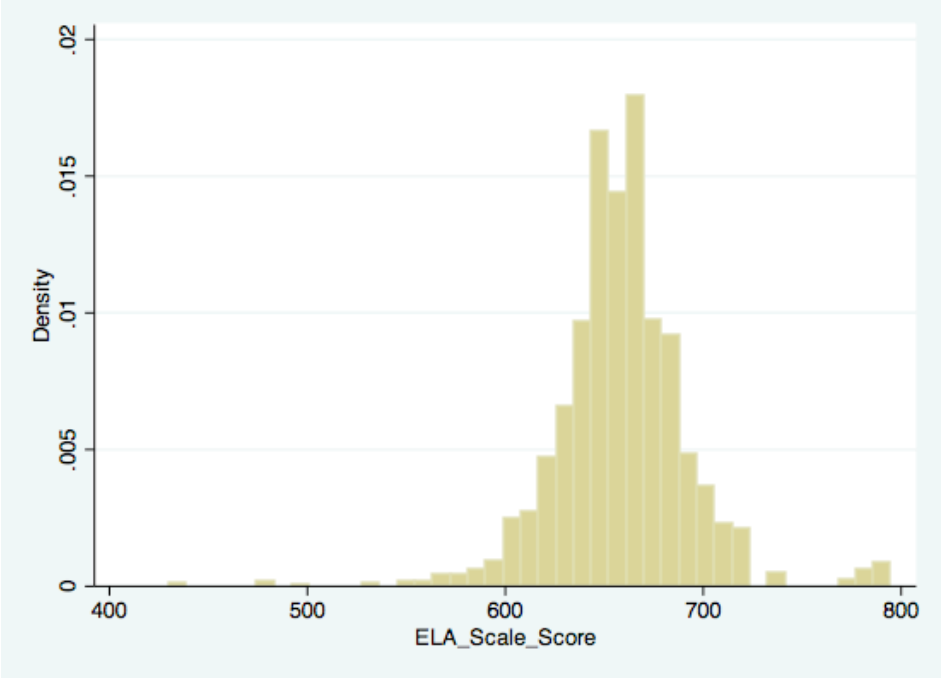
Mean: 665.06 SD: 34.62

Figure 1: Citywide Language Arts Scale Scores (Grades 3-5)



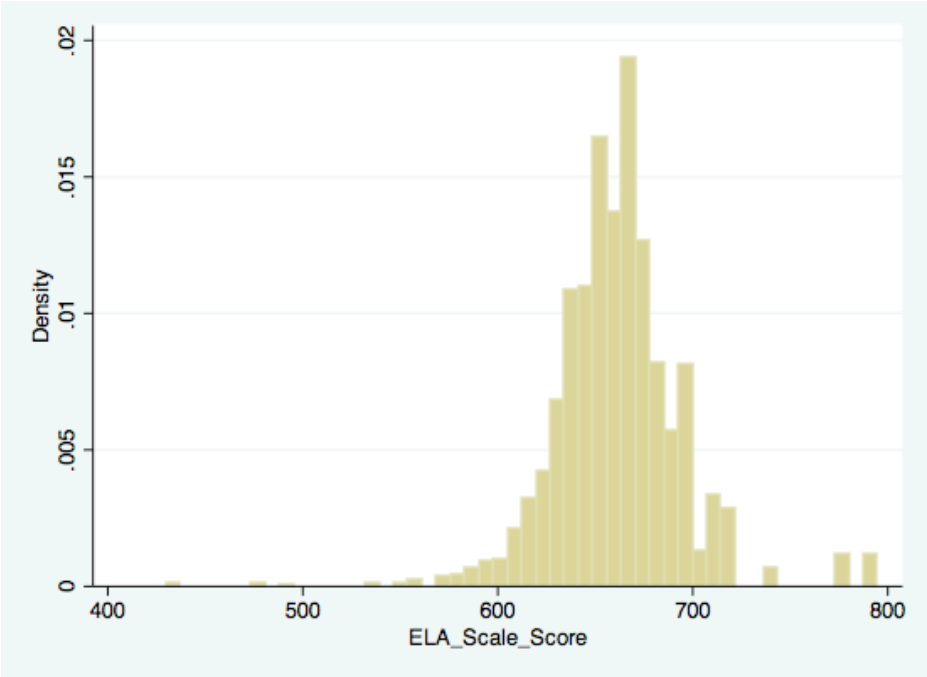
Mean: 658.31 SD: 32.31

Figure 2: Citywide Low-Income Language Arts Scale Scores (Grades 3-5)



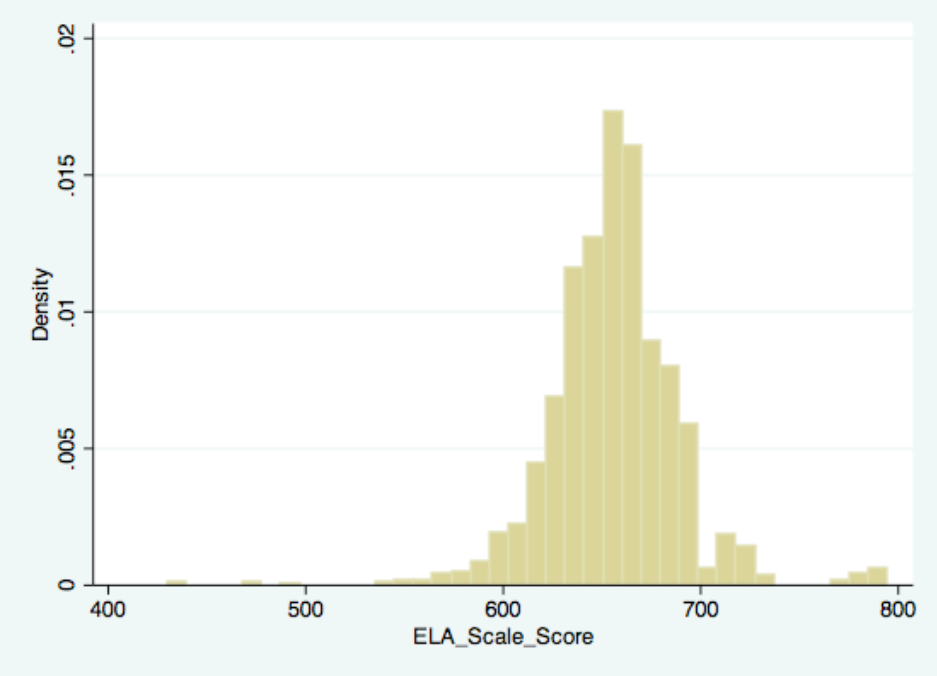
Mean: 659.03 SD: 34.25

Figure 3: Citywide Homeless Language Arts Scale Scores (Grades 3-5)



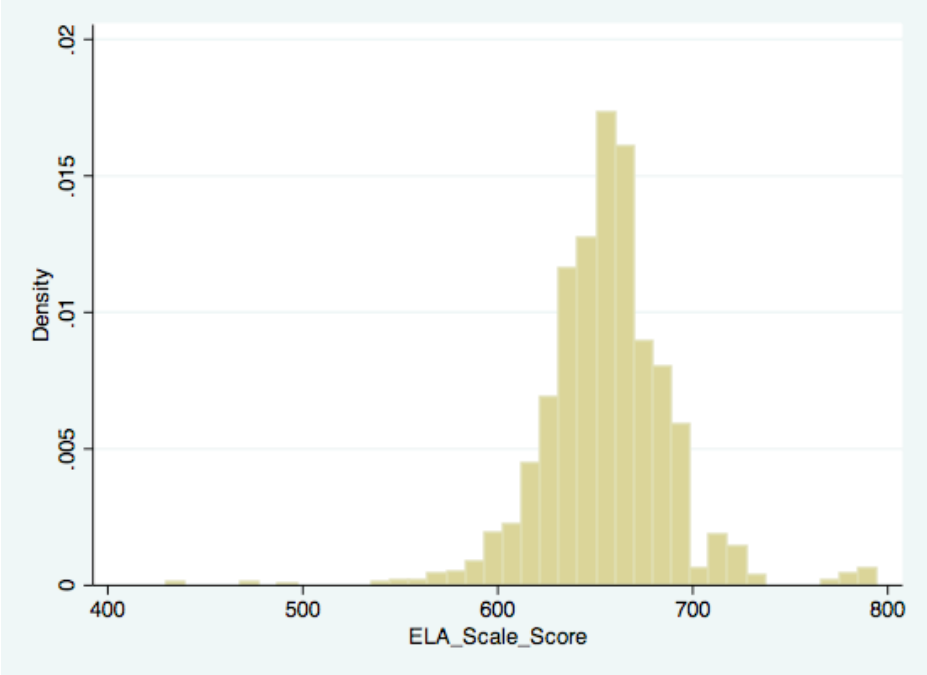
Mean: 661.83 SD: 33.33

Figure 4: Districts A and B Language Arts Scale Scores (Grades 3-5)



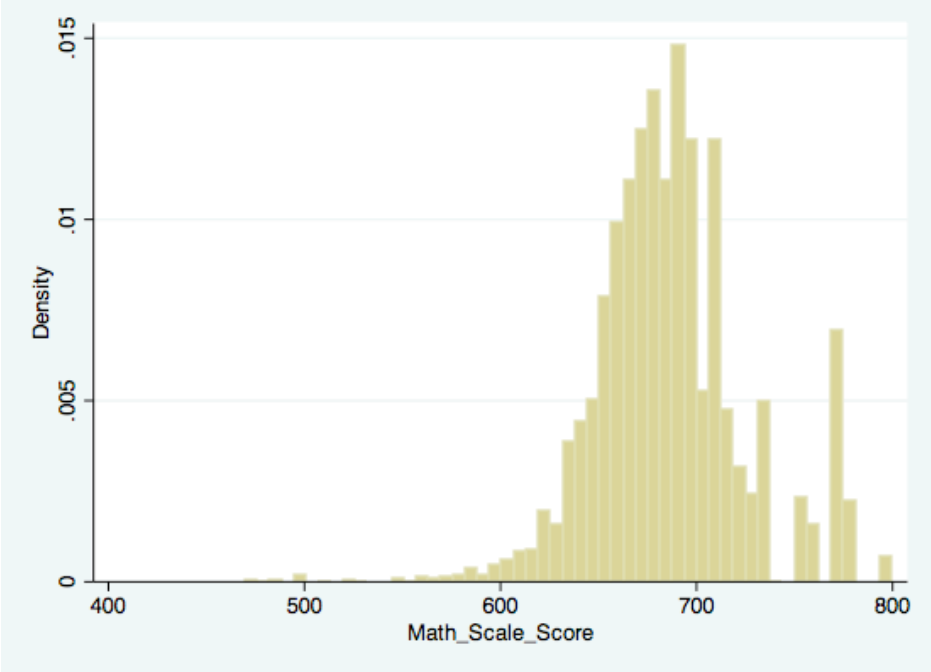
Mean: 657.01 SD: 31.45

Figure 5: Districts A and B Low-Income Language Arts Scale Scores (Grades 3-5)



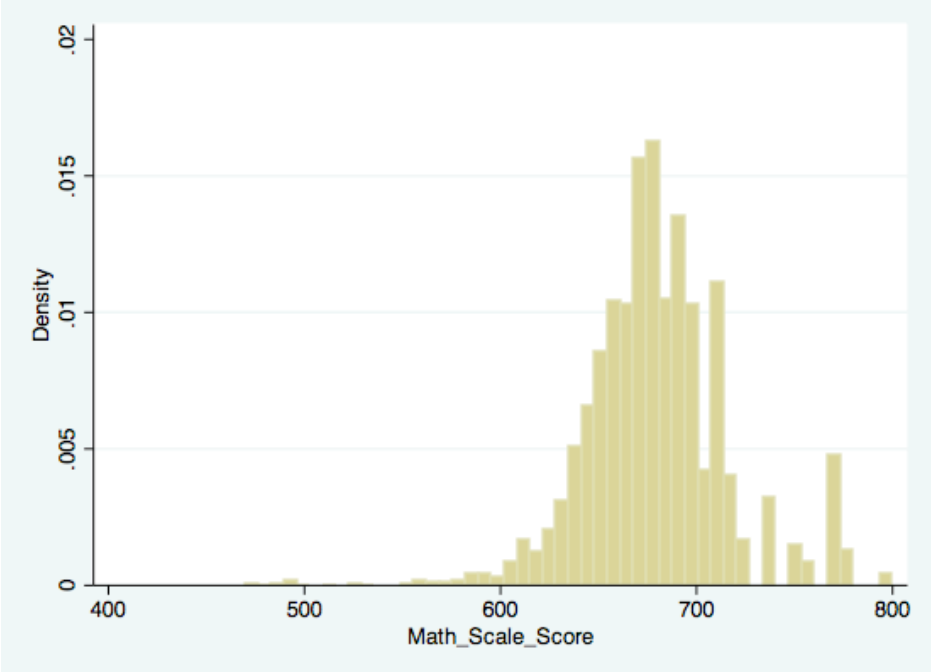
Mean: 656.66 SD: 32.93

Figure 6: Districts A and B Homeless Language Arts Scale Scores (Grades 3-5)

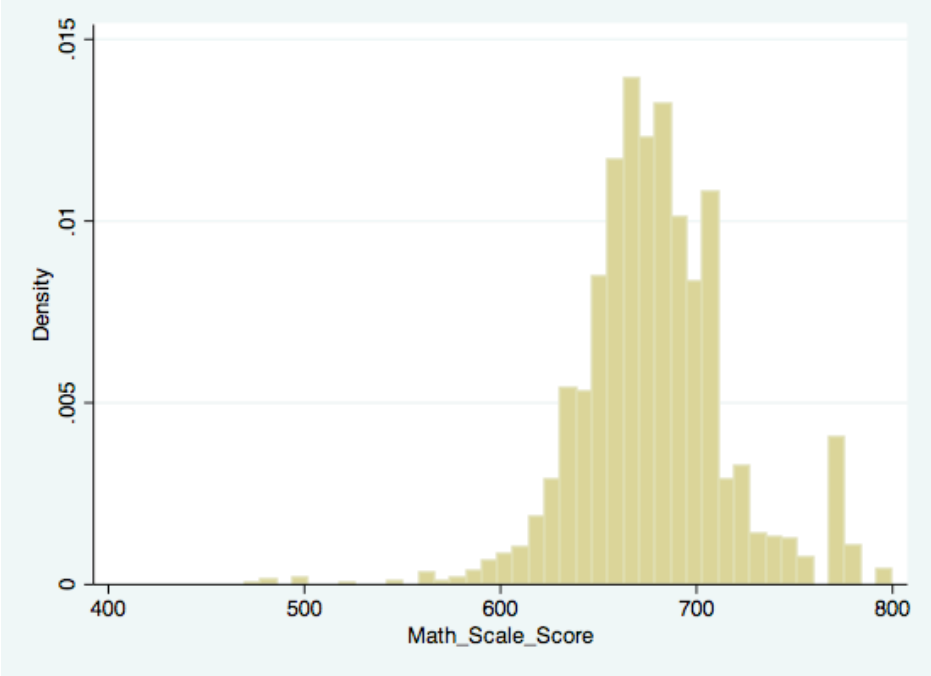


Mean: 687.01 SD: 38.07
Figure 7: Citywide Math Test Scale Scores (Grades 3-5)

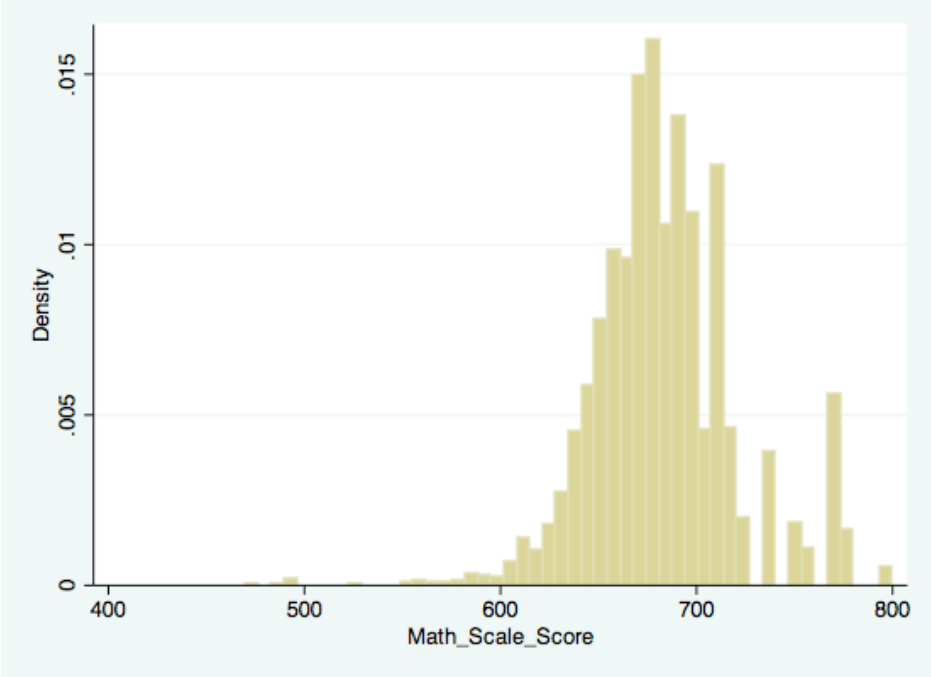
6.75



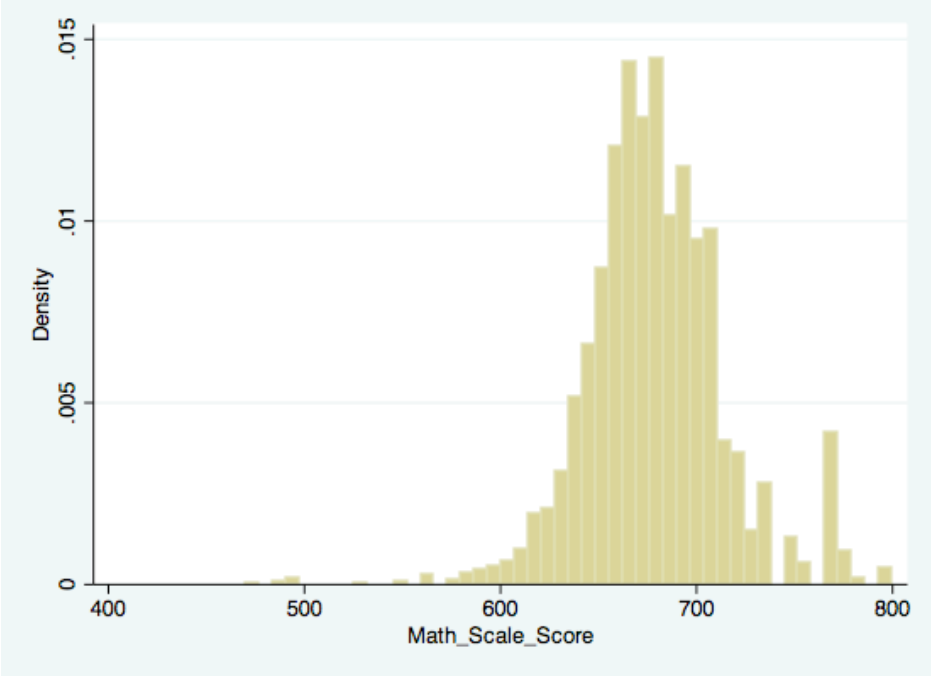
Mean: 680.25 SD: 36.46
Figure 8: Citywide Low-Income Math Test Scores (Grades 3-5)



Mean: 679.19 SD: 37.69
Figure 9: Citywide Homeless Math Test Scores (Grades 3-5)

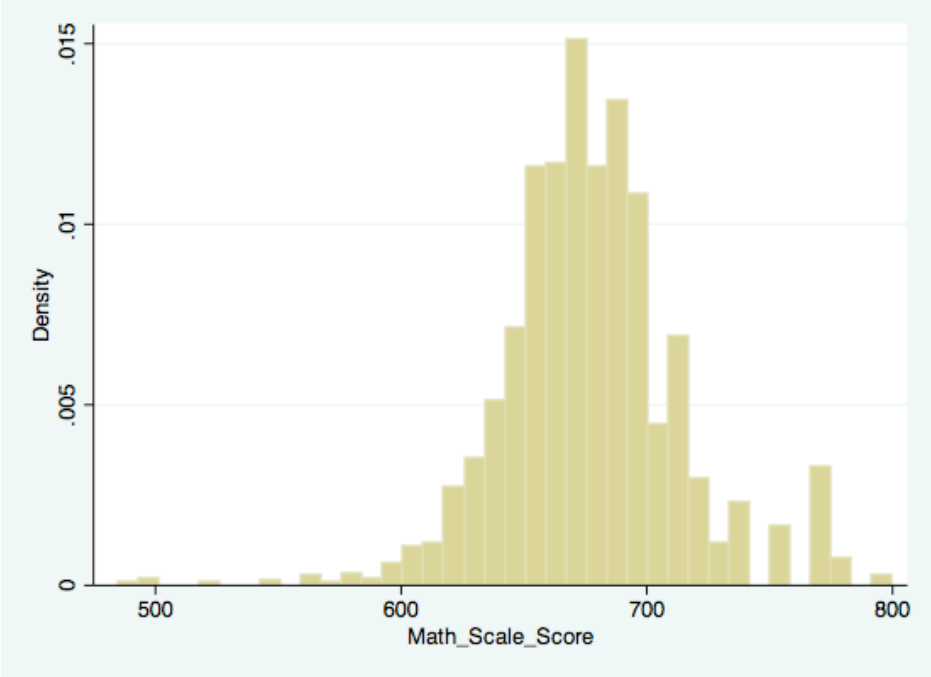


Mean: 683.69 SD: 36.93
Figure 10: Districts A and B Math Test Scale Scores (Grades 3-5)



Mean: 678.86 SD: 35.63

Figure 11: Districts A and B Low-Income Math Test Scale Scores (Grades 3-5)



Mean: 677.20 SD: 36.17

Figure 12: Districts A and B Homeless Math Test Scale Scores (Grades 3-5)

APPENDIX B: PRINCIPAL INTERVIEW PROTOCOL

Thank you for taking the time to talk with me. I realize you have a very busy schedule, so I'll keep my questions brief and limit our time to 30 minutes.

As my letter stated, I used to teach in this city. I had homeless students in my classes, and I know how I handled the challenges; now that I'm in my doctoral program, I've read a lot of research on homeless students and I'd like to get some firsthand information from principals.

Background Questions

1. How long have you been a principal?
2. How long have you been principal at this school?
3. How many homeless students does your school serve?
4. Has this number remained stable over time?
5. Do most of your homeless students live in a nearby shelter?
6. How do they get to school?

Challenges

1. What are the biggest challenges your school faces in educating homeless students?

School-level Strategies

2. How does your school support low-income students?
3. How does your school support highly-mobile students?
4. How does your school support homeless students?
    a. Are there people other than classroom teachers who interact with these students? If yes, what do they do?
    b. Do these students get supports outside of the school? If yes, which/how?
    c. In what ways are staff prepared for the challenges of teaching these students?

Classroom-level Strategies

1. How do teachers support homeless and highly-mobile students in the classroom?

General

2. Is there anything else you think I should know?

Concluding

3. How many students are enrolled in the school this year?
4. What did you teach before you became a principal?

Thank you so much for taking the time to talk to me – I can only imagine how busy your days are, and I really appreciate it.

APPENDIX C: TEACHER/GUIDANCE COUNSELOR INTERVIEW PROTOCOL

Thank you for taking the time to talk with me. I realize you have a very busy schedule, so I will keep my questions brief and limit our time to 30 minutes. First, I need to get your consent to participate in my study and to have our conversation audio taped.

As my letter stated, I used to teach in this city. I had homeless students in my classes, and I know how I handled the challenges. Now that I'm in my doctoral program, I have read a lot of research on homeless students, and I'd like to get some firsthand information from teachers/guidance counselors.

Background Questions

1. How long have you been a teacher/guidance counselor?
2. How long have you been teachers/guidance counselor at this school?
3. Do most of your homeless students live in a nearby shelter?
4. How do they get to school?

Challenges

5. What are the biggest challenges your school faces in educating homeless students?

Classroom-level Strategies

6. How do you support struggling students?
7. How do you support highly-mobile students?
8. How do you support homeless students?
    a. Are there instructional strategies you use?
    b. Are there people other than classroom teachers who interact with these students? If yes, what do they do?
    c. Do these students get supports outside of the school? If yes, which/how?
    d. In what ways have you been prepared for the challenges of teaching these students?

General

9. Is there anything else you think I should know?

Concluding

10. How many students are in your class this year?

Thank you so much for taking the time to talk to me – I can only imagine how busy your days are, and I really appreciate it.

APPENDIX D: ONLINE PRINCIPAL SURVEY

1. How many years have you been a principal?

    a. This is my first year
    b. 1 – 3 years
    c. 4 – 6 years
    d. 7 – 9 years
    e. 10+ years

2. Approximately how many homeless students does your school serve this year?

    a. < 5
    b. 6 – 10
    c. 11 – 20
    d. 21 – 30
    e. 31+

3. Where do most of these students live? Please select all that apply.

    a. In nearby transitional housing/shelters
    b. In transitional housing in other neighborhoods/zones/boroughs
    c. In domestic violence shelters
    d. I don't know
    e. Other (please specify):

4. What is the biggest challenge your school faces in meeting the needs of homeless students? Please select only one.

    a. Transportation
    b. Absence/lateness
    c. Parental involvement
    d. Missing records (birth certificates, immunizations, etc.)
    e. Special education needs
    f. Mental health/Behavior problems
    g. Other (please specify):

5. What programs or practices does your school use to support students who are struggling? (open answer)

6. What programs or practices does your school use to support students who are highly mobile (change residences more than once per year)? (open answer)

7. What programs or practices does your school use to support students who are experiencing homelessness? (open answer)

8. What do teachers do to adjust their teaching to the needs of homeless students? Please select all that apply.

    a. Teachers do not adjust their teaching for homeless students
    b. Teach more slowly
    c. Individualize instruction
    d. Provide emotional support
    e. Refer students to other supports in the school (guidance counselor, etc.)
    f. Refer students to supports outside the school (community programs, etc.)
    g. Provide academic support before/after school
    h. Bring supplies (clothing, food) for students
    i. Other (please specify):

9. In addition to teachers, which adults in the school typically work with homeless students and/or their families? Please select all that apply.

    a. Guidance counselor(s)
    b. Parent coordinator(s)
    c. Homeless liaison
    d. Assistant principal(s)
    e. Myself
    f. Other (please specify):

10. In what ways are teacher and other staff prepared to handle the challenges of working with students experiencing homelessness? Please select all that apply.

    a. Professional development (school-led)
    b. Professional development (district-led)
    c. Professional development (led by outside agency)
    d. Professional learning communities
    e. Team meetings
    f. They are not prepared specifically to work with homeless students
    g. Other (please specify):

APPENDIX E: CODING FRAMEWORKS

A. Original, from literature:

1. Physical Needs
    a. Transportation
    b. Food
    c. Medical Services
2. Mental Health
    a. Sensitizing School Staff
    b. Establishing a Safe and Caring Environment
3. Learning Readiness
    a. Academic Program
    b. Providing Enrichment
4. Cross-Cutting
    a. Coordinating Services
    b. Supporting Parents

B. Revised, from interview data:

1. Logistics
    a. Identification of homeless students
    b. Funding
    c. Attendance/Lateness
    d. Transportation
2. Physical Needs
    a. Food and basic supplies
    b. Medical Services
3. Mental Health
    a. Sensitizing School Staff
    b. Establishing a Safe and Caring Environment
4. Learning Readiness
    a. Academic Program
    b. Providing Enrichment
5. Cross-Cutting
    a. Coordinating Services with Outside Agencies
    b. Coordinating Services within the School/District
    c. Supporting Parents
6. Staff unity
7. Delegation of duties
8. Advocacy

APPENDIX F: REGRESSION RESULTS FOR HOMELESS STUDENTS

Citywide Math Scores (Homeless Only)

	Model 1	Model 2	Model 3	Model 4	Model 5 (Fixed Effects)
Homeless 09	-8.31***	-6.79***	-1.67***	-0.56	-0.60*
	(0.49)	(0.44)	(0.34)	(0.34)	(0.29)
Low income		-15.34***	-2.43***	-2.04***	-1.66***
		(0.64)	(0.25)	(0.25)	(0.16)
Homeless 08			-2.66***	-0.95	-0.83
			(0.62)	(0.62)	(0.54)
Homeless 08 & 09			-2.65*	0.07	0.37
			(1.23)	(1.23)	(1.08)
African American			-11.52***	-10.61***	-9.73***
			(0.48)	(0.47)	(0.28)
Latino			-9.40***	-8.41***	-7.68***
			(0.40)	(0.39)	(0.25)
Asian			-4.14***	-2.99***	-4.01***
			(0.43)	(0.42)	(0.28)
Other race			-8.00***	-6.77***	-6.16***
			(1.05)	(1.05)	(0.88)
Special education			-13.07***	-12.20***	-12.39***
			(0.45)	(0.43)	(0.23)
Math score 08			0.66***	0.64***	0.62***
			(0.00)	(0.00)	(0.00)
Days absent				-0.28***	-0.27***
				(0.01)	(0.01)
Constant	687.50***	696.07***	247.71***	261.79***	276.15***
	(0.57)	(0.66)	(3.18)	(3.13)	(1.49)
R^2	0.00	0.04	0.58	0.59	0.60
F	283.04	375.94	3804.56	3655.29	12880.15

Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Districts A & Math Scores (Homeless Only)

	Model 1	Model 2	Model 3	Model 4	Model 5 (Fixed Effects)
Homeless 09	-6.95***	-5.81***	-1.40**	-0.24	-0.22
	(0.65)	(0.56)	(0.43)	(0.44)	(0.38)
Low income		-13.52***	-2.36***	-1.83***	-1.51***
		(0.86)	(0.36)	(0.36)	(0.23)
Homeless 08			-2.20**	-0.62	-0.70
			(0.80)	(0.80)	(0.70)
Homeless 08 & 09			-2.36	0.03	0.23
			(1.45)	(1.45)	(1.32)
African American			-10.23***	-9.25***	-9.74***
			(0.69)	(0.69)	(0.43)
Latino			-9.24***	-8.12***	-7.99***
			(0.61)	(0.61)	(0.41)
Asian			-3.50***	-2.45***	-3.83***
			(0.61)	(0.60)	(0.45)
Other race			-6.58***	-5.68***	-5.23***
			(1.52)	(1.55)	(1.26)
Special education			-11.97***	-11.15***	-12.05***
			(0.59)	(0.58)	(0.32)
Math score 08			0.67***	0.65***	0.64***
			(0.01)	(0.01)	(0.00)
Days absent				-0.25***	-0.25***
				(0.01)	(0.01)
Constant	684.16***	692.82***	242.33***	252.49***	264.56***
	(0.71)	(0.92)	(4.46)	(4.53)	(2.09)
R^2	0.00	0.03	0.56	0.57	0.59
F	114.58	162.18	1720.16	1618.17	6888.64

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Citywide Language Arts Scores (Homeless Only)

	Model 1	Model 2	Model 3	Model 4	Model 5 (Fixed Effects)
Homeless 09	-6.44***	-4.91***	-0.90**	-0.29	-0.29
	(0.42)	(0.38)	(0.29)	(0.29)	(0.29)
Low income		-15.43***	-3.18***	-2.94***	-2.44***
		(0.58)	(0.22)	(0.22)	(0.16)
Homeless 08			-2.06***	-1.08	-0.95
			(0.55)	(0.55)	(0.55)
Homeless 08 & 09			-1.00	0.65	0.73
			(1.05)	(1.05)	(1.09)
African American			-9.17***	-8.49***	-7.32***
			(0.42)	(0.42)	(0.28)
Latino			-7.97***	-7.28***	-6.23***
			(0.40)	(0.39)	(0.25)
Asian			-2.01***	-1.26**	-2.38***
			(0.49)	(0.49)	(0.29)
Other race			-6.16***	-5.46***	-4.96***
			(0.98)	(0.98)	(0.90)
Special education			-12.06***	-11.50***	-12.08***
			(0.36)	(0.36)	(0.24)
Lang arts score 08			0.51***	0.51***	0.48***
			(0.00)	(0.00)	(0.00)
Days absent				-0.16***	-0.14***
				(0.01)	(0.01)
Constant	665.47***	674.10***	337.77***	342.99***	356.76***
	(0.49)	(0.59)	(2.46)	(2.44)	(1.39)
R^2	0.00	0.05	0.49	0.49	0.51
F	235.44	428.34	2877.66	2624.80	8458.40

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Districts A & B Language Arts Scores (Homeless Only)

	Model 1	Model 2	Model 3	Model 4	Model 5 (Fixed Effects)
Homeless 09	-5.55***	-4.41***	-0.72	-0.07	0.00
	(0.59)	(0.51)	(0.39)	(0.39)	(0.37)
Low income		-13.60***	-2.84***	-2.51***	-2.34***
		(0.82)	(0.29)	(0.29)	(0.23)
Homeless 08			-1.79*	-0.92	-0.90
			(0.70)	(0.69)	(0.69)
Homeless 08 & 09			-1.11	0.31	0.08
			(1.16)	(1.16)	(1.29)
African American			-7.83***	-7.15***	-7.63***
			(0.51)	(0.50)	(0.42)
Latino			-7.35***	-6.62***	-6.77***
			(0.50)	(0.50)	(0.40)
Asian			-0.58	0.06	-2.20***
			(0.73)	(0.73)	(0.45)
Other race			-6.17***	-5.57***	-5.77***
			(1.16)	(1.16)	(1.24)
Special education			-11.46***	-10.94***	-11.93***
			(0.51)	(0.50)	(0.32)
Lang arts score 08			0.51***	0.51***	0.49***
			(0.01)	(0.01)	(0.00)
Days absent				-0.14***	-0.13***
				(0.01)	(0.01)
Constant	662.22***	670.96***	338.93***	342.25***	354.86***
	(0.62)	(0.87)	(3.62)	(3.61)	(1.90)
R^2	0.00	0.04	0.48	0.48	0.50
F	87.79	169.71	1309.49	1199.55	4698.40

Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

1. How many years have you been a principal? Create Chart Download

	Response Percent	Response Count
This is my first year	12.5%	1
1-3 years	25.0%	2
4-6 years	37.5%	3
7-9 years	12.5%	1
10+ years	12.5%	1
answered question		8
skipped question		0

2. Approximately how many homeless students does your school serve this year? Create Chart Download

	Response Percent	Response Count
< 5	50.0%	4
6-10	25.0%	2
11-20	0.0%	0
21-30	12.5%	1
31+	12.5%	1
answered question		8
skipped question		0

3. Where do most of these students live? Please select all that apply. Create Chart Download

	Response Percent	Response Count
In nearby transitional family housing/shelters	**71.4%**	**5**
In transitional housing in other neighborhoods/zones/boroughs	28.6%	2
In domestic violence shelters	42.9%	3
I don't know	14.3%	1
Other (please specify) Hide Responses		1

In transitional housing nearby and in other neighborhoods.
4/25/11 9:37PM View Responses

4. What is the biggest challenge your school faces in meeting the needs of homeless students? Please select only one. Create Chart Download

	Response Percent	Response Count
Transportation	12.5%	1
Absence/lateness	**62.5%**	**5**
Parental involvement	12.5%	1
Missing records (birth certificates, immunizations, etc.)	0.0%	0
Special education needs	12.5%	1
Mental health/Behavior problems	0.0%	0
Providing basic supplies (food, clothing, notebooks, etc.)	0.0%	0
Other (please specify)		0
answered question		**8**
skipped question		**0**

5. What programs or practices does your school use to support students who are struggling academically? Download

	Response Count
Hide Responses	7

Provide academic intervention services
5/16/11 8:36AM View Responses

Extended day and academic intervention during the day also work withthe social worker or guidance counselor
5/13/11 9:32PM View Responses

Academic Intervention Services - small group instruction
5/13/11 7:59AM View Responses

purchase books, supplies etc.
5/13/11 6:13AM View Responses

afterschool
4/29/11 7:36AM View Responses

RTI Services
4/27/11 10:06AM View Responses

Morning and after school programs, academic instructional specialists who provide opportunities for small group instruction, parent workshops and counseling.
4/25/11 9:37PM View Responses

answered question	7
skipped question	1

6. What programs or practices does your school use to support students who are highly-mobile (change residences more than once per year)? Download

	Response Count
Hide Responses	5

Same as above
5/13/11 9:32PM View Responses

Attendance intervention - home visits, provide metro cards for public transportation
5/13/11 7:59AM View Responses

na
5/13/11 6:13AM View Responses

none
4/29/11 7:36AM View Responses

Family counseling and assistance with transportation needs.
4/25/11 9:37PM View Responses

7. What programs or practices does your school use to support students who are experiencing homelessness? Download

	Response Count
Hide Responses	6

Provide them with bookbags and supplies.
5/16/11 8:36AM View Responses

Same as above
5/13/11 9:32PM View Responses

Individual and small group counseling with the guidance counselor - may include parents
5/13/11 7:59AM View Responses

support through guidance counslor and parent coordinator
5/13/11 6:13AM View Responses

financial support
4/29/11 7:36AM View Responses

Parent coordinator and guidance counselor provides assistance when needed.
4/25/11 9:37PM View Responses

8. What do teachers do to adjust their teaching to the needs of homeless students? Please select all that apply. Create Chart Download

	Response Percent	Response Count
Teachers do not adjust their teaching for homeless students	25.0%	2
Teach more slowly	12.5%	1
Individualize instruction	**75.0%**	**6**
Provide emotional support	50.0%	4
Refer students to other supports in the school (guidance counselor, etc.)	**75.0%**	**6**
Refer students to supports outside the school (local community programs, etc.)	37.5%	3
Provide academic support before/after school	50.0%	4
Bring supplies (clothing, food, etc.) for students	**75.0%**	**6**
Other (please specify) Show Responses		1

Try to involve parent
5/13/11 9:32PM View Responses

9. In addition to teachers, which adults in the school typically work directly with homeless students and/or their families? Please select all that apply. Create Chart Download

	Response Percent	Response Count
Guidance counselor(s)	**100.0%**	**8**
Parent coordinator(s)	75.0%	6
Homeless liaison	0.0%	0
Assistant principal(s)	50.0%	4
Myself	62.5%	5
Other (please specify) Show Responses		1

Academic intervention specialists
4/25/11 9:37PM View Responses

10. In what ways are teachers and other staff prepared to handle the challenges of educating and working with students experiencing homelessness? Please select all that apply. Create Chart Download

	Response Percent	Response Count
Professional development (school-led)	**37.5%**	**3**
Professional development (district-led)	0.0%	0
Professional development (provided by outside agency)	0.0%	0
Professional learning communities	25.0%	2
Team meetings	**37.5%**	**3**
They are not prepared specifically to work with homeless students	**37.5%**	**3**
Other (please specify) Show Responses		1

Conversatons with school GC and SW
5/13/11 9:32PM View Responses

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