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Moving to Collective Efficacy: How Inner-City Mobility Impacts Minority and Immigrant Youth Victimization and Violence

Final Summary Overview

April 2020

By Maria João Lobo Antunes, Ph.D. and Eileen M. Ahlin, Ph.D.



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Moving to Collective Efficacy:

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Moving to Collective Efficacy: How Inner-City Mobility Impacts Minority and Immigrant Youth Victimization and Violence

Abstract

Background:

Despite much recent attention devoted to understanding the ramifications of residential mobility, especially negative consequences for youth (Sampson, 2008; Sharkey & Sampson, 2010), there is scant research exploring how inner-city mobility impacts youth violence and victimization among minorities and immigrants. Leaving the city imparts benefits: decreasing deviance and improving youth outcomes. Considering that many are unable to “escape” the city, clarifying what effects, if any, inner-city mobility has is critical. Destination neighborhoods for youth who move in the city are either contextually the same, better, or worse than their original neighborhood. Evidence suggests that immigrant families are more likely to move as are racial minorities. Because of this, we examined the extent to which moving within a city affects minority (racial and ethnic) and immigrant youth experiences, particularly in relation to changes in their neighborhood including collective efficacy; a major characteristic shaping community crime rates and youth violence. This study specifically assesses whether vertical mobility (upward or downward changes in neighborhood context) or horizontal mobility (no changes in neighborhood context) influence youth victimization and violence.

Study Goals:

Our project involved six main goals: (1) identify key characteristics of the destination neighborhoods and those who are moving within the city of Chicago; (2) evaluate predictors of inner-city mobility; (3) examine the effects of inner-city migration on family management; (4) understand how inner-city mobility of minority and immigrant youth affects engagement in violence and victimization and whether vertical or horizontal mobility with respect to key neighborhood factors differentially influences minority and immigrant youth outcomes; (5) assess whether vertical or horizontal mobility differentially influences minority and immigrant youth outcomes; and (6) assess who fares better – youth who vertically move (to better or worse neighborhoods), those who do not move, or those who horizontally move (to equivalent neighborhoods).

Methods:

This research used data from the Project on Human Development in Chicago Neighborhoods (PHDCN). Data were drawn from both the Community Survey (N=97) and Longitudinal Cohort Study (N=1,611). The rich data from the Community Survey (1994-1995) affords the opportunity to examine how community characteristics like collective efficacy, disorder, and indicators of social disorganization can impact a variety of youth behaviors among at-risk youth over time between Wave 1 and Wave 2 and Wave 2 and Wave 3. The Longitudinal Cohort Study (1994-1997; 1997-2000; 2000-2002) provides data on youth characteristics and experiences with violence, and ecological information on family and peer relationships. We focus primarily on three of the seven youth cohorts from the Longitudinal Cohort Study: 9, 12, and 15. The ages of

these youth during the study period placed them at increased risk for exposure to community violence and place them in range for aging into, peaking, or aging out of crime and delinquency.

The Longitudinal Cohort Study respondents are nested in neighborhood clusters, and multilevel models were employed to assess the outcomes victimization and violence within neighborhood context. We employed a series of hierarchical generalized linear models using HLM 7 in addition to running several analyses of variance (ANOVA) which permitted examinations between groups of interest.

Results:

About 13% of youth moved within the city either between Wave 1 and Wave 2 or Wave 2 and Wave 3. Youth were more likely to move horizontally in terms of neighborhood poverty and residential instability. About half of movers relocated to communities higher in collective efficacy and lower in disorder; such upward mobility was particularly evident among first- and second-generation immigrants. Peer deviance strongly predicted youth violence among non-movers only. A negative relationship between unstructured socializing and youth violence among inner-city movers is perhaps driven by quality of peer relationships. Inner-city mobility can have protective effects for immigrant youth who engage in slightly less violence than non-movers. Families who are unable, or do not wish to move may rely on more restrictive family management strategies to protect their children from unfettered access to communities. For example, higher levels of neighborhood disorder increased the chances that a parent would prevent their child from unsupervised time in the neighborhood.

Conclusions:

Research has shown that compared to White youth, minorities not only tend to be exposed to higher levels of community violence but also engage in more violence whereas immigrant youth are more likely to experience but not engage in violence. Therefore, this study of inner-city residential mobility demonstrates how neighborhood contexts influence these behaviors and further explain much discussed differences in minority and immigrant youth outcomes.

Specifically:

Goal 1: Although only 12.6% of our sample moved within the city, the tendency was for the families to move either horizontally or vertically upward. Horizontal mobility was more prominent for the neighborhood structural characteristics. With respect to neighborhood disorder, families moved away from disorder and toward collective efficacy. Upward mobility was significant for minority and immigrant families.

Goal 2: Minority and immigrant youth are more likely to move within the city than Whites. Low conditions of neighborhood collective efficacy predicted inner-city mobility as did youth exposure to community violence.

Goal 3: Inner-city mobility had an effect on supervision only, with movers experiencing greater supervision. Collective efficacy did not predict family management strategies. The most consistent predictors of parenting were prior parenting strategies.

Goal 4: Restrictiveness was the most important family management practice as it served as a protective factor against both exposure to and engagement in violence, even after controlling for inner-city migration. Peer relationships were criminogenic in terms of exposure and perpetration of violence. Collective efficacy failed to predict exposure to community violence and youth engagement in violence. Interestingly, neighborhood disorder was a risk factor for exposure to community violence though the results revealed a different relationship with youth violence. Youth living in highly disordered neighborhoods committed less violence.

Goal 5: The analyses revealed that Hispanic youth who moved experienced a decline in violent behavior compared to those who remained in their original community. For Black youth, moving, even if only within the confines of Chicago, acted as a protective factor. Inner-city mobility mattered, especially for immigrant youth as youth in this group reported a significant decrease in violent behavior, post-move. The protective effect was particularly pronounced for first- and second-generation immigrant youth.

Goal 6: Disorder had no effect on the movers' violent behavior but functioned as a protective factor for the non-movers, likely because parents sought to employ more restrictive family management techniques. Regardless of mobility, the criminogenic effects of peer deviance persisted, and predicted greater expected involvement in violence. Findings also show that community victimization was more detrimental to the non-movers, amplifying youth violence. Inner-city mobility provided the greatest benefit for immigrant youth who experienced notable reductions in both exposure to and engagement in violence.

Moving to Collective Efficacy: How Inner-City Mobility Impacts Minority and Immigrant Youth Victimization and Violence

INTRODUCTION

Background

Residential mobility can have many positive effects on children, youth, and adults including reduction in victimization, criminal involvement, and receipt of welfare; increased employment and adult income; better health; and improved parenting practices (Katz et al., 2001; Leventhal & Brooks-Gunn, 2000; Ludwig et al., 2012; Morris et al., 2018; Rosenbaum, 1994; Sharkey, 2012). Residential mobility may also be linked to detrimental outcomes including adverse mental health and increased exposure to community violence and violent victimization and involvement in violent behavior (Chyn, 2016; Haynie & South, 2005; Mok et al., 2016; Sharkey & Sampson, 2010). Detrimental changes in peer relationships may also occur when youth move neighborhoods as mobile youth are more likely than their residentially stable peers to form friendships with deviant peers (Haynie et al., 2006). The effects of residential mobility may be contextualized for those who remain within the confines of the city compared to those who leave urban areas. For example, according to Sharkey and Sampson (2010) youth who moved outside the city of Chicago experienced reductions in violent behavior and exposure to violence compared to youth who moved within the city, suggesting that inner-city mobility at least for the city of Chicago, may have damaging effects on youth outcomes.

Despite the depth and breadth of the literature on residential mobility, much of which focuses on reasons why families move with less emphasis on the impact of the move, there is a lack of knowledge regarding the effects of residential mobility on a variety of deviant behaviors and experiences among minority and immigrant youth. Furthermore, many residential mobility studies focus on the role of housing voucher programs such as Moving-to-Opportunity (MTO)

and The Gautreaux Program and the movement of residents from urban environments to the suburbs (Chyn, 2016; see Johnson et al., 2002 for a review). There is a dearth of research examining the more common self-propelled inner-city migration – which, at times, is the only available housing opportunity especially among the economically disadvantaged (see Quigley & Weinberg, 1977). Many housing programs aim to support vertical, particularly upward, mobility of residents. The caveat is that less is known about horizontal mobility when residents move to similarly situated neighborhoods and whether outcomes change or remain the same.

Focus of the Current Study

Studies have tackled the important questions of how inner-city mobility changes risks for youth. But, absent from the literature is an understanding of how key neighborhood characteristics impact youth from racial/ethnic minority groups or immigrant families and how vertical (upward or downward) or horizontal (no change) inner-city moves influence youth involvement in violence, exposure to violence, and association with deviant peers. The goal of residential mobility programs such as Moving to Opportunity and The Gautreaux Program is vertical, or upward mobility. Such voucher initiatives seek to improve the lives of residents by placing them in “better” neighborhoods; neighborhoods defined by strong social ties, long-standing tenure of residents, and low levels of disorder. Research demonstrates that these improved neighborhood conditions translate into reductions in violence. We included a measure of upward mobility, while also acknowledging that some moves place residents in neighborhoods with lower levels of these good neighborhood indicators, while other moves are horizontal and the quality of the old and new neighborhood is the same. Moreover, the literature has emphasized how neighborhood characteristics can shape parenting practices (Elliott et al., 2006; Furstenberg et al., 1999; Lobo Antunes & Ahlin, 2014, 2015) and therefore influence

youth outcomes. Nevertheless, not much has been done to examine the extent to which moving within a city affects both youth outcomes and parenting practices. We elaborated on the extant research by examining whether residential mobility alters family management styles.

Inner-city residential mobility among minority and immigrant youth is important for a variety of reasons. First, minorities and immigrants have differential risks of engagement in violence, exposure to violence, and association with deviant peers compared to their White counterparts with substantial differences for immigrant youth, particularly related to generational immigration status (Bersani, 2014; Crouch et al., 2000; Gibson & Miller, 2010; Sampson et al., 2005; Zimmerman & Messner, 2013). Second, neighborhood context differentially impacts outcomes for various racial and ethnic groups (Lobo Antunes & Ahlin, 2015; Sampson & Sharkey, 2008). For example, studies have shown that parenting decisions are particularly susceptible to neighborhood influences as are choices regarding supervision practices and the establishment of friendship ties (Elliott et al., 2006; Furstenberg et al., 1999; Lobo Antunes, 2012). Thirdly, there is a steady increase in the number of minorities in the United States with continued growth projected through the coming decades and research suggests that some minority and immigrant groups tend to move short distances more frequently; especially African American and first-generation immigrant families who are financially constrained and limited by language barriers (see Iceland & Scopilliti, 2008; Sharkey & Sampson, 2010; U.S. Census Bureau, 2010). In fact, Sharkey and Sampson (2010) report that African American and Latino youth are more likely to move within the city of Chicago, compared to White youth, and movers are over two times more likely to stay within the city heightening the need for research on the effects of residential mobility among these youths. Although research suggests that Hispanics are becoming increasingly segregated from Whites and Blacks there is little scholarly work on the

impact of Latino segregation and residential mobility on youth outcomes (Lichter et al., 2015; Steil et al., 2015).

Building on the work initiated by the Chicago School of Sociology and evolution of studies on human development and behavior in context, we embrace an ecological systems theory perspective for the current study (see Bronfenbrenner, 1986). Contextual influences frame youth experiences with the outcomes of interest in this study. For example, mesosystem variables such as community context can significantly shape youth outcomes and new neighborhoods can have a substantial influence on youth behavior as the effects of a move are affected by the context of the destination. The other layers of the ecological system most relevant to this research include family and peers (microsystem), and the individual youth and their demographic and personality characteristics at the nucleus. Even though research demonstrates the power of key neighborhood characteristics on youth outcomes, less is known about how indicators of neighborhood context such as collective efficacy influences behavioral outcomes among minority and immigrant youth. Furthermore, additional inquiry is needed to assess how moving to a “better” or “worse” neighborhood influence youth and parenting practices.

These contextual factors are especially important considering Shaw and McKay’s (1942) argument that youth adopt the values of the neighborhood to which they move as evidenced by Sharkey and Sampson (2010) who report that youth who move outside of Chicago engage in less violence. Similarly, Parente and Mahoney (2009) found that males who move to a high-crime neighborhood become more aggressive, again clearly portraying some of the behavioral shifts that may ensue following a residential move. In relation to disorder, findings are mixed regarding how such neighborhood conditions affect youth behaviors, but recent reports suggest neighborhood disorder not only impacts negative youth outcomes like delinquency but that

parents adopt more restrictive family management practices when faced with such damaging environmental conditions. Similarly, researchers have yet to agree on the macro and micro-level implications of neighborhood collective efficacy, but some have demonstrated that higher levels of collective efficacy are associated with lower levels of nonlethal intimate partner violence, prevalence of carrying concealed firearms, and arrest (Browning, 2002; Kirk, 2009; Molnar, Miller, Azrael, & Buka, 2004).

Family management practices are especially relevant for youth living in disadvantaged neighborhoods (Elliott et al., 2006; Furstenberg et al., 1999; Lobo Antunes & Ahlin, 2014). In fact, Elliott et al. (2006) argue that “family variables are the dominant predictors of [adolescent] success...” (p. 247). Some findings suggest, in essence, youth whose parents adopt less restrictive/protective family management strategies are more likely to engage in deviance (Furstenberg et al., 1999; Herrenkohl et al., 2003; Lobo Antunes & Ahlin, 2014; Roche & Leventhal, 2009; Tobler et al., 2009), not necessarily as a consequence of the moves themselves but as a potential product of the new environmental conditions. Several investigations report that less restrictive/protective parenting practices impact youth violence, exposure to violence, and association with deviant peers (Ahlin & Lobo Antunes, 2015; Lobo Antunes & Ahlin, 2014; Lobo Antunes, 2012). Parents in neighborhoods perceived as less disordered, for example, are more likely to adopt a less protective management style which in turn grants youth the opportunity to engage in deviant activities unsupervised. Examining how family management practices potentially evolve as a function of the attributes of the new neighborhood can clarify recent results shared in the literature as well as inform policy with respect to housing programs and vouchers that have been popularly applied in the past and are resurfacing in the policy arena.

It is also imperative to examine differences in parenting practices by different racial/ethnic groups and immigrant generational statuses. Chao and Kanatsu (2008) report greater use of behavioral controls and monitoring among Hispanic parents, compared to Whites, even when contextual variables are considered. Moreover, variations in family management strategies between Hispanics and Whites are frequently due to cultural differences in parenting styles or values (Hashima & Amato, 1994). For example, Hispanic culture emphasizes familismo (importance of family) whereas White families tend to encourage independence (Driscoll, Russell, & Crockett, 2008). Differences in parenting practices and the adoption of family management strategies are also associated with socioeconomic status (Hoff-Ginsberg & Tardif, 1995) and affordability constraints in the provision of afterschool activities and supervision choices. Delinquent behavior and experiences with violence in the community, are much more likely to occur after school hours (Gottfredson, Gottfredson, & Weisman, 2001). Families who struggle to afford afterschool supervision or care for their children are also the families who most need the support. Another factor, parental stress, can negatively impact family management choices (see Crnic & Low, 2002) fostering harsher responses to youth behavior. Foreign-born parents experienced higher levels of parenting stressors (e.g., depression, autism, child obesity, single parenthood) than native-born parents (Yu & Singh, 2012), and foreign-born Hispanic parents, in particular, endured such parental stresses at a rate that is five times higher than non-Hispanic Whites (Yu & Singh, 2012).

Residential mobility can result in detrimental outcomes such as increased violence. Improving outcomes among minority and immigrant youth should be a primary focus of research to uncover ways to address predictors of criminal behavior, exposure to violence, and socialization with deviant peers (a known correlate of youth deviance and delinquency). Inner-

city migration can influence these outcomes directly, or the effect of moving may be mediated by family management strategies which is often contingent on neighborhood contextual factors such as social disorganization, disorder, and collective efficacy. With specific emphasis on minority and immigrant youth, we examined inner-city migration patterns and their effects on youth outcomes and family management practices. For youth, the focus rests primarily on engagement in and exposure to violence and association with deviant peers. We also examined family management strategies and how these parenting practices changed across moves and are shaped by neighborhood characteristics (Furstenberg et al., 1999; Herrenkohl et al., 2003; Tobler et al., 2009). We explored whether upward or downward mobility in terms of collective efficacy, a predictor of both individual-level crime and deviance and macro-level crime rates, affects youth negative outcomes (Browning, 2002; Kirk, 2009; Molnar et al., 2004; Sampson et al., 1997). Additionally, we investigated if family management strategies adapted to changes in collective efficacy and other neighborhood characteristics; the data afforded an opportunity to evaluate influences of parenting practices in mediating the relationship between neighborhoods and youth outcomes. Social disorganization theory, long concerned with residential stability of neighborhoods, added to this investigation by considering the importance of place on youth delinquency (Shaw & McKay, 1942).

RESEARCH OBJECTIVES

Sharkey and Sampson (2010) report that youth who remained in the city of Chicago versus those who moved outside the city engaged in more violence, and experienced greater victimization and exposure to violence. To build on Sharkey and Sampson's contribution, we emphasized a comparison of movers and non-movers while controlling for racial/ethnic and immigrant status distinctions. This focus is necessary because there is evidence indicating

substantial differences in outcomes between youth in various racial and ethnic groups as well as immigrant and non-immigrant youth.

Our project involved six main goals: (1) identify key characteristics of the destination neighborhoods and those who are moving within the city of Chicago; (2) evaluate predictors of inner-city mobility; (3) examine the effects of inner-city migration on family management; (4) understand how inner-city mobility of minority and immigrant youth affects engagement in violence and victimization and whether vertical or horizontal mobility with respect to key neighborhood factors differentially influences minority and immigrant youth outcomes; (5) assess whether vertical or horizontal mobility differentially influences minority and immigrant youth outcomes; and (6) assess who fares better – youth who vertically move (to better or worse neighborhoods), those who do not move, or those who horizontally move (to equivalent neighborhoods).

STUDY DESIGN AND METHODOLOGY

Project on Human Development in Chicago Neighborhoods

We examined the Community Survey and Longitudinal Cohort Study from the Project on Human Development in Chicago Neighborhoods (PHDCN). The PHDCN used an interdisciplinary approach to gather data to examine causal pathways of involvement in prosocial and antisocial behaviors and the influence of neighborhood context on these behaviors. The PHDCN integrated neighborhood level surveys with individual-level surveys of youth and their primary caregivers and as such the data were very well-suited to the current investigation. Firstly, Chicago is a large city with a racially and ethnically diverse population, including a large proportion of Latino youth and immigrants. The sampling procedures used to recruit participants was based on the racial/ethnic and socioeconomic composition of the neighborhood clusters (NCs). This diversity in the study sample allowed for the investigation of minority and

immigrant differences in the outcomes; acknowledging there is some overlap in these two categorizations. Secondly, the PHDCN data set had a wide range of variables that were applicable to the study's goals, including violent behaviors, exposure to violence, peer relationships, collective efficacy, indicators of social disorganization (residential mobility, population heterogeneity, and poverty), disorder, and family management strategies adopted by parents. Data for these variables were gathered at various time points across three waves of data collection allowing for tests controlling for temporal ordering where the predictor variable precedes the outcome. Thirdly, the data included critical information regarding mobility during the Longitudinal Cohort Study data collection period. We were therefore able to determine inner-city mobility patterns all the way from Wave 1 to Wave 3. Finally, the multilevel, nested nature of the data permitted us to not only examine youth behaviors and outcomes within the neighborhood but across neighborhoods allowing a broader analysis of the effects of inner-city mobility on minority and immigrant youth.

Community Survey

The Community Survey, conducted between 1994 and 1995, was a cross-sectional investigation of the perceptions of residents living in Chicago. The Community Survey consisted of 8,782 household interviews of adult residents (18 and older) and participants were identified by sampling residents living in the city's 847 census tracts. The census tracts were collapsed into 343 Chicago neighborhood clusters (NC) and each NC contained about 2.3 census tracts and approximately 8,000 residents. The NCs were designed to be "ecologically meaningful" and were constructed using geographically relevant boundaries and first-hand knowledge of the neighborhoods (see Sampson et al., 2002). The NCs were also representative of Chicago's racial/ethnic and social class diversity. After the NCs were constructed, a three-stage sampling

technique was employed, whereby city blocks were first sampled within each NC, residential dwelling units were then sampled within each block, and one adult from each of the sampled dwellings was interviewed. Roughly 25 residents from each NC were interviewed for the CS.

Longitudinal Cohort Study

The Longitudinal Cohort Study (LCS) was a three-wave, multi-cohort, prospective, longitudinal study of child and adolescent development. A stratified probability sampling procedure was employed. From the original 343 NCs developed for the Community Survey, 80 NCs were selected for the Longitudinal Cohort Study and stratified by racial/ethnic and socioeconomic status. Participants were identified via in-person interviews that took place in approximately 40,000 homes. Over 8,000 eligible participants were identified and 6,228 were interviewed for the study, yielding a response rate of 75% at Wave 1. Primary caregivers (a parent, relative, etc.) and where applicable the child/youth, were asked to take part in a series of in-home interviews and assessments. Information was gathered at three different waves. At Wave 2, 16 subjects were deceased and 874 were lost due to attrition resulting in an eligible sample of 5,338. At Wave 3 a further 9 participants were deceased and 1,353 lost due to attrition. The remaining eligible pool of youth was 4,850. Children in the LCS were grouped into one of the seven age cohorts (birth, 3, 6, 9, 12, 15, and 18) where labels reflect the age of youth at Wave 1. The current study used pooled Longitudinal Cohort Study data from three cohorts (9, 12, and 15) collected during Waves 1-3. These cohorts were selected because these youths were aging into, peaking, or aging out of crime and delinquency and protective parenting practices adapt as youth mature. The breadth of cohorts permitted capture of important developmental stages and family management strategies known to influence youth violence. For example, by the third wave cohort 15 youth were beginning a downward trajectory in delinquency so we used these data to study predictors of inner-city mobility because during the final wave these youths were,

on average 18 years of age and most likely less subject to family management practices as their independence from the family unit increased. In terms of cohorts 9 and 12, these youth were examined most extensively because measures were available at every data collection wave, and parenting practices were especially important as these children transitioned from late childhood to mid-adolescence. Characteristics of the eligible and study sample are shown in Table 1 and Figure 1.

Table 1: Descriptive statistics of eligible sample

	Cohort					
	9		12		15	
Age	Mean	S.D.	Mean	S.D.	Mean	S.D.
Wave 1	9.15	.33	12.15	.32	15.15	.31
Wave 2	11.21	.60	14.19	.59	17.23	.63
Wave 3	13.73	.55	16.70	.52	18.80	.57
Race/Ethnicity	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Hispanic	305	43.9	278	39.8	238	40.8
Black	214	30.8	231	33.0	185	31.7
White	97	14.0	92	13.2	95	16.3
Other	79	11.0	98	13.7	65	10.9
Sex	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
Male	382	53.2	357	49.8	294	49.2
Female	336	46.8	360	50.2	303	50.8
Immigrant Status¹	<i>N</i>	%	<i>N</i>	%	<i>N</i>	%
First generation	24	3.4	51	7.1	54	9.2
One-half generation	51	7.2	43	6.0	28	4.7
Second generation	229	32.2	195	27.2	162	27.5
Third generation	407	57.2	427	59.6	346	58.6

Our initial sample was comprised of 2,000 youth across the cohorts of interest but was reduced to 1,611 because of respondent loss and missing values. Attrition analyses were

¹ Immigrant generational status was captured in four binary variables (DiPietro & Cwick, 2015; Zhou, 1997). Youth born outside the United States and who moved after the age of 6 were classified as *first generation*. Those who were foreign-born and moved as infants or before the age of 6 were coded as one and *one-half generation* (or 1.5). *Second generation* youth are those who were born in the United States but have at least one foreign-born parent. Finally, *third+ generation* youth were born in the United States to parents who were also native born.

undertaken with respect to the youth outcomes to ensure there were no significant differences between the retained and eligible sample. Our final pool was uniformly distributed between male (N=792, 49.2%) and female (N=819, 50.8%) participants. The mean age at Wave 1 was 12 years (s.d. = 2.5). Over two-fifths of the sample identified as Hispanic-Latino (N=751, 46.6%) and a little over a third identified as Black (N=548, 34.0%). Close to 60% of the youth were third generation immigrants (N=893) whereas about 30% of youth had at least one foreign-born parent (N=518). A much smaller proportion of the sample were first or one-half generation immigrants (N=101 and N=93, respectively).

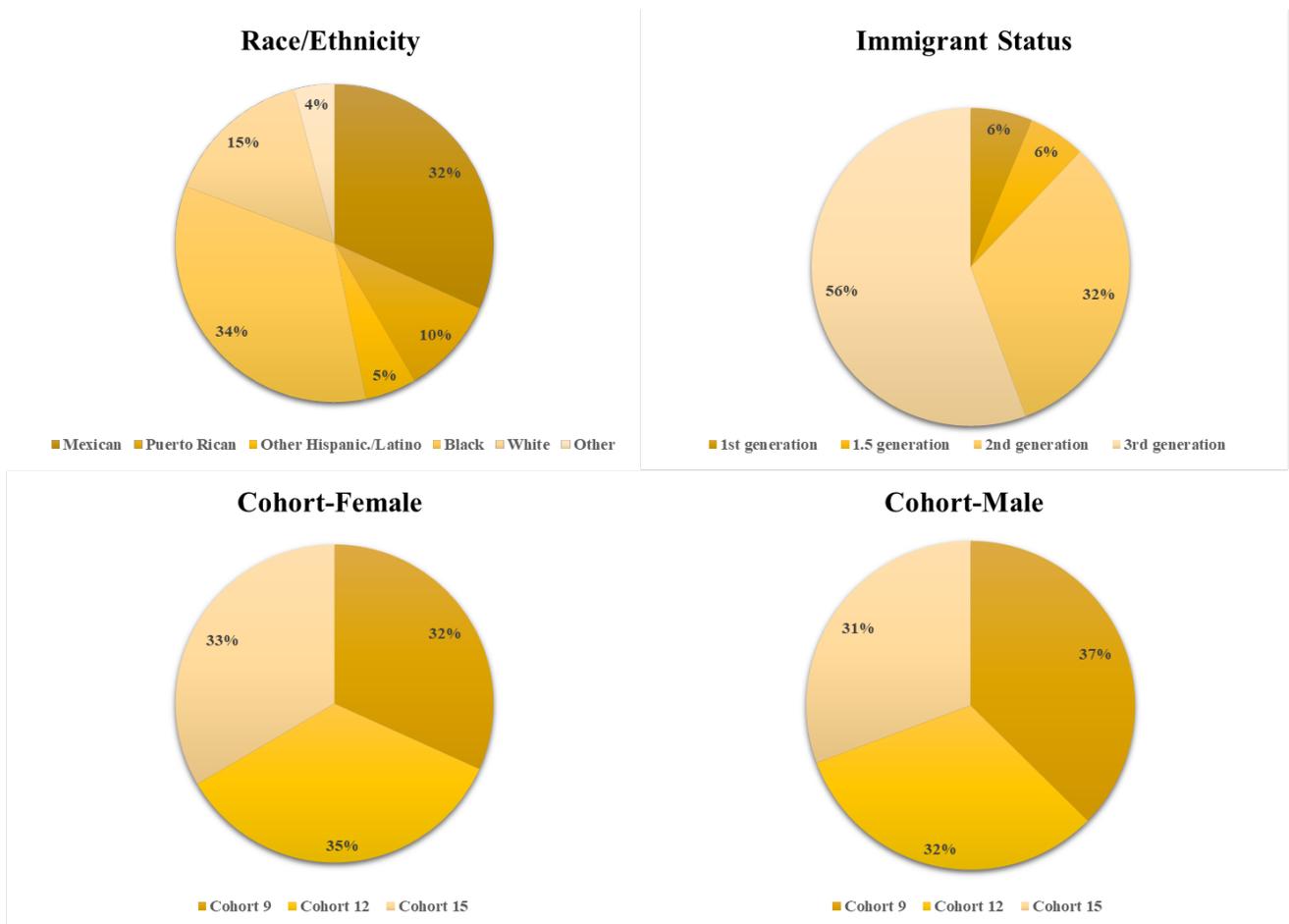


Figure 1- Demographic characteristics of study sample

Table 2: Key variables and their definitions

Variable	Definition
Wave	One of three data collection points
YOUTH DEMOGRAPHICS	
Race	Youth's self-identified racial grouping
Ethnicity	Youth's Hispanic origin
Male	Youth's gender; female is reference group
Immigrant status	Youth's immigrant generational status: first, 1.5, second, or third
Cohort	Youth's cohort at Wave 1 upon entry into the PHDCN study
Self-control	Parental assessment of youth's sensation seeking, persistence in task, inhibitory control, and sensation seeking
Family SES	Standardized principal component of the primary caregiver's maximum education, household income, and socioeconomic index variables
Inner-city mobility	Individuals who moved neighborhoods between Wave 1 and Wave 2 or Wave 2 and Wave 3
NEIGHBORHOOD CHARACTERISTICS	
Residential instability	Residential turnover (same house as in 1985) and reduced homeownership/owner-occupied house
Immigrant concentration	Proportion of residents who are foreign born
Poverty	Proportion of residents below the poverty line, receiving public assistance, unemployed, less than age 18, African American, and female headed households
Collective efficacy	Relationships between neighbors that form the basis for informal social control and social cohesion
Disorder	Resident perceptions of behaviors and situations in the community (e.g., vandalism, litter, drugs)
FAMILY MANAGEMENT STRATEGIES	
Harsh discipline	Variety score indicating whether parent slaps, punches, insults, or hits their child to address behavior problems
Knows peers	Parent knows their child's friends by name/sight
Restrictiveness	Child is not permitted unsupervised access to the neighborhood
Prior family management strategy	Parenting practice used in prior wave
PEER RELATIONSHIPS AND SUPPORT	
Peer deviance/association with deviant peers	8-item additive scale of deviant behavior by youth's peers
Unstructured socializing	7-item scale of youth's informal interactions with peers
Peer social support	Extent to which youth feel and believe they are supported by their friends.
YOUTH VIOLENCE	
Violent youth behavior	12-item variety score of youth involvement in violent behaviors in past 12 months (e.g., shot at someone, snatched purse)
Exposure to violence - community	Youth victimization (direct and indirect) in the community (e.g., youth experienced or witnessed someone being shot)
Exposure to violence – school	Youth victimization (direct and indirect) at school (e.g., youth experienced or witnessed someone being attacked)

A range of variables from the Community Survey and the Longitudinal Cohort Study (Table 2) were analyzed to address the research questions. These variables included measures of

the youth demographics; neighborhood characteristics; family management strategies; peer relationships and support; and youth violence.

Analysis Plan

Before conducting the multilevel analyses, we employed a series of Analyses of Variance models (ANOVAs) and tests of mean differences. We also mapped youth mobility patterns. These first steps laid the initial foundation for the multilevel models. The combination of the Community Survey and Longitudinal Cohort Study datasets placed youth experiences in a community context. At Wave 1 the youth in the PHDCN were nested in 80 neighborhood clusters but by Wave 3 the Longitudinal Cohort Study participants were nested in many more as they moved across Chicago (97 for our study). A multilevel analysis approach was appropriate because many of the assumptions of single-level analyses were violated because the data were grouped. Hierarchical linear modeling (HLM) is one method of multilevel analysis and our choice to employ HLM was based on statistical, empirical, and theoretical grounds (Luke, 2004). Because of their common environment individuals likely shared some characteristics with others who also lived in their neighborhood cluster. The lack of independence in observations can affect the standard errors in statistical models. These correlated error terms violate the assumptions of ordinary least squares regression and must be accounted for statistically; HLM can account for these similarities in standard errors (Raudenbush & Bryk, 2002).

MAIN FINDINGS

Goal 1: Identify key characteristics of the destination neighborhoods and movers

Inner-City Mobility

We begin by simply examining inner-city mobility of the youth (Table 3). This section does not address predictors of mobility, just the patterns by race/ethnicity and immigrant generational status. Mobility was fairly consistent across cohorts. Although not statistically

significant, Table 3 shows that cohort 9 was, compared to the other cohorts, less likely to move. As noted in previous work, Black youth and their families were more likely to experience inner-city mobility, compared to the other racial/ethnic groups.

Table 3: Mobility patterns of study sample

Cohort	<u>Moved Wave 1 to Wave 2</u>						<u>Moved Wave 2 to Wave 3</u>					
	<i>Yes</i>		<i>No</i>		<i>Outside Chicago</i>		<i>Yes</i>		<i>No</i>		<i>Outside Chicago</i>	
	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
9	131	18.2	516	71.9	71	9.9	101	14.1	418	58.2	101	101
12	132	18.4	544	75.9	41	5.7	114	15.9	420	58.6	76	14.1
15	113	18.9	453	75.9	31	5.2	106	14.9	332	55.6	83	13.9
Race	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
Hispanic	217	18.6	887	67.4	65	5.6	172	14.7	699	59.8	133	18.6
Black	210	23.5	617	68.3	68	7.6	183	20.4	482	53.9	109	12.2
White	33	8.1	325	77.3	50	12.3	26	6.4	253	62.0	89	13.8
Other	73	21.0	249	72.7	25	7.2	57	16.4	194	55.9	45	12.7
Immigrant Status	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>	<i>N</i>	<i>%</i>
First generation	31	24.0	87	67.4	11	8.5	29	22.5	61	47.3	24	18.6
One-half generation	44	24.4	123	68.3	13	7.2	32	17.8	94	52.2	22	12.2
Second generation	132	15.2	672	77.3	65	7.5	95	10.9	540	62.1	120	13.8
Third generation	344	20.2	1238	72.7	122	7.2	290	17.0	968	56.8	217	12.7

Cohorts 9 and 12 had the most complete data with respect to mobility, demographics, and youth outcomes. Of the 1,069 youth within these groups we identified 138 who moved within the city of Chicago during the data collection period. Figure 2 identifies differences in key neighborhood characteristics – poverty, immigrant concentration, collective efficacy, disorder, and residential instability, between original neighborhood and destination neighborhood.

Our analyses revealed that some youth moved horizontally in relation to both poverty and residential instability. Specifically, youth moved to neighborhoods with similar levels of concentrated disadvantage and communities where residents were more likely to rent rather than own homes. Collective efficacy and disorder were often inversely related to each other with neighborhoods high in collective efficacy usually low in disorder and vice-versa. It is therefore

not surprising that close to half our youth (49.3%) moved to communities with higher levels of collective efficacy and over 40% relocated to communities lower in disorder. In fact, with respect to collective efficacy and disorder, 80% of our sample either horizontally moved or vertically moved to a neighborhood with better conditions.

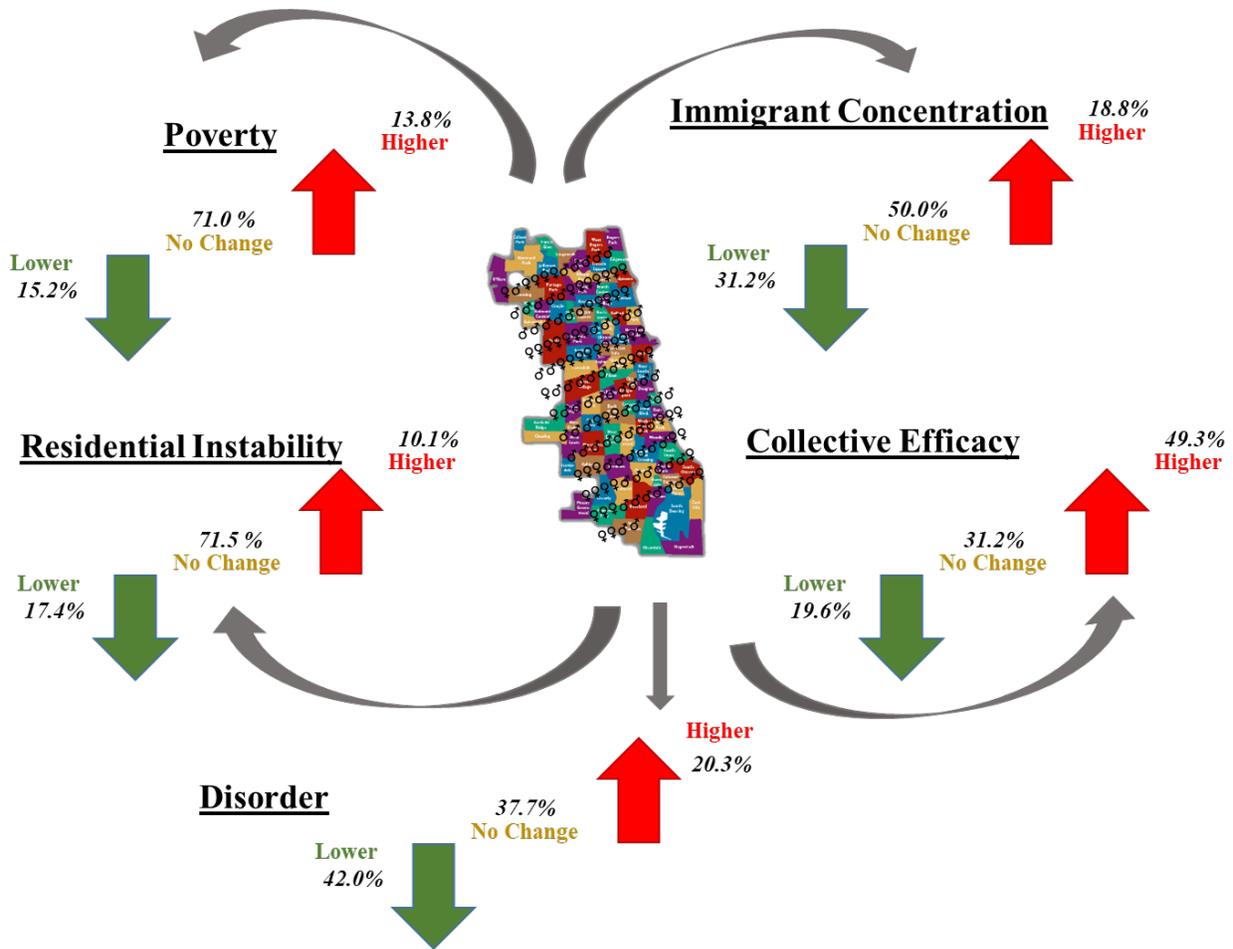


Figure 2 - Destination of inner-city movers²

² Figures on map of Chicago represent the 138 female and male movers.

Inner-city movers- Race/Ethnicity and Immigrant Status

The racial/ethnic characteristics of the youth who moved are presented in Figure 3. For the most part youth moved horizontally, but there were two clear exceptions. Hispanic youth were more likely to move to communities higher in collective efficacy, meaning to a destination community with higher levels of neighborhood cohesion and informal social control than their original neighborhood. Similarly, both Hispanic and Black youth were prone to move to communities lower in disorder, although Black youth seem to be more uniformly distributed across moves that equally placed them in the upward vertical, downward vertical, and horizontal (no change) categories.

Comparable trends occurred for the immigrant youth (Figure 4). First and second-generation respondents were much more likely to move to collective efficacy, even though the same, but less pronounced trajectory was evident for native youth. Youth who were foreign-born but who moved to the U.S. as infants (1.5 generation) tended to move neighborhoods lower in disorder, with none from this group moving to a destination community higher in physical and social disorder.

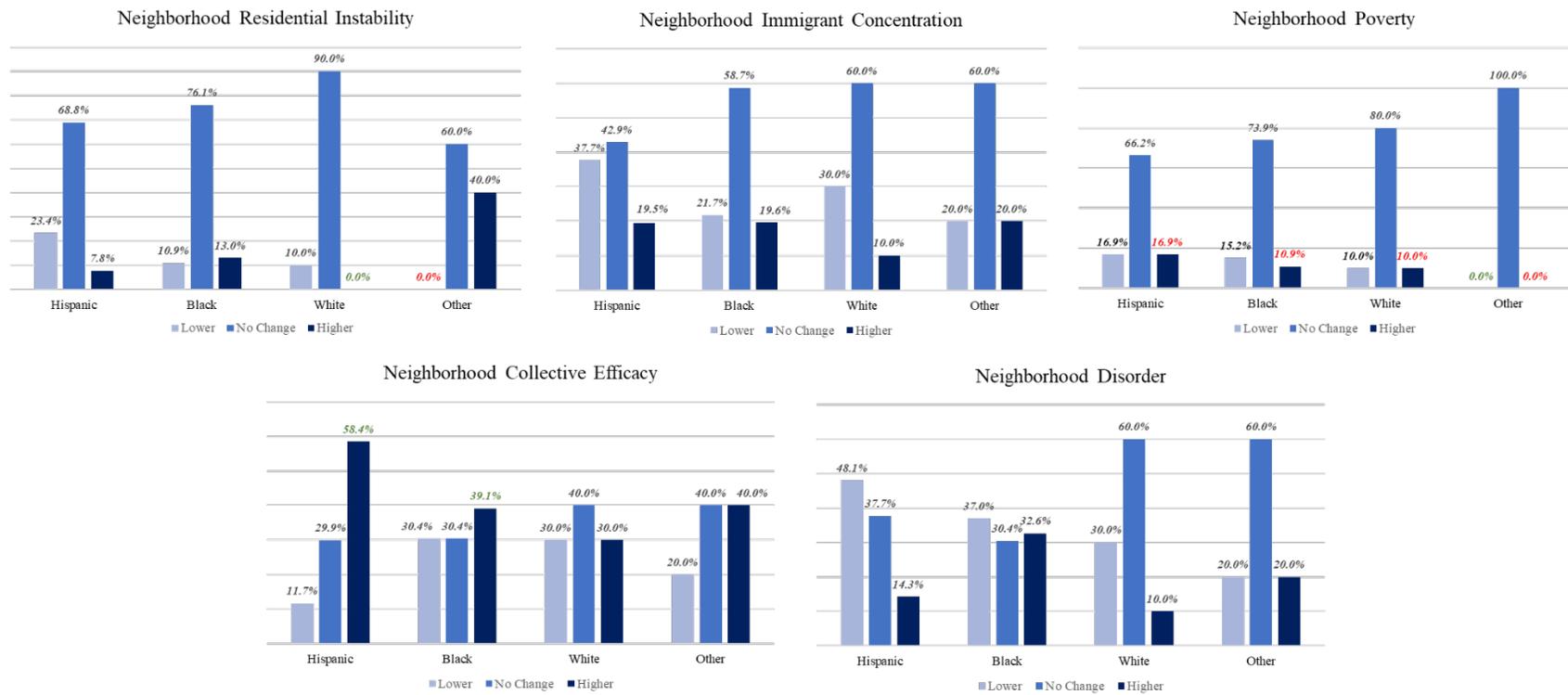


Figure 3- Race/ethnicity and destination of inner-city movers

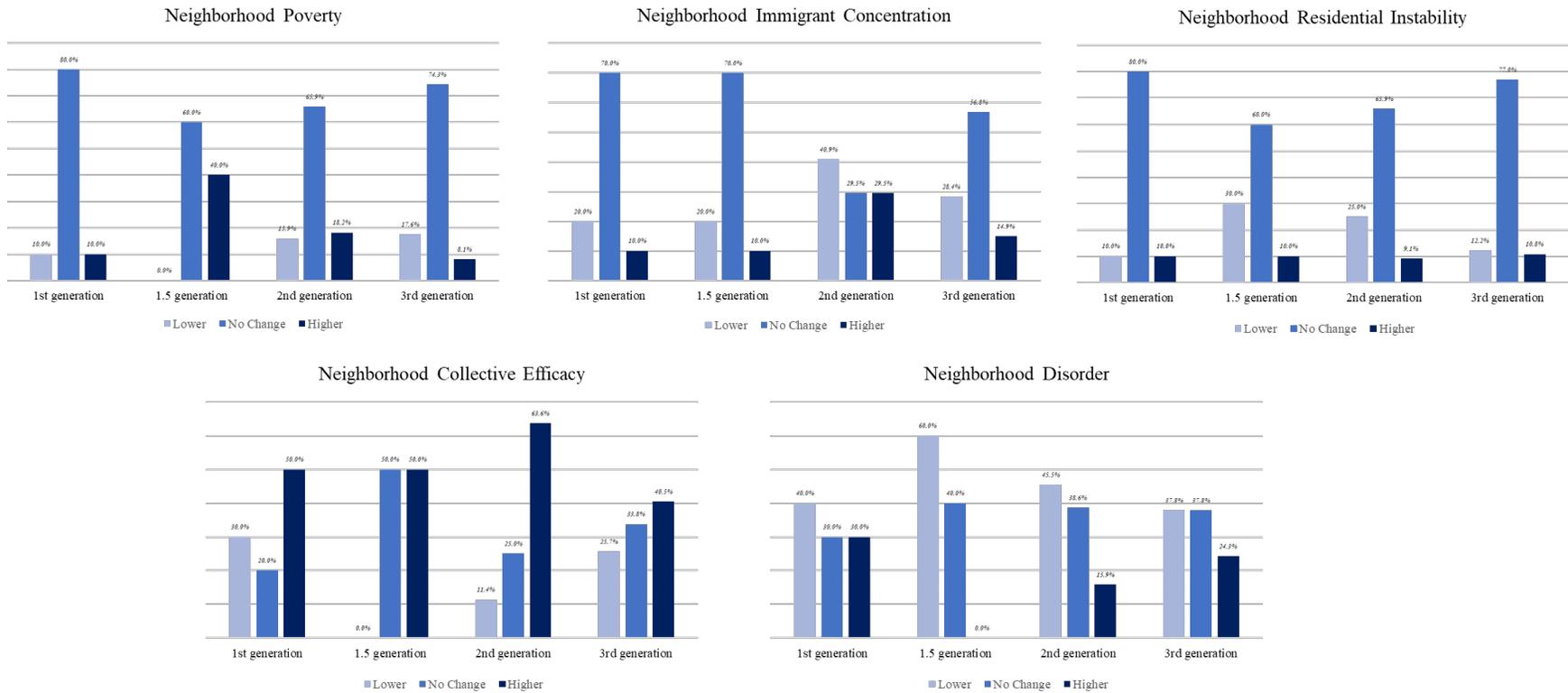


Figure 4- Immigrant status and destination of inner-city movers

Goal 2: Predicting Inner-City Mobility

Tracing the inner-city mobility patterns draws a distinct picture of where youth moved to and characteristics of those who moved. Figure 5 illustrates the statistically significant predictors of inner-city mobility in our entire sample. The models revealed that male youth were 42% less likely to move compared to their female counterparts. Deviant relationships and criminogenic factors like exposure to community violence (ETV-C) seemed to fuel migration within the city. For example, each additional instance of experienced violence in the neighborhoods increased the odds of moving by 10%. Compared to White youth, Mexican, Puerto Rican, and Black youth were more likely to move as were first immigrant generation youth. The relationship between *knows peers* and inner-city migration is a particularly interesting one. Children and adolescents whose parents were familiar with their children’s friends and knew them by name and sight, were over 40% less likely to move. This finding lends support to arguments suggesting friendship ties and parent-peer relationships function as anchors to the community.

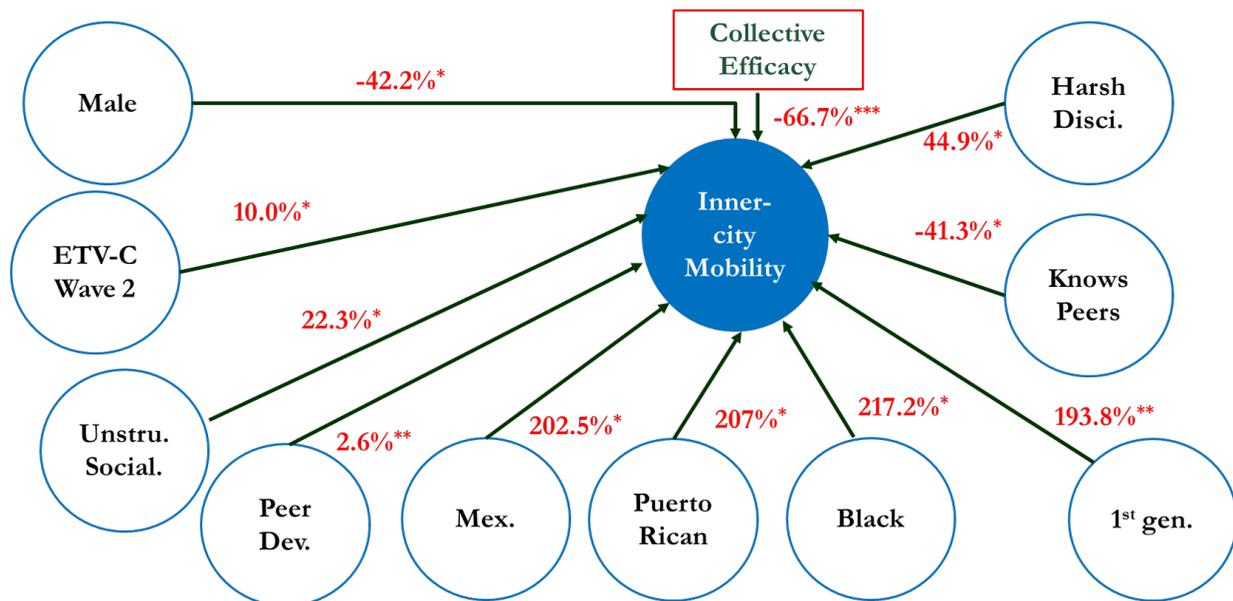


Figure 5- Factors Predicting Inner-City Mobility³

³ $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Goal 3: The effects of inner-city migration on family management

Family management strategies included a variety of parenting practices, routines, and disciplinary decisions geared toward successfully managing children's lives on a day-to-day basis. To evaluate variations in family management practices we conducted a series of hierarchical generalized linear models that incorporated race/ethnicity and immigrant status and controlled for prior parenting strategy and inner-city mobility. The relationship between inner-city migration, youth demographic characteristics and specific family management practices are depicted below. As seen in Table 4, collective efficacy did not seem to significantly predict any of the parenting practices examined here. With the exception of restrictiveness, prior use of supervision, harsh discipline, and knowing peers predicted use of the same the parenting strategy the following wave. There is remarkable consistency in parenting strategies across residential locations. The effects of youth racial/ethnic characteristics are also portrayed in Table 4. Hispanic youth were much less likely than their peers to spend unsupervised time in the neighborhood while more likely to be subjected to greater supervision and monitoring within the home. For example, compared to White youth, Hispanic respondents were two times more likely to be restricted from unfettered access to the community. Parents and caregivers of these youth used lower levels of harsh disciplining. With respect to other youth characteristics, youth's low self-control was only predictive of parental use of harsh discipline. For every standard deviation increase in low self-control harsh discipline increased by 23%.

Interestingly, inner-city mobility only significantly influenced supervision. Youth who moved experienced an increase in parental supervision and monitoring. The findings in Table 4 also highlight the impact of immigrant generational status on the use of family management practices. Compared to native born youth, second-generation immigrant youth were more likely to be restricted from unsupervised time in the community. These children and teens were also

punished less harshly, although they and first-generation youth were supervised at lower rates than their native-born counterparts. Parents of first-generation youth tended not be as familiar with their children's friends. Several factors may have influenced this relationship including language and cultural barriers or socioeconomic status which robustly predicted whether parents knew their children's friends by name and sight.

Goal 4: Understanding how inner-city mobility affects engagement in violence and victimization

Inner-City Mobility - Protective or Risk Factor?

A series of two-way Analyses of Variance models (ANOVAs) were used to set the stage regarding the effects inner-city mobility has on youth deviant outcomes. Specifically, we examined whether there were significant changes in youth engagement in violence, exposure to violence at school and in the community, and association with deviant peers. Furthermore, we examined these variations by gender, race/ethnicity, and immigrant generational status. To determine who fares better, those who moved within the city or those who stayed in their original neighborhood cluster, it was critical to ascertain if changes in these outcomes occurred for those who moved, while also controlling for change in those who did not. Overall, without considering youth demographics characteristics, and by simply executing a one-way ANOVA with mobility set as the between-groups factor, the results suggested statistically significant differences in association with deviant peers and violent behavior for those who moved to another community within the city of Chicago versus those who remained in their original community. Youth who moved reported having, on average, fewer deviant friends and engaged in less violence. In relation to exposure to violence at school and in the community, there were no statistically significant differences between the inner-city movers and the non-movers.

Table 4: Predicting family management strategies

	<u>Restrictiveness</u>		<u>Supervision</u>		<u>Discipline</u>		<u>Knows Peers</u>	
	b (SE)	b (SE)	b (SE)	b (SE)	b (SE)	b (SE)	b (SE)	b (SE)
Intercept	0.93*** (0.09)	0.92*** (0.9)	14.56*** (0.14)	14.56*** (0.14)	0.14*** (0.04)	0.14*** (0.04)	0.94*** (0.08)	0.94*** (0.08)
Peer Deviance	0.02 (0.02)	0.02 (0.02)	0.05 (0.03)	0.05 (0.03)	0.00 (0.01)	0.00 (0.01)	-0.02 (0.02)	-0.02 (0.02)
Unstructured Socializing	-0.29*** (0.08)	-0.29*** (0.08)	-0.50 (0.1)	-0.50 (0.1)	0.07+ (0.04)	0.07+ (0.04)	0.08 (0.08)	0.08 (0.08)
Peer Social Support	0.03 (0.03)	0.03 (0.03)	0.01 (0.03)	0.01 (0.03)	0.02 (0.01)	0.02 (0.01)	0.02 (0.02)	0.02 (0.02)
ETV⁴-Community	-0.06 (0.06)	-0.07 (0.06)	-0.01 (0.07)	-0.01 (0.07)	-0.01 (0.02)	-0.01 (0.02)	0.01 (0.04)	0.01 (0.05)
ETV-School	-0.03 (0.08)	-0.02 (0.09)	-0.22* (0.09)	-0.22* (0.09)	0.08* (0.04)	0.08* (0.04)	-0.07 (0.09)	-0.08 (0.09)
Low Self-Control	-0.02 (0.09)	-0.02 (0.09)	0.09 (0.11)	0.09 (0.11)	0.21*** (0.04)	0.21*** (0.04)	-0.09 (0.08)	-0.09 (0.08)
Black	0.38+ (0.21)	0.31 (0.21)	0.77* (0.39)	0.78+ (0.42)	-0.05 (0.09)	-0.05 (0.09)	0.04 (0.25)	0.08 (0.24)
Hispanic	0.88*** (0.22)	0.84*** (0.23)	1.35** (0.48)	1.36** (0.49)	-0.23* (0.11)	-0.23* (0.11)	-0.17 (0.27)	-0.17 (0.27)
1st Generation	0.44 (0.48)	0.36 (0.5)	-2.67** (1.1)	-2.67** (1.09)	0.20 (0.22)	0.21 (0.22)	-0.86** (0.37)	-0.81* (0.37)
1.5 Generation	0.33 (0.36)	0.33 (0.36)	-0.47 (0.36)	-0.47 (0.36)	-0.09 (0.24)	-0.09 (0.24)	-0.44 (0.32)	-0.42 (0.32)
2nd Generation	0.97*** (0.25)	0.93*** (0.24)	-0.67* (0.34)	-0.67* (0.34)	-0.33* (0.14)	-0.33* (0.14)	-0.30 (0.24)	-0.28 (0.24)
Male	-0.36* (0.18)	-0.36* (0.18)	0.04 (0.21)	0.04 (0.21)	-0.02 (0.08)	0.02 (0.08)	-0.13 (0.13)	-0.13 (0.13)
Cohort 12	-1.27*** (0.16)	-1.26*** (0.16)	-0.13 (0.21)	-0.13 (0.21)	-0.07 (0.08)	-0.07 (0.08)	-0.08 (0.16)	-0.09 (0.16)
SES	-0.10+ (0.06)	-0.06 (0.06)	0.05 (0.08)	0.05 (0.08)	0.07* (0.03)	0.07* (0.03)	0.29*** (0.06)	0.28*** (0.06)
Prior FM Strategy⁵	0.32 (0.2)	0.32 (0.2)	0.35*** (0.07)	0.35*** (0.07)	0.18*** (0.01)	0.18*** (0.01)	-	-
Inner-City Mobility	0.10 (0.24)	0.12 (0.04)	0.55* (0.24)	0.55* (0.25)	0.10 (0.1)	0.10 (0.1)	0.04 (0.23)	0.04 (0.23)
Collective Efficacy		-0.68* (0.34)		0.18 (0.55)		0.04 (0.14)		0.32 (0.24)
Variance	0.18*	.22***	0.95***	0.97	n.s.	n.s.	.05	.06

+ $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Referent Groups → 3rd Generation, White, and Cohort 9

⁴ Exposure to violence

⁵ We control for the use of this family management strategy at a prior wave. For example, in the case of *restrictiveness*, we included prior *restrictiveness*.

Does mobility matter for boys and girls?

Although youth who moved reported less association with deviant peers and engagement in violence, there were no discernible interactions between youth gender and inner-city mobility. Interestingly, association with deviant peers seemed to increase for girls across the waves of data collection regardless of mobility. The change in violent behavior was more pronounced for males in the sample. While both groups reported a decrease in violent activities, the boys especially benefitted from an inner-city move.

Age and inner-city mobility

By the third wave of data collection, youth in cohort 9 were on average 14 years of age; youth in cohort 12 were about 17 years old. Research suggests that the younger group would be approaching, if not already entrenched in deviant behavior, and the older cohort would be at its peak of deviant behavior and possibly beginning a desistance phase of aging out of crime. Such trends explain why cohort 9 experienced an increase in deviant peer relationships while the older cohort reported a decline in the number of deviant peers. Violent behavior, similar to the deviant peer associations, increased for the younger cohort.

Goal 5: Assessing whether vertical or horizontal mobility differentially influences minority and immigrant youth outcomes

Race and ethnicity

Interactions between inner-city mobility and race/ethnicity were observed. The analyses revealed that Hispanic youth who moved experienced a decline in violent behavior compared to those who remained in their community of origin. For Black youth, moving, even if only within the confines of Chicago, acted as a protective factor. However, moving seemed to have a criminogenic effect for White youth. White youth who moved, compared to those who did not,

reported greater participation in violent behavior. Inner-city mobility as a risk factor is likely related to differences in parenting in addition to other youth characteristics. For example, and as discussed later, White parents were much less restrictive than Black or Hispanic parents, which in turn provided some clarification as to why White youth who moved fared worse than youth from other racial groups whose parents may have placed greater controls over their time spent unsupervised in the community.

Immigrant youth

Inner-city mobility matters, especially for immigrant youth as youth in this group reported a significant decrease in violent behavior post-move. The protective effect was particularly pronounced for first- and second-generation immigrant youth. These youths were much more likely to have moved to a neighborhood higher in collective efficacy (Figure 4) which may help explain the beneficial effects. It is also possible that these findings are closely related to the findings regarding association with deviant peers. Immigrant youth, particularly first- and second-generation, reported fewer deviant peers after moving. Association with deviant peers is one of the most robust predictors of crime and delinquency (Haynie, Silver, & Teasdale, 2006), and a decrease in one affects a decrease in the other.

Inner-city Migration, Family Management, and Youth Exposure to Community Violence

The impact of family management strategies, youth demographics, and neighborhood characteristics on exposure to community violence (ETV-C) are detailed in Table 5. The assessment began with an examination of how family management affects youth experiences with community violence, and suggests that only restrictiveness shaped youth ETV-C. Restricted children and teens experienced an over 30% reduction in expected ETV-C. The findings in Table 5 also highlight the importance of peer relationships in exacerbating ETV-C. Associations with deviant peers and unstructured socializing presented risk factors for youth ETV-C. The summary

of the relationships studied are depicted in Figure 6. At the community level, neighborhood disorder increased expected ETV-C by over 100% even when controlling for other neighborhood factors and inner-city mobility. Furthermore, boys, the younger cohort, and those with deviant friends reported higher incidences of ETV-C. Apart from first-generation immigrant status, which modestly functions as a protective factor, most indicators examined here enhanced risk for victimization and the witnessing of violent events in the neighborhood.

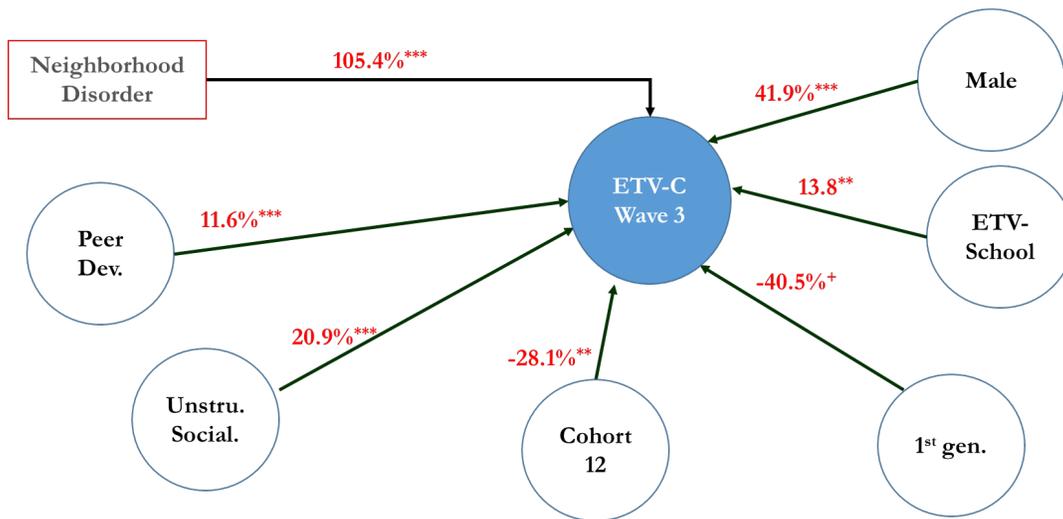


Figure 6 - Predicting youth exposure to community violence- Summary of relationships⁶

⁶ + $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Table 5: Examining youth exposure to community violence

	<u>Family Management</u> b (SE)	<u>Peer Relationships</u> b (SE)	<u>Neighborhood Effects</u> b (SE)	<u>Within Neighborhoods</u> b (SE)	<u>Between Neighborhoods</u> b (SE)
Intercept	-0.10 (0.06)	-0.20*** (0.07)	-0.11 ⁺ (0.06)	-0.29*** (0.07)	-0.32*** (0.06)
Inner-City Mobility	-0.12 (0.16)	-0.16 (0.16)		-0.15 (0.15)	-0.1 (0.15)
Restrictiveness	-0.38*** (0.11)			-0.08 (0.12)	-0.09 (0.13)
Supervision	0.02 (0.02)			0.02 (0.02)	0.02 (0.01)
Harsh Discipline	-0.01 (0.02)			-0.01 (0.02)	-0.01 (0.02)
Knows Peers	-0.05 (0.13)			0.00 (0.11)	0.00 (0.11)
Peer Deviance		0.07*** (0.01)		0.11*** (0.01)	0.11*** (0.01)
Unstructured Socializing		0.19*** (0.05)		0.19*** (0.05)	0.19*** (0.05)
Peer Social Support		-0.02 (0.02)		0.01 (0.02)	0.02 (0.02)
ETV-School				0.12* (0.05)	0.13** (0.05)
Low Self-Control				0.08 (0.05)	0.07 (0.05)
Black				0.28+ (0.16)	0.16 (0.2)
Hispanic				0.03 (0.18)	-0.01 (0.19)
1st Generation				-0.53+ (0.29)	-0.52 ⁺ (0.29)
1.5 Generation				-0.12 (0.22)	-0.13 (0.22)
2nd Generation				-0.04 (0.16)	-0.05 (0.16)
Male				0.36*** (0.12)	0.35*** (0.11)
Cohort 12				-0.31** (0.11)	-0.33** (0.11)
SES				-0.09* (0.04)	-0.06 (0.04)
Neighborhood Factors					
Poverty			0.31*** (0.09)		0.01 (0.12)
Imm. Concentration			-0.08 (0.06)		0.02 (0.08)
Residential Stability			0.02 (0.06)		0.09 (0.07)
Collective Efficacy					
Disorder					0.72* (0.29)
Variance	0.12***	0.11***	0.80*	0.10***	0.09***

⁺*p* < .10. **p* < .05. ***p* < .01. ****p* < .001.

Referent Groups → 3rd Generation, White, and Cohort 9

Violent Behavior: Does Moving Within the City Make a Difference?

Table 6 depicts the independent effect of family management strategies, ETV-C, and peer relationships on youth engagement in violence. Only restrictiveness significantly affected youth expected involvement in violence. According to the results in Table 6, restrictiveness acted as a protective factor and reduced youth violent behavior, an effect, however, that disappeared once demographic characteristics, peer relationships, and ETV-C were considered. This is not unanticipated. The prior figure and table showed that restrictiveness predicted ETV-C. Additional analyses also suggest that restrictiveness predicted association with deviant peers. Therefore, the results indicate that the influence of restrictiveness on violence was likely mediated by peer deviance. The nonsignificant effect of unstructured socializing is intriguing. Researchers frequently report the criminogenic effect of unstructured socializing, yet we uncovered none. It is also notable that, across the board, inner-city mobility predicted neither ETV-C nor youth violent behavior. Low self-control robustly predicted youth expected engagement in violence. Specifically, each additional increase in low self-control increased youth expected violent behavior by 15%.

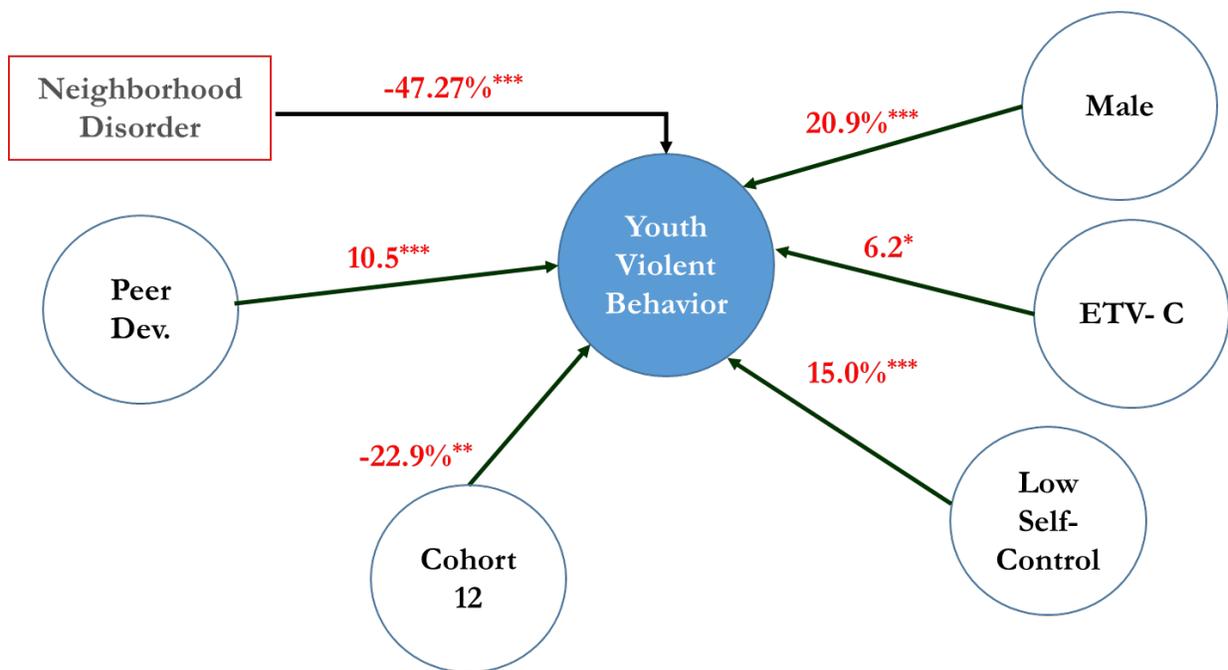


Figure 7- Predicting youth engagement in violence- Summary of relationships⁷

The analyses revealed no differences in the effect of immigrant generational status on youth violent behavior and only a limited effect of race. However, neighborhood characteristics yielded some curious results in terms of disorder. Immigrant concentration has routinely been found to act as a protective factor against youth violence but the between neighborhood results in Table 6 also suggest that disorder functioned as a protective factor which is counter to much extant research on the topic. Nonetheless, additional analyses revealed that disorder shaped parenting decisions such that parents in disordered communities were much more likely to curtail youth access to the neighborhood. Therefore, when controlling for family management practices, namely restrictiveness, the criminogenic effect of disorder dissipated.

⁷ $^+p < .10$. $^*p < .05$. $^{**}p < .01$. $^{***}p < .001$.

Table 6: Predicting youth engagement in violent behavior

	<u>Family Management</u>	<u>Peer Relationships</u>	<u>Exposure to Violence - Community</u>	<u>Neighborhood Effects</u>	<u>Within Neighborhoods</u>	<u>Between Neighborhoods</u>
	b (SE)	b (SE)	b (SE)	b (SE)	b (SE)	b (SE)
Intercept	0 (0.05)	-0.09 ⁺ (0.05)	-0.03 (0.05)	0.01 (0.05)	-0.13** (0.05)	-0.13** (0.05)
Inner-City Mobility	-0.07 (0.14)	-0.1 (0.14)	-0.1 (0.14)		-0.12 (0.13)	-0.12 (0.13)
Restrictiveness	-0.15* (0.07)				0.07 (0.09)	0.05 (0.1)
Supervision	0.01 (0.01)				0 (0.01)	0 (0.01)
Harsh Discipline	0 (0.12)				-0.03 (0.02)	-0.03 (0.02)
Knows Peers	0.03 (0.1)				0.01 (0.09)	0.02 (0.1)
Peer Deviance		0.11*** (0.01)			0.1*** (0.01)	0.1*** (0.01)
Unstructured Socializing		0.04 (0.04)			0.02 (0.04)	0.03 (0.04)
Peer Social Support		-0.02 ⁺ (0.01)			0 (0.15)	-0.01 (0.02)
ETV-Community			0.14*** (0.02)		0.04 (0.05)	0.06* (0.03)
ETV-School			-0.1 (0.14)		0.06 (0.03)	0.04 (0.05)
Low Self-Control					0.14*** (0.04)	0.14*** (0.04)
Black					0.24 ⁺ (0.13)	0.22 (0.14)
Hispanic					0.01 (0.15)	0.05 (0.15)
1st Generation					-0.32 (0.28)	-0.32 (0.28)
1.5 Generation					-0.16 (0.2)	-0.15 (0.2)
2nd Generation					-0.16 (0.12)	-0.16 (0.12)
Male					0.2** (0.07)	0.19** (0.07)
Cohort 12					-0.26** (0.09)	-0.26** (0.1)
SES					-0.03 (0.03)	
Neighborhood Factors						-0.03 (0.03)
Poverty				0.3** (0.12)		0.19 (0.12)
Imm. Concentration				-0.14** (0.04)		-0.03 (0.05)
Residential Stability				-0.07 (0.06)		-0.09 (0.05)
Collective Efficacy				-0.31 (0.21)		-0.26 (0.29)
Disorder				-0.57 ⁺ (0.31)		-0.64* (0.25)
Variance	0.08***	0.08***	.06*	0.06*	0.04***	0.09***

⁺p < .10. *p < .05. **p < .01. ***p < .001.

Referent Groups → 3rd Generation, White, and Cohort 9

Goal 6: Who Fares Better? Inner-City Movers versus Non-Movers: How different are they?

Our final analyses compared inner-city movers to non-movers. We conducted a series of multilevel models, beginning with the unrestricted and fully unconditional models in addition to equality of coefficient tests.⁸

Family Management and Peer Relationships

Neighborhood variations in family management strategies and peer relationships are illustrated in Figures 8 and 9. When determining the need for a multilevel analysis, it is useful to begin with an empirical assessment regarding the variability of the dependent variable across the level-2 units and we do this in Figures 8, 9, and 10. The graphs presented in Figure 8 illustrate the distinct variations in mean levels of restrictiveness, harsh discipline, and peer relationships, particularly deviant peers, and peer social support, not only across the neighborhood clusters, but also between the movers and non-movers. The hierarchical generalized linear model (HGLM) findings illustrated in Table 7 denote marked differences between movers and non-movers. The protective support of restrictiveness is seen only for the inner-city movers, a difference that is confirmed by the equality of coefficients tests (findings highlighted in red). Although peer deviance increased youth violent behavior, equality of coefficients tests revealed significant differences between the two, as the influence was more pronounced for the non-movers.

⁸ Equality of coefficient tests are executed using the equation proposed by Paternoster, Brame, Mazerolle, and Piquero (1998).

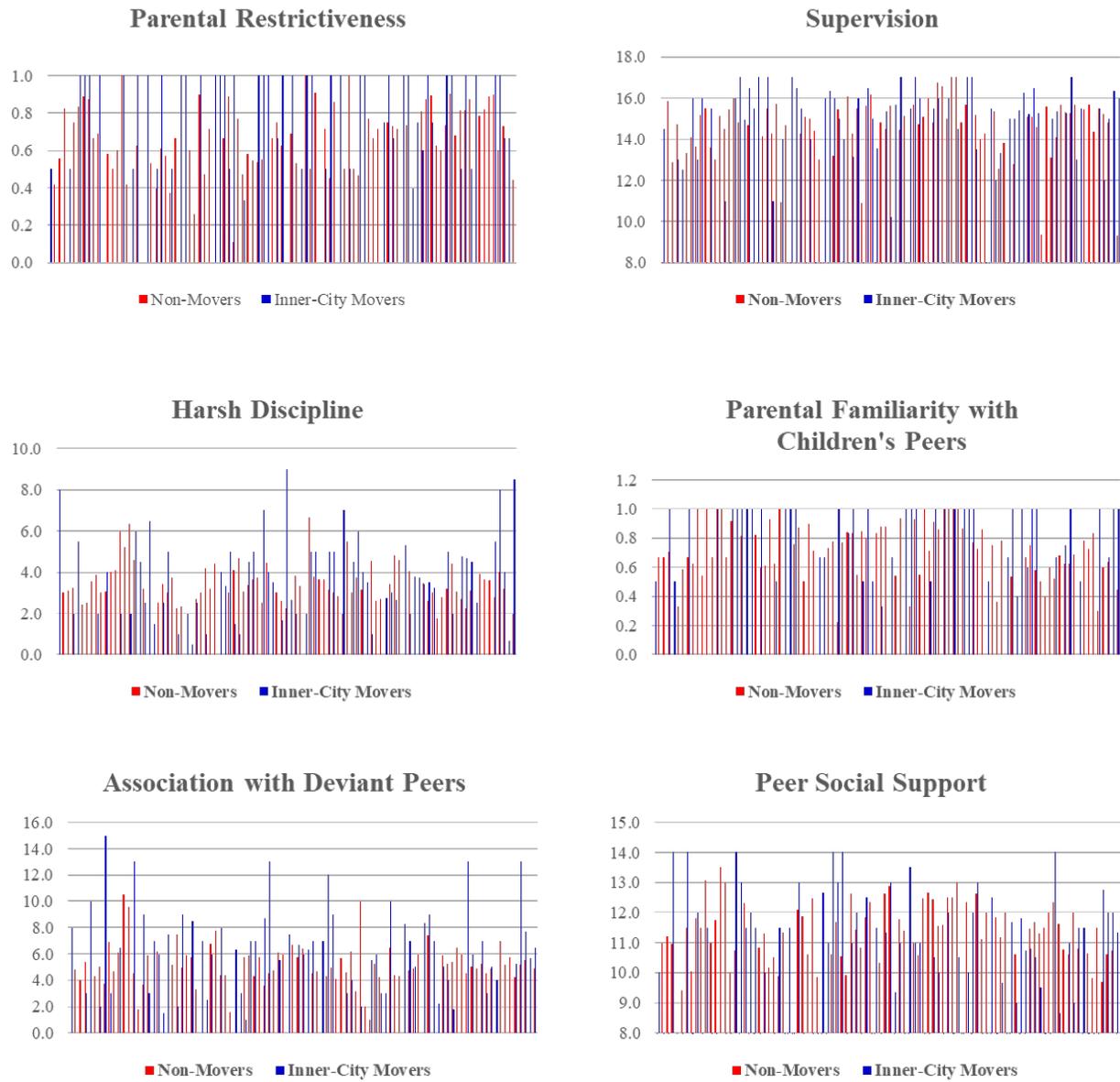


Figure 8⁹- Neighborhood variations of family management and peer relationships by mobility

⁹ The x axis represents the neighborhood clusters. The y axis is the mean of the dependent variable in question.

Table 7: Family management and peer relationships predicting youth violence by mobility status

	Family Management		Peer Relationships	
	<i>Inner-City Movers</i>	<i>Non-Movers</i>	<i>Inner-City Movers</i>	<i>Non-Movers</i>
	<u>b (SE)</u>	<u>b (SE)</u>	<u>b (SE)</u>	<u>b (SE)</u>
Intercept	0.14 (0.1)	0.02 (0.09)	0.09 (0.09)	0.07 (0.05)
Restrictiveness	-0.31* (0.15)	-0.11 (0.01)		
Supervision	-0.01 (0.04)	0.01 (0.02)		
Harsh Discipline	0.01 (0.03)	0.02 (0.1)		
Knows Peers	0.17 (0.2)	0.02 (0.1)		
Peer Deviance			0.07*** (0.02)	0.10*** (0.01)
Unstructured Socializing			-0.05 (0.07)	0.06 (0.04)
Peer Social Support			-0.07* (0.02)	-0.03* (0.01)
Variance	.22***	.09***	0.23***	.06*

[†]*p* < .10. **p* < .05. ***p* < .01. ****p* < .001.

Exposure to Violence: Differences between the Movers and Non-Movers

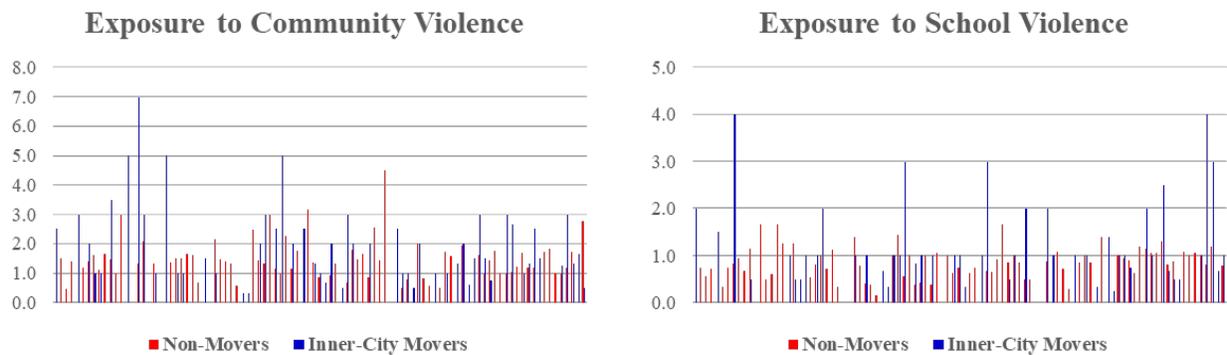


Figure 9¹⁰- Neighborhood variations of exposure to violence by mobility

The neighborhood variations in exposure to community and school violence illustrated in Figure 9 underscore obvious differences between the mean youth exposure to violence between the movers and non-movers, particularly regarding ETV-School. In essence, neighborhood-level means calculated for ETV-C and ETV-School denoted variations between youth who moved

¹⁰ The x axis represents the neighborhood clusters. The y axis is the mean of the dependent variable in question.

versus those who did not, within each neighborhood. The multilevel analyses are displayed in Table 8 and demonstrate the criminogenic effect of ETV-C for all youth in our sample. The neighborhood factors also produced curious results. For the inner-city movers the incorporation of the structural characteristics and collective efficacy dramatically reduced by half the neighborhood variability of youth violence. Poverty had a stronger impact on movers' engagement in violence, increasing expected involvement in violence by 42% compared to 15% for the non-movers. Throughout our analyses collective efficacy did not demonstrate protectiveness, which happens to be quite consistent with the research. At the individual level, collective efficacy has been connected to unstructured socializing (Maimon & Browning, 2010), adolescent sexual initiation (Browning, Leventhal, & Brooks-Gunn 2005) and delinquency (Simons et al., 2005). Nevertheless, some have found few or no beneficial effects on individual outcomes (Kirk, 2008; Kirk, 2009; Maimon & Browning, 2012; Sampson, Morenoff, & Raudenbush, 2005).

Table 8: Predictive effect of exposure to violence on predicting youth violent behavior by mobility status

	<u>Exposure to Violence</u>		<u>Neighborhood Factors</u>	
	<i>Inner-City Movers</i>	<i>Non-Movers</i>	<i>Inner-City Movers</i>	<i>Non-Movers</i>
	b (SE)	b (SE)	b (SE)	b (SE)
Intercept	0.09 (0.1)	-0.02 (0.05)	0.03 (0.05)	0.07 (0.05)
ETV-Community	0.15** (0.04)	0.14*** (0.03)		
ETV-School	0.08 (0.07)	0.06 (0.06)		
Neighborhood Factors				
Poverty			0.35** (0.13)	0.14+ (0.07)
Immigrant Concentration			-0.27** (0.1)	-0.14** (0.04)
Residential Stability			0.02 (0.11)	-0.07 (0.05)
Collective Efficacy			0.36 (0.46)	-0.2 (0.16)
Variance	.22***	.09***	0.11+	.06*

+ $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

Youth Violence- The Final Models

A visual inspection of the variability of the dependent variable across the level-2 units set the stage for the multilevel analysis. Figure 10 depicts mean youth engagement in violence for non-movers and movers across the neighborhood clusters. The variation in peaks and troughs provided solid support for the need to apply a multilevel approach, a decision that was confirmed by the fully unconditional models.

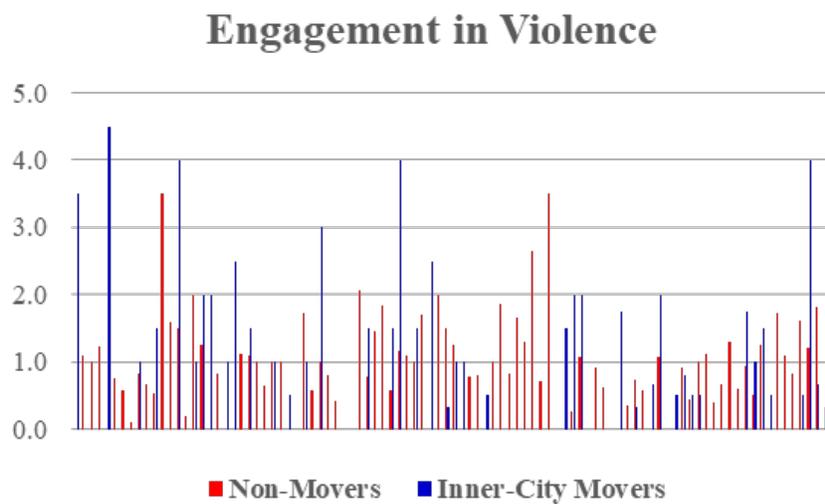


Figure 10¹¹- Neighborhood variations of youth violence by mobility

The complete multilevel models are displayed in Table 9. The coefficients and standard errors illustrated in red denote the significant differences in the equality of coefficients tests. Peer deviance strongly predicted expected youth engagement in violence for the non-movers. However, the unexpected negative relationship between unstructured socializing and youth violence for the inner-city movers was counter to previous research findings. We hypothesize that the quality of peer relationships is driving this particular result. We suggest that the more supportive the peer social relations are, the less likely youth are to participate in violence. Peer

¹¹ The x axis represents the neighborhood clusters. The y axis is the mean of the dependent variable in question.

social support was also connected to unstructured socializing such that it was not as crime-inducing when coupled with high quality peer social support. The effects in Table 9 emphasize the protective influences moving can have for immigrant youth as those who moved benefited from a new environment. Their engagement in violence was lower than native born youth and the coefficient comparisons demonstrated how these youth tended to fare better.

Table 9: Multilevel models – Impacts on youth violence by mobility status

	<u>Within Neighborhoods Model</u>		<u>Between Neighborhoods Model</u>	
	<i>Inner-City Movers</i> b (SE)	<i>Non-Movers</i> b (SE)	<i>Inner-City Movers</i> b (SE)	<i>Non-Movers</i> b (SE)
Intercept	-0.01 (0.10)	-0.11 (0.04)	-0.02 (0.09)	-0.1 (0.05)
Restrictiveness	-0.33* (0.15)	0.15 (0.10)	-0.40* (0.16)	0.13 (0.10)
Supervision	-0.01 (0.04)	0.00 (0.01)	0.01 (0.03)	0.00 (0.01)
Harsh Discipline	-0.02 (0.03)	-0.01 (0.01)	-0.03 (0.03)	-0.01 (0.01)
Knows Peers	0.23 (0.18)	-0.01 (0.10)	0.19 (0.17)	-0.01 (0.09)
Peer Deviance	0.05* (0.02)	0.10*** (0.01)	0.05** (0.02)	0.09*** (0.01)
Unstructured Socializing	-0.15* (0.07)	0.04 (0.04)	-0.16* (0.07)	0.04 (0.01)
Peer Social Support	-0.05* (0.02)	-0.01 (0.01)	-0.05* (0.02)	-0.01 (0.01)
ETV-Community	0.07 (0.04)	0.06* (0.03)	0.06 (0.04)	0.07* (0.03)
ETV-School	0.03 (0.05)	0.05 (0.05)	0.04 (0.04)	0.04 (0.05)
Low Self-Control	0.12 (0.11)	0.13*** (0.04)	0.09 (0.10)	0.13*** (0.04)
Black	0.39 (0.36)	0.22+ (0.12)	0.04 (0.33)	0.26+ (0.14)
Hispanic	0.34 (0.40)	0.00 (0.15)	0.33 (0.34)	0.04 (0.17)
1st Generation	-0.65+ (0.38)	-0.24 (0.25)	-0.64+ (0.37)	-0.26 (0.26)
1.5 Generation	-0.73* (0.32)	-0.22 (0.18)	-0.83** (0.31)	-0.21 (0.18)
2nd Generation	0.15 (0.26)	-0.17 (0.12)	0.15 (0.25)	-0.17 (0.12)
Male	0.30+ (0.16)	0.20** (0.08)	0.31* (0.15)	0.18* (0.08)
Cohort 12	0.21 (0.17)	-0.18+ (0.10)	0.22 (0.15)	-0.18+ (0.10)
SES	0.08 (0.07)	-0.03 (0.03)	0.08 (0.07)	-0.03 (0.10)
Neighborhood Factors				
Poverty			0.30+ (0.17)	0.10 (0.11)
Imm. Concentration			-0.25* (0.12)	-0.01 (0.05)
Residential Stability			0.02 (0.10)	-0.10+ (0.06)
Collective Efficacy			-0.07 (0.45)	-0.15 (0.28)
Disorder			n.s.	-0.50* (0.23)
Variance	.21**	.04*	0.17*	.03*

+*p* < .10. **p* < .05. ***p* < .01. ****p* < .001.

A summary of the more striking comparisons is portrayed in Figure 11. Disorder had no effect on the movers' violent behavior but functioned as a protective factor for the non-movers. Absent the ability to move, parents resorted to more restrictive parenting mechanisms in order to curtail access to harmful neighborhood environments. Regardless of mobility, the criminogenic effects of peer deviance persisted, predicting greater expected involvement in violence. Experiences with community violence were also more detrimental to the non-movers, amplifying youth violence. Similarly, the results in Figure 11 suggested that low self-control influences non-movers' violent behavior with no significant effect on youth who moved. Finally, immigrant youth who moved reported engaging in fewer violent behaviors, compared to those who remained in the community of origin, indicating that inner-city mobility may have had beneficial outcomes for these children and adolescents.

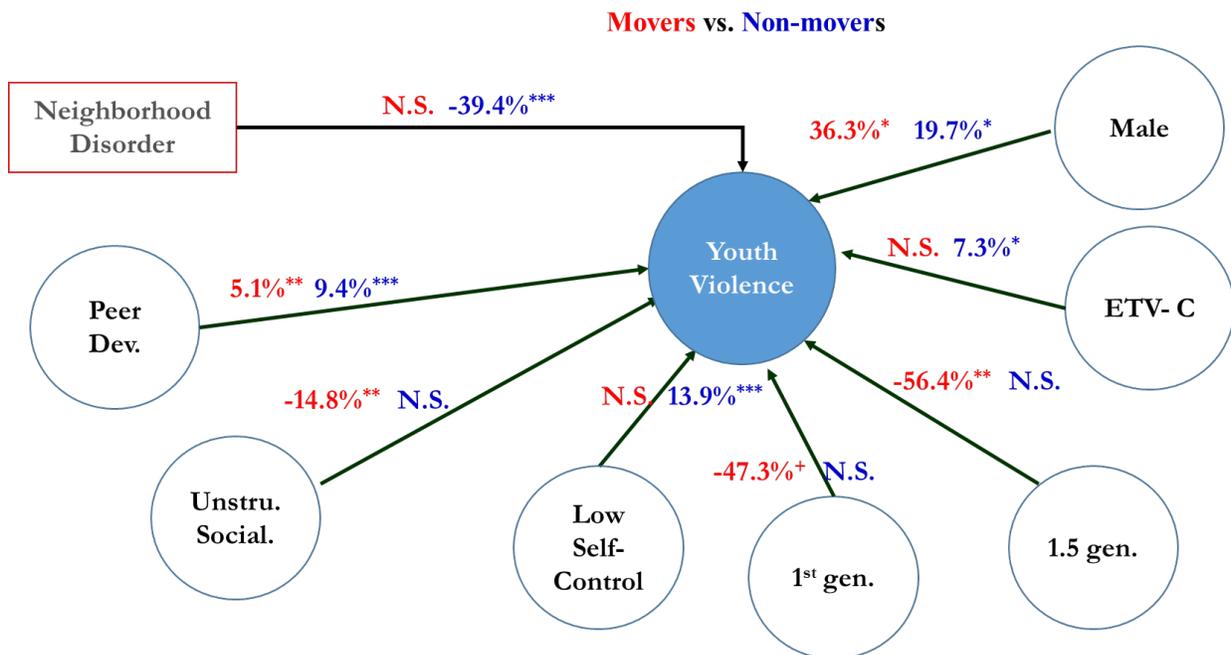


Figure 11- Predicting youth engagement in violence- Summary of relationships¹²

¹² + $p < .10$. * $p < .05$. ** $p < .01$. *** $p < .001$.

IMPLICATIONS FOR POLICY AND PRACTICE

There is a clear need to examine how minority and immigrant inner-city residential mobility influences youths' experiences with violence, whether perpetrated or experienced, and association with deviant peers. Broadly speaking, violence is one of the leading causes of death for youth between the ages of 5 and 14 and becomes the number two cause of death for 15 to 24-year olds (Murphy et al., 2012). Among African Americans ages 15-34, homicides were the most common cause of death in 2017 and African American young men have the highest risk of experiencing violence (CDC, 2017; Jenkins et al., 2009). Ecologically informed protective and risk factors such as neighborhood context, family, peers, and individual personality factors among Hispanic youth mitigate or amplify exposure to violence risk suggesting early intervention is essential (Jennings et al., 2016). Immigrant youth experience less exposure to violence and their involvement in violent behavior is lower than native born youth (Antunes & Ahlin, 2018; McDonald, 2018; Vaughn & Salas-Wright, 2018; Zimmerman & Messner, 2013). The protective effects of immigrant status and whether it functions within the context of inner-city mobility deserves additional attention.

It is important to understand what fuels this violence and what can be done at both an individual and neighborhood level to decrease these instances of violence. Under resourced communities are more prone to violence and youth living in lower-income neighborhoods witness more violence than youth residing in financially established communities (Buka et al., 2001; Haynie et al., 2006). Youth and their families may move to a similarly situated community or one that is akin to an upward or downward shift in mobility. These changes in residence can alter engagement in violent behaviors, exposure to violence, and association with deviant peers.

Furthermore, inner-city mobility may influence parenting practices that can alter a youth's risk of violence and peer relationships.

This study demonstrates that there are many contextual circumstances that must be incorporated into an explanation of youth violence. Our findings show that inner-city mobility predicted neither ETV-C nor youth violent behavior. However, in-depth nuanced analyses that address the ecological systems in which youth go about their daily lives uncovers differences in youth violence and ETV-C between movers and non-movers. Programs like Moving to Opportunity and Gautreaux only scratch the surface by facilitating family moves. If other dynamics are not addressed, including peer relationships and family management strategies, inner-city mobility by itself is a limited protective factor for escaping violence.

Study Limitations

We believe that the advantages of the PHDCN, especially with respect to the proposed project far outweigh the data's limitations, however, it is necessary to recognize some of the caveats presented by the data. One of the criticisms levied concerns the age of the data. Data collection for the final wave was completed approximately 15 years ago and brings into question the present-day relevance of some of the measures and information collected. There have been many societal advances since the PHDCN data were collected that foreseeably impact youth violence and exposure to violence and the ecological contexts explored in this study. For example, cellular technology supporting cell phones was limited and usage was not ubiquitous as it is today. Relatedly, social media accessible 24/7 through computers and cellular technology with the advent of smart phones was not the social force it is today. The emergence of these technologies and how they shape youth experiences (e.g., continued connections with peers, expanded opportunities for exposure to violence, increased connection with parents when outside

of the home) requires a new research agenda to bring the study findings into the current social milieu by exploring whether mobility has the same insulating consequence in contemporary times. Despite the dated nature of the PHDCN data, violence and exposure to violence are ongoing problems for youth, and more importantly recent analyses of mobility using Moving to Opportunity show how the effects of residential instability can be long-term and far reaching. The design and content of the PHDCN allow researchers to address these issues especially because cohorts demonstrate how moving can impact youth at different ages and perhaps explain how inner-city moves, given the conclusions of Sharkey and Sampson (2010), harmfully impacts youth.

Another oft-cited limitation is the length of time between waves. The PHDCN was a large and ambitious endeavor; and while the time span between the start of each wave approximated 2 years, the interview period, end-to-start, from wave-to-wave was fairly tight given the size of the sample. The time lag, however, made it possible for the cohorts to mature. Each cohort represents, to an extent, a key developmental stage in the growth of the children and youth from infancy to adulthood and therefore captures information critical to the current project. Understanding the effects of inner-city mobility requires an examination of its impact across different periods of youth development. These effects can thus be assessed at youth ages equivalent to onset, persistence, and even desistance from deviant behavior as each cohort develops and ages from wave to wave.

Lastly, concern has been raised regarding the static nature of the community survey and its measures like collective efficacy and neighborhood structural characteristics. The question remains whether these community factors are slow to change. Evidence suggests that neighborhood features, while they do change, are slow to occur. For example, Kingsley and Petit

(2007) demonstrated that over a 10-year period most of the neighborhood conditions within the census tracts studied remained relatively stable. Given the time taken for the 3-wave Longitudinal Cohort Study data collection period it is unlikely that neighborhood conditions would have been markedly altered. Thus, neighborhood factors remain useful and pertinent within the context of the PHDCN and a multilevel framework to examine neighborhood effects on minority and immigrant youth inner-city mobility.

Future Research

The current study sets the stage for more detailed investigations into the role of inner-city mobility. The results of this study add to our understanding of the effects of inner-city mobility on violence, violent victimization, and deviant peer relationships among minority and immigrant youth. A natural progression of this work is to analyze if the effects of moving are age-graded (Tønnessen et al., 2016). Youth experiences are contingent on a variety of factors related to developmental phases that unfold as youth age. The age at which a youth moves may influence violence, violent victimization, and association with deviant peers. A further study could assess the longer-term effects of adverse outcomes linked to residential mobility for minority and immigrant youth (Webb et al., 2016). Also, more work needs to be done to establish whether refugees experience the same risks as immigrant youth given their higher risk of developing post-traumatic stress disorder after exposure to various types of violence (see Betancourt et al., 2017). Additional study is necessary to understand why people move as our findings may be conditioned on the impetus behind inner-city mobility. Forced mobility, including evictions (Desmond, 2017), add another layer of complications that cannot be addressed by the present data.

SCHOLARLY PRODUCTS

There are several scholarly products that have been completed and are anticipated from this grant project:

Journal articles:

Antunes, M. J. L., Ahlin, E. M., Emmert, A. D., & Manasse, M. (2020). Gender Differences in Youth Exposure to Community Violence: A Partial Test of Power-Control Theory. *Feminist Criminology*, 1557085119877248.

Antunes, M. J. L., & Ahlin, E. M. (in press, online). Minority and immigrant youth exposure to community violence: The differential effects of family management and peers. *Journal of Interpersonal Violence*. DOI: 10.1177/0886260518755491

Antunes, M. J. L., & Ahlin, E. M. (to be submitted). The effects of inner-city mobility on youth violence: A test of mediating variables.

Ahlin, E. M., & Antunes, M. J. L. (to be submitted). Predicting youth inner-city mobility: Who fares better?

Book / book chapter:

Ahlin, E. M., & Antunes, M. J. L. (2018). Escape from violence and changes in neighborhood informal social control: Understanding causes and consequences of residential mobility. In R. Allen Hays (Ed.), *Neighborhood Change and Neighborhood Action: The Struggle to Create Neighborhoods that Serve Human Needs* (pp. 185-209). Lanham, MD: Lexington Books.

Ahlin, E. M., & Antunes, M. J. L. (under contract). *Violence in context*. New York: Routledge.

Resource guide:

Ahlin, E. M., & Antunes, M. J. L. (submitted). *Addressing violence and victimization from an environmental perspective. A resource guide for practitioners*. Prepared for the National Institute of Justice, Washington, D.C.

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