

HOUSING AND SOCIAL ISSUES: A CROSS DISCIPLINARY REVIEW OF THE EXISTING LITERATURE

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Abstract

Research conducted in North America over the last three decades is summarized in this article to explore the multidimensional nature of housing affordability and the negative social consequences that can result from failing to ensure appropriate housing options are available for low and moderate income families. Social implications of neighborhood quality, homeownership, public housing, housing quality, and homelessness are all considered within the context of public education, community health, and criminal activity. The literature review is intended to inform policymakers involved in affordable housing programs, as well as to encourage real estate developers to consider innovative ways to increase the supply of affordable rental and owner-occupied housing in ways that are both profitable and socially responsible.

There is widespread agreement among policy analysts that an inadequate supply of affordable rental and owner-occupied housing can lead to a number of negative social outcomes. This literature review explores these relationships by examining five dimensions of housing affordability and the impact of each on educational attainment, community health, and criminal activity. Cross-disciplinary research conducted in North America over the last three decades serves as a foundation for the analysis and the first dimension of housing affordability considered is neighborhood quality. The social implications of homeownership are contemplated next, followed by a discussion of the advantages and disadvantages of public housing versus privately owned affordable housing options. Studies assessing the detrimental effects of poor housing quality are then summarized before concluding with a review of the social ramifications of homelessness, the most severe dimension of housing deprivation. Each section of the paper is intended to provide policymakers with a better understanding of the linkages between housing and social issues, while also establishing a basis for collaboration between the public and private sectors to identify socially responsible and profitable residential development strategies.

NEIGHBORHOOD QUALITY

Economically disadvantaged families often live in areas with high concentrations of poverty due to a lack of affordable housing elsewhere. This type of environment is problematic because it has been found to have negative effects on local residents. The

research summarized below considers the linkages between neighborhood quality, education, healthcare, and crime.

NEIGHBORHOODS AND EDUCATION

Social disorganization theory offers a useful starting point to examine the relationship between neighborhoods and education. It focuses on risks and resources at the neighborhood level that have countervailing effects on children (Byrd and Chavous, 2009). Key components of the theoretical framework include: collective socialization processes, social networks, social control mechanisms, economic opportunities, and institutional structures (Ainsworth, 2002; Nettles, Caughy, and O'Campo, 2008). Each can affect academic achievement in positive and negative ways.

Collective socialization processes refer to the interactions individuals have with their surroundings that shape their norms and values (Crowder and South, 2003). Children residing in neighborhoods with an abundance of well-educated and employed adults are anticipated to succeed in school because the value placed on education by the community is passed on to the younger generation by example. Alternatively, children living in areas with high concentrations of poverty, pervasive criminal activity, and low levels of educational attainment are expected to mimic these behaviors and struggle in school. Empirical studies confirm the importance of collective socialization processes and some even conclude that the number of college graduates and professionals living within a neighborhood has nearly as great of an impact on academic outcomes as the quality of the instruction children receive in the classroom (Ainsworth, 2002; Byrd and Chavous, 2009).

Children that do not live in affluent neighborhoods may still have opportunities to interact with college educated professionals if constructive social networks are in place. For example, many civic organizations attempt to provide economically disadvantaged adolescents with exposure to positive adult role models through extracurricular activities. Despite these efforts, constructive social networks are too often missing in impoverished neighborhoods. Parents residing in these areas may also lack the financial resources to effectively monitor the activity of their children, leaving them susceptible to negative peer influences (Ainsworth, 2002). The combination of destructive social networks and weak social control mechanism creates significant risks for economically disadvantaged students. Scholars have found that children living in distressed neighborhoods often suffer from limited social control, have a higher probability of interacting with deviant peers, and in turn have a higher probability of engaging in deviant behavior themselves (Brody, Murry, Kim, and Brown, 2002). Such behavior can clearly disrupt a child's education.

The economic opportunities available within a neighborhood have additionally been found to affect education in a manner similar to that of collective socialization processes and social networks. Children familiar with high paying jobs, as well as the adults that hold such jobs, tend to see education as a means of obtaining future financial success. On the contrary, a dearth of economic opportunity reinforces perceptions that education is not a viable option to improve one's life. Empirical

studies have found perceptions of neighborhood quality are related to the value placed on education by students and the amount of effort put forth in school (Ainsworth, 2002; Bowen, Bowen, and Ware, 2002; Ceballo, McLoyd, and Toyokawa, 2004).

Institutional resources, such as schools and community centers, are a final factor at the neighborhood level expected to affect academic outcomes. The quality of institutions influences not only the instruction received by a student, but also the adult role models and social networks to which they are exposed. Both the availability and perceived quality of institutional resources have been found to impact grade point averages and the value placed on school by adolescents (Byrd and Chavous, 2009).

Two interesting empirical studies summarized by Rosenbaum (1995) illustrate the impact of collective socialization process, social networks, and institutional resources on academic achievement. These studies relied on data collected from the Gautreaux Program in Chicago, which was implemented in response to a court order requiring desegregation of the city's public housing projects. The program provided a unique opportunity to examine neighborhood effects because housing vouchers were randomly assigned to low-income black families with similar characteristics, allowing some to reside in suburban areas and others in poor urban areas. The first of these studies found adolescents moving to the suburbs initially had problems adjusting to their new schools, but quickly acclimated. Despite some reports of racial tension, students in the experimental group noted greater levels of satisfaction with teachers and higher academic standards. The second study found only 5% of students moving to the suburbs dropped out of school, as compared to 20% of the control group remaining in poor urban areas. Grades were similar across the two groups, although 40% of the students in the experimental group enrolled in college-track classes, while only 24% of the students in the control group did the same. Similarly, 54% of the students moving to the suburbs went on to college, while only 21% of the control group pursued post-secondary education. Both the experimental group and the control group reported similar degrees of social interaction, but members of the experimental group reported more interaction with white students.

The empirical evidence presented above suggests that the academic outcomes of poor children can be improved by providing their families with access to affordable housing in stable neighborhoods. Nonetheless, a related body of research indicates that neighborhood continuity may be just as important as neighborhood quality. A number of studies have examined the impact of residential and school mobility on academic achievement. The results are critically important because low-income families move much more frequently than other segments of the population in response to housing issues (Heinlein and Shinn, 2000). From a social capital perspective, moving to a new neighborhood or school can impinge upon a child's ability to form relationships with peers and teachers that contribute to long-run academic success. It may also be difficult for teachers to identify the educational needs of highly mobile students because they have less interaction with faculty and staff before moving on to another school. The problem is compounded by waiting lists and other systemic delays that slow the delivery of supplemental educational services (Julianelle and Forcarinis, 2003).

Isolating the impact of student mobility on academic achievement is difficult because families that move frequently potentially have unobservable characteristics that differentiate them from other households. Longitudinal studies including controls for “pre-move” measures of social capital and academic aptitude have been employed to address the issue. These studies generally conclude that residential mobility and school mobility have a negative effect on standardized tests scores and educational aspirations, with the greatest impact occurring in situations where both moves occur simultaneously (Pribesh and Downey, 1999). Moving from school to school early in a child’s academic career also appears to have a more detrimental impact on standardized test scores and grade retention rates than moves that occur later on (Heinlein and Shinn, 2000).

An empirical study by Pribesh and Downey (1999) examined the effects of mobility on students after including variables in the statistical analysis to control for measures of social capital, academic achievement, and stressful life events that existed before the move. Fluctuations in social capital were first estimated as a function of moving. Social capital was measured using a series of survey questions designed to identify a student’s participation in extracurricular activities. Questions were also asked to assess parents’ relationships with their child, other parents, and the school system. School mobility and residential mobility were found to reduce social capital. The most significant declines were observed when a child changed residences and schools simultaneously. Mobility explained approximately 5% of the variance in standardized test scores and academic aspirations after controlling for preexisting levels of social capital and other family characteristics. Highly mobile students were found to have lower levels of social capital before a move, which proved to be a mitigating factor limiting the observed impact of mobility on academic outcomes.

A second longitudinal study by Heinlein and Shinn (2000) examined the effect of mobility on standardized test scores in the New York City public school system. A series of control variables were included in the statistical analysis to serve as proxies for a child’s socioeconomic status. The study did not find a relationship between school mobility and standardized test scores or grade retention after controlling for pre-move standardized test scores. After dropping the control for prior academic achievement, school mobility was found to have a strong negative impact on standardized test scores for students moving three or more times since entering kindergarten. Approximately 48% of sixth grade students moving fewer than three times performed at or above grade level in math, while only 38% performed at similar levels in the highly mobile group. An assessment of standardized reading scores between the two groups produced similar results. Only 18% of the highly mobile students performed at or above grade level, as compared to 27% of the less mobile students. Similar results were observed for third graders. Approximately 49% and 30% of the students moving fewer than three times since kindergarten performed at or above grade level in math and reading respectively, as compared to 35% and 23% in the less mobile group.

The results of the aforementioned mobility studies are noteworthy because they suggest that academic outcomes can be improved by ensuring families with children do not have to move repeatedly to find affordable housing. They also indicate that

programs designed to provide disadvantaged families with access to housing in more stable neighborhoods must be mindful of the potentially disruptive effects of mobility on education. The latter of these issues is especially important in light of uncertainty regarding the nature of the relationship between neighborhood characteristics and academic achievement. Proponents of epidemic theory argue that improvements in neighborhood quality affect academic outcomes in a nonlinear fashion, in which negative social outcomes only spread through community like a disease once concentrations of poverty and crime exceed threshold levels (Crane, 1991). The position is interesting because it draws into question whether public resources should be used to help families move out of moderately disadvantaged areas if only small improvements in education can be achieved. The disruptive impact of moving may offset any benefit derived from residing in a more affluent area with better institutional resources. Nonetheless, considerable disagreement exists regarding the merits of epidemic theory and alternative theoretical frameworks placing greater emphasis on collective socialization processes may indicate that even small improvements in neighborhood quality can have measureable effects on academic outcomes if positive social networks are created for children (Ainsworth, 2002; Dietz, 2002; Byrd and Chavous, 2009).

There is more agreement that neighborhood effects can vary with the age, gender, and race of a child. Adolescents are potentially more susceptible to neighborhood effects than younger children because they have greater exposure to environmental factors outside the home (Shumow, Vandell, and Posner, 1999; Thompson, 2002; Emory, Caughy, Harris, and Franzini, 2008; Nettles, Caughy, and Campo, 2008). Females also appear to have stronger relationships within their neighborhoods, which may amplify or diminish neighborhood effects by increasing their exposure to risk factors and resources (Crane, 1991). Racial segregation in the housing market may additionally increase the magnitude of neighborhood effects if it encourages the formation of cohesive communities of minority residents that are unable to build external social networks (Crowder and South, 2003). Empirical studies offer inconsistent results on all of these issues, although there does appear to be agreement that age, gender, and race influence neighborhood effects in meaningful ways.

NEIGHBORHOODS AND CRIME

Neighborhood characteristics are anticipated to influence crime and victimization rates through several of the causal mechanisms discussed above. Negative peer associations, in conjunction with limited economic opportunity and weak social control mechanisms, may perpetuate criminal activity in economically disadvantaged areas in the absence of intervening factors. Numerous studies have attempted to estimate the magnitude of these neighborhood effects.

In a census tract-level analysis of New York City, Hannon and Cuddy (2006) examined the potential impact of neighborhood ecology on drug dependence mortality. Drug-related death rates were greater in areas with high poverty, significant numbers of young adults and males, and concentrated populations of minority residents. After controlling for poverty, homeownership rates and measures of blight had independent

effects on the prevalence of drug-related mortality. The results of the study must be interpreted with caution because the findings only demonstrate the drug-users concentrate in certain types of areas. The methodology falls short of demonstrating a causal relationship between neighborhood quality and crime. Other studies attempt to establish such a link.

Moving to Opportunity (MTO) demonstrations conducted in Baltimore, Boston, Chicago, Los Angeles, and New York City offer the best opportunities to examine the relationship between neighborhoods and crime (Ludwig et al., 2008). Families participating in these demonstrations resided in public housing or project-based Section 8 housing located in neighborhoods with poverty rates exceeding 40% before being randomly assigned to three groups. Those assigned to the experimental group received counseling assistance from local nonprofit organizations and vouchers for private-sector rental housing in low poverty areas. Families assigned to the comparison group received unrestricted housing vouchers and no counseling. The remaining families were assigned to a control group that did not receive rental assistance or counseling, but remained eligible for public housing.

In an early evaluation of Boston's MTO demonstration, boys in the experimental and comparison groups exhibited approximately one-third fewer behavioral problems than those in the control group (Katz, Kling, and Liebman, 2001). Perceived safety was also found to increase, while exposure to violent crime and criminal victimization declined. Similar results were observed in Baltimore (Ludwig, Duncan, and Hirschfield, 2001). Experimental and comparison group members 11 to 16 years old experienced a reduction in violent crime arrests relative to the control group. Property crime arrests were somewhat higher among teens in the experimental group, but the effect persisted for only a short time after relocation.

A follow-up study of Baltimore's MTO demonstration found moving to neighborhoods with less poverty and crime affected boys and girls differently. Both genders experienced fewer violent crime arrests after random assignment when compared to the control group. Females were arrested less often for other crimes during this period of time as well. After several years, beneficial neighborhood effects continued only for young females. Property crime arrests became more common in the experimental male group than in the control group (Ludwig et al., 2008). A second evaluation of Baltimore's MTO demonstration reached similar conclusions. Males 12 to 19 years old in the experimental and comparison groups self-reported more behavioral problems than those in the control group. Moving to more stable neighborhoods had little to no impact on the criminal behavior of girls (Orr et al., 2003).

While the MTO studies discussed thus far provide some evidence that moving to more affluent neighborhoods reduces crime and victimization rates, the causal mechanisms underlying these observations are not clearly established. Alternative sources of data have been used to address the issue. Sampson and Raudenbush (1997), for example, argued that variations in crime rates that cannot be explained by aggregated demographic characteristics of an individual can be attributed to the collective efficacy of a neighborhood. Social structures and organizations were anticipated to influence a community's ability to promote common values and maintain social control. After

surveying residents of 343 Chicago neighborhoods and controlling for individual characteristics, measures of collective efficacy were found to be negatively related to criminal violence.

Other studies have utilized a variety of datasets and methodologies to examine the relationship between neighborhoods and crime. Miles-Doan (1998) relied on law enforcement and U.S. Census data for Duval County, Florida to examine the importance of neighborhood context on the incidence of domestic violence. Neighborhoods with high concentrations of poverty, unemployment, and female-headed households were found to have dramatically higher rates of domestic violence than otherwise comparable neighborhoods. Walsh and Taylor (2007) investigated the relationship between community characteristics and motor vehicle theft rates over a ten-year period. The study found greater increases in auto theft in more racially mixed communities, as well as in areas surrounded by neighborhoods with higher initial motor vehicle theft rates. Allen (1996), on the other hand, failed to find a statistically significant relationship between relative poverty at the neighborhood level and several indicators of criminal activity.

Having found some evidence of a causal link between neighborhood deprivation and crime, it is possible in theory to estimate the criminal justice cost savings resulting from a reduction in concentrated poverty. At least one rigorous study has attempted to do so. Kling, Ludwig, and Katz (2005) compared differences in crime costs between experimental and control group youth participating in one MTO program. Costs associated with criminal activity among experimental group youth were found to be 15% to 33% lower than those associated with the control group. While the results were not statistically significant in a pooled sample of boys and girls, large and statistically significant cost savings were observed for girls under some sets of assumptions.

The research summarized above offers compelling evidence that criminal activity among adolescents can be reduced by investing in affordable housing programs that limit concentrations of poverty. However, the results of MTO studies also suggest that moving to more affluent neighborhoods has disparate effects on boys and girls, as well as on members of different age cohorts. These mitigating factors must be taken into account to ensure affordable housing initiatives include appropriate support programs that prevent adolescents from reverting back to deviant behavior after the initial impact of relocating to a more stable neighborhood wears off.

NEIGHBORHOODS AND HEALTHCARE

With the notable exceptions of criminal activity and unsafe structures that can lead to injury, neighborhood characteristics are not expected to contribute directly to the health status of local residents. There are, however, at least two indirect ways in which distressed neighborhoods may have a detrimental impact on both adults and children. Some neighborhoods arguably provide residents with access to better healthcare services and reduce their exposure to long-term “weathering” processes such as stress and resource deprivation (Ellen, Mijanovich, and Dillman, 2001). Several empirical

studies confirm these presumptions and suggest that neighborhoods can affect physical and psychological health.

Katz, Kling, and Liebman (2001) took advantage of MTO data from Boston to examine the causal relationship between neighborhood quality and health. In this study, the health status of both adults and children moving to more affluent neighborhoods improved as compared to those remaining in low-income communities. For adults, the authors reported improvements in overall health and mental health. The mean self-reported health status of experimental group members increased by 51% more than that of control group members. A higher number of adults in the experimental group also reported feeling "calm and peaceful." Children in the experimental and comparison groups experienced improved health status as well. Those moving to more affluent neighborhoods had fewer behavioral problems, incidents of depression, and asthma attacks requiring medical attention. In a related study, Leventhal and Brooks-Gunn (2003) interviewed 550 families participating in New York City's MTO demonstration. Parents moving to more affluent neighborhoods reported significantly less psychological distress than parents that did not move. Boys relocating with their families were also found to have significantly fewer depressive episodes and dependency problems than those remaining in public housing. An interim evaluation of the New York City MTO conducted by HUD offered similar results (Orr et al., 2003). The study found a large reduction in the incidence of obesity in the experimental group, as well as less psychological distress and depression. Among children, some of the significant effects of MTO on health included reductions in psychological distress, depressive episodes, and anxiety disorders among girls.

The empirical research that has been conducted indicates that physical and psychological health can be improved by providing economically disadvantaged families with access to housing in stable areas. The conclusion generally holds for both adults and children. The most common health benefits include reductions in depressive episodes, anxiety and stress. Improving health status, in conjunction with limiting criminal activity and enhancing educational performance, should provide community leaders with strong incentives to consider affordable housing programs that provide low and moderate income families with access to more affluent neighborhoods.

HOMEOWNERSHIP

Although many members of the general public recognize the importance of preventing concentrated poverty and are supportive of efforts to help low- and moderate-income families obtain affordable housing in stable neighborhoods (Mueller and Tighe, 2007), there is ongoing debate regarding the best way to achieve the objective. Some favor initiatives to increase the supply of affordable rental housing, while others prefer programs that encourage homeownership through various types of public subsidies. Both approaches have merit and can generate positive social outcomes. Homeownership may be particularly beneficial for some types of families and is therefore considered as a second dimension of housing affordability.

HOMEOWNERSHIP AND EDUCATION

Homeownership is expected to contribute to the academic success of children for a variety of reasons. First, empirical studies have found that homeownership reduces residential mobility due to the transaction costs associated with selling a home (Dietz and Haurin, 2003). This may put the children of homeowners in a better position than those of renters to develop social capital. Second, homeownership provides adults with a financial incentive to monitor the activities that go on in their neighborhood due to stronger community ties and an interest in preserving area property values (Green and White, 1997). These social control mechanisms can reduce negative peer effects and encourage children to embrace the benefits of education. Third, homeownership may encourage civic involvement and improve parenting skills (Rossi and Weber, 1996; DiPasquale and Glaeser, 1999), which can stimulate positive academic outcomes. At least five recent studies test these hypotheses.

Aaronson (2000) examined the impact of homeownership on public school retention after controlling for several variables related to educational attainment. Children of homeowners were less likely to drop out of school than those of renters, but the relationship was mitigated by several factors. Approximately half of the impact of homeownership dissipated after controlling for residential mobility. The detrimental effects of residential mobility were pronounced for students residing in low-income areas, while homeownership had the greatest effect on school retention rates in more affluent neighborhoods.

Green and White (1997) analyzed the impact of homeownership on both dropout rates and teen pregnancy. The estimated dropout rate for children of renters with average income levels was approximately 4% higher than that of homeowners. A larger effect was observed in a subset of low-income households. Children of renters in this group were 9% more likely to drop out of high school than children of homeowners. Tenure mitigated the impact of homeownership on school retention, but the relationship remained statistically significant after controlling for the number of years a family resided in a home or apartment. The prevalence of teen pregnancy was 2%–4% lower amongst children of homeowners.

A study of low-income families by Harkness and Newman (2003) found that children of homeowners were 13% more likely to graduate from high school and 6% more likely to pursue post-secondary education than the children of renters. Homeownership had the greatest impact in stable neighborhoods with relatively high income levels. Interestingly, neighborhood quality had a much less pronounced effect on the educational outcomes of renters. The authors concluded that low-income families with children might be better served in some instances by becoming homeowners in their current neighborhood rather than renting in a more affluent area.

Other studies have explored the relationship between homeownership and education using alternative measures of academic achievement. Haurin, Parcel, and Haurin (2002) found that homeownership increased standardized test scores 7%–9% and reduced behavioral problems 1%–3% after controlling for a child's socioeconomic status. Boyle (2002) examined the prevalence of behavioral problems using multilevel

regression techniques to control for family, school, and neighborhood characteristics. Family and neighborhood characteristics explained more than half of the variance in behavioral problems, but homeownership still had a statistically significant impact after controlling for these nested variables. There was also some evidence that homeownership increased receptive vocabulary among children included in the research.

Notwithstanding the fact that much of the existing research indicates homeownership influences academic outcomes primarily through a reduction in student mobility, there is some evidence that other factors are at work. Social control mechanisms and improved parenting skills may explain at least a portion of the observed difference in academic outcomes between the children of homeowners and the children of renters. Subsidy programs that encourage homeownership in stable neighborhoods may therefore benefit moderately disadvantaged families in ways that cannot be easily replicated through other housing initiatives.

The educational benefits of homeownership must, however, be evaluated in conjunction with the destabilizing effects of foreclosure since families with limited economic resources are particularly susceptible to this threat. Bowdler, Quercia, and Smith's (2010) qualitative study of Latino families experiencing foreclosure highlights the challenges that many children face after losing a home. Over half of the families participating in the study reported that their children had academic or behavioral problems after the event, which were attributed to increased familial stress, crowded living conditions, and changing schools. The results are not particularly surprising in light of the established linkages between student mobility, housing quality, and academic outcomes (Pribesh and Downey, 1999; Heinlein and Shinn, 2000; Maxwell, 2003; Evans and Wener, 2006). Other scholars have gone a step further by contending that children living in neighborhoods with high foreclosure rates may experience negative social outcomes due to a loss of social capital in the area, even if their housing status remains unchanged (Martin, 2010). Additional research is needed to examine the merits of this hypothesis in order to assess the risk foreclosures create for the educational attainment of children remaining behind in fragile neighborhoods.

HOMEOWNERSHIP AND CRIME

The causal mechanisms through which homeownership influences education also affect criminal behavior, albeit in different ways. Residential stability promotes the development of dense social networks and frequent communications among neighbors that may reduce crime by encouraging collective supervision of property (DiPasquale and Glaeser, 1999; McNulty and Holloway, 2000). Several empirical studies comparing the sociability of homeowners and renters provide support for this hypothesis. Rossi and Weber (1996) compared measures of social capital among homeowners and renters after controlling for age and socioeconomic status. They found that homeowners were more likely than renters to be members of organized social groups. DiPasquale and Glaeser (1999) arrived at somewhat similar conclusions. Employing ordinary least squares regression and instrumental variable techniques, the authors found that homeownership was positively related to measures of social capital.

Rohe and Stegman (1994a) compared community and social participation among low-income homeowners and renters. They found that homeowners were more likely to be involved in neighborhood organizations. In several of these studies, alternative model specifications failed to find a statistically significant difference between the sociability of homeowners and renters, so the results should be interpreted cautiously.

Another body of research attempts to measure important differences between homeowners and renters by comparing their commitment to the maintenance of the dwelling unit in which they reside. Several of these studies have found that homeowners have stronger financial and social incentives to invest in the upkeep of their property than do renters (Rohe and Stewart, 1996; Ioannides, 2002). This behavior can potentially deter crime because proper maintenance is a visible sign of guardianship (Brown, Perkins, and Brown, 2004; Rephann, 2009). Empirical studies indicate that homeowners are more likely than renters to occupy dwellings in superior condition and to invest in property maintenance (Galster, 1983; Spivak, 1991). However, there is considerable debate regarding the magnitude of these differences (Gatzlaff, Green, and Ling, 1998).

Finally, homeownership may limit criminal activity by indirectly discouraging adolescents from engaging in deviant behavior. Such a result is expected because homeowners have a financial incentive to closely monitor the activity of children living in their neighborhood (Green and White, 1997). Homeowners additionally develop parenting skills and higher levels of self-esteem through the homeownership process that are passed on to their children (Haurin, Parcel, and Haurin, 2002). While survey data offers some evidence that self-esteem levels are in fact higher among homeowners (Rossi and Weber, 1996), empirical research offer inconsistent results. Rohe and Stegman (1994b) compared the perceptions of low-income homeowners before and after purchasing a home and failed to find a statistically significant increase in self-esteem after the purchase, although higher levels of life satisfaction were observed.

Somewhat surprisingly, empirical studies directly examining the relationship between homeownership and crime rates are less common than those that evaluate the underlying causal mechanisms that link the two together. The studies that exist offer relatively consistent results. Krivo and Peterson (2000) estimated a 24% decrease in homicide rates in response to a 10% increase in homeownership among white families. Alba, Logan, and Bellar (1994) concluded that homeownership reduced exposure to both property crime and violent crime, while Glaeser and Sacerdote (1999) found that cities with higher homeownership rates experienced less criminal victimization. White (2001) observed a negative relationship between homeownership and murder rates in high-income cities and a positive relationship between homeownership and burglary rates in low-income cities. While all of these results must be interpreted cautiously due to the possibility of endogeneity bias, homeowners and their families do appear to be less likely than renters to participate in crime or be victims of criminal activity.

Since homeownership is hypothesized to deter crime by contributing to the development of social networks, it also stands to reason that certain events may stimulate deviant behavior by breaking down communication among neighbors or

diminishing their incentive to engage. This conjecture has been explored in a series of studies examining the relationship between foreclosures and crime. Goodstein and Lee (2010) used county-level panel data from across the U.S. to determine if foreclosures were positively related to spikes in certain types of crime. A one percentage point increase in the county foreclosure rate was found to generate over a ten percentage point increase in the burglary rate the following year. Larceny and aggravated assault rates were also found to respond positively to foreclosure activity, albeit in a less severe manner. Two related studies using data from Chicago offer less consistent results. Immergluck and Smith (2006) utilized cross-sectional data and only found a positive relationship between foreclosures and violent crimes, while Kirk and Hyra (2010) utilized panel data and found that foreclosures did not have an independent effect on violent or property crime rates after controlling for community characteristics. Ciu's (2010) research concluded that foreclosure alone did not produce an increase in violent crime around homes in Pittsburg, but it did so after the properties eventually became vacant. In the aggregate, the results of these studies suggest a great deal of uncertainty continues to surround the nuanced relationship between foreclosure and crime that calls for further analysis.

HOMEOWNERSHIP AND HEALTHCARE

Homeownership can affect physical and psychological health directly and indirectly. Families residing in owner-occupied housing are known to invest more in the upkeep of their property than renters, which is likely to reduce the risk of injuries and respiratory problems associated with housing conditions. At the same time, reduced mobility provides homeowners with better information about local healthcare providers, allowing families to turn to doctors before their condition becomes more difficult to treat (Dietz and Haurin, 2003). Promoting homeownership as a source of personal wealth also increases the resources available to families to spend on healthcare (Acevedo-Garcia, Osypuk, and Werbel, 2004), while higher self-esteem and life satisfaction associated with owning a home may improve psychological health. Few studies have examined these causal mechanisms individually to determine which is at work, but there is some evidence that homeownership can improve health status.

Dunn and Hayes (2000) used survey data from two Vancouver neighborhoods to identify the effect of housing characteristics and social status on the overall health of residents. In one neighborhood, respondent homeowners self-reported better health status and greater health satisfaction than renters. In the other neighborhood, no statistically significant relationships were found. Rossi and Weber (1996) reported similarly mixed results. Data obtained from the National Survey of Families and Households suggested that homeowners self-reported somewhat higher physical health than renters, while an analysis of General Social Survey data did not return any statistically significant associations. Robert and House (1996) found homeownership was associated with "physical limitations," but not with self-reported health status or a number of chronic conditions.

Psychological health, measured in terms of mental health, happiness, and incidents of depression, also appears to be affected by housing status. Empirical research suggests that the relationship can be positive or negative (Dunn and Hayes, 2000; Rossi and Weber, 1996). For example, some studies have found that homeowners are more stress resistant than renters and experience less strain, depression, and substance abuse after stressful life events. Others have found that homeownership has negative effects because some families, particularly those with low incomes, do not enjoy the freedom or feeling of control associated with owning a home. This may translate into heightened stress levels and poor health conditions.

The most promising results have emerged in studies examining the relationship between homeownership and childhood depression. Cairney (2005) used data from the National Population Health Survey to trace the impact of living in an owner-occupied house on the probability of depressive episodes in children of different ages. The prevalence of depression was three times higher among 12 to 14 year-olds living in rental dwellings than it was among comparable children living in owner-occupied housing. In a cohort of 15 to 19 year-olds, the prevalence of depression was only 3% higher among children of renters than children of homeowners. Boyle (2002) also found lower levels of psychological distress among children of homeowners than children of renters in a study utilizing an index score to measure emotional-behavioral problems.

Even if homeownership can produce positive healthcare outcomes, there is the possibility that failing as a homeowner can have detrimental effects. The subprime crisis has brought this concern to the forefront of housing policy discourse and generated a resurgence of interest in the relationship between foreclosure and community health. Few studies have addressed the issue directly, although Bennett, Scharoun-Lee, and Tucker-Seeley (2009) outlined a number of ways in which foreclosure may impact mental and physical health. The foreclosure process is described as a prolonged stressor that can lead to both depressive disorders and coping mechanisms that involve negative health behaviors such as increased alcohol and tobacco use, irregular sleep patterns, and decreased physical activity. Low socioeconomic status groups were anticipated to be at high risk for these problems because they have fewer “stress-buffering resources” at their disposal. Pollack and Lynch (2009) explored these problems in greater detail in a study of Philadelphia homeowners in danger of foreclosure. Nearly half of the sample undergoing foreclosure satisfied screening criteria for depression, while many also reported increased smoking and food insecurity. The authors emphasized the importance of the results, but also noted that they must be interpreted with caution because health status can be a cause and an effect of foreclosure.

The results of the research presented in this section indicate that homeownership can promote a number of positive social outcomes. However, it can also be a destabilizing force for low-income families if it creates an unmanageable financial burden. Steps must therefore be taken to promote the availability of affordable rental housing, in addition to homeownership opportunities, to ensure appropriate options are available for economically disadvantaged families.

PUBLIC HOUSING

A wide variety of programs reliant on federal funding have emerged over time to help economically disadvantaged families obtain affordable rental housing. Among these are traditional public housing projects owned and operated by public housing authorities, as well as Section 8 voucher and certificate programs designed to reduce the cost of privately-owned rental housing for families that meet specific income guidelines. The former type of housing assistance is referred to as project-based aid, while the latter is referred to as tenant-based aid. Currie and Yelowitz (2000), among others, note that federal policymakers have expressed a growing preference for tenant-based aid because large public housing projects are perceived to generate numerous social problems by concentrating poverty in select areas. Section 8 vouchers and certificates are often viewed as preferable alternatives because they provide low-income families with a means of accessing stable neighborhoods by offsetting a portion of the cost of market rate housing in any area they choose to live. Vouchers are particularly flexible because they allow economically disadvantaged households to pay rental rates above public housing authority standards if they so choose by contributing more of their own money (Hartung and Henig, 1997). Despite these benefits, the research summarized below suggests both tenant-based aid and specific types of public housing have a legitimate place in a diversified affordable housing program.

PUBLIC HOUSING AND EDUCATION

There is little disagreement in the academic literature that public housing projects are often located in economically disadvantaged areas (Newman and Harkness, 2000). This creates significant challenges for researchers because neighborhood effects must be disentangled from public housing effects to isolate the impact of this type of affordable housing program on academic achievement. At least three empirical studies have used rigorous methodological approaches to estimate the impact of public housing residency on different measures of academic success.

Newman and Harkness (2000) examined the effects of different types of housing assistance programs on educational attainment. In the cross-sectional study, the authors utilized instrumental variable techniques to address the possibility of endogeneity bias and found neither public housing residency before the age of 15 nor the number of years spent in public housing had a statistically significant impact on the number of years spent in school, high school graduation, or postsecondary education. The point in childhood when an individual resided in public housing was also unrelated to the aforementioned measures of educational attainment. All of these findings led the authors to conclude that public housing, in and of itself, does not have a detrimental effect on academic success.

Currie and Yelowitz (2000) also challenged negative perceptions of public housing. The authors hypothesized that public housing serves segments of the population very well due to administrative guidelines that benefit some families more than others. After controlling for variables anticipated to influence academic achievement, the

authors of the cross-sectional study found that families living in properties owned by public housing authorities experienced less crowding and were more likely to reside in small apartment complexes than were other low-income households. Children living in public housing were also 11% less likely to have been held back in school than similar students residing elsewhere.

A quasi-experimental study conducted by Jacob (2004) potentially offers the most methodologically sound evidence that public housing does not have a negative effect on academic outcomes. The research took advantage of data obtained from children living in high-rise public housing projects in Chicago that were forced to move to Section 8 housing due to their buildings being closed or demolished. Closure provided an exogenous source of variation in housing assistance necessary to establish a causal relationship between public housing and academic achievement. Children relocating to Section 8 housing did not perform better or worse than their peers remaining in public housing.

Each of the studies summarized above suggest that public housing is capable of providing low-income families with a satisfactory living environment that does not have a negative effect on academic outcomes. However, the fact that many public housing projects are located in economically disadvantaged areas exposes families to detrimental neighborhood effects that have been found to lower standardized test scores, reduce educational attainment, and stimulate behavioral problems. Public housing projects should be made available in stable neighborhoods to maximize the potential benefits.

PUBLIC HOUSING AND CRIME

There are several theoretical reasons to believe public housing may be related to heightened levels of criminal activity. Private sector landlords can potentially be more selective than public housing authorities when choosing tenants. They also have a stronger financial incentive to monitor the behavior of those residing in their properties. Thus, public housing projects may attract the criminally-inclined because it is the only option available to them (Santiago, Galster, and Pettit, 2003). There is also some evidence that public housing projects suffer from a lack of collective efficacy. One stream of research claims public housing residents are less likely to work together to solve community problems and are more likely to hold divergent views as to what constitutes acceptable behavior (Taylor, 2001). This may prevent communal supervision of property and children within a public housing complex. Regardless of which of these causal mechanisms is at work, three linkages between public housing and crime have been put forth: public housing may encourage neighborhood crime by attracting the criminally inclined; public housing may expose area residents to a higher probability of criminal victimization; and public housing may encourage the economically disadvantaged individuals living within a complex to participate in deviant behavior. These hypotheses have all been empirically tested.

The first of the propositions presented above has arguably received the most attention. Research appears to support the existence of a positive relationship between public

housing and crime; yet some social scientists call for more evidence before drawing definitive conclusions (Freeman and Botein, 2002). An early study by Ronecek, Bell, and Francik (1981) found that proximity to public housing had a small, albeit statistically significant, impact on the prevalence of violent crime in 4,000 neighborhoods throughout Cleveland. However, adjacency to public housing was one of the least important predictors of violent crime in their model after controlling for socio-economic status and the housing characteristics of adjacent blocks. McNulty and Holloway (2000) tried to determine the impact of distance from public housing on crime rates in neighborhoods with different racial compositions throughout Atlanta. Communities in very close proximity to public housing were found to be more likely to have high crime rates, although no statistically significant difference was observed farther away. In a community-level analysis of Louisville, Suresh and Vito (2007) found a tendency of aggravated assaults to cluster around certain low-income public housing developments. The authors concluded that revitalization efforts, in combination with the acquisitions of nearby abandoned properties, caused a shift in the clustering pattern of violent crime. Other criminal behavior studies have included proximity to public housing as a control variable and reached similar conclusions (Glaeser and Sacerdote, 2000).

Empirical evidence demonstrating a relationship between public housing and crime does not necessarily support a conclusion that private management offers a better option. Few studies have addressed this question directly. Ones that have offer mixed results. Bowie (2001) failed to find that private management reduced crime and victimization in a quasi-experimental study of crime and personal safety in public housing throughout Miami. Break-ins and thefts were more common at privately managed sites, while shootings and violent crime were more common at publicly managed sites. No statistically significant difference was observed in residents' perceptions of personal safety in either type of housing.

Some researchers argue that it is not public housing per se that encourages crime, but rather a high concentration of poverty that contributes to residential instability and social disorder (Sampson, 1990). If this hypothesis is true, scattered site public housing should stimulate less criminal activity than concentrated public housing. Evidence exists to support this position. An empirical analysis by Santiago et al. (2003) found no statistical evidence that small-scale dispersed public housing increased violent crime, property crime, criminal mischief, or disorderly conduct. To the contrary, weak evidence was found that crime rates were actually lower around these sites.

The hypothesis that public housing increases the probability of criminal activity among its residents has been studied less extensively than crime in surrounding areas. Ireland, Thornberry, and Loeber (2003) compared self-reported crime and violence among adolescents and young adults residing in public housing projects to low-income adolescents living outside of public housing in Rochester, New York and Pittsburgh, Pennsylvania. In Rochester, the authors did not find any statistically significant difference in property crime and violent crime rates between the two groups. Higher levels of violent crime were observed among public housing residents in Pittsburgh.

There is a larger body of evidence that suggests residents of public housing have a higher probability of being victimized than those living outside public housing in similar neighborhoods (Du Rant, Getts, Cadenhead, and Woods, 1995; Holzman, Hyatt, and Dempster, 2001). DeFrances and Smith (1998) examined victimization rates in public housing communities using data from the 1995 National Crime Victimization Survey (NCVS). In the total population, public housing residents reported higher serious victimization rates compared to people living elsewhere. Public housing residents in urban areas were also found to be at greater risk of victimization regardless of race. Contradictory results were found in a study by Glaeser and Sacerdote (2000) using the same dataset. A negative and statistically significant relationship was found between public housing and violent crime victimization. These studies examined different types of crimes and used dissimilar estimation strategies, which may explain the discrepancy in the results. Zelon, Rohe, Leaman, and Williams (1994) examined victimization in different types of public housing projects such as high-rise buildings, low-rise buildings, townhouses, and scattered sites. High-rise dwellings enjoyed lower property crime rates, but violent crime occurred most often in this type of environment. Townhouses suffered the highest property crime rates. The study did not, however, compare crime in public housing developments to those of the surrounding community.

PUBLIC HOUSING AND HEALTHCARE

Some public housing potentially poses health risks for its residents due to its condition (Fertig and Reingold, 2007), but rigorous empirical analysis of the community health effects of public housing is limited. Only a handful of studies over the last decade have tried to trace the relationship using econometric techniques capable of addressing unobservable tenant characteristics and self-selection problems. The issue is worthy of consideration because public housing has the potential to generate positive health effects as well. Public housing may allow people to live in better environments than they could otherwise afford, thereby limiting the detrimental effects of overcrowding, which has been shown to relate to stress, unsanitary conditions, and the spread of infectious disease (Mann, Wadsworth, and Colley, 1992). Other positive factors associated with public housing may include proximity to social services and positive peer effects (Rertig and Reingold, 2007).

Rertig and Reingold (2007) found that public housing had few negative effects on health status. The only exceptions were mothers' overall health and the probability of obesity. Residing in public housing significantly worsened a mother's health status and significantly increased the probability of a mother being overweight. The findings must be interpreted cautiously because the research appears to suffer from self-selection and omitted variable bias. Housing quality, together with unobserved neighborhood and tenant characteristics, seem to be more plausible explanations for these health outcomes than government ownership of affordable housing. The supposition is supported by empirical research comparing health outcomes in large public housing projects to those in scattered site public housing projects. A lower prevalence of depression, substance abuse, and traumatic events were observed in

scattered site projects in a comparative study of Yonkers, New York (Briggs, 1997). The findings indirectly support a conclusion that variables other than public ownership and management influence health outcomes in subsidized housing residents.

Once again, the challenge of disentangling neighborhood effects from public housing effects makes it difficult to determine whether one type of housing assistance program generates better social outcomes than another. Research does, however, strongly support the conclusion that reducing concentrations of poverty is important to improve educational outcomes, deter criminal activity, and improve community health, regardless of whether affordable housing is provided by the public sector or the private sector. The ongoing shift towards tenant-based affordable housing programs may be justified to the extent that these policies provide economically disadvantaged families with access to better neighborhoods. Scattered site public housing also appears to be an option capable of generating many of the same benefits when appropriately managed.

HOUSING QUALITY

Housing is generally considered affordable if it consumes no more than 30% of a household's gross income. This type of definition is useful because it provides an objective measure, but it fails to take into account housing quality. Economically disadvantaged families are often forced to crowd into dilapidated rental units to reduce their housing costs. While technically affordable, such conditions do not adequately serve a household's needs and can contribute to a number of negative social outcomes. A growing body of empirical research confirms this expectation. Academic achievement, criminal behavior, and health status all appear to be influenced directly and indirectly by housing quality.

HOUSING QUALITY AND EDUCATION

There are several causal mechanisms through which housing quality can affect the academic outcomes of children. One of the most commonly cited mechanisms is crowding. Residential crowding appears to encourage social withdrawal among children, a reduction in parental responsiveness among adults, and greater parent-child conflict (Evans and McCoy, 1998; Maxwell, 2003; Evans and Wener, 2006). All of these behaviors have a negative impact on education. Parents living in crowded environments have additionally been found to speak to their children in less complex ways, which may result in delayed cognitive development (Evans, Maxwell, and Hart, 1999).

Another variable closely related to housing quality is noise. Students exposed to high levels of noise pollution at school or at home experience more behavioral problems, higher levels of stress, and impaired cognitive performance when compared to peers benefitting from quieter environments (Evans, 2006). The most profound effects have been observed in studies focusing on noise generated by airports and busy roads, although day-to-day noise has also been found to create stress for children and reduce motivation levels (Evans, Hygge, and Bullinger, 1995; Evans, Lercher, and Meis,

2001; Haines et al., 2001). The risk is potentially significant for low-income families because reasonably priced housing is often located in noisy areas that have proven unattractive for higher-end residential development. Crowding may compound the problem by producing high noise levels within a home (Evans et al., 2006).

In addition to crowding and noise, at least two studies suggest that the overall physical condition of a house affects a child's potential for academic success. Evans, Saltzman, and Cooperman (2001) examined the relationship between housing quality, behavioral problems, and task persistence among low- and moderate-income third graders. An index comprised of 88 housing characteristics was created to measure the overall quality of the house in which a child resided, while the number of times a child attempted to solve an unsolvable puzzle was used as a proxy for task persistence. Parental responses to a series of questions related to a child's conduct were used to create an index measuring behavioral problems. Housing quality was positively related to task persistence and negatively related to behavioral problems after controlling for socioeconomic variables and gender.

Gifford and Lacombe (2006) also used an index measuring overall housing quality to estimate housing's impact on the socio-emotional health of children in Canada. Surveys were completed by one parent and one teacher for each child participating in the study to obtain a measure of the emotional health. Overall housing quality was not found to affect teacher-reported emotional health, but it did have a significant negative effect on parent-reported emotional health. The magnitude of the impact was moderated by socioeconomic and demographic variables. These measures of socio-emotional health contribute to academic outcomes and are anticipated to link housing quality to education.

HOUSING QUALITY AND CRIME

The social capital and criminology literatures document a connection between the physical characteristics of housing and crime. Different residential structures appear capable of encouraging or discouraging deviant behavior. For example, large multifamily apartment buildings may encourage criminal activity if residents do not have close relationships with their neighbors or an incentive to exert guardianship over common areas. Population density within a housing complex may also stimulate criminal activity by reducing the probability of criminals being caught. Alternatively, high rates of homeownership and low rates of residential mobility within neighborhoods comprised predominately of single-family homes may discourage crime. Measuring these relationships is difficult because families living in multifamily housing may have different characteristics than those living in single-family homes. At least five empirical studies address the issue.

A city-level analysis conducted by Glaeser and Sacerdote (2000) found no connection between burglary and multifamily housing. Street crimes such as robberies and auto theft, on the other hand, were much more prevalent near multifamily residential structures. Predicted levels of victimization were 6.7% higher for those living in apartment buildings relative to those residing in single-family detached dwellings. In

a study of crime rates in cities, Glaeser and Sacerdote (1999) concluded that the low probability of being arrested in densely populated areas explained approximately one-fifth of urban crime. Although no direct tests of the effects of population density in large apartment buildings on crime were conducted, the logic may be applicable to densely populated housing.

Empirical studies have also considered the relationship between property maintenance and criminal behavior. The findings are important because signs of abandonment or physical deterioration can create favorable conditions for socially unacceptable behavior. Brown, Perkins, and Brown (2004) studied the direct effect of residential decay on crime rates. Poor roof conditions, peeling paint, inadequate yard maintenance, litter, and graffiti were all used as proxies for visible decay. After controlling for earlier levels of crime, physical decay was linked to unexpected increases in crime rates. Research conducted by Sampson and Raudenbush (1999) suggests that some of the observed relationship between property maintenance and crime may be spurious because neighborhood characteristics are correlated with housing conditions. Their study found measures of housing maintenance only had a statistically significant effect on robberies after controlling for neighborhood quality. Other types of crime, including burglary and homicide, were not associated with property maintenance. The authors did, however, warn of a cascading mechanism that may ultimately stimulate crime in areas with deteriorating housing conditions.

HOUSING QUALITY AND HEALTHCARE

The relationship between housing quality and health status is well documented. Worn structures may pose a threat of injury. Exposure to toxic substances, moisture, and mold may result in respiratory infection or other illnesses. Poor maintenance may have a negative impact on psychological well-being. Existing research supports each of these propositions.

Poorly maintained housing increases the likelihood of injuries, especially burns and falls (Krieger and Higgins, 2002). A study conducted in Chicago found unprotected radiators and pipes were directly related to the risk of injury among children in public housing (Quinlan, 1996). An inspection of two multifamily buildings found that 79% of all units had problems such as missing radiator covers and insufficient insulation around radiator pipes. Another study by Shenassa, Stubbendick, and Brown (2004) found that concentrated rental housing and older housing was associated with higher rates of nonfatal pediatric injury. The risk of falling and being burned increased by 17% and 34%, respectively, with every 10% increase in housing built before 1950 in the neighborhood. The results of the hierarchical analyses demonstrated that housing conditions and pediatric injury were related to neighborhood characteristics.

Hynes et al. (2003) used survey data collected in two neighborhoods in Massachusetts to examine the relationship between housing quality and health conditions unrelated to injury. The study found overheating, as well as higher levels of moisture and mold, increased the prevalence of sore throats among local residents. Those living in units with mold and smoke were more likely to cough. Overheating predicted both dizziness

and tiredness among dwellers, while moisture and mold had the most detrimental effects on children's health. Andriessen, Brunekreef, and Roemer (1998) and Gent et al. (2002) also found home moisture increased reports of coughing and upper respiratory symptoms in children after controlling for other health-related factors.

Lead exposure is another health problem closely related to housing quality. It can contribute to reproductive system damage in adults, as well as mental and physical developmental problems in children (Griffith, Doyle, Wheeler, and Johnson, 1998). Empirical studies have found that lead exposure, primarily from paint and pipes, can cause neurological damage in children under the age of six and increased rates of infant mortality (Krieger and Higgins, 2002; Troesken, 2008). Research conducted by Griffith, Doyle, Wheeler, and Johnson (1998) found home values and population density predicted lead levels in children's blood, supporting the supposition that older housing may increase lead exposure.

The effects of housing quality have also been traced to psychological well-being. Evans, Wells, and Moch (2003) reviewed 37 studies conducted between 1962 and 2001. All of them found positive associations between housing and psychological health. More recent studies conducted in Europe and the U.S. found dampness, mold, and other measures of housing quality were related to depression in both children and the elderly, although the relationship was mitigated by perceptions of control over housing (Evans, Saltzman, and Cooperman, 2001; Evans and Kantrowitz, 2002; Shenassa, Liebhaber, Braubach, and Brown, 2007). These studies, in conjunction with those examining physical ailments, suggest housing environment has a strong impact on residents.

Overall, the studies summarized in this section indicate that the affordable housing debate needs to be expanded to acknowledge housing quality. Dilapidated physical structures, exposure to criminal activity, and overcrowded conditions all create significant physical and psychological threats for residents, even if the price of a residential unit falls within acceptable guidelines. Improving the quality of the affordable housing stock may therefore be an effective way to promote a number of social policy goals.

HOMELESSNESS

The social consequences of homelessness are extensive and a considerable amount of research has been devoted to the topic. Each of the studies summarized below demonstrates a clear link between chronic and temporary homelessness, education, crime, and healthcare. The findings suggest this severe form of housing deprivation affects children and adults negatively.

HOMELESSNESS AND EDUCATION

Comparative studies by Wood, Valdez, Hayashi, and Shen (1990) and Zima, Wells, and Freeman (1994), among others, suggest homeless children are far more likely to suffer from behavioral disorders and academic delays than their permanently housed

peers. It is, however, difficult to determine if these problems are attributable to homelessness or other poverty-related issues correlated with housing status. A growing body of empirical research attempts to answer the question using multivariate statistical analysis. Buckner (2008) offers a comprehensive overview of the studies completed over the last two decades, three of which are summarized below. The results indicate that homelessness can hinder the academic success of children in a number of ways.

Rubin et al. (1996) compared the standardized test scores received by a group of homeless children to those received by a control group of permanently housed children selected from the same public school classrooms. Homeless children scored significantly lower in several academic areas despite similar levels of verbal and nonverbal intelligence. Approximately 54% to 75% of the homeless students were below grade level, as compared to 22% to 50% of the permanently housed students. Homeless children were also nearly five times more likely to have repeated a grade.

Buckner, Bassuk, and Weinreb (2001) went a step further by measuring the impact of residential mobility, school mobility, and housing status on the educational outcomes of low-income students in Massachusetts. Standardized test scores received by 80 homeless children were compared to those received by a group of 148 permanently housed children with similar socioeconomic profiles. All were single-parent families. A series of control variables were included in the statistical model to capture the effects of social support networks, life stressors, and socioeconomic characteristics anticipated to influence academic achievement. School mobility, measured in terms of how many schools a child attended in the past year, was found to have a negative impact on test scores. Homelessness and residential mobility, on the other hand, did not have a statistically significant effect. Similar rates of absenteeism were reported for the test and control groups, leading the authors to conclude that school attendance and mobility had a greater impact on academic success than housing status.

Rafferty, Shinn, and Weitzman (2004) used data collected by the New York City Department of Education to analyze the long-term effects of homelessness. The longitudinal study took advantage of standardized test scores available for 46 students before and after entering a temporary shelter. A control group of 87 children housed during the study period was selected from the public assistance roles. Approximately one year after entering a temporary shelter, the standardized reading scores of formerly homeless children were estimated to be 6% lower than their housed peers, controlling for prior levels of academic achievement. The observed difference in reading scores dissipated after five years. While no statistically significant relationship was found between standardized mathematics scores and homelessness, interviews conducted to augment the dataset uncovered other negative educational outcomes. Formerly homeless children attended more schools, had lower academic ambitions, reported less positive educational experiences, and were twice as likely to have repeated a grade.

The research presented above offers mixed results as to whether homelessness directly affects education. There is, however, little doubt that the absenteeism and school

mobility associated with homelessness have a detrimental impact on academic outcomes. Public school systems struggle to address these problems because diagnosing the special needs of highly mobile students is extraordinarily difficult. In fact, studies by Zima, Bussing, Forness, and Benjamin (1997) and Buckner, Bassuk, and Weinreb (2001) have found as many as half of the children residing in temporary shelters require special education services, while less than one quarter actually receive it. Social programs targeting the homeless population must therefore focus not only on providing children with shelter, but also on better addressing their educational needs.

HOMELESSNESS AND CRIME

There is a widespread belief that chronically homeless people are criminally inclined (Snow, Baker, and Anderson, 1989). It remains unclear whether this assertion is true, but there does appear to be a relationship between homelessness and criminal activity (Roman and Travis, 2006). Existing research indicates 9% to 12% of state prisoners were homeless at the time of arrest or homeless upon release (Ditton, 1999; Hughes, Wilson, and Beck, 2001). Other studies suggest more than 20% of the chronically homeless population has served time in prison or been convicted of a felony (Gelberg, Linn, and Leake, 1988; Schlay and Rossi, 1992). Homeless people also experience much higher recidivism rates than other ex-convicts (Metraux and Culhane, 2004). Each of these observations provides some evidence of a causal link between homelessness and deviant behavior.

A separate stream of research focuses on the relationship between homelessness, crime, and mental illness. These studies show homelessness is an important factor contributing to the probability of incarceration for those with psychological problems (Lamb and Weinberger, 2001). Survey research indicates mentally ill offenders are more likely to be homeless before arrest than other inmates (McCarthy and Hagan, 1991; Ditton, 1999). After controlling for demographic and diagnostic factors, homelessness has also been found to greatly increase violent crime among the mentally ill (Martell, 1991).

Another avenue for homelessness to directly affect criminal activity is through adverse effects on children. If homelessness makes children more aggressive, one might expect later problems with delinquent and criminal behavior. Molnar, Rath, and Klein (1991) found evidence of withdrawal, disobedience, and destructive behavior among homeless children. In another study, 66% of parents reported that their children participated in fights, exhibited restlessness or experienced depression after becoming homeless (Citizen's Committee for Children, 1988).

HOMELESSNESS AND HEALTHCARE

Homelessness is a health hazard because it limits access to resources capable of improving mental and physical well-being (Singer, 2003). The detrimental effects can be severe for both adults and children. Numerous empirical studies reveal poor health status among homeless adults. Lewis, Andersen, and Gelberg (2003) analyzed

homeless women in Los Angeles and found that 37% reported unmet medical needs. The figure was 16% higher than the same indicator in a national sample of working adults (Bloom, Simpson, Cohen, and Parsons, 1997). Flick (2007) found respiratory issues, digestive tract problems, coronary heart disease, skin disease, and injuries all occurred more frequently in the homeless population. In a large cross-sectional study of the homeless in San Francisco, White et al. (1997) concluded that homeless individuals were more likely to report poor or fair health status than individuals permanently housed. Homeless people were additionally more likely to suffer from high blood pressure, diabetes, and asthma.

The health status of homeless children also appears to be worse than that of their permanently housed peers. Poor nutrition, lack of hygiene, and emotional stress are the hypothesized causal mechanisms. In a review of existing research, Buckner (2008) concluded that poverty and homelessness have consistently been linked to detrimental health outcomes. These health problems may include asthma and ear infections, as well as overall poor health and physical disorders (Fox and Roth, 1989; Rafferty, 1991). Homelessness even contributes to weak health status before a child is born because homeless mothers experience greater incidents of preterm delivery and low birth weight babies (Little et al., 2005).

Homelessness is also a contributing factor to poor mental health among adults and children. Goodman, Saxe, and Harvey (1991) argued that homelessness directly increases the risk of emotional disorders through processes such as psychological trauma and learned helplessness. The detrimental effects can be short or long term. Empirical studies suggest that as many as 51% of some homeless populations suffer from diagnosable psychological problems (Gory, Ritchey, and Mullis, 1990). The effect of homelessness on the mental health of children is somewhat more ambiguous. Many studies demonstrate that homeless children have a greater probability of emotional disorders (Fox, Barnett, Davies, and Bird, 1990; Buckner and Bassuk, 1997). However, these psychological problems may be caused by other stressors associated with homelessness rather than homelessness itself. A study of preschool children conducted by Bassuk et al. (1997) found that poor parenting practices and a history of physical abuse were significant predictors of poor psychological outcomes, while homelessness and residential instability were insignificant. Harpaz-Rotem, Rosenheck, and Desai (2006) also reported no significant association between housing status and emotional problems.

Disentangling the effects of poverty and homelessness is a daunting challenge, but the existing research offers relatively consistent evidence that this form of housing deprivation can result in negative health outcomes, as well as encourage criminal activity and impinge upon academic success. These social problems are important to recognize because they have proven to be extremely costly to remedy. The fiscal burden of chronic homelessness in particular has encouraged many communities to increase their efforts to address the issue.

CONCLUSION

The literature review presented in this paper clearly demonstrates that housing affordability has multiple dimensions, all of which are related to the educational

attainment of children, community health, and crime. These linkages are most apparent at the neighborhood level, where environmental factors have consistently been found to impact the wellbeing of local residents. Children exposed to a positive socialization process, better institutional resources, and heightened social control mechanisms often experience higher success in the classroom and engage in less deviant behavior. Furthermore, the health status of both children and adults appears to improve when families are exposed to fewer stressors at the neighborhood level that negatively affect their physical and psychological wellbeing. Policymakers must be cognizant of these benefits and pursue affordable housing strategies that reduce concentrations of poverty. This can potentially be achieved through inclusionary zoning, scattered site public housing programs or simply a greater willingness on the part of elected officials to provide regulatory approvals for affordable housing projects located in affluent areas. At the same time, support systems must be put in place to ensure social capital is not lost when low- and moderate-income families move from one area to another because mobility appears to have a significant impact on children.

Efforts to increase the supply of geographically disbursed affordable housing should focus on both rental and owner-occupied options because homeownership has been found to generate significant social benefits in some instances. These outcomes are attributed to reduced residential mobility and heightened levels of civic involvement among homeowners, as well as improved parenting skills and greater economic incentives to monitor activities that go on within a neighborhood. All of these causal mechanisms require additional study, but the existing research provides convincing evidence that homeownership can generate positive social benefits for families with the financial wherewithal to maintain a home. These advantages of homeownership must, however, be evaluated in conjunction with the potential effects of failing as a homeowner. An emerging body of research indicates that the foreclosure process can disrupt the education of children, trigger depression among adults, and increase criminal activity by destabilizing neighborhoods. All of these concerns are significant in light of the number of foreclosures brought on by the subprime crisis. Policymakers must therefore keep sight of the benefits of both affordable rental and owner-occupied housing.

Likewise, both project-based and tenant-based affordable housing programs must be promoted to ensure a wide range of opportunities are available for families with different needs. Several empirical studies refute the negative stereotypes commonly associated with public housing projects and suggest they offer an attractive alternative for many families when they are located in stable neighborhoods. The academic outcomes and health status of children residing in public housing have been found to be similar to those of economically disadvantaged children receiving other types of housing assistance. Existing studies do show crime and victimization rates are often higher in areas surrounding public housing projects, but it is difficult to determine if these outcomes are caused by public housing or simply attributable to the types of neighborhoods where large public housing projects are often located. Teasing out the nature of this relationship through further study may help overcome neighborhood opposition to the development of public housing projects in areas with higher socioeconomic status.

Irrespective of whether project-based aid or tenant-based aid is provided by a housing program, attention must be given to housing quality to make sure this dimension of affordability is not overlooked. Housing deemed affordable by conventional standards may still produce negative social outcomes if residents are exposed to excessive noise and crowding. Existing research shows that such conditions contribute to delayed cognitive development and social withdrawal among children, as well as depression and anxiety among adults. These medical conditions may occur in conjunction with injuries, respiratory problems, and other physical ailments more commonly associated with poor housing quality. Physical deterioration may also increase the probability of a home being burglarized due to visible signs of low guardianship, although the existing research offers inconsistent results. Policymakers must take all of these concerns into account when designing robust affordable housing initiatives.

Finally, the studies summarized in this paper highlight the potentially devastating effects of homelessness on families. Homelessness has been found to affect the academic achievement of children by increasing stress levels, encouraging absenteeism, and forcing students to change schools. Negative health outcomes for homeless children and adults have additionally been attributed to stress, as well as the inaccessibility of medical services and nutritious food. These problems appear to be compounded by high levels of criminal activity among homeless populations that are linked to mental health issues resulting from housing deprivation. Comprehensive programs designed to prevent both temporary and permanent homelessness are necessary to address these concerns.

From the perspective of the private sector, real estate professionals must take on a more active role in addressing the social problems associated with an inadequate supply of affordable housing or run the risk of having regulations imposed upon them that limit the financial viability of residential development. Efforts should be made to incorporate affordable units into market rate projects when possible and public officials should be made aware of the financial costs associated with mixed-income development so appropriate incentives can be put in place to mitigate the burden. Innovative design features and construction methodologies must also be put forth by the residential development community to reduce the negative effects of crowding and noise, improve the overall quality of affordable housing units, and encourage interaction among socioeconomically diverse neighbors. Such features may be incorporated into privately-owned units or suggested for inclusion in public housing projects to promote long-term social benefits. All of these steps potentially have the ability to improve the quality of life within a community and increase its attractiveness for future real estate investment by enhancing educational resources, improving community health, and limiting crime.

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