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EXAMINING THE PROXIMAL EXPERIENCES OF URBAN YOUTH IN CHICAGO, ILLINOIS

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SADIQ YUSUF PATEL

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Table of Contents

Appendices Page

List of Figures

List of Tables

List of Maps

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Abstract

While a large body of research has established a clear association between structural conditions of urban youths' residential neighborhoods and their involvement in delinquent behavior, how specific sociobehavioral and community contexts outside the home are associated with delinquency remains unclear. Research to date sheds limited light on the characteristics of the places where urban youth spend their time, both within and outside their residential neighborhoods, and how those settings might be associated with delinquent behavior. This study advances place-based delinquency scholarship by examining three key aspects of the places where urban youth spend time—i.e., surrounding community context (e.g., crime), social and behavioral features (e.g., adult supervision), and distance from home—using cross-sectional data gathered from a sample of 296 minority youths ages 13 to 17 residing in high-burden urban neighborhoods in Chicago. The study has three specific aims; first, the study examines the characteristic of settings where urban youth report spending time during a typical week. Second, the study examines whether involvement in delinquent behavior is associated with characteristics of these settings. Third, the study evaluates whether youths' evaluations of risk and safety are associated with various aspects of activity space and whether these associations vary by delinquent behavior. The following key set of findings emerged from the study: Urban youths spend much of their time in locations geographically removed from their homes, although usually within the same general area of the city. Furthermore, indoor settings located within high-risk community contexts exhibit protective proximal features, particularly adult supervision, adult presence, and goal-oriented activities. Delinquent youths were less likely to spend time in settings characterized by higher levels of adult supervision and youth engagement in goal-oriented activities compared to nondelinquent youths. Limited evidence was found to

indicate that features of the surrounding community context were associated with delinquent behavior. The study is unique in that it is the first to integrate these three key aspects of urban youths' activity settings. Second, the project is the first contextual analysis of delinquent behavior focusing on the association between where and how urban youth spend their time and engagement in delinquent behavior. These research aims have received little attention in the literature and merit scientific investigation given the little we know of the daily settings where urban youth spend time and how they relate to health and behavior.

CHAPTER 1

INTRODUCTION

Problem Statement

The importance of neighborhood context in shaping youth health and behavior has been acknowledged for decades. Considerable effort has been devoted to understanding the behavioral and health consequences of growing up in economically disadvantaged urban neighborhoods (Browning et al., 2008; Chung & Steinberg, 2006; Gorman-Smith et al., 1999, 2000; Leventhal & Brooks-Gunn, 2000; Sampson et al., 2002; Sharkey et al., 2012). These studies have largely focused on the relation between the characteristics of urban youths' residential neighborhoods—including socioeconomic disadvantage, high crime rates, racial segregation, high percentage of single-parent households, and limited neighborhood resources and social connections—and youth involvement in delinquent behavior (Bellair & McNulty, 2009; Chung & Steinberg, 2006; Gorman-Smith, Tolan, & Henry, 2000; Kirk, 2008; Mrug & Windle, 2009; Zimmerman & Messner, 2010, 2011). This research has found youth living in high-burden urban neighborhoods to be at higher risk for involvement in delinquent behavior.

However, even among urban youth who live within the same community, there is considerable variation in their participation in delinquent behavior. This variation could be, in part, related to where and how youth spend their time. Urban youth spend their time in a variety of activity settings—such as recreational centers, homes, schools, movies, parks, or coffee shops—both within their own residential neighborhoods and within other community contexts apart from their residential neighborhoods. These settings may vary with respect to the surrounding community context (e.g., level of violent crime and socioeconomic disadvantage), people who are present, level of adult monitoring, types of activities going on, and distance from

home (Browning & Soller, 2014). Research to date sheds limited light, however, on the characteristics of the places where urban youth spend their time, both within and outside their residential neighborhoods, and how those settings might be associated with delinquent behavior. Understanding where, how, and with whom urban youth spend their time may offer more insight into the daily experiences of urban youth and how these experiences are associated with delinquent behavior.

Very little is known about where and how urban youth spend their time. A small body of research has tracked and captured the daily experiences of urban youth using the "activity space" construct. Activity space is defined as a location that an individual frequents during the course of their daily activities (Miller, 1991). Research has largely focused on understanding two aspects of activity space: the community context surrounding the space (e.g., level of violent crime and poverty) and the social and behavioral features within the spaces (e.g., people present, activities youths are engaging in, and level of adult supervision) (Bohnert et al., 2009; Mennis et al., 2016). More recently, researchers have recognized that youths also spend time in spaces outside of their immediate neighborhood and that proximity to home and neighborhood may be an important variable in understanding youth risk behavior. Research to date, however, has yet to integrate these multiple aspects of activity space within a single study (Browning & Soller, 2014).

The present study addresses these gaps in research by examining the relation between where and how youth spend their time, considering multiple aspects of activity space, and youth involvement in delinquent behavior. Integrating these aspects of activity spaces provides a rich and holistic understanding of the daily environments in which urban youth spend time—both within and outside their residential neighborhoods—and advances understanding of the relation

of community context and delinquent behavior. In addition, this study offers a new methodological approach to examining activity space and understanding how different aspects of place influence youth health and behavior.

In addition to building a detailed understanding of urban youths' daily environments, more research is needed to understand how youths navigate high-risk urban environments within the context of their daily activity spaces. Research to date has shed limited light on the process by which urban youth evaluate the level of risk and safety within their activity space. Studies have typically focused on a single aspect of activity space such as the surrounding community context (e.g., crime, poverty), social and behavioral features within these spaces (e.g., adult supervision, type of activity), or distance from home, often ignoring other key aspects of these spaces (Mason, 2010; Mennis & Mason, 2009; Mennis et al., 2016; Wiebe et al., 2013).

Research has yet to determine which aspect(s) of activity space are associated with youths' evaluations of risk and safety within and around those spaces. The present study seeks to bridge this gap by examining multiple aspects of activity spaces, youth perceptions of risk and safety associated with activity spaces, and whether and how these associations might vary based on youth participation in delinquent behavior. Such examination may provide additional insight into how delinquent and nondelinquent urban youth navigate high-risk urban environments and select the settings in which they spend time.

Dissertation Goals and Significance

The overall intent of this study is to provide a rich and holistic understanding of the places where urban youth spend their time and examine how those environments are associated with youth engagement in delinquent behavior. Using cross-sectional data gathered from a

sample of 296 minority youths ages 13 to 17 who reside in high-burden urban neighborhoods in Chicago, the study was designed to address three specific questions:

1. **In what types of settings do urban adolescents spend their time?** Analyses are conducted to identify the types of activity spaces (e.g., friends' homes, after-school programs, schools) where urban youth report spending their time during a typical week. The study also examines key characteristics of the community context surrounding the activity spaces (i.e., concentrated disadvantage and violent crime), distance from home, and social and behavioral features within the activity space (i.e., goal-oriented activities, individuals present, and level of adult supervision). Community context was measured using census and crime data. Distances between home and activity spaces were measured by geocoding residence and activity spaces. Social and behavioral features were measured by youth report. These analyses provide a rich and holistic understanding of the daily environments where urban youth in Chicago spend their time.
2. **Do adolescents who engage in delinquent behavior spend time in different types of settings than adolescents who do not engage in delinquent behavior but also live in the same neighborhoods?** Analyses were conducted to examine the relation between involvement in delinquent behavior and types and characteristics of activity spaces, including community context, distance from home, and social and behavioral features. Delinquent behavior was measured using the Self-Report Delinquency Scale (Elliot et al., 1983).
3. **What aspects of activity spaces are associated with adolescents' evaluation of risk and safety, and do these associations vary by youth involvement in delinquent behavior?** Analyses were conducted to examine whether certain types of spaces are

evaluated as risky or safe by youth, whether degree of risk and safety are associated with the community context surrounding the activity space, distances from home, and social and behavioral features of those spaces, and whether these associations vary by youth involvement in delinquent behavior.

Organization of Dissertation

This dissertation is organized into five chapters. Chapter 1 provides an overview of the issues addressed and the specific aims of the analyses conducted. The theoretical foundations of this research, literature review, and research questions are presented in Chapter 2. The research methods, including study design, sample, measures and analytic plan are outlined in Chapter 3. Chapter 4 summarizes the dissertation findings, referencing the research questions outlined in Chapter 2. The final chapter (Chapter 5) reviews key findings, highlighting contributions to the literature and implications for scholarship and social work practice.

CHAPTER 2

THEORETICAL FOUNDATION AND LITERATURE REVIEW

Developmental Ecological Framework

A developmental ecological perspective on risk, protection, and prevention informs the present study, which acknowledges the variety of daily experiences of urban youth, emphasizing that development is influenced by the social systems that youth experience directly, such as family, school, and neighborhood (Bronfenbrenner, 1979, 1988, 1995). Bronfenbrenner (1999) describes four levels of influence on human development with varying proximity to the person: the microsystem, the mesosystem, the exosystem, and the macrosystem. Bronfenbrenner's theory suggests that aspects of each level influence development both directly and in interaction with other levels of influence. The *microsystem* refers to the social systems with which the individual has regular, direct contact, such as family, peers, or caregivers. The *mesosystem* refers to the interactions between different aspects of the individual's microsystem, forming "a system of microsystems" (Bronfenbrenner, 1999, p. 40). An example of a child's mesosystem is the interaction between their parents and their school environment. The *exosystem* is defined by connections between two or more settings, one of which does not directly contain the individual. Examples of exosystems include family social networks and neighborhood contexts. Finally, the *macrosystem* refers to the cultural environment in which a person lives and all factors associated with the cultural environment (race, ethnicity, religious beliefs, opportunity structures, and socioeconomic status). Bronfenbrenner later included the *chronosystem*—the historical events occurring over the life course of an individual—as a fifth layer of influence. According to the ecological systems model, a change or conflict occurring at any one layer affects all other layers.

Central to the developmental ecological framework are "proximal processes"—i.e., the daily interactions between developing individuals and the symbols, objects, and people they encounter. According to Bronfenbrenner (1995), proximal processes are the "engines of development"—i.e., the direct experiences that drive development.

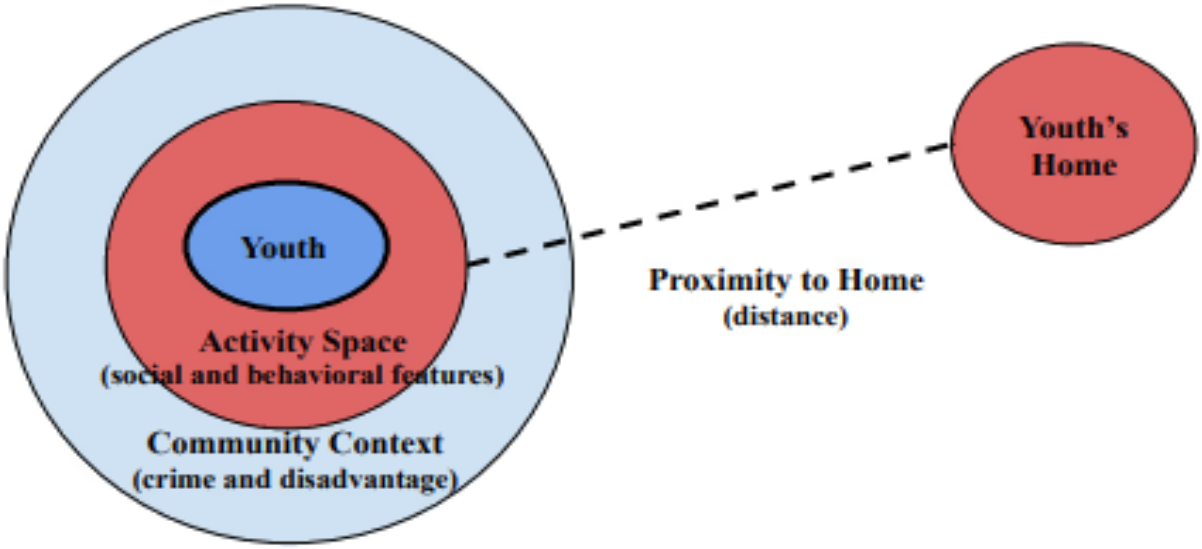


Figure 2.1. Conceptual Model for Activity Space.

This study uses the "activity space" construct as an organizing framework to understand the proximal processes of urban youth. Activity spaces are defined as the locations in which an individual spends time over the course of their daily activities. Based on prior literature, three aspects of activity space are the focus of this study. These include the social and behavioral features of these spaces (i.e., the activities youth engage in, individuals present, and level of adult supervision), the community context surrounding these spaces (i.e., features of the surrounding community, such as the levels of crime and socioeconomic disadvantage), and proximity of these spaces to youths' homes. Taken together, these aspects of activity space provide a holistic understanding of urban youths' proximal processes. Thus, this study is based in the

developmental ecological perspective, integrating the concept of activity space, to describe the environments of urban youth and to examine the relation between where and how adolescent youth spend their time and their involvement in delinquent behavior.

Social Disorganization Theory

According to social disorganization theory, structurally disadvantaged neighborhoods characterized by high levels of poverty, single-parent households, racial and ethnic heterogeneity, and residential mobility are associated with higher rates of juvenile delinquency than more resourced neighborhoods (Bursik & Grasmick, 1993; Elliott et al., 1996; Sampson, 1997; Shaw & McKay, 1942). Social disorganization theory maintains that neighborhood context and location have significant effects on youth engagement in delinquent behavior (Kubrin & Weitzer, 2003). Social disorganization theory emerged from early Chicago School sociologists Robert Park and Ernest Burgess's (1925) examination of how immigration and industrialization impacted Chicago's residential patterns and quality of life within neighborhoods. Chicago School scholars were particularly interested in the increase within large urban aggregates of social problems, such as "disease, crime, disorder, vice, insanity, and suicide"—all of which were interpreted as indicators of social disorganization. Park and Burgess detected a pattern of concentration of these social problems within particular areas sharing characteristics of high rates of poverty, residential mobility, unemployment, and poor housing. Park and Burgess hypothesized that these neighborhood characteristics weakened local systems of informal social control, leading to neighborhood social disorganization and the proliferation of crime and vice.

Shaw and McKay's book *Juvenile Delinquency and Urban Areas* (1942) further advanced social disorganization theory, summarizing over two decades of ecological research on juvenile delinquency within Cook County, Illinois. Their analysis revealed that high delinquency

rates persisted in certain Chicago neighborhoods over long periods of time, despite changes in the racial and ethnic composition of these communities. This finding led to the conclusion that neighborhood ecological conditions shape rates of juvenile delinquency over and above the characteristics of individual residents. Shaw and McKay identified four specific characteristics that contribute to high rates of juvenile delinquency: concentrated poverty, population turnover, physical deterioration, and population heterogeneity. A substantial body of literature has since demonstrated a meaningful correlation between these neighborhood characteristics and rates of juvenile delinquency at the neighborhood level (Bellair & McNulty, 2009; Chung & Steinberg, 2006; De Coster, Heimer, & Wittrock, 2006; Gorman-Smith, Tolan, & Henry, 2000; Haynie, Silver, & Teasdale, 2006; Kirk, 2008; Mrug & Windle, 2009; Peeples & Loeber, 1994; Zimmerman & Messner, 2010, 2011).

To date, research on neighborhood effects on youth delinquency has largely focused on the structural characteristics of urban youths' residential neighborhoods—often defined by an administrative unit such as a census tract—when examining the relation between neighborhood conditions and delinquent behavior (Browning & Soller, 2014; Sampson, Morenoff, & Gannon-Rowley, 2002). A common assumption is that the residential neighborhood is the most relevant context affecting youth behavior (Kwan, 2009). Individuals who live within the same census tract are assumed to experience the same level of exposure to contextual influences, regardless of where they live within the census tract or how much time they spend within their neighborhood of residence (Kwan, 2009). Despite new evidence indicating that urban youth spend a large portion of time outside their homes, both within and outside their residential census tract, little research attention has been paid to community contexts other than where youth live (Browning & Soller, 2014).

The current study uses social disorganization theory to provide a theoretical foundation for examining, through a neighborhood-based lens, the relation between where and how urban youth spend time and youth engagement in delinquent behavior. Prior research within the tradition of urban ecology has highlighted the importance of neighborhood structural characteristics in predicting youth engagement in delinquent behavior. Concentrated poverty is consistently highlighted as a predictor of a variety of adverse health and behavioral outcomes among urban youth.

In addition to concentrated disadvantage, neighborhood-level crime and violence have also been shown to be an important factor related to youth outcomes (Carroll-Scott et al., 2013; Massey, 2004; Sampson, Morenoff, & Raudenbush, 2005; Sharkey, 2010; Sharkey et al., 2012). Although the effects of residence in a high-violence neighborhood may operate through direct experiences of witnessing or victimization, high aggregate levels of neighborhood violence—even if not directly witnessed or experienced—are associated with a host of poor outcomes, including increased risk for involvement in delinquent behavior (Sampson, Morenoff, & Raudenbush, 2005). In this study, these variables are integrated into analyses examining the association between delinquent behavior and features of the community context surrounding urban youths' activity spaces.

This study uses both the developmental ecological framework and social disorganization theory to examine the relationship between key characteristics of urban youths' activity spaces and their engagement in delinquent behavior. To further advance the theoretical foundation for examining delinquency through a community-context lens, a brief review of neighborhood-effects literature is provided in the following section. The studies reviewed highlight the

association between structural conditions of neighborhoods and youth involvement in delinquent behavior.

Community Context and Youth Delinquency

There is considerable evidence that an adolescent's well-being, including health and behavior, is linked to the characteristics of the community in which the young person resides. Research conducted over the last 25 years has clearly demonstrated that youth who reside in low-income urban communities characterized by concentrated disadvantage are at increased risk of adverse health and behavioral outcomes, including substance abuse, high-risk sexual behavior, aggression, obesity, depression, anxiety, posttraumatic stress disorder, and impaired cognitive functioning. These relations hold even after controlling for individual- and family-level circumstances (Browning et al., 2008; Chung & Steinberg, 2006; Gorman-Smith et al., 1999, 2000; Leventhal & Brooks-Gunn, 2000; Sharkey et al., 2012; Sampson et al., 2002).

Much of this work has focused on risk for involvement in delinquent or violent behavior (Bellair & McNulty, 2009; Chung & Steinberg, 2006; De Coster, Heimer, & Wittrock, 2006; Gorman-Smith, Tolan, & Henry, 2000; Haynie, Silver, & Teasdale, 2006; Kirk, 2008; Mrug & Windle, 2009; Peeples & Loeber, 1994; Zimmerman & Messner, 2010, 2011). For example, using data from wave one and two of the National Longitudinal Study of Adolescent Health, De Coster and colleagues (2006) examined the relation between concentrated disadvantage—as measured by poverty rate, total unemployment rate, male unemployment rate, median household income, and percentage of female-headed households—and delinquent behavior. Youths were sampled from 80 high schools and 52 middle schools across the United States. The analytic sample consisted of 11,207 youths between the ages of 12 and 22, with a mean age of 15.8 years. The majority of the sample was White (63%), followed by African American (21%), and Latino

(16%), with equal representation of males and females. Prior-year delinquency was measured by five items: whether youths were involved in a serious fight, used a weapon in a fight, used a weapon to get something, hurt someone, or shot or stabbed someone. This variable was coded as a six-point ordinal outcome, ranging from zero to five. A significant positive correlation between neighborhood disadvantage and delinquent behavior was found, even after controlling for individual/family characteristics (e.g., age, gender, ethnicity, parent education, family income), prior involvement in violent behavior, deviant peer associations, and prior-year victimization.

Data from the Moving to Opportunity Study (MTO) (King, Ludwig, & Katz, 2005) also suggest that neighborhood socioeconomic status is associated with adolescents externalizing behavior problems. Families living in housing projects in five of the nation's largest cities (Baltimore, Boston, Chicago, Los Angeles, and New York) were randomly assigned to one of three groups: (1) an experimental or treatment group that received Section 8 housing vouchers and special assistance to move, with the requirement that the move be to a low-poverty neighborhood; (2) a control group that received Section 8 housing vouchers but no special assistance and no stipulation as to where to move; or (3) a second control group that did not receive vouchers or special assistance and remained in public housing. King, Ludwig, and Katz (2005) examined the relation between neighborhood-level poverty and delinquent behavior using a sample of 1,807 MTO youth who were between the ages of 15 and 25 in 2001. The majority of the analytic sample was African American (66%), followed by Latino (34%), with nearly equal representation of males and females. Delinquency was measured through administrative arrest records and follow-up surveys completed by MTO youth in 2002. Findings suggest that moving to lower-poverty neighborhoods leads to fewer violent- and property-crime arrests for females,

and fewer violent arrests for males. Compared with males in the control group, those in the experimental group had lower rates of self-reported problem behaviors.

More recently, Zimmerman and Messner (2012), using three waves of data from the Project on Human Development in Chicago Neighborhoods (PHDCN), reported a significant positive association between concentrated disadvantage—as measured by poverty, percent of households receiving public assistance, unemployment, and median household income—and delinquent behavior, after controlling for behavioral, cognitive, family, and demographic factors. The analytic sample consisted of 1,502 youths of ages 12 and 15 years, with a nearly equal representation of males and females (49% male and 51% female), who resided within 80 neighborhoods in Chicago. The majority of the sample was Latino (45%), followed by African American (37%), White (14%), and other (4%). Delinquent behavior was measured using the Self-Report of Offending questionnaire (National Institute on Drug Abuse, 1991), which includes behaviors such as hitting someone, attacking someone with a weapon, and carrying a hidden weapon.

Collectively, this body of evidence gives credence to the primacy of place in youth engagement in delinquent behavior. Although past research has established a clear association between structural conditions of urban youths' residential neighborhoods and their involvement in delinquent behavior, how specific sociogeographic contexts outside the home are associated with delinquency remains unclear. Previous studies of context primarily used administrative areas, such as residential census tracts, to assess neighborhood context and its relation to youth behavior. However, these areal units may not fully or accurately characterize where and how adolescents spend time and interact with others at the microgeographic level (e.g., hanging out at the mall without adult supervision or participating in an after-school tutoring program).

Emerging research indicates that urban youth spend approximately half of their time outside their homes within a variety of activity settings—such as recreational centers, homes, schools, movie theaters, parks, or coffee shops—both within their own residential neighborhoods and within other community contexts apart from their residential neighborhoods (Browning & Soller, 2014; Browning et al., 2015). These settings vary with respect to the people who are present, level of adult monitoring, and types of activities going on (Bohnert et al., 2008; Larson et al., 2001). Research to date sheds limited light, however, on the characteristics of the places where urban youth spend their time, both within and outside their residential neighborhoods, and how those settings might be associated with delinquent behavior. Understanding where, how, and with whom urban youth spend their time may offer more insight into the daily experiences of urban youth and how these experiences are associated with delinquent behavior.

"Activity space" is an important construct that provides methodological guidance for understanding urban youths' daily experiences. Activity space is defined as a location that an individual frequents during the course of their daily activities (Miller, 1991). To date, research on activity spaces of urban youth has largely focused on understanding two aspects of activity spaces: (1) the community context surrounding these spaces (e.g., level of violent crime and poverty), and (2) the social and behavioral features within these spaces (e.g., people present, activities) and how these aspects of activity space relate to youth behavior.

The present study integrates multiple aspects of activity space, including the surrounding community context, social and behavioral features, and distance from home, within a single study to provide a richer and more holistic understanding of youths' proximal processes and a more comprehensive assessment of how characteristics of these spaces might relate to delinquent behavior. The literature review that follows details the scholarship to date with regard to activity

space, highlights how the present study builds on these studies, and discusses how empirical findings from this scholarship can provide a more thorough understanding of the association between activity spaces and delinquent behavior.

Community Context of Activity Space and Youth Behavior

Research has repeatedly shown that urban youth, including those who reside in the same neighborhoods, spend time in geographically dispersed locations that are often located outside their residential neighborhoods (Browning & Soller, 2014). For example, using data gathered from 878 urban youths between the ages of 11 and 17 using GPS-enabled smartphones, investigators found that youths on average spent 46% of their time at home, 37% outside their residential neighborhoods, and only 17% outside of their home but within their residential neighborhoods (Browning et al., 2015). Similarly, Basta, Richmond, and Wiebe (2010), using structured interviews to document the travel paths of 55 African American male youths over a one-day period found that youths spent an average of 8.3 hours per day (with reported hours ranging from 0 to 23.5 hours) outside their residential census tracts. Youths' travel paths remained within 8 census tracts on average but ranged from 1 to 34 census tracts. Youths travelled distances of 1.5 miles from home on average, with distances from home ranging from 0 to 7.6 miles (Basta, Richmond, & Wiebe, 2010). In a similar study, Wiehe and colleagues (2008) used GPS technology to track over a one-week period the activity-space locations of 15 females of ages 14 to 17 residing in low-income urban neighborhoods within a Midwestern city. On average, participants spent 33% of their time in locations that were at least one kilometer from their homes (Wiehe et al., 2008). Taken together, these findings suggest that urban adolescents' activity spaces are often located outside the home, both within and outside their residential neighborhoods.

The activity spaces of urban youths, both within and outside their residential neighborhoods, are embedded within community contexts that vary with regard to the level of violent crime. Using data from the AHDC study, Browning and colleagues (2017) examined levels of violent crime surrounding urban adolescents' activity spaces. The number of violent crimes within a census tract was measured using crime data from the Columbus Division of Police. These investigators found significant differences in the level of violent crime surrounding activity spaces of urban youths who lived in the same neighborhoods. Specifically, under the assumption that youth who reside in the same neighborhood are exposed to the same level of violent crime, the intraclass correlation coefficient (ICC) would result in 100% of the variability at the neighborhood level (i.e., youths who reside in the same neighborhood would have the same level of exposure to violent crime). However, the study found that the census tract only accounted for 35% of the variation in youths' exposure to violent crime, with 75% at the individual level, demonstrating variability within neighborhoods with regard to youths' exposure to violent crime. These results indicate that urban youths, particularly those residing in the same neighborhoods, spend time in a variety of activity spaces, and that these activity spaces vary considerably with regard to surrounding violent crime. However, research has yet to examine the level of socioeconomic disadvantage surrounding urban youths' activity spaces.

The community contexts surrounding adolescents' activity spaces—particularly levels of socioeconomic disadvantage and violent crime—have been found to be associated with youth problem behavior (Byrnes et al., 2015; Mennis et al., 2016; Wiehe et al., 2013). Given limited research examining whether community contexts outside the residential neighborhood are associated with youth problem behavior, Wiehe and colleagues (2013) examined whether geographic contexts where adolescents spend time while away from home influenced health-

related behaviors. The sample consisted of 52 females of ages 14 to 17 in Indianapolis, Indiana, 63% of whom identified as African American, 31% as White, and 6% as Latina. Activity-space locations were recorded for a one-week period using GPS technology, and the number of violent crimes were measured for a 200-meter radius surrounding each activity-space location using crime data from Indianapolis's department of police. Past-month substance use and sexual behaviors were measured by youth self-report using the CDC Youth Risk Behavior Survey. The investigators found that higher levels of crime surrounding home activity spaces were significantly associated with both substance use and sexual behavior, whereas levels of crime surrounding nonhome activity spaces were significantly associated with substance use, but not sexual behavior.

Other studies have found socioeconomic disadvantage surrounding nonhome activity spaces to be associated with substance use behavior. Byrnes and colleagues (2015) reported that high socioeconomic disadvantage—as measured by poverty, unemployment, percentage of female-headed households, and renter occupied housing—surrounding nonhome activity spaces was significantly associated with substance use ($r = .52$, $p < .05$), whereas disadvantage surrounding home activity spaces was not ($r = .40$, $p = .11$). Their sample consisted of 18 urban adolescents of ages 16 to 17. Half (50%) of participants were female, and 61.1% of all participants identified as White, 22.2% as African American, and 16.7% as multiethnic. Substance use behaviors were measured using the Adolescent Alcohol and Drug Involvement Scale (AADIS) (Moberg & Hahn, 1991). A study by Mennis and colleagues (2016) yielded similar findings, showing that socioeconomic disadvantage (i.e., poverty, unemployment, female-headed households, and renter-occupied housing) surrounding nonhome activity spaces was significantly associated with substance use behavior, even after controlling for age, race,

gender, and home socioeconomic disadvantage. The sample consisted of 139 urban youths of ages 13 to 14, 59% of whom were female and 89% of whom were African American. Information on substance use behavior was gathered using the AADIS.

Taken together, these studies highlight potential risk associated with the community context in which youths spend their time. While these studies point to community-level socioeconomic disadvantage and violent crime as important predictors of risk behavior, these data provide little understanding of the types of activity spaces in which youths spend their time or other aspects of the activity-space context that might relate to specific risk. The present study, by examining both the characteristics of the community and the activity space itself, may provide a more comprehensive and accurate assessment of community contexts affecting delinquent behavior.

Social and Behavioral Features of Activity Space and Youth Behavior

Another line of research has examined the social and behavioral features of urban youths' activity spaces. Larson and colleagues (2001) conducted a large-scale study documenting the settings in which urban youth spent time. The sample consisted of 253 fifth to eighth grade African American youths (112 boys and 141 girls) from eight elementary schools in Chicago. Participants carried alarm watches to which signals were sent at random times within a two-hour period between 7:30 a.m. and 9:30 p.m. for a seven-day period. Upon receipt of a signal, participants filled out self-report forms documenting their immediate setting (e.g., home, school, park, friend's home), activity (e.g., homework, chores, relaxing), and individuals with them (e.g., friends, family members, classmates). Using these data, Larson and colleagues (2001) examined the types of settings youths frequented, the activities they engaged in within these settings, and the individuals present. The study showed that youths on average spent 50.7% of their time at

home, 27.8% at school, and 21.5% in other public locations (e.g., parks, stores, friends' homes, relatives' homes). Participants reported engaging in structured activities (e.g., classwork, homework, extracurricular activities, chores, working) for 25.6% of their time, and unstructured activities (e.g., watching TV, listening to music, relaxing, playing sports, hanging out) for 74.4% of their time. The largest proportion of their time was spent with family members (38%), with the rest of their time spent alone (20.7%), with classmates (20.3%), with friends (18.2%), and with other individuals (e.g., coach, babysitter) (3.9%).

In another study using the same data, Bohnert, Richards, and colleagues (2008) examined how urban youths spend their discretionary time (i.e., periods of the day in which youths are not involved in school, work, or self-maintenance activities). The activities youths reported were coded using three exclusive categories: active structured (i.e., adult supervised, goal-oriented activities such as participation in an organized sports team, music lesson, or volunteering), active unstructured (i.e., unsupervised, non-goal-oriented activities such as pick-up basketball games or playing video games), and passive unstructured (i.e., unsupervised, non-goal-oriented activities such as watching television, relaxing, or listening to music). Investigators found that discretionary time accounted for 53.2% of youths' waking hours, with youths reporting 2.7% of that time being engaged in active structured activities, 23.1% of that time being engaged in active unstructured activities, and 27.4% of that time being engaged in passive unstructured activities. The majority of discretionary time was spent on unstructured activities (i.e., unsupervised, non-goal-oriented activities).

Much of the literature has used the construct of structured and unstructured activities to understand how urban youth spend their time and the relation with youth behavior. Structured activities are those in which adult leaders dictate to participants a highly specified series of goal-

oriented activities. This construct integrates the elements of adult supervision and goal-oriented nature of the activity. Little research, however, has assessed these elements separately. The present study seeks to disentangle these elements by independently measuring, through youth report, the level of adult supervision and the goal-oriented nature of the activity within the activity space and the association with youth involvement in delinquent behavior.

Research has shown that social and behavioral features of youths' activity spaces have implications for youth engagement in delinquent behavior. Richards and colleagues (2004) reported that more time spent with peers, unmonitored activity, engagement in non-goal-oriented activities, or any combination of these features was associated with youth engagement in delinquent behavior, whereas more time spent with family and engaging in goal-oriented activities were associated with nondelinquent behavior, even after controlling for grade, gender, and family income. In another study using the same data, Bohnert and colleagues (2009) examined the relation between different types of discretionary-time activities (i.e., active structured, active unstructured, and passive unstructured) and delinquent behavior. More time spent on active unstructured activities was significantly associated with higher levels of delinquency, whereas the relation between active structured activities and delinquency was not significant, after controlling for gender, grade level, and family income. In both studies, delinquent behavior was measured using the Self-Report Delinquency Scale (Elliot et al., 1985).

Other studies have focused on examining the relation between time spent in unstructured activities and delinquency. Osgood and Anderson (2004), using a sample of 4,358 eighth-grade students from thirty-six schools in 10 cities in the United States, reported that time spent engaging in unstructured socializing was significantly associated with delinquent behavior, even after controlling for gender, ethnicity, age, family structure, parental education, and school

resources. The sample was comprised of Asian (6%), African American (35%), Latino (16%), and White (44%) participants, with nearly equal representation of males and females. The 10 cities included large metropolitan areas and small towns, middle-class suburbs, and low-income urban neighborhoods. A single item measured the level of unstructured socializing with peers in the absence of authority figures. The item asked, "In an average week, how many hours do you spend hanging around with your current friends, not doing anything in particular, where no adults are present?" Delinquency was measured using the Self-Report Delinquency Scale (Elliot et al., 1985).

More recently, Anderson and Hughes (2009) found in a nationally represented sample of 17,890 adolescents of ages 13 to 19 that time spent with peers in unstructured activities was significantly and positively associated with delinquent behavior, even after controlling for age, gender, ethnicity, family structure, family income, and access to private transportation. Data came from Wave I of the National Longitudinal Study of Adolescent Health—a nationally representative, school-based study of adolescents in grades 7 through 12. The sample was comprised of White (54%), African American (21%), Latino (17%), Asian (7%), and Native American (1%) youths, with equal representation of males and females. The level of unstructured socializing was measured by a single question: "During the past week, how many times did you just hang out with friends?" Responses ranged from 0 (*not at all*) to 3 (*five or more times*). Delinquency was measured using the Self-Report Delinquency Scale (Elliot et al., 1985).

Other research indicates that even within formal after-school activities, the level of structure protects against delinquent behavior (Mahoney & Statton, 2000; Rorie et al., 2010). After-school sports or tutoring programs are considered more highly structured because adult leaders dictate that youth engage in a series of goal-oriented activities. Adult-supervised after-

school programs, however, are comparatively less structured, with youths engaging in various activities, few of which are goal oriented (Osgood, Anderson, & Shaffer, 2005). Using a cross-sectional survey of eighth graders (and a mailed survey of their parents) from six communities within one Swedish county, Mahoney and Stattin (2000) examined the effect of participating in structured activities (involving same-age peers and adult leadership) versus participating in unstructured youth recreation centers on youth engagement in delinquent behavior. The sample comprised 703 adolescents (351 boys, 352 girls), with all youths identifying as Swedish. Youth recreation centers (YRCs) loosely resemble community centers in the US (i.e., they attempt to provide youths with prosocial activities in the evenings and are available to youths ages 13–19), but YRC activities are mainly youth directed, with little guidance for how time is spent. Results indicated that students who participated in structured activities reported fewer antisocial behavior (such as shoplifting, getting drunk, or contact with police). Conversely, participation in YRCs was related to staying out late and associating with older peers or peers who have had police contact.

More recently, Rorie and colleagues (2010) examined the relation between level of activity structure within after-school programs (ASP) and delinquent behavior using a sample of 224 low-income youth who attended ASPs in five urban middle schools in the United States. Participants, nearly half of whom were male (54%), were on average 12 years old, predominantly African American (69%), low income (59% received subsidized meals at school), and most lived in a single-parent home (63%). The ASP operated for three hours per day, three days per week, for a total of 96 days during the 2006–2007 school year at each of the five sites. Activity structure was defined as the extent to which activities included clear expectations for how students should spend their time. Activities were classified into five categories: life skills

instruction, academic activities (e.g., homework assistance), creative recreational activities (e.g., arts and crafts), active recreational activities (e.g., dance, sports), and other activities (e.g., daily snack time and special event celebrations). Research assistants observed four distinct ASP activities during each site visit—usually a life-skills session, an academic-assistance session, and two leisure-activity sessions. A total of 398 discrete activities were observed over a one-year period, with data recorded for five-minute intervals within each of these activities. Observers coded two types of delinquent behaviors occurring during the activity: violence and other counternormative actions (Dishion, 1996). Violence included any threat of, imitation of, or actual engagement in physically harmful acts against another person (e.g., threatening to kill someone, pretending to hit someone, or actual pushing/shoving). Other counternormative actions included behaviors that were not illegal but were considered to be defiant or age inappropriate (e.g., sexual gestures, talking back to group leaders, or cursing). Multilevel analyses revealed that higher levels of structure in the activity as a whole decreased levels of violence and counternormative behavior, even after controlling for group leader, age, gender, and ethnicity. Furthermore, as the level of structure in five-minute intervals within the activity increased, the level of violent behavior declined (Rorie et al., 2010).

Other studies have focused on the association between adult presence or supervision within activity settings and youth problem behavior (Aizer, 2004; Richardson et al., 1993). Richardson and colleagues (1993) examined the relation between level of adult supervision within after-school settings and problem behavior using a sample of 3,993 ninth-grade students in six school districts in southern California. The sample consisted of 1,930 boys and 2,063 girls, self-classified as White (32%), African American (13%), Hispanic (46%), or Asian (9%). Supervision was measured by asking participants whether adults were present where they spent

time after school, whereas monitoring was measured by asking whether the parent always, usually, or never knew their whereabouts after school. These two items were combined, and adolescents were categorized based on levels of adult supervision and/or monitoring. Behaviors examined included cigarette, alcohol, and marijuana use, and risk taking. Overall, findings indicated that adolescents who were not supervised by adults after school had significantly greater problem behavior (more substance use and risk taking) than those who were supervised by an adult. However, there were no significant differences between those who were supervised and those who were unsupervised if their parents always knew their whereabouts.

Aizer (2004), using data from the National Longitudinal Survey of Youth Child–Mother (NLSY-CM), examined the relation between after-school supervision at home and youths' problem behavior, focusing on skipping school, alcohol or marijuana use, theft, and harming other individuals. The original NLSY-CM survey design oversampled African Americans, Latino, and economically disadvantaged poor Whites. The final sample consisted of 3,726 children of ages 10 to 14. Participants included African Americans (36%), Latinos (24%), and White youths (40%), with a mean age of 12 years. Youths were asked if an adult was usually present when the child returned from school. Findings indicated that after-school adult supervision was significantly associated with a decrease in risky or antisocial behaviors, such as skipping school, using alcohol or drugs, engaging in theft, or hurting another individual, even after controlling for age, ethnicity, gender, mother's age, marital status, family income, and maternal education. While research suggests that adult presence and supervision are significantly associated with decreased delinquent behavior among youth, there is an absence of research related to whether a youth's relationship to an adult affects the likelihood of delinquent behavior.

Taken together, these studies indicate that urban youths spend time in different types of spaces, and that these spaces vary with regard to the individuals present and activities going on. Furthermore, some studies have found correlation between youth involvement in delinquent behavior and different characteristics of activity spaces. For example, youths spending time in spaces with adult supervision and involving more goal-oriented activities are less likely to be involved in delinquent behavior. The present study builds on these foundational studies by grounding the social and behavioral features of youths' activity spaces to specific locations, providing a fuller understanding of urban youths' proximal processes. An important next step in activity-space research would be to integrate methods that capture both community-level and social behavioral characteristics of these spaces (Browning & Soller, 2014).

Distance from Home and Youth Delinquency

Another important but less well-understood aspect of activity-space influence on behavior is the distance traveled between an adolescent's home and the activity-space locations (Browning & Soller, 2014). Do youths travel to more or less risky spaces? Most of the existing research examining distance traveled from home has focused on adults and their routine activities. For example, by examining the distances between home and routine activity locations of minority residents of low-income urban communities in Los Angeles (LA), Sastry and colleagues (2002) found that the distance traveled to routine activity locations was significantly greater for minority residents (who were far more likely to reside in a socioeconomically disadvantaged neighborhood) than for White residents. This was the case even after controlling for age, level of education, recent immigration, family income, and time lived in the neighborhood (Sastry, Pebley, & Zonta, 2002). However, activity-location distance from home for urban youths, apart from travel distances to school, has remained largely unexamined (see

Wiebe et al., 2013). The present study fills this gap by examining the distances urban youth travel to spend time at different types of spaces.

The proximity of activity spaces to one's home may have implications for understanding youth participation in delinquent behavior. Research indicates that delinquent behavior typically occurs in settings farther from home, most often in a different residential neighborhood (Sampson, Morenoff, & Gannon-Rowley, 2002; Tompsett, Amrhein, & Hasan, 2014). Using data from a sample of 179 adolescents between ages 12 and 17 involved in the juvenile justice system in a small Midwestern city, Tompsett and colleagues (2014) examined whether youths were more likely to engage in delinquent behavior within or outside their residential neighborhoods. The sample consisted of 163 males and 16 females, with a mean age of 16 years. The majority of participants identified as African American (65%), followed by White (15%), multiracial (12%), Latino (3%), "other" (2%), and Native American (1%). The tendency of participants to engage in delinquent behaviors within his/her home neighborhood was assessed via the question: "When you are doing things that are illegal or could get you in trouble, where are you most likely to be doing them?" The three possible responses included "in the neighborhood where I live," "in a neighborhood where my friend(s) lives, but I don't," and "in a neighborhood where none of us live." The investigators found that 34% of youths were most likely to engage in illegal activities "in the neighborhood where [they] live," 13% were most likely to engage in illegal activities "in a neighborhood where [their] friend(s) lives, but [they] don't," and 53% were most likely to engage in illegal activities "in a neighborhood where none of [them] live."

Other research examining the distance between home and crime sites among juvenile offenders finds that adolescents on average travel 1.5 and 0.7 miles to property- and violent-crime sites respectively (for review, see Bichler et al., 2011). Ackerman and Rossmo (2014),

using Dallas crime data for a five-year period from 1998 through 2002, examined the correlation between age and distance traveled to various crime sites. The data included 25,154 arrests for 10 types of crime (e.g., murder, rape, theft, vandalism). The crimes were committed by individuals between the ages of 16 and 85, with a mean age of 30 years. Findings revealed—after controlling for gender, ethnicity, type of crime, and concentrated disadvantage—that the average distance between home and crime sites lengthened during teenage years and peaked at age 26 before subsequently declining. More specifically, 16-year-old, White, male offenders traveled 3.7 miles to crime sites. Females traveled 0.32 miles farther than males, while Whites traveled 0.57 miles farther than African Americans and 0.85 miles farther than Latinos (Ackerman & Rossmo, 2014). Taken together, these findings suggest that farther distance from one's home may provide an adolescent with more opportunity to engage in delinquent behavior as they are no longer under the watchful eyes of parents, family members, or neighbors (Tompsett et al., 2014).

Activity Space Selection and Socialization

This study explores the relation between behavior and where and how urban youth spend their time, focusing on the association between youth self-reports of involvement in delinquent behavior and the types and characteristics of the activity spaces where youth report spending time. The present study draws upon the peer-effects literature in conceptualizing whether youth involvement in delinquent behavior predicts the places where urban youth spend time or whether the places where urban youth spend their time predicts involvement in delinquent behavior. Do youth who report engaging in delinquent behavior choose to spend time in risky activity spaces? Are youth socialized by the features (risky or protective) of the activity spaces where they spend time? Within the peer-effects literature, there is disagreement about the processes involved in peer effects. Social control theorists (e.g., Hirschi, 1969) suggest that peers affect one another

through selection (i.e., adolescents tend to select friends who are similar to themselves). On the other hand, models of peer influence (Dishion, Patterson, & Griesler, 1994; Sutherland & Cressey, 1974) suggest that socialization (i.e., peer groups exert an influence on group members) is the primary process involved.

Selection versus socialization is an enduring theoretical and empirical question in peer relations. Selection and socialization are alternative explanations for the observation that adolescents and their peers tend to have similar levels of delinquent behavior and substance use. Selection refers to adolescents gravitating to friends who are similar to them (Wills & Cleary, 1999). Selection processes begin as early as kindergarten (Cairns & Cairns, 1994, p. 108), appear to be a driving mechanism in forming peer groups, and should be considered when studying peer influences (Brown et al., 1997; Kandel, 1978). Similarity indicators such as gender and race are primary organizing characteristics of peer groups (Cairns & Kroll, 1994). Similarity among group members is related to many outcomes and characteristics including academic achievement, attractiveness, aggression, substance use, and other behaviors (Cairns & Cairns, 1994, pp. 112–113; Eiser, Morgan, Gammage, Brooks, & Kirby, 1991).

Socialization, or social influence, explains individual-peer similarity by the process of peers exerting influence on the behavior of the individual (Wills & Cleary, 1999). Several studies have documented the risk associated with deviant peer influences (Brook, Whiteman, Gordon, & Cohen, 1986; Dishion, Patterson, & Reid, 1988; Elliott, Huizinga, & Ageton, 1985; Hawkins, Lishner, & Catalano, 1985; Hawkins, Catalano, & Miller, 1992; Klein, Forehand, Armistead, & Brody, 1994). For example, Dishion, Spracklen, Andrews, and Patterson (1996) found, using videotaped conversations, that delinquent adolescents offered advice on deviant activities and

rewarded their friends with nonverbal and verbal indications of approval when the friends talked about deviant activities. They termed this process "deviancy training."

Manski (1995) noted the difficulty inherent in assessing simultaneous processes involved in peer influence, and Berndt (1992) suggested that pathways of influence between individuals and peers are mutual rather than unidirectional. Some studies of delinquency and substance use indicate significant effects for both processes (Keenan, Loeber, Zhang, Stouthamer-Loeber, & Van Kammen, 1995; Luthar & D'Avanzo, 1999). Others have found significant effects for either selection (Farrell & Danish, 1993) or socialization (Wills & Cleary, 1999), but not both.

Given the present study's analyses use cross-sectional data, it is difficult to distinguish between processes of selection and socialization regarding the relation between youth involvement in delinquent behavior and where and how youth spend their time. Therefore, the present study models these analyses in a manner that implies selection (i.e., youth involvement in delinquent behavior is the independent variable), fully acknowledging that these analyses are unable to distinguish between processes of selection or socialization due to the cross-sectional nature of these data. However, while these analyses are modeled in a manner that implies selection, these findings may have implications for processes of socialization.

Limitations of Existing Literature

Research to date has acknowledged the importance of integrating and examining multiple aspects of urban youths' activity spaces to provide a more holistic understanding of proximal processes related to youth behavior (Browning & Seller, 2014). However, studies typically consider only a single aspect of activity space, and no study to date has integrated multiple aspects of activity space within a single study. The present study addresses these gaps in the literature, integrating multiple aspects of urban youths' activity spaces, to provide a better

understanding of where, how, and with whom youths spend their time, as well as the relation between involvement in delinquent behavior and different aspects of activity space.

Youths' Evaluation of Risk and Danger within Activity Spaces

In addition to understanding the characteristics of urban youths' activity spaces, more research is needed to understand how urban youths think about these spaces. Research to date has shed limited light on the process by which urban youth evaluate the level of risk and safety within these spaces. Examining the association between different aspects of urban youths' activity spaces and youths' evaluations of risk and safety could provide insight as to how youths identify and actively select the spaces in which they spend time. The present study examines how youths evaluate these spaces and whether these evaluations vary between youths who do and youths who do not participate in delinquent behavior.

The Socio-Spatial Adolescent Study (Mason, 2009) is a large-scale study which examined how youths evaluate the level of risk and safety within their activity spaces. The sample (n = 301) included primarily African American (87%) and female (61%) adolescents with a mean age of 17. Similar to the current study, participants were asked to identify the activity spaces they frequented during a typical week. Youths were then asked to identify those activity spaces considered most risky (i.e., places where youths were most likely to engage in delinquent, threatening, dangerous, or illegal activities) and most safe (i.e., places safest from harm or danger) and to provide narratives as to why they identified these spaces as such. A significant percentage of participants (48%), though notably less than half of youths, reported home as their safest activity setting, followed by a friend's home (25%), school (11%), and church (5%). Furthermore, 46% of participants reported a city place (e.g., city street, subway

stop, nightclub, retail store, restaurant, or movie theatre) as their riskiest setting, followed by a friend's home (15%), school (13%), park (10%), and recreational center (8%).

A follow-up study reported that youths' evaluations of risk and safety varied by substance use behavior (Mason et al., 2010). Both home and a friend's home were reported as the safest activity settings by substance using and nonusing adolescents (49% and 47% reported home and 27% and 23% identified a friend's home). However, among users, 8% reported city places as their safest location, followed by school (6%) and church (3%), whereas 15% of nonusers reported school, followed by church (7%). The majority of substance-using (51%) and nonusing (42%) adolescents reported city places as their riskiest activity setting. Among users, 19% reported a friend's home as their riskiest location, followed by parks (9%), school (7%), and recreational centers (4%), whereas nonusers reported school (18%), followed by parks (11%), recreational centers (11%), and a friend's home (9%) as their riskiest location. This study did not examine whether the types of spaces youths evaluated as the riskiest or safest varied by delinquent behavior.

Taken together, these studies suggest that youth's evaluations of specific types of spaces as risky or safe differ based on substance-use behavior. A methodological limitation of these studies is their examination of spaces youths reported as the "riskiest" or "safest." Youths reported 876 activity spaces overall. However, only 301 were considered for these analyses as youths were only asked to identify the "riskiest" and "safest" space and the level of risk and safety for each reported activity space were not evaluated (Mason et al., 2010). Consequently, these analyses provide an incomplete understanding of youths' evaluations of risk and safety as they do not consider all activity spaces reported by youths. Furthermore, these analyses only provide descriptive information regarding the types of spaces youths identified as "riskiest" and

"safest" and do not provide information regarding how youths evaluate spaces relative to other activity spaces.

In addition, these analyses do not account for between-person differences in youths' evaluations of risk and safety. It is possible that a youth's age, race, or gender might affect how they evaluate risk and safety within their activity spaces. However, research has yet to account for such differences. The present study addresses these gaps by documenting youths' evaluations of risk and safety for each reported activity space (n = 859) using a 5-point Likert scale and by using multilevel analyses to account for potential within- and between-person differences in youths' evaluations of risk and safety.

Several studies have examined the association between the community context surrounding activity spaces and youths' evaluations of risk and safety. For example, Wiebe and colleagues (2013), using a sample of 65 African American males of ages 10 to 18 (with a mean age of 15.8) living in Philadelphia, Pennsylvania, examined whether violent crime (i.e., homicides and aggravated assault) occurring within a one-quarter mile radius of their morning travel routes to school was associated with their evaluations of danger. Youths were asked to document their travel routes and provide their evaluation of the level of danger at various points along the route using a 1–9 Likert-scale, with 9 representing "*very high*." Findings revealed a significant positive association between community violent crime and youths' evaluation of danger ($b = 0.04$, $p < .05$), even after controlling for age and mode of transportation (i.e., walking, driving, public transportation).

Mennis and colleagues (2016), using a sample of 139 urban youths of ages 13 and 14 in Philadelphia, examined the relation between the socioeconomic disadvantage surrounding youths' activity spaces—as measured by poverty, unemployment, percentage of female-headed

households, and percentage of renter-occupied housing—and youths' evaluation of safety within these spaces. Safety was assessed using an Ecological Momentary Assessment survey item. Prompted at random times throughout the day, youth were asked, "How safe are you right now?" three to five times per day. Responses ranged from 1 ("*Not at all safe*") to 9 ("*Very safe*"). The locations in which youths completed the EMA survey were also captured and socioeconomic disadvantage was measured for these locations. Only nonhome locations were considered in these analyses. The study found a significant positive correlation ($b = 0.013$, $p < .05$) between socioeconomic disadvantage and youth's evaluations of danger, even after controlling for age, race/ethnicity, gender, substance use behavior, and home socioeconomic disadvantage. Furthermore, the study reported that substance use behavior (as measured by AADIS) was significantly negatively associated with youth's evaluations of safety ($b = -0.024$, $p < .01$), after controlling for activity-space disadvantage, home disadvantage, age, race/ethnicity, and gender. Collectively, these findings indicate that the community context surrounding activity spaces could influence youth's evaluations of safety and that youth behavior may also affect how they evaluate the level of safety within these spaces.

Various analyses of narratives provided by youths have been conducted to examine the reasons behind youths' evaluation of spaces as "riskiest" or "safest" (Mason & Korpela, 2009; Mason et al., 2009). Mason and Korpela (2009), using a sample of 68 adolescents between the ages of 14 and 19 years (mean age of 16.5) enrolled in a substance abuse treatment program, examined youths' explanations as to what makes an activity space "safest" or "riskiest." The sample consisted of 54 males and 14 females. With regard to race, 33% identified as White, 20% as African American, 9% as Latino, and 6% as mixed. Participants in the study reported 398 activity-space locations. Participants were asked to identify the locations they regarded as safest

and riskiest and to provide an explanation of what makes these locations safe or risky. A given location could not be identified as both safe and risky. The reasons for classifying places as "safest" or "riskiest" fell into two broad categories: social/behavioral reasons and environmental reasons. Locations were identified as "safe" primarily for social and behavioral reasons (e.g., presence of family or protective people, adult monitoring, or engagement in goal-oriented activities), and risky locations were identified as "risky" primarily for environmental reasons (e.g., being in areas characterized by isolation or high crime, being outdoors, or being far from home) (Korpela & Mason, 2009). Activity spaces in which parents or family members were present were viewed as safer and less risky compared to activity spaces occupied by nonrelated adults. However, settings including other youths and without adult presence were considered riskier and less safe compared to settings including both youths and adults. Furthermore, settings in which adults carefully monitor youths' activities were seen as safer and less risky compared to settings with little to no adult monitoring. In addition, activity spaces where youths participate in goal-oriented activities were considered safer and less risky compared to spaces in which youths engage in non-goal-oriented activities. Finally, activity spaces of further distance from home were considered riskier and less safe compared to those close to home (Mason & Korpela, 2009).

In a follow-up study, Mason and colleagues (2010) examined the reasons behind youths' evaluation of spaces as "riskiest" or "safest" using data from the Socio-Spatial Adolescent Study data set (n = 301). Youths were asked to identify the safest and riskiest locations and to provide an explanation of what makes these locations safe or risky. Linguistic text analyses of youths' explanations were conducted to produce categories of reasons for locations being attributed as risky or safe. Linguistic analyses yielded four categories for representing risk and safety. For safe locations, the results were distributed as social reasons (81%) (based on the presence of peers,

families, others), and environmental reasons (19%) (based on features of the setting). Risky locations were distributed as social reasons (59%), and environmental reasons (41%). Many of the participants' explanations for safety were due to socially based reasons, such as, "my family is there so I feel safe," "there are adults and security present," or "around people I know," followed by environmental reasons, such as "inside where it is safe" or "no crime or illegal activity going on." Many of the subjects' explanations for risk were due to social reasons, such as "lots of kids and no parents," "no authority around," and environmental reasons, such as "lots of drug sales and crime," and "you're outside and wide open to whoever's there."

In both studies, the roles of social and behavioral features within these spaces were speculated as being particularly salient in assessing a place as "safe." Youths who spend time in settings with protective social and behavioral features might be less likely to attribute features of the surrounding community context (e.g., crime) as factors determining safety, as they experience safety and the absence of risk due to the protective social and behavioral features within these settings (Mason & Korpela, 2009; Mason et al., 2010). The authors appropriately conclude with the question, "With enough monitoring and presence of protective people, can any location be considered safe and not risky, and without these ingredients do places become risky and unsafe?" (p. 9).

Research Questions

Based on developmental ecological theory and current research literature on the activity spaces of urban youth, the present study was designed to advance understanding of where and how youth spend their time, and if there are associations between activity space and youth involvement in delinquent behavior. Using cross-sectional data gathered from a sample of

minority youth who reside in high-burden urban neighborhoods, analyses were conducted to address three specific questions:

1. In what types of settings do urban adolescents spend their time? In answering this question, the study will identify the types of spaces youths report spending their time during a typical week. It will also explore the characteristics of those activity spaces with respect to community context (i.e., concentrated disadvantage and violent crime), social and behavioral features (i.e., goal-oriented activity, individuals present, and level of adult supervision), and distance from home.
2. Do adolescents who engage in delinquent behavior spend time in different types of settings than adolescents who do not engage in delinquent behavior but also live in the same neighborhoods? In answering this question, the study will examine whether involvement in delinquent behavior is associated with specific types of activity spaces and with the characteristics of those activity spaces related to community context, social and behavioral features, and distance from home.
3. What aspects of activity spaces are associated with adolescents' evaluation of risk and safety, and do these associations vary by youth involvement in delinquent behavior? In answering this question, the study will examine whether certain types of spaces are evaluated as riskier or safe, whether the evaluations of risk and safety are associated with the community context surrounding the activity space, distances from home, and social and behavioral features of those spaces, and whether these associations vary by delinquency.

CHAPTER 3

RESEARCH DESIGN AND ANALYTIC STRATEGY

Study Design and Dataset

Data from an existing study, Neighborhood Matters, (Gorman-Smith, Tolan, Henry & Schoeny, 2012; Henry, Gorman-Smith, Schoeny, & Tolan, 2014), a two-phase cross-sectional study originally designed to test measures of neighborhood-level social processes believed to influence risk and protection for youth involvement in violence within low-income urban communities in Chicago, were used to address this set of questions. Data were collected from 302 adolescents between the ages of 13 and 17 in 30 census tracts in Chicago. Two hundred ninety-nine of the 301 participants identified as African American or Latino, and two identified as Asian. The present study focuses on the 299 participants who identified as African American or Latino. Study participants completed interviews, including measures that captured the locations and characteristics of their activity spaces (e.g., type of setting, level of adult supervision, type of activity, individuals present), as well as youth reports of their involvement in delinquent behavior.

Sample and Recruitment

The original Neighborhood Matters study was comprised of two phases. In Phase 1, measures of neighborhood social processes were developed and administered to a sample of 605 young adult and adult "neighborhood informants" in 30 census tracts in Chicago. In Phase 2 (individual sample), 600 families (parent-child pairs) with the oldest child being school-entry age or in adolescence, completed interviews to assess neighborhood social processes but also family processes, individual factors, and child and adolescent outcomes. Data from the adolescent sample of phase 2 were used for this study.

Thirty neighborhoods (i.e., census tracts) within Chicago were selected via a stratified random sampling from pools of eligible census tracts within Chicago. Eligibility was based on the following criteria: (1) residential population predominantly (>50%) Latino/Hispanic or African American, (2) more than 1,000 individuals living in the tract, (3) between 20% and 45% of households with income below poverty level, and (4) tract crime rate of less than 150 aggravated assaults per 10,000 residents per year. Based on 2009 estimates of census data and actual crime data, 155 census tracts (63 Latino, 92 African American) out of 866 in Chicago met these criteria. All eligible census tracts were divided into five strata based on poverty level (i.e., 20–25%, 25–30%, 30–35%, 35–40%, and 40–45%), and within each poverty level stratum, six tracts (three Latino and three African American) were selected randomly. Tracts were replaced by random selection if they bordered other tracts already in the sample or contained a significant geographic barrier within their boundaries (e.g., the tract was bisected by an expressway). The geographic locations of the 30 tracts are indicated on the map in Figure 3.1. The census tracts outlined in green and purple indicate majority African American neighborhoods on the west side and south side of Chicago, whereas census tracts outlined in red and blue indicate majority Latino neighborhoods on the near west side and near south side of Chicago.

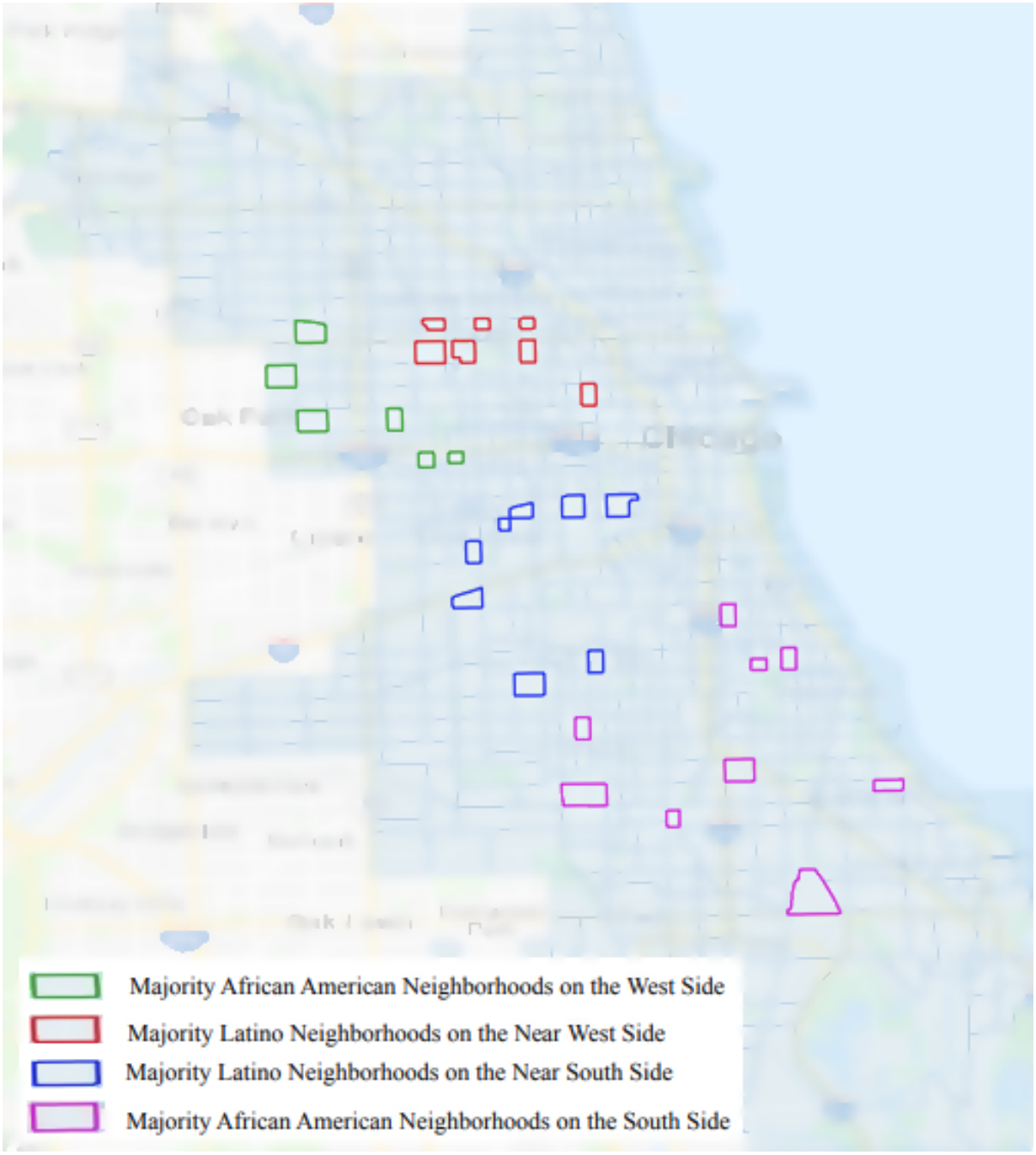


Figure 3.1. Census Tracts (n = 30) in Neighborhood Matters Study.

A respondent-driven sampling approach was taken to recruit participants into phase 2 of the study. Participants from the phase 1 sample served as initial informants to identify households with children in the target age ranges for phase 2 (i.e., ages 5–8 and 14–17). In each of the 30 census tracts, respondents from phase 1 were contacted to request assistance in

identifying neighbors eligible for phase 2. Recontact letters were mailed to each phase 1 respondent prior to attempting phone or in-person contact. The recontact letter provided an opportunity (phone and mail) to request that study staff not contact them further. Once recontact letters were mailed, the recruitment team made phone calls and in-person visits to the participants and reintroduced the study. They asked about households within the census tract with children within the target age ranges for the phase 2 sample and asked them to provide whatever contact and identifying information they had and were willing to share. Beyond identifying likely ages of the children and providing contact information, no other data about the identified families were obtained.

The recruitment team then called or visited the identified households to determine eligibility (i.e., the oldest child was age 5–8 or 13–17, the family lived in the census tract for at least one year, and the family did not participate in Phase 1 of the study), as well as interest. If a family in the second stage of sampling met eligibility criteria, the recruitment team explained the study, recruited and scheduled an interview. Parental consent and child assent were obtained. This process continued until 20 families (10 with adolescent; 5 male and 5 female and 10 with younger children; 5 male and 5 female) participated in a given census tract. All interviews were conducted by trained staff who read the questions and response choices. The more sensitive questions in the adolescent interview were self-administered using Audio Computer Assisted Self Interview (CASI) technology. Responses were recorded on laptop computers in encrypted, password-protected data files.

Data Analytic Sample

Data from the adolescent sample were used for these analyses. Three participants from the original sample (n = 299) were dropped from the analytic sample because none of their

reported activity spaces were successfully geocoded, resulting in a final sample of 296 individuals. For purposes of this study, only successfully geocoded activity-space locations—locations where neighborhood context measures could be obtained—were included in the analysis. As a general rule, geocoding success rates of greater than 85% are considered acceptable (Ratcliffe, 2004). The 299 adolescents reported 856 total activity-space locations, and 819 (95.7%) of these locations were geocoded. This resulted in a final sample of 296 adolescents between the ages of 13 and 17 years, with a mean age of 15.4 years (see Table 3.1). The ethnic composition of the sample was 51.7% African American and 48.3% Hispanic. The gender composition of the sample was 50.7% male and 49.3% female.

Table 3.1
Descriptive Characteristics of Analytical Sample (n = 296)

Characteristic	*n*	%
Age *(mean 15.4)*		
13	9	3
14	81	27.4
15	60	20.3
16	74	25
17	72	24.3
Ethnicity		
African American	153	51.7
Latino	143	48.3
Gender		
Male	146	50.7
Female	150	49.3

Measures

Activity Space Characteristics

Activity-space data were collected using the Ecological Interview (Mason et al., 2004) (see Appendix D for survey). Using a method known as "free listing," participants were asked to list and describe all the elements comprising a particular domain of interest—in this case, weekly

activity locations (Weller & Romney, 1988). Using the Recall Method (Verma & Saraswathi, 1992), respondents reported on their activities in sequential order for a given reference period—in this case, one week.

Teens were asked to identify up to 10 locations visited during a typical week, providing specific geographical information for these locations, including complete addresses, if known. If not known, then they were asked to provide cross streets and names of known landmarks such as parks or subway stations close to the activity-space location. In addition, subjects were asked to identify the type of setting, level of adult supervision, individuals present, and activities they engaged in for each location. Finally, participants assessed the level of risk and safety of each of these locations.

Type of setting. The type of setting was obtained from responses to the prompt: "*List the places where you spend time with friends, family, and other people, or on your own during a typical week.*" Responses were coded into 20 mutually exclusive categories. These categories were collapsed into seven superordinate categories based on previous research on adolescent activity spaces (i.e., Lason et al., 2001; Mason et al., 2009, 2015). Activity-space categories included (1) home, (2) school, (3) friend's or relative's home, (4) adult-owned or managed business or public facility, (5) nonrecreational personal development setting (e.g., library), (6) after-school program or recreational center, and (7) outdoor public setting (e.g., park).

Adult supervision. Adult supervision at each activity space was assessed from responses to the 5-point Likert scale question: "*How often are there adults paying attention to, monitoring, or supervising what you are doing at this place?*" Responses included 1 ("*never*"), 2 ("*hardly ever*"), 3 ("*sometimes*"), 4 ("*often*"), and 5 ("*always*"). This measure was recoded into three

categories: low supervision ("never" or "hardly ever"), medium supervision ("sometimes" or "often"), and high supervision ("always").

Activity. The activities that adolescents engage in at each activity space were assessed from responses to the open-ended question: "*What do you usually do when you are there?*" These activities were coded into three categories: goal-oriented activity or activities, non-goal-oriented activity or activities, or both. This measure was recoded as a 0, 1 dichotomous measure with 0 representing non-goal-oriented activity or activities and 1 representing goal-oriented activity or activities. Examples of goal-oriented activities included completing household chores or homework-related activities, working (after-school job), attending sports practice or an after-school program, whereas examples of non-goal-oriented activities included watching television, hanging out with friends, playing sports for recreation, playing videogames, texting friends, or going to the mall or movie theatre.

Individuals present. The type of individuals present at each activity space was assessed using responses to the question: "*Who is usually at that place with you when you are there? [select all that apply].*" Participants selected from seven possible responses: friends, parents/guardians, adult relatives, siblings, other youth relatives, other youths, and other adults. The original seven categories were collapsed into three categories similar to those used in prior activity space research (Lason et al., 2001): (1) related adults (parents/guardians or adult relatives), (2) unrelated adults (other adults), and (3) other youth (i.e., friends, siblings, or other youth).

Perception of risk. Adolescents' perceptions of risk for each activity space were assessed by the survey item "*How risky is this place?*", with responses given on a scale of 1

("*not risky at all*") to 5 ("*very risky*"). Risky places were defined as "places where you or others are more likely to engage in delinquent, threatening, dangerous, or illegal activities."

Perception of safety. Adolescents' perceptions of safety for each activity space were assessed using the survey item "*How safe is this place?*", with responses given on a scale of 1 ("*very safe*") to 5 ("*very unsafe*"). Safe places were defined as "places where you are safe from harm or danger."

Concentrated disadvantage. Concentrated disadvantage of the neighborhood (census tract) was defined as a linear combination of four census variables that have been shown in other studies to characterize neighborhood context: (a) percentage of female-headed households, (b) percentage of unemployed adults, (c) percentage of owner-occupied homes, and (d) percentage of families below poverty level (Gorman-Smith et al., 2010). Using data from the 2011 five-year American Community Survey for all census tracts in the United States (US Census, 2011), a principal components analysis revealed a single factor that accounted for 63.5% of the variance in the items. The composite measure of concentrated disadvantage was created as a standard score with a mean of zero and a standard deviation of one, with higher values indicating greater disadvantage. In the present study, 819 activity spaces were located within 272 separate tracts. Concentrated disadvantage was calculated for each of these tracts.

Violent crime. Crime incident data from the Chicago Police Department (CPD) were obtained for the 12 months beginning January 1, 2011, and ending December 31, 2011. For each incident, these data included date and time of occurrence, type of crime, and the geocoded location. CPD uses Illinois Uniform Crime Reporting (IUCR) codes to classify incidents. IUCR codes can be aggregated with FBI Uniform Crime Reporting codes. For the present analyses, two categories of crime were used to measure violent crime: *aggravated assault* and *shootings.*

Aggravated assaults are unlawful attacks with the intent of inflicting serious injury and include attacks in which an injury was sustained (aggravated batteries) or threats of attack with a weapon (aggravated assaults). *Shootings* are defined as aggravated batteries in which a firearm was used. Although it is possible to use a firearm in the commission of aggravated battery without firing the weapon, this definition is felt to be the best proxy for shootings.

A total of 15,580 aggravated assaults, including 1,740 shootings (11.2% of aggravated assaults), were recorded for the 12 months studied. Using QGIS 3.4, the number of crimes within a quarter-mile radius were counted for each successfully geocoded activity-space location.

Distance from home. The straight-line distances (in miles) between adolescents' homes and activity-space locations were calculated in QGIS 3.4 using the Euclidean Distance function. The Euclidean Distance function is the most commonly used straight-line distance function (Terziyan, 2017; Wilson & Martinez, 1997). Because the present study was not interested in examining travel distances between adolescents' home and activity-space locations, other common distance functions, such as the Manhattan Distance function, were not considered (Wilson & Martinez, 1997).

Individual-Level Factors

Youth delinquency. The Self-Report of Delinquency (SRD) (Elliott et al., 1985) provided estimates of delinquent activity (see Appendix C for survey). Delinquent behavior was calculated using a frequency score weighted by legal seriousness. This ordinal scale has five levels (0 to 4), ranging from *no involvement* (Level 0) through *minor status offenses* and *misdemeanors* (Levels 1-2) to *multiple serious misdemeanors* and *felonies* (Levels 3-4) (Henry et al., 2012; see Table 3.2). This scale is referred to as the Elliott Level Scale as it was first suggested by Elliott and colleagues (Elliott et al., 1985). For these analyses, data were recoded

into three categories: *nondelinquent behavior* (Level 0), *low level of delinquent behavior* (Levels 1 and 2), and *serious level of delinquency* (Levels 3 and 4) (see Table 3.3). It is important to note that there is an unresolved issue of differential validity with regard to the SRD measure. As compared to other race-gender groups, some studies have found that the responses provided by African American males appear to have lower levels of validity (Hindelang et al., 1981; Huizinga and Elliott, 1986). However, Farrington et al. (1996) and Maxfield et al. (2000) found no evidence of differential validity by race/ethnicity. Maxfield and colleagues (2000) did find lower reporting for females than males.

Table 3.2
Elliott Level Scale

Level	Description		
0	1-2 status offenses or class C misdemeanors		
1	3 or more status offenses or class C misdemeanors, and less than three class A or B misdemeanors		
2	3 or more class A or B misdemeanors, and no felonies	***OR***	1-2 class 3 or 4 felonies, and no Class 1 or 2 felonies
3	3-9 class 3 or 4 felonies, or 1-2 class 1 or 2 felonies		
4	10 or more class 3 or 4 felonies, or 3 or more class 1 or 2 felonies		

Table 3.3
Proportion of Sample Engaging in Delinquent Behavior

Level of Self-reported Delinquency	*n*	%
Non-Delinquent (*n* = 112)	112	38
Low Delinquency (*n* = 125)	125	42
Serious Delinquency (*n* = 59)	59	20
Total	296	100

Control Variables

The present study controlled for age, gender, and ethnicity as prior research suggests that age, race, and gender are associated with youths' evaluations of risk and safety within their activity spaces and delinquent behavior (Mennis & Mason, 2011; Mennis et al., 2016).

Ethnicity. Data on participants' ethnicity was gathered from the demographic questionnaire. This measure was recoded as a 0, 1 dichotomous measure with 0 representing Hispanic and 1 representing African American.

Gender. Data on participants' gender was gathered from the demographic questionnaire. This measure was recoded as a 0, 1 dichotomous measure with 0 representing female and 1 representing male.

Age. Data on participants' ages was gathered from the demographic questionnaire. This measure was treated as a continuous variable, with age ranging from 13 to 17.

Analytic Strategy

Data Preparation

Data preparation tasks were conducted using ArcGIS 10.2, QGIS 3.4, and SPSS 25.0. Home and activity-space locations provided by each subject were converted to a text-format street address and geocoded using ArcGIS 10.2. The original 299 subjects provided a total of 856 activity-space locations, and 819 activity spaces were geocoded. The geocoding process converted street addresses into latitudinal and longitudinal coordinates and provided the census tract for each home, school, and activity-space location. The Euclidean Distances between home and activity-space locations and number of violent crimes within a quarter-mile radius of activity-space locations were measured in QGIS 3.4. These data were then linked to census data using SPSS 25.0.

Descriptive Analyses

Descriptive analyses were performed using SPSS 25.0. The means and standard deviations of continuous items and frequencies of categorical items were analyzed. Univariate normality was explored using tests of skewness (i.e., the degree and direction of asymmetry of a distribution) and kurtosis (i.e., the extent that data is peaked or flat in a distribution). The present study adopts conservative values of skewness (+1/-1) and kurtosis (+4/-4) as unacceptable levels of skewness and kurtosis (Bowen & Guo, 2012). No variables indicated normality issues (see Appendix B).

Statistical Analyses

All statistical analyses were performed using Stata 14.0. Stata 14.0 was selected because of its ability to conduct multilevel analyses for binary, nominal, ordinal, and continuous outcomes. For these analyses, clustering at both individual and community levels were considered if the ICC was significant using a .05 level of significance.

Another advantage of using Stata 14.0 is its capacity to use Maximum Likelihood (ML) estimation for multilevel models. Literature suggests that ML yields unbiased estimators for clustered ordinal, nominal, continuous, and binary outcomes if data are obtained on 100 or more clusters, cluster sizes are small, and, in the case of ordinal outcomes, the ordinal variable has three or more categories (Bauer & Sterba, 2011; Hedeker, 2008; Maas & Hox, 2005). Given that the analytic sample consisted of 296 clusters (i.e., individuals), cluster sizes were relatively small (ranging from 1 to 5 observations, with an average of 2.7 observations per individual), and ordinal outcomes considered in this study (i.e., adult supervision, evaluations of risk and safety) consisted of 3 or more categories, the present study used ML estimation.

Missing Data

Given that the percentage of missing activity-space data was minimal (only 0.73% for select primary variables; see Table 3.5), these activity spaces were omitted from analyses. This approach is recommended when the loss of cases due to missing data is less than 5%, as biases and loss of power are likely to be inconsequential (Graham, 2009; Little & Rubin, 2002). While five of the 819 activity spaces were omitted from analyses due to missing data, this did not result in a loss of subjects (n = 296) as the individuals who reported these five activity spaces reported other activity spaces as well.

Table 3.4

Percentage of Missing Data in Analytical Sample

Individual Characteristics (n = 296)	%
Delinquent Behavior	0.00%
Age	0.00%
Gender	0.00%
Ethnicity	0.00%
Activity Space Characteristics (n = 819)	
Concentrated Disadvantage	0.00%
Violent Crime	0.00%
Distance from Home	0.73%
Type of Setting	0.00%
Level of Adult Supervision	0.73%
Individuals Present	
Related Adult	0.73%
Nonrelated Adult	0.73%
Other Youth	0.73%
Goal Oriented Activity	0.00%
Evaluation of Risk	0.73%
Evaluation of Safety	0.73%

Question 1 Analysis: In what types of settings do urban adolescents spend their time?

Analyses were conducted to provide descriptive information regarding adolescents' reported activity spaces. Analyses were also conducted to map each of the reported activity spaces. Descriptive analyses were conducted using SPSS 25.0, and data visualization was conducted using Excel 16.0. First, frequencies of the types of spaces reported by youths and the proportion of these spaces located within and outside of youths' residential neighborhoods were calculated. Second, the proportion of the sample reporting activity spaces by setting type were calculated.

The compare means procedures in SPSS 25.0 were conducted for community context variables (i.e., violent crime and socioeconomic disadvantage) and distance from home by setting type. Furthermore, cross-tabulation analyses were conducted for social and behavioral variables (i.e., supervision, goal-oriented activity, and individuals present) by setting type. For community-context variables and distance from home, the mean and standard deviations of each

item were presented by setting type. For social and behavioral variables (i.e., supervision, goal-oriented activity, and individuals present), the frequency of each item was presented by setting type.

Finally, using QGIS 3.4, six two-dimensional maps of Chicago were created to visualize reported activity spaces—one for each setting type (excluding reported home activity spaces). Census tracts in which youths resided were outlined in green, red, blue, or purple (Figure 3.1). Census tracts outlined in green and purple indicate majority African American neighborhoods on the west side and south side of Chicago, whereas census tracts outlined in red and blue indicate majority Latino neighborhoods on the near west side and near south side of Chicago.

The reported activity spaces were plotted using the same color used to outline residential census tracts. Activity spaces less than 0.5 miles from home locations were represented by a lighter shade of green, red, blue, or purple, whereas activity spaces 0.5 miles or greater from home locations were represented by a darker shade of green, red, blue, or purple.

Question 2 Analysis: Do adolescents who engage in delinquent behavior spend time in different types of settings than other adolescents from the same neighborhoods?

Preliminary analyses were conducted to determine whether level of delinquency was significantly associated with age, ethnicity, and gender (using chi-square tests) and to determine whether level of delinquency was associated with the number of reported activity spaces, controlling for age, ethnicity, and gender (using a t-test).

Analyses were then conducted to examine whether level of delinquent behavior was associated with specific types of activity spaces, controlling for age, ethnicity, and gender. Two multilevel models, one which included delinquency and another which excluded delinquency, were executed. A log likelihood ratio test was conducted to determine whether including

delinquency significantly improved model accuracy. Next, a series of multilevel models were executed to examine whether level of delinquent behavior was associated with characteristics of the activity space related to community context, distance from home, and social and behavioral features, controlling for age, ethnicity, and gender. Separate analyses were conducted for home, school, and nonhome/nonschool activity locations. Individual- and community-level clustering were considered only if the ICC were significant using a .05 level of significance. However, for home and school activity spaces, only clustering at the community level was examined, as youths reported one home and one school location. Furthermore, for home locations, clustering at the community level was not considered for community-context features as there would be no within-neighborhood variation.

For these analyses, Helmert contrasts were used to analyze how each level of delinquency compared with the mean of subsequent levels of delinquency with regard to type of setting and characteristics of activity spaces. The first contrast compared nondelinquent youth to delinquent youth (i.e., youth who engage in low and/or serious levels of delinquency), whereas the second contrast compared youth who engage in low levels of delinquency to youth who engage in serious delinquent behavior.

Question 3 Analysis: What aspect of activity spaces are associated with adolescents' evaluations of risk and safety, and do these associations vary by delinquency?

The analyses of activity-space association with adolescents' evaluations of risk and safety were conducted using multilevel models for clustered ordinal outcomes, controlling for age, ethnicity, and gender. Only clustering at the individual level was considered, as preliminary analyses revealed no significant ICC (using a .05 level of significance) for clustering at the community level.

Two multilevel models—i.e., one for perception of risk and another for safety—were used to examine the association between certain types of spaces and youths' evaluations of risk and safety. Two additional analyses (i.e., one for each outcome)—which included the type of setting by delinquency interaction term—were conducted to examine whether the association between type of setting and youths' evaluations or risk and safety varied by delinquent behavior. Table 3.6 provides a summary of the analyses conducted for Question 3.

Furthermore, a series of analyses were conducted to examine the association between the characteristic of these spaces (i.e., surrounding community context, distance from home, and social and behavioral features) and youths' evaluations of risk and safety. These analyses were also conducted separately for home, school, and nonhome, nonschool activity spaces. Two additional analyses (i.e., one for evaluation of risk and another for evaluation of safety) were conducted to examine whether these associations varied by delinquent behavior. These analyses included eight interaction terms (i.e., socioeconomic disadvantage by delinquency, violent crime by delinquency, distance from home by delinquency, adult supervision by delinquency, goal-oriented activity by delinquency, other youth by delinquency, related adult by delinquency, and nonrelated adult by delinquency).

Helmert contrasts were used to understand how each level of delinquency compared with the mean of subsequent levels of delinquency with regard to youths' evaluations of risk and danger. The first contrast compared nondelinquent youth to delinquent youth (i.e., youth who engage in either low or serious levels of delinquency), whereas the second contrast compared youth who engage in low levels of delinquency to youth who engage in serious delinquent behavior. Helmert contrasts were also used to understand how each level of supervision compared with subsequent levels of supervision with regard to youths' evaluations of risk and

safety. The first contrast compared low supervision to medium and high levels of supervision, whereas the second contrast compared medium supervision to high supervision.

Table 3.5
Summary of Analyses for Question 3

Analysis	Activity Spaces	Dependent Variable	Independent Variable(s)	Control Variables
1	All	Evaluation of Risk	Type of Setting	Age, ethnicity, and gender
2	All	Evaluation of Safety	Type of Setting	Age, ethnicity, and gender
3	All	Evaluation of Risk	Type of Setting, Delinquency, and Type of Setting x Delinquency	Age, ethnicity, and gender
4	All	Evaluation of Safety	Type of Setting, Delinquency, and Type of Setting x Delinquency	Age, ethnicity, and gender
5	Home	Evaluation of Risk	Community context variables, social and behavioral features, and distance from home	Age, ethnicity, and gender
6	Home	Evaluation of Safety	Community context variables, social and behavioral features, and distance from home	Age, ethnicity, and gender
7	Home	Evaluation of Risk	Community context variables, social and behavioral features, distance from home, delinquency, and eight interaction terms (by delinquency)	Age, ethnicity, and gender
8	Home	Evaluation of Safety	Community context variables, social and behavioral features, distance from home, delinquency, and eight interaction terms (by delinquency)	Age, ethnicity, and gender
9	School	Evaluation of Risk	Community context variables, social and behavioral features, and distance from home	Age, ethnicity, and gender
10	School	Evaluation of Safety	Community context variables, social and behavioral features, and distance from home	Age, ethnicity, and gender
11	School	Evaluation of Risk	Community context variables, social and behavioral features, distance from home, delinquency, and eight interaction terms (by delinquency)	Age, ethnicity, and gender
12	School	Evaluation of Safety	Community context variables, social and behavioral features, distance from home, delinquency, and eight interaction terms (by delinquency)	Age, ethnicity, and gender
13	Nonhome, Nonschool	Evaluation of Risk	Community context variables, social and behavioral features, and distance from home	Age, ethnicity, and gender
14	Nonhome, Nonschool	Evaluation of Safety	Community context variables, social and behavioral features, and distance from home	Age, ethnicity, and gender
15	Nonhome, Nonschool	Evaluation of Risk	Community context variables, social and behavioral features, distance from home, delinquency, and eight interaction terms (by delinquency)	Age, ethnicity, and gender
16	Nonhome, Nonschool	Evaluation of Safety	Community context variables, social and behavioral features, distance from home, delinquency, and eight interaction terms (by delinquency)	Age, ethnicity, and gender

CHAPTER 4

RESULTS

Question 1 Results

Findings for Question 1, regarding where adolescents spend their time, are organized into four sections. The first section describes the types of activity spaces reported by participants. Sections 2 through 4 examine key characteristics of those activity spaces: surrounding community context (i.e., concentrated disadvantage and violent crime), distances between home and activity-space locations, and social and behavioral features within these spaces (i.e., level of adult supervision and goal-oriented activities, and individuals present).

Reported Activity Spaces

The 296 youth participants reported 819 activity spaces, averaging nearly three locations per participant. Locations were categorized so that if a participant reported "my friend Anthony's house" as one of their activity spaces, it would be coded as a "friend's home." A total of 20 unique activity-space location categories—such as "home," "school," "friend's house," and "mall" were reported, which were collapsed into seven superordinate categories based on prior activity-space research (Larson et al., 2001; Mason, 2010) (Table 4.1).

Table 4.1
Categories of Reported Activity Spaces (n = 819)

Original Category	*n*	Superordinate Category	*n*
1. Home	168	1. Home	168
2. School	185	2. School	185
3. Friend's Home	137	3. Friend's or Relative's Home	205
4. Relative's Home	68		
5. Mall	12	4. Adult Owned or Managed Business or Public Facility	93
6. Store	38		
7. Café/Restaurant	23		
9. Movies	18		
10. Museum	1		
11. Zoo	1		
12. Library	9	5. Nonrecreational Personal Development Setting	32
13. Work	10		
14. Professional Development Course	5		
15. Church	8		
16. Afterschool Program	26	6. Afterschool Program or Recreational Facility	54
17. Recreational Facility	28		
18. Park	63	7. Outdoor Public Setting	82
19. Neighborhood Street	18		
20. Beach	1		
	819		819

The most frequently reported activity spaces were a friend's or relative's home (25%), followed by school (23%), home (21%), business or public facility (11%), an outdoor public setting (park or neighborhood street) (10%), an after-school program or recreational center (7%), and a nonrecreational personal development setting (4%) (Table and Figure 4.2). Excluding the 168 activity spaces that were homes, 77% of reported activity spaces were outside of youths' residential census tracts, whereas 23% were within their residential census tracts. The large majority of reported schools (90%), businesses or public facilities (91%), and nonrecreational professional development settings (91%) were outside youths' residential census tracts. A smaller proportion (but still a majority) of friends' or relatives' homes (61%), after-school programs or recreational centers (72%), and outdoor public settings (70%) were within youths' residential census tracts. Collectively, these findings indicate that youth spend time in different types of spaces, and the majority of these spaces are located outside their residential neighborhoods.

Table 4.2

Reported Activity Spaces by Setting Type (n = 819)

Type of Setting	Reported Activity Spaces		Within Census Tract		Outside Census Tract	
	n	%	*n*	%	*n*	%
Home (*n* = 168)	168	21%	168	--	0	--
School (*n* = 185)	185	23%	18	10%	167	90%
Friend's or Relative's Home (*n* = 205)	205	25%	80	39%	125	61%
Adult-Owned or -Managed Business or Public Facility (*n* = 93)	93	11%	8	9%	85	91%
Nonrecreational Personal Development Setting (*n* = 32)	32	4%	3	9%	29	91%
After-school Program or Recreational Facility (*n* = 54)	54	7%	15	28%	39	72%
Outdoor Public Setting (*n* = 82)	82	10%	25	30%	57	70%
	819	100%	317	23%*	502	77%*

Note. n indicates number of reported activity spaces

* percentage excludes home activity spaces

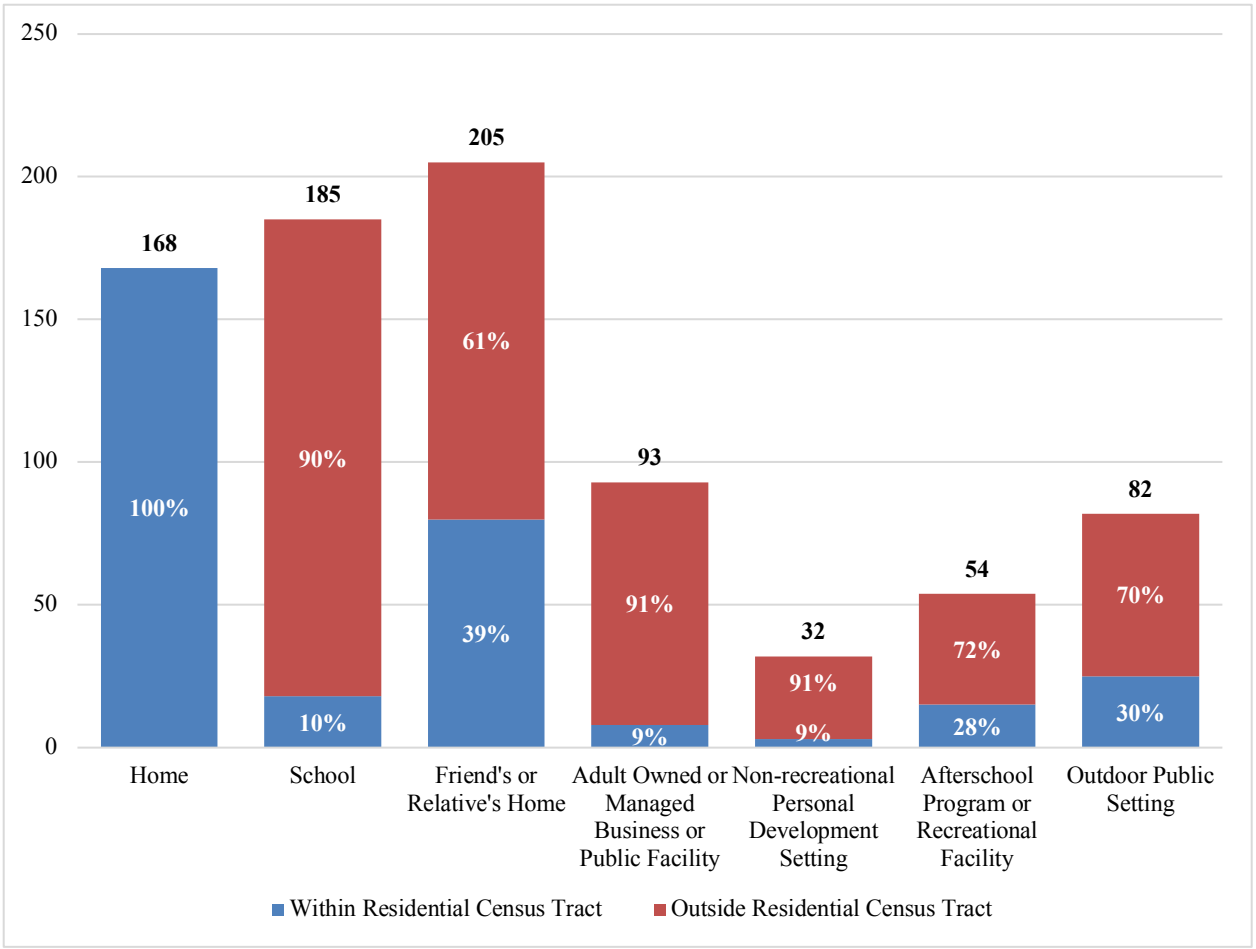


Figure 4.2. Reported Activity Spaces by Setting Type (*n* = 819).

Further analyses were conducted to examine the proportion of the sample (n = 296) reporting each type of activity space (Table and Figure 4.3). The majority of the sample reported school (62%), followed by a friend's or relative's home (57%), and home (54%). Substantially fewer participants, however, reported a business or public facility (27%), an outdoor public setting (26%), an after-school program or recreational facility (16%), or a personal development setting (10%) (Table and Figure 4.3). One hundred sixty-eight youths reported a home location and 185 youths reported a school location (i.e., 168 youths reported the 168 home locations and 185 youths reported the 185 school locations). Some youths, however, reported multiple nonhome, nonschool activity spaces. Specifically, 91 youths reported 205 friends' or relatives' homes, 50 youths reported 93 businesses or public facilities, 17 youths reported 32 personal development settings, 19 youths reported 54 after-school programs or recreational facilities, and 32 youths reported 82 outdoor public settings. Of youths who reported more than one friend's or relative's homes, few (i.e., 5% of total sample of 296 participants) reported at least one which was located within their residential census tract and another located outside (Table 4.3). Only one percent (1%) of the total sample reported more than one after-school program or recreational facility and outdoor public setting, with at least one located within their residential census tract and another located outside. Taken together, these findings indicate that the majority of the sample spent time at home, school, and a friend's or relative's home, whereas substantially fewer spent time at other types of spaces.

Table 4.3

Proportion of Sample Reporting Activity Spaces by Setting Type (n=296)

Type of Setting	Total	Within Census Tract	Within and Outside Census Tract	Outside Census Tract
Home (*n* = 168)	57%	57%	0%	0%
School (*n* = 185)	62%	6%	0%	56%
Friend's or Relative's Home (*n* = 205)	54%	19%	5%	30%
Adult-Owned or -Managed Business or Public Facility (*n* = 93)	27%	3%	0%	24%
Nonrecreational Personal Development Setting (*n* = 32)	10%	1%	0%	9%
After-school Program or Recreational Facility (*n* = 54)	16%	4%	1%	11%
Outdoor Public Setting (*n* = 82)	26%	7%	1%	18%

Note. n indicates number of subjects reporting each type of activity space

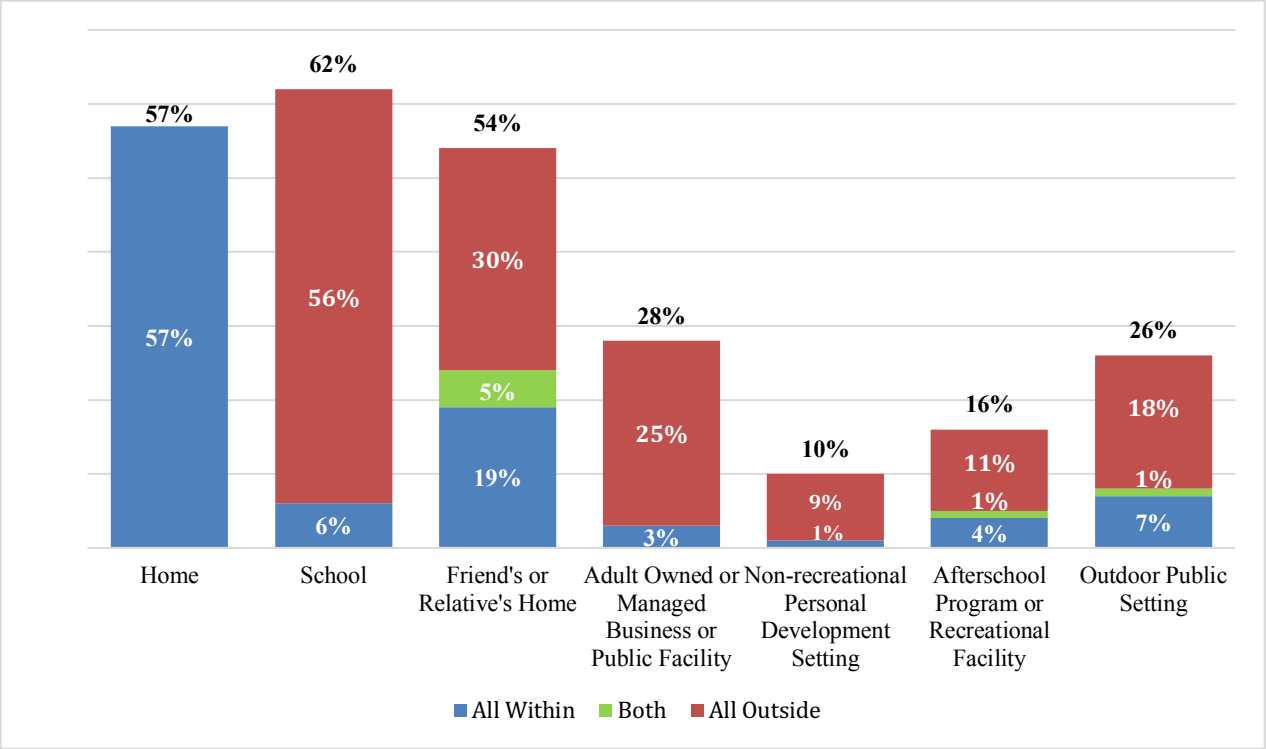


Figure 4.3. Proportion of Sample Reporting Activity Spaces by Setting Type (*n* = 296).

Community Context

Levels of concentrated disadvantage surrounding reported activity spaces ranged from

-1.27 to 4.68, with a mean of 1.49 and standard deviation of 1.28, with larger values indicating higher levels of socioeconomic disadvantage. The majority of reported activity spaces were located in areas well above the national average for concentrated disadvantage (M = 0.00; SD = 1.00). The annual number of violent crimes within a one-quarter mile radius of the reported spaces ranged from 0 to 98, with a mean of 22.6 and standard deviation of 16.4.

A substantial proportion of youths, in response to the open-ended question of where youths spend their time during a typical week, did not report home and school as activity spaces (43% and 38%, respectively), despite providing home and school addresses as part of their demographic information and likely spending time at these locations. To accommodate for data limitations arising from the open-ended question, home and school addresses of all youths were geocoded to provide insight into the community context (i.e., violent crime and socioeconomic disadvantage surrounding participants' school and home locations and the distances between school and home locations. Table 4.4 provides the results of analyses examining the community context and distance from home of reported activity spaces. This included home (n = 168) and school (n = 185) locations reported by youths, unreported home and school locations (the 128 and 111 home and school locations not reported by youths in response to the open-ended question), and all home and school locations (296 and 290 home and school locations). However, the social and behavioral features of all home and school locations could not be examined as youths were only asked to describe these features for reported activity spaces. Reported and unreported home locations differed significantly with regard to concentrated disadvantage but not with regard to nearby violent crime. However, there were no significant differences between reported and unreported school locations with regard to concentrated disadvantage and nearby violent crime.

Table 4.4
Community Context and Distance from Home (Home and School Locations)

Type of Setting	Concentrated Disadvantage (census-tract level)		Violent Crime (prior year incidents within a one-quarter mile radius)		Distance from Home (miles)	
	M	*SD*	*M*	*SD*	*M*	*SD*
Home						
Reported (*n* = 168)	1.98*	1.09	24.3	12.8	--	--
Unreported (*n* = 128)	1.63*	1.09	23.2	12.0	--	--
All Homes (*n* = 296)	1.82	1.12	23.8	12.5	--	--
School						
Reported (*n* = 185)	1.35	1.29	17.9	13.6	1.9	1.9
Unreported (*n* = 105)	1.58	1.23	18.3	11.6	2.1	2.3
All Schools (*n* = 290)	1.44	1.27	18.0	12.7	2.0	2.1

Note. n indicates number of activity spaces
* Significant difference between level of concentrated disadvantage surrounding reported and unreported home locations ($p < .01$)

Table 4.5 examines the community context (i.e., concentrated disadvantage and violent crime) and distance from home for reported nonhome, nonschool activity spaces (*n* = 466).

Table 4.5
Community Context and Distance from Home (Nonhome, Nonschool Locations)

Type of Setting	Concentrated Disadvantage (census-tract level)		Violent Crime (prior year incidents within a one-quarter mile radius)		Distance from Home (miles)	
	M	*SD*	*M*	*SD*	*M*	*SD*
Friend's or Relative's Home (*n* = 205)	1.67	1.21	23.3	14.6	1.5	2.4
Adult-Owned or -Managed Business or Public Facility (*n* = 93)	0.40	1.15	14.3	13.5	3.6	3.4
Nonrecreational Personal Development Setting (*n* = 32)	1.15	1.35	17.3	19.9	2.5	2.0
After-school Program or Recreational Facility (*n* = 54)	1.87	1.30	24.2	18.3	2.5	4.8
Outdoor Public Setting (*n* = 82)	1.60	1.18	19.8	12.7	1.1	1.8

Note. n indicates number of reported activity spaces

Levels of concentrated disadvantage (Tables 4.4 and 4.5; Figure 4.4) were highest for reported home activity spaces (*M* = 1.98, *SD* = 1.09). This was followed by after-school programs or recreational facilities (*M* = 1.87; *SD* = 1.30), friend's or relative's homes (*M* = 1.67; *SD* = 1.21), outdoor public settings (*M* = 1.60; *SD* = 1.18), schools (*M* = 1.35; *SD* = 1.29), nonrecreational personal development settings (*M* = 1.15, *SD* = 1.35), and businesses or public facilities (*M* =

0.40, *SD* = 1.15). Concentrated disadvantage surrounding businesses or public facilities was substantially lower compared to other types of spaces.

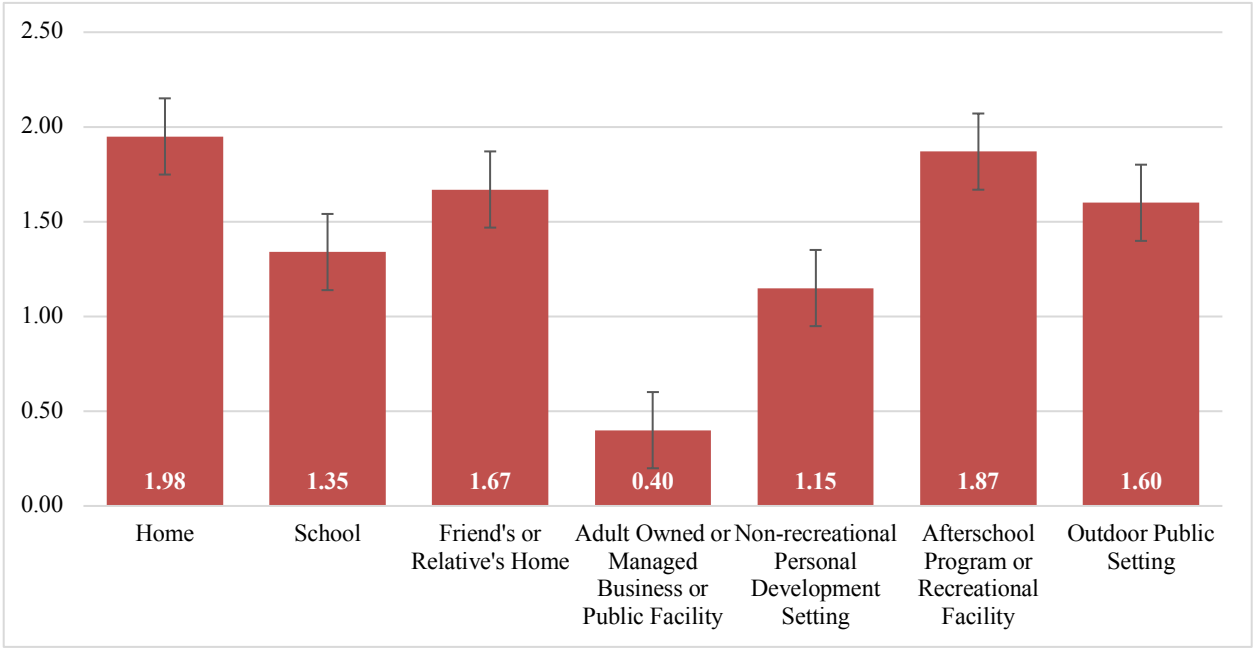


Figure 4.4. Concentrated Disadvantage (census-tract level) by Setting Type (*n* = 819).
Note: Limited only to home and schools reported as activity spaces

Similar trends were found with regard to the number of violent crimes within a one-quarter mile radius of reported activity spaces (Figure 4.5). The highest number of violent crimes occurred near homes (*M* = 24.3; *SD* = 12.8), followed by afterschool programs and recreational facilities (*M* = 24.2; *SD* = 18.3), friend's or relative's homes (*M* = 23.3; *SD* = 14.6), outdoor public settings (*M* = 19.8; *SD* = 12.7), schools (*M* = 17.9; *SD* = 13.6), nonrecreational personal development settings (*M* = 17.3; *SD* = 19.9), and businesses or public facilities (*M* = 14.3; *SD* = 13.5).

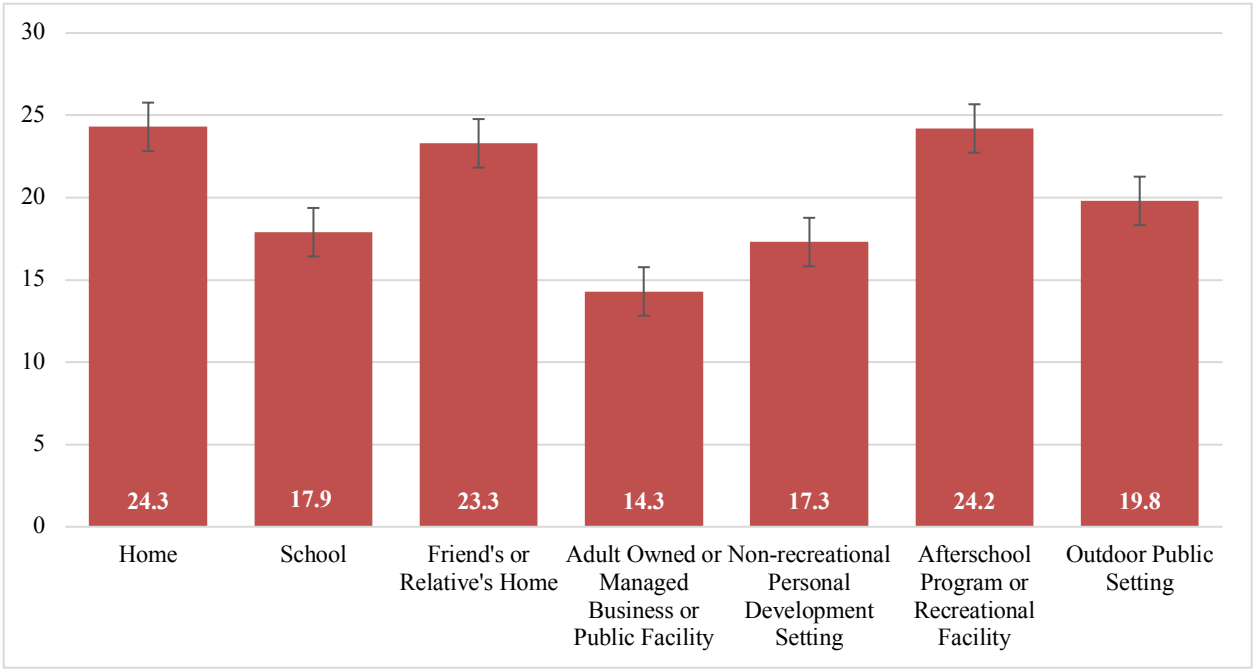


Figure 4.5. Violent Crimes (prior year incidents within a one-quarter mile radius) by Setting Type ($n = 819$).
Note: Limited only to home and schools reported as activity spaces

Distance from Home

Distances between home and activity-space locations (see Figure 4.6) ranged from 0.01 to 30.7 miles, with a mean of 2.0 miles and standard deviation of 2.7 miles. Distances from home were furthest for businesses or public facilities ($M = 3.6$; $SD = 3.4$), followed by after-school programs or recreational facilities ($M = 2.5$; $SD = 4.8$), nonrecreational personal development settings ($M = 2.5$; $SD = 2.0$), reported schools ($M = 1.9$; $SD = 1.9$), friends' or relatives' homes ($M = 1.5$; $SD = 2.4$), and outdoor public settings ($M = 1.1$; $SD = 1.8$). These findings indicate that youth travel varying distances to spend time in different types of spaces. While businesses and public facilities are located on average 3.6 miles from youths' homes and are in more affluent areas, after-school programs or recreational facilities, also located far from youths' homes (i.e., on average 2.5 miles), are in areas of high disadvantage and crime.

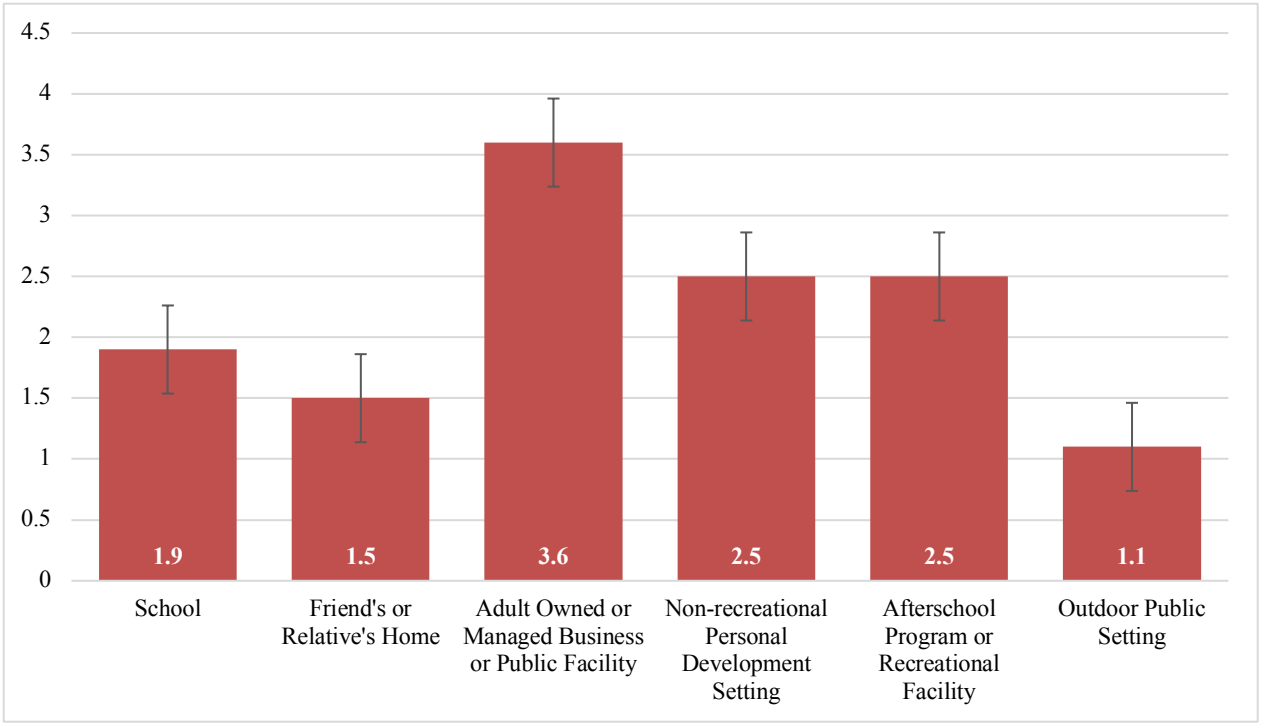
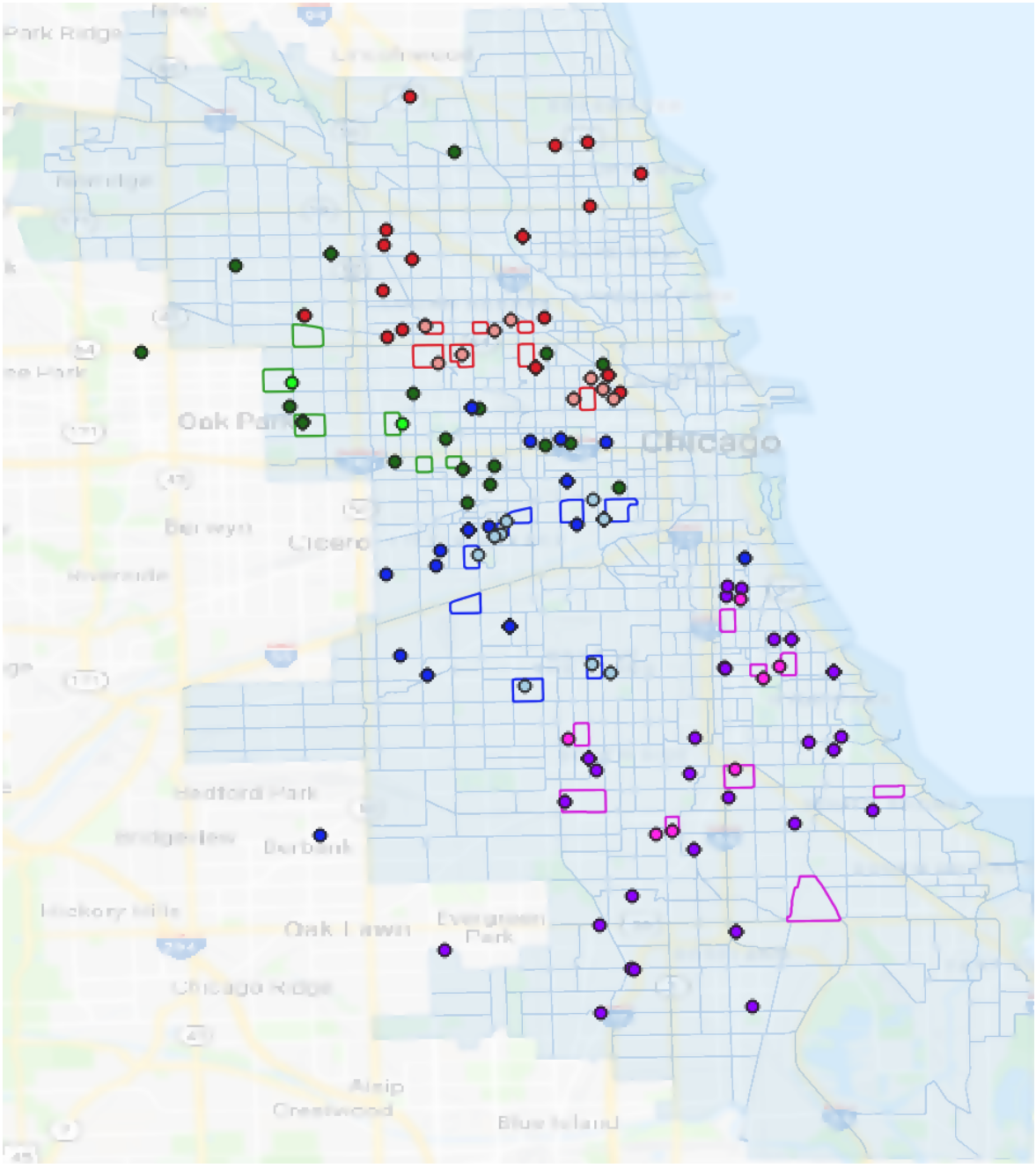


Figure 4.6. Distance from Home (miles) by Setting Type (n = 819).
Note: Limited only to home and schools reported as activity spaces

Maps 4.1–4.6 visualize the locations of different types of spaces and the distances of these spaces from youths' homes. The census tracts in which youths resided were outlined in green, red, blue, or purple (Figure 5.2), with green and purple indicating majority African American neighborhoods on the west side and south side of Chicago respectively, and census tracts outlined in red and blue indicating majority Latino neighborhoods on the near west side and near south side of Chicago respectively. These colors were also used to highlight the activity spaces reported by youth residing in these tracts. Distances of less than 0.5 miles were denoted by lighter shades of green, red, blue, and purple, whereas distances of 0.5 miles or greater were denoted by darker shades.

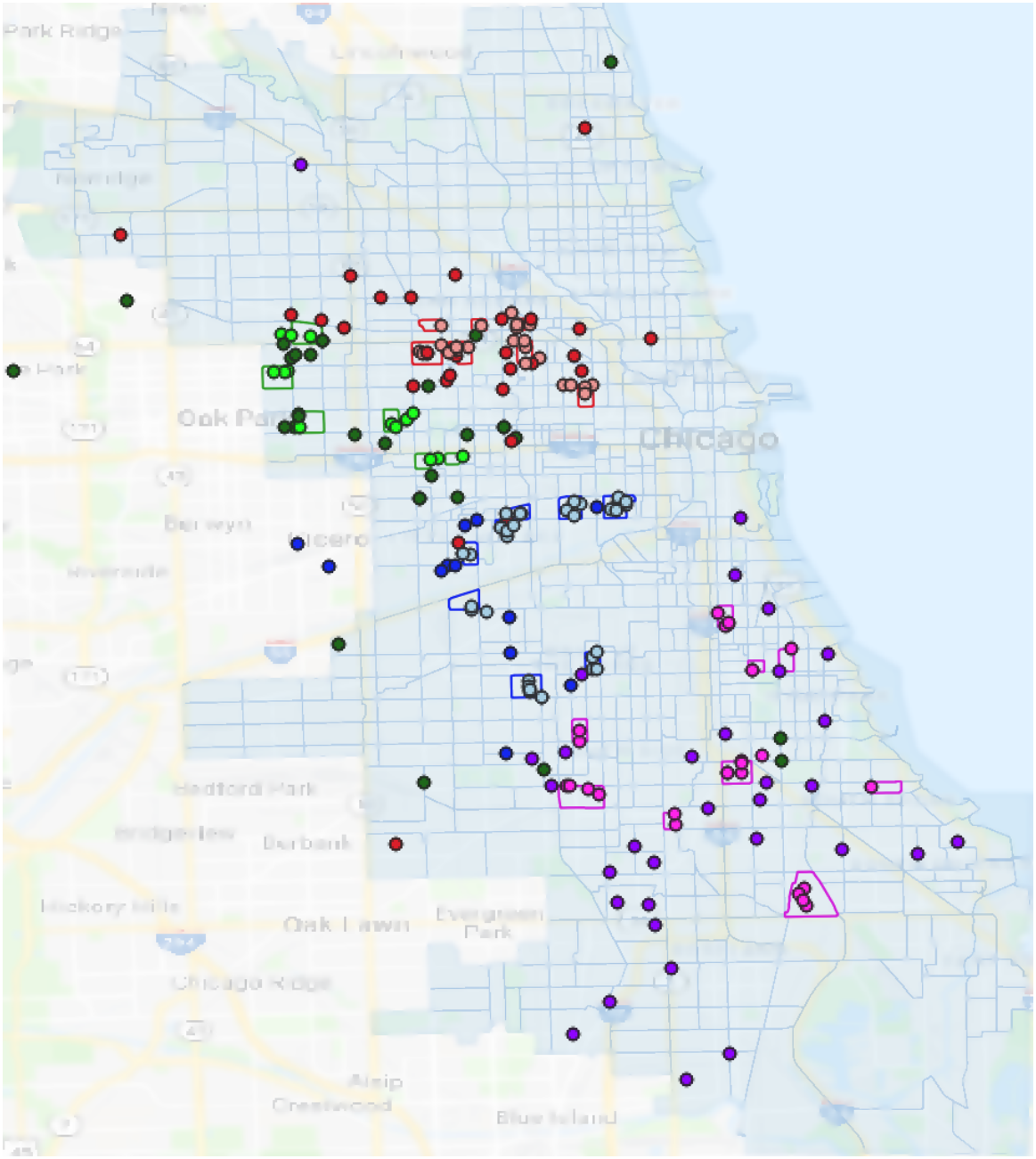
These maps reveal that while youths often traveled distances greater than 0.5 miles to various types of spaces (denoted by darker colors), these spaces were often located near their residential census tracts. For example, while the majority of youths traveled distances greater

than 0.5 miles to businesses or public facilities, many of these spaces were located in the same area (e.g., west side, near south side) as their residential census tracts (Map 4.3). Furthermore, it is interesting to note that youth residing in Latino neighborhoods on the near south side (denoted by blue) reported fewer after-school programs or recreational facilities (Map 4.5) compared to youths residing in Latino neighborhoods on the near west side and African American neighborhoods on the west side and south side.



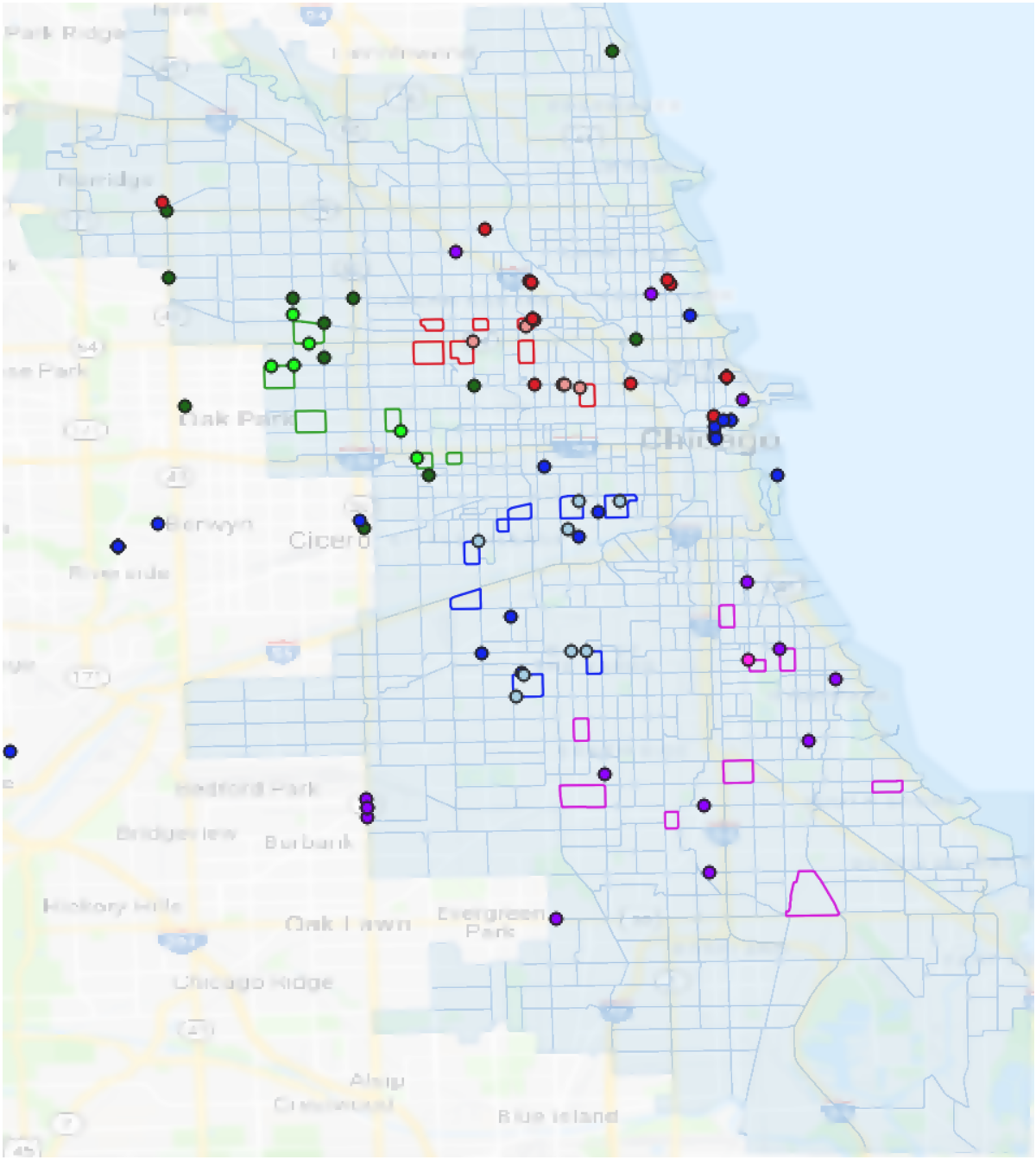
Map 4.1. Reported Schools (*n* = 185).

	<0.5 mi	≥0.5 mi
Youth residing in majority African American neighborhoods on the West Side		
Youth residing in majority Latino neighborhoods on the Near West Side		
Youth residing in majority Latino neighborhoods on the Near South Side		
Youth residing in majority African American neighborhoods on the South Side		



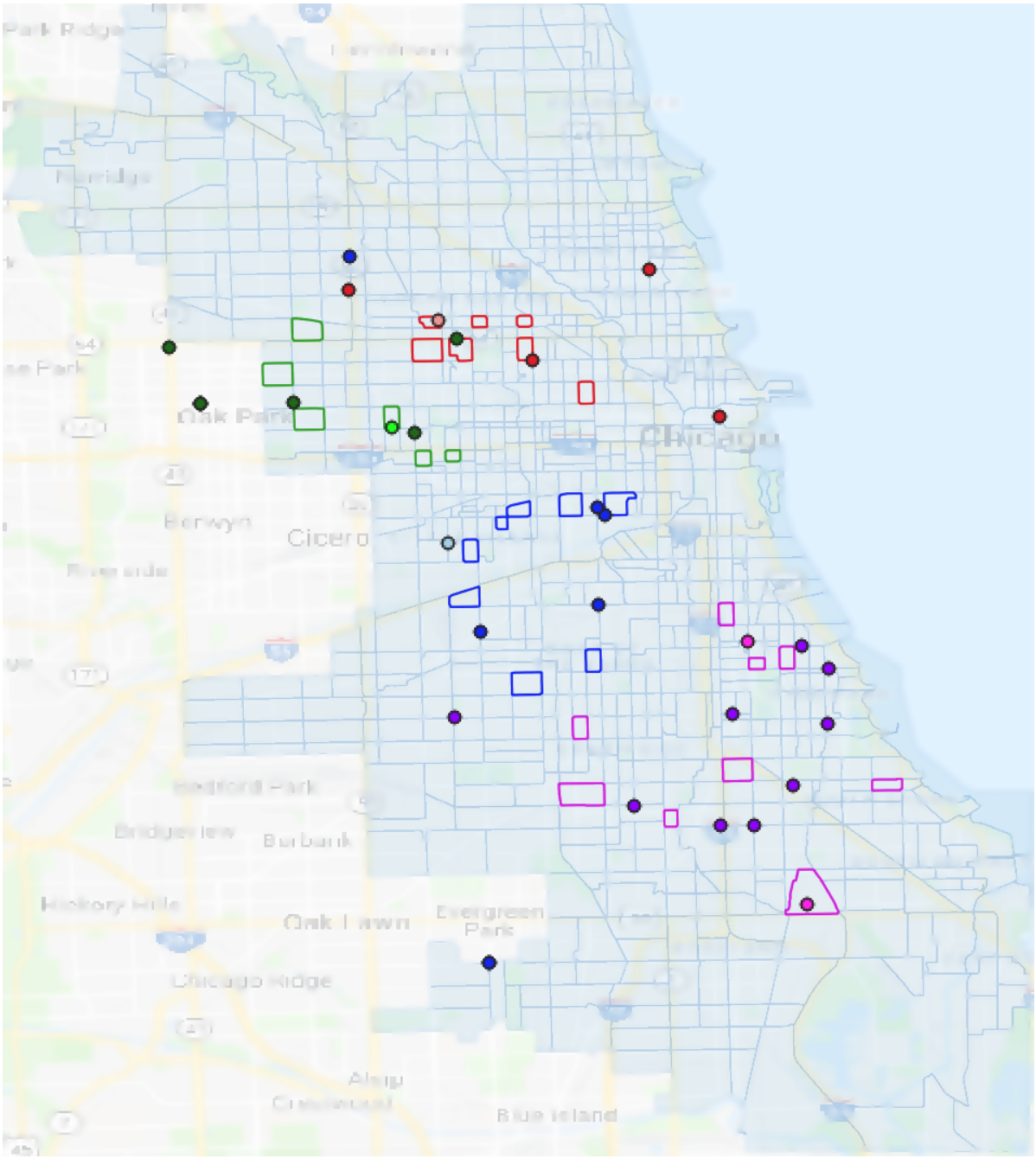
Map 4.2. Friend's or Relative's Home (*n* = 205).

	<0.5 mi	≥0.5 mi
Youth residing in majority African American neighborhoods on the West Side		
Youth residing in majority Latino neighborhoods on the Near West Side		
Youth residing in majority Latino neighborhoods on the Near South Side		
Youth residing in majority African American neighborhoods on the South Side		



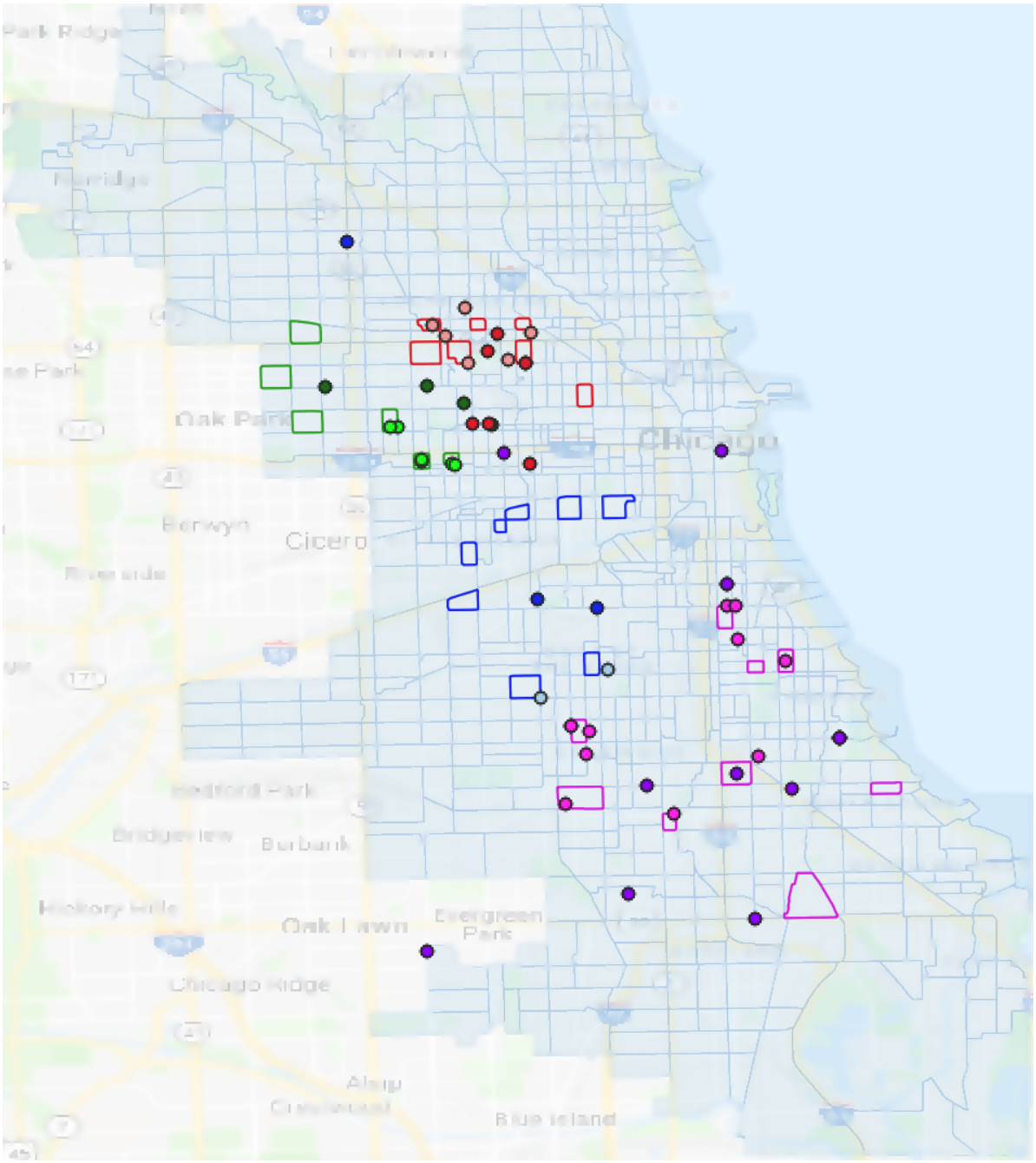
Map 4.3. Adult Owned or Managed Business or Public Facility (*n* = 93).

	<0.5 mi	≥0.5 mi
Youth residing in majority African American neighborhoods on the West Side		
Youth residing in majority Latino neighborhoods on the Near West Side		
Youth residing in majority Latino neighborhoods on the Near South Side		
Youth residing in majority African American neighborhoods on the South Side		



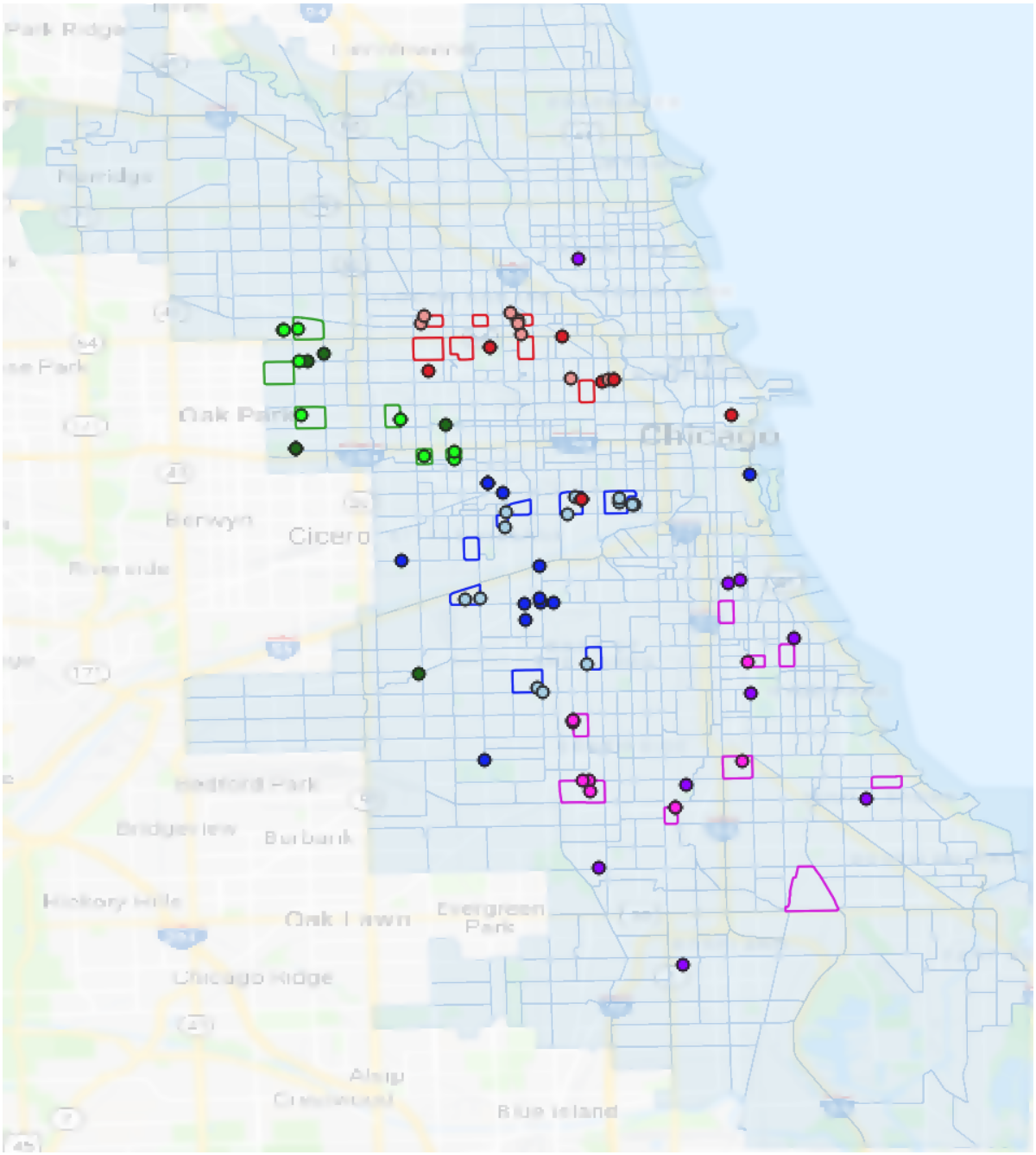
Map 4.4. Nonrecreational Personal Development Setting (*n* = 32).

	<0.5 mi	≥0.5 mi
Youth residing in majority African American neighborhoods on the West Side		
Youth residing in majority Latino neighborhoods on the Near West Side		
Youth residing in majority Latino neighborhoods on the Near South Side		
Youth residing in majority African American neighborhoods on the South Side		



Map 4.5. After-school Program or Recreational Facility (*n* = 54).

	<0.5 mi	≥0.5 mi
Youth residing in majority African American neighborhoods on the West Side		
Youth residing in majority Latino neighborhoods on the Near West Side		
Youth residing in majority Latino neighborhoods on the Near South Side		
Youth residing in majority African American neighborhoods on the South Side		



Map 4.6. Outdoor Public Settings (*n* = 82).

	<0.5 mi	≥0.5 mi
Youth residing in majority African American neighborhoods on the West Side		
Youth residing in majority Latino neighborhoods on the Near West Side		
Youth residing in majority Latino neighborhoods on the Near South Side		
Youth residing in majority African American neighborhoods on the South Side		

Social and Behavioral Features

The social and behavioral features within these spaces (i.e., level of adult supervision, goal-oriented activities, and individuals present) were also evaluated by youth report. The level of adult supervision differed by type of setting, X^2 (12, N = 813) = 218.0, $p < .001$. The large majority of activity spaces were characterized by youth as having medium to high levels of adult supervision (Table 4.6 and Figure 4.7). However, 41% and 56% of adult-owned or -managed businesses or public facilities and outdoor public settings were characterized as having low levels of adult supervision. Furthermore, 13% and 15% of homes and friend's or relative's homes were characterized as having low levels of adult supervision.

Table 4.6
Level of Adult Supervision by Setting Type (n=813)

Type of Setting	Low		Medium		High	
	n	%	*n*	%	*n*	%
Home (*n* = 168)	22	13%	62	37%	84	50%
School (*n* = 185)	5	3%	42	23%	138	75%
Friend's or Relative's Home (*n* = 205)	31	15%	94	46%	80	39%
Adult-Owned or -Managed Business or Public Facility (*n* = 93)	36	41%	33	37%	19	22%
Nonrecreational Personal Development Setting (*n* = 32)	0	0%	12	38%	20	63%
After-school Program or Recreational Facility (*n* = 54)	4	8%	14	26%	35	66%
Outdoor Public Setting (*n* = 82)	46	56%	26	32%	10	12%
	144	18%	283	35%	386	47%

Note. n indicates number of reported activity spaces

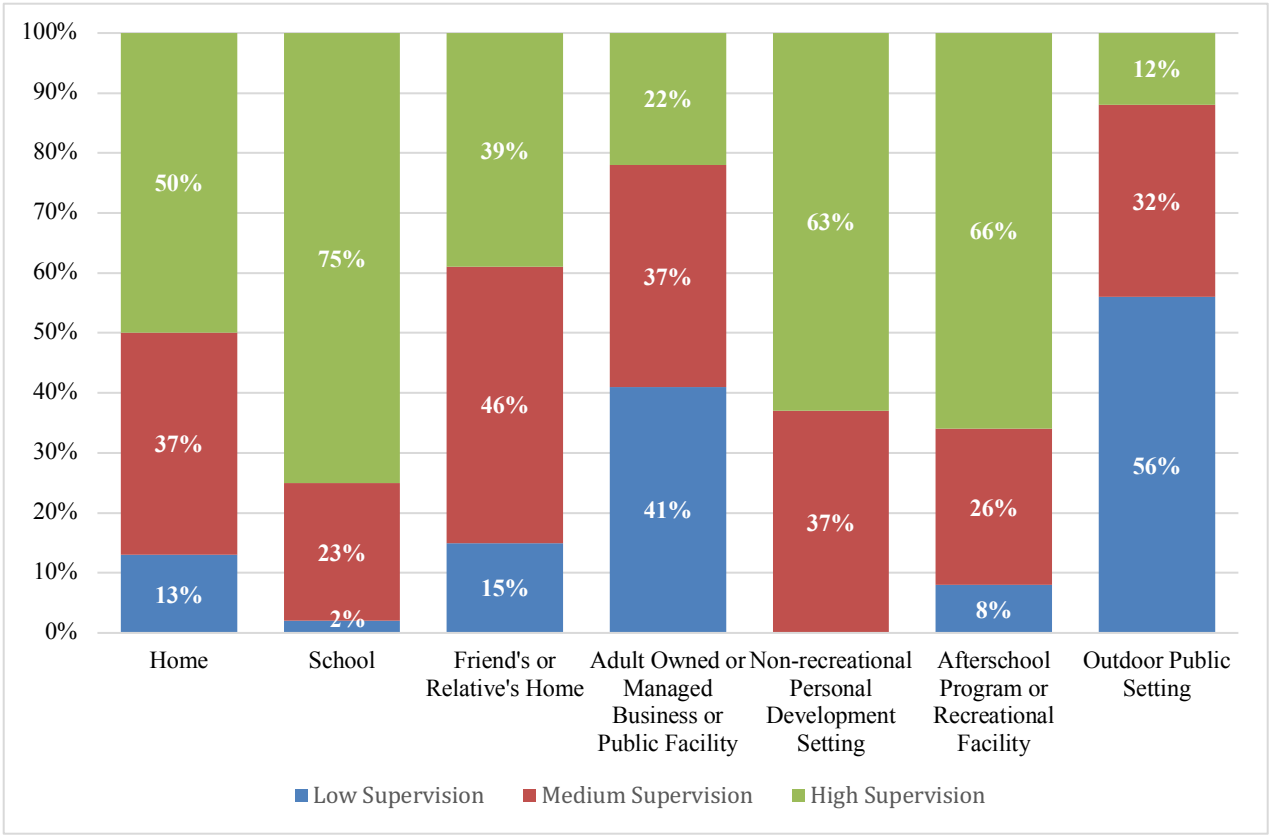


Figure 4.7. Level of Adult Supervision by Setting Type (n = 813).
Note: Limited only to home and schools reported as activity spaces

The type of activity also significantly differed by setting type, X^2 (6, N = 819) = 484.8, p < .001. Almost all youth reported participating in goal-oriented activities in school (99%) and in nonrecreational personal development settings (100%). On the other hand, almost all reported engaging in non-goal-oriented activities in outdoor public settings (99%), businesses or public facilities (97%), and friends' or relatives' homes (88%). Mixed responses were reported for home and after-school programs or recreational facilities. Among youths who reported participating in an after-school program or recreational facility, 43% reported engaging in goal-oriented activities, whereas 57% did not. Similarly, among youths who reported spending time at home, 51% reported engaging in goal-oriented activities at home, whereas 49% did not.

Table 4.7
Type of Activity by Setting Type (n=819)

Type of Setting	Goal Oriented		Nongoal Oriented	
	n	%	*n*	%
Home (*n* = 168)	86	51%	82	49%
School (*n* = 185)	184	99%	1	1%
Friend's or Relative's Home (*n* = 205)	25	12%	180	88%
Adult-Owned or -Managed Business or Public Facility (*n* = 93)	3	3%	90	97%
Nonrecreational Professional Development Setting (*n* = 32)	32	100%	0	0%
After-school Program or Recreational Facility (*n* = 54)	23	43%	31	57%
Outdoor Public Setting (*n* = 82)	1	1%	81	99%
	354	43%	465	57%

Note. n indicates number of reported activity spaces

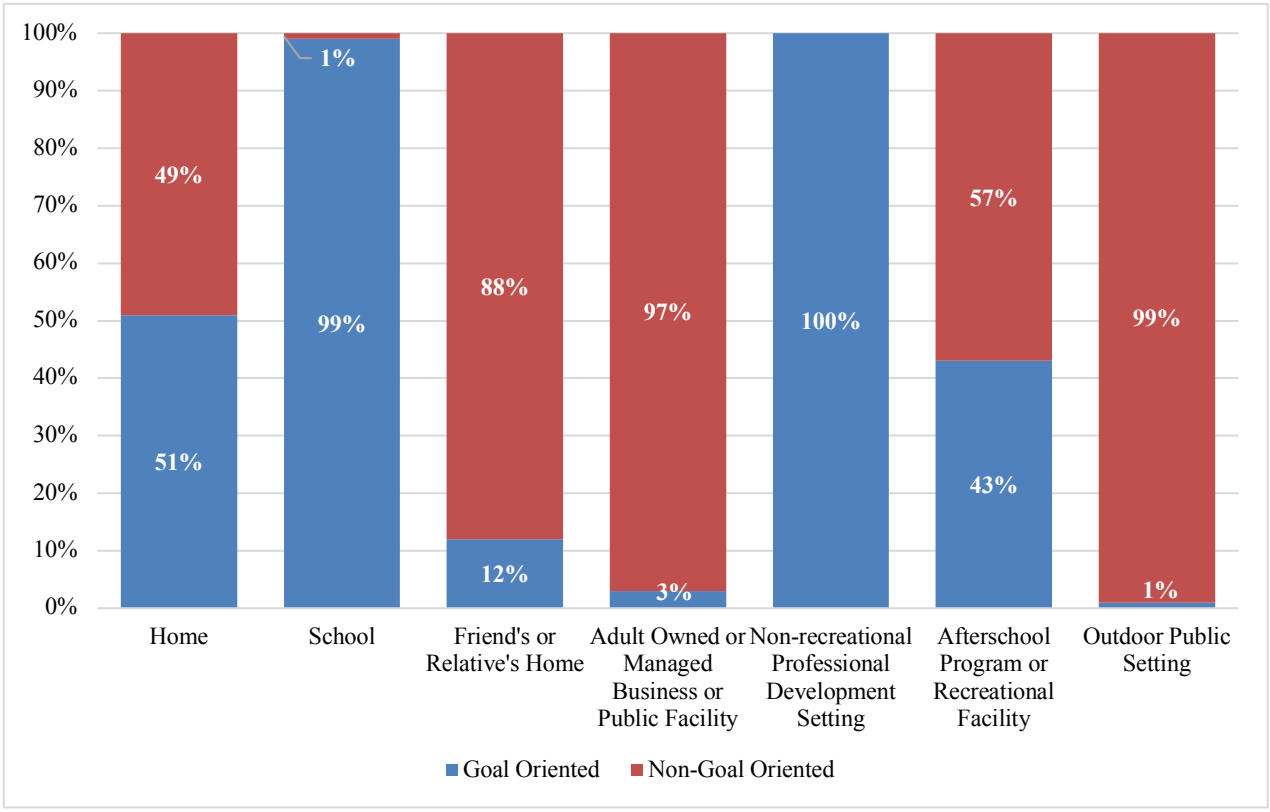


Figure 4.8. Type of Activity by Setting Type (*n* = 819).
Note: Limited only to home and schools reported as activity spaces

The individuals present—i.e., other youth, related adult(s), and nonrelated adult(s)—were assessed by setting type (Table 4.8 and Figure 4.9). The presence of other youths differed by type of setting, X^2 (6, N = 813) = 51.4, p < .001. While other youths were present in the majority of reported activity spaces, they were less likely to be present at home (81%), friends' and/or

relatives' homes (89%), businesses or public facilities (84%), and personal development settings (75%), compared to school (99%), after-school programs or recreational facilities (94%), and outdoor public settings (99%).

The presence of related adults differed by setting type, X^2 (6, N = 813) = 345.9, p < .001. Related adults were often present at home (90%), friends' or relatives' homes (64%), and were much less present in personal development settings (31%), businesses or public settings (25%), after-school programs or recreational facilities (20%), outdoor public settings (12%), and schools (6%). The presence of nonrelated adults also differed by type of setting, X^2 (6, N = 813) = 326.4, p < .001. Of adults present, those who were nonrelated accounted for 92% at school, 80% at after-school programs or recreational facilities, and 75% at nonrecreational personal development settings. The numbers of nonrelated adults present were significantly lower in outdoor public settings (33%), businesses or public facilities (31%), friends' or relatives' homes (31%), and at home (7%).

Table 4.8
Individuals Present by Setting Type (n=819)

Type of Setting	Other Youth		Related Adult(s)		Non-Related Adult(s)	
	n	%	*n*	%	*n*	%
Home (*n* = 168)	136	81%	151	90%	12	7%
School (*n* = 185)	183	99%	11	6%	170	92%
Friend's or Relative's Home (*n* = 205)	183	89%	131	64%	64	31%
Adult-Owned or -Managed Business or Public Facility (*n* = 93)	78	84%	23	25%	29	31%
Nonrecreational Personal Development Setting (*n* = 32)	24	75%	10	31%	24	75%
After-school Program or Recreational Facility (*n* = 54)	51	94%	11	20%	43	80%
Outdoor Public Setting (*n* = 82)	81	99%	10	12%	27	33%
	736	90%	347	42%	369	45%

Note. n indicates number of reported activity spaces

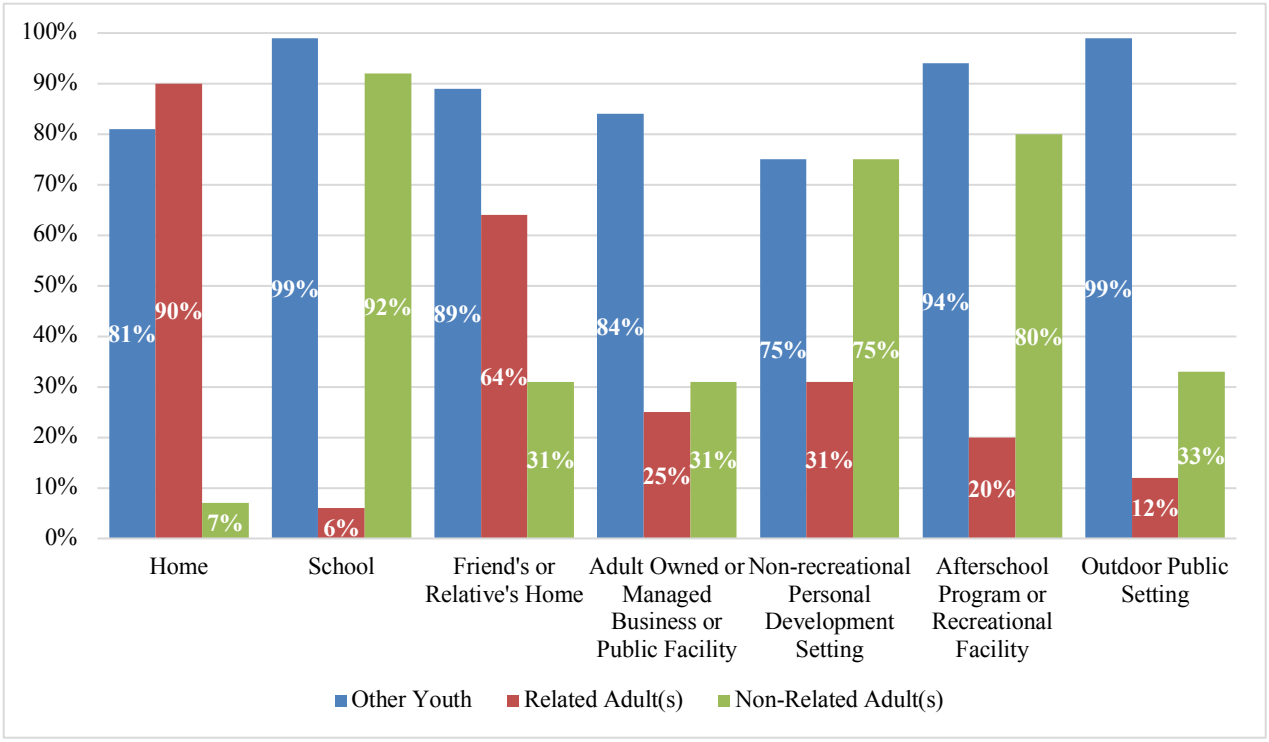


Figure 4.9. Individuals Present by Setting Type (n = 813).
Note: Limited only to home and schools reported as activity spaces

Overall, these findings indicate that types of activity spaces vary with respect to the social and behavioral features of adult supervision, goal-oriented activities, and individuals present. Outdoor public settings and businesses or recreational facilities are characterized by lower levels of supervision, minimal presence of related or nonrelated adults, and youth engagement in non-goal-oriented activities. Friends' or relatives' homes, personal development settings, after-school programs or recreational facilities, home, and school are characterized by higher levels of adult supervision, the presence of related or nonrelated adults, and youth engagement in goal-oriented activities.

Question 2 Results

The results of analyses conducted to address Question 2, which focused on comparisons of activity spaces for delinquent and nondelinquent youth, are organized into three sections. The first section presents findings from analyses examining the levels of engagement with delinquent

behavior by youth in the sample. Section 2 examines the relation between level of delinquency and the types of settings where youth report spending time. Finally, Section 3 examines the relation between level of delinquency and characteristics of these spaces related to the surrounding community context, distance from home, and social and behavioral features within these spaces.

Youth Engagement in Delinquent Behavior

Analyses indicate that, using youth self-report and scaled using the Elliott level criteria, 38% of the sample reported engaging in little to no prior-year delinquent behavior, 42% reported engaging in low levels of delinquency, and 20% reported engaging in serious delinquent behavior (Tables 4.9). Youth who engaged in serious delinquency reported committing, on average, 8.4 Class 4 felony offenses, 8.1 Class 3 felony offenses, 7.5 Class 2 felony offenses, and 0.9 Class 1 felony offenses in the prior year. Youths who engaged in low levels of delinquent behavior reported committing 0.21 Class 4 felonies, 0.12 Class 3 felonies, 0.0 Class 2 felonies, and 0.0 Class 1 felonies in the past year, whereas youths who engaged in little to no delinquent behavior reported committing no prior-year felony offenses.

Table 4.9
Delinquent Behavior (n=296)

Level of Delinquency	*n*	%
Serious Delinquency (*n* = 59)	59	20
Low Delinquency (*n* = 125)	125	42
Nondelinquent (*n* = 112)	112	38
Total	296	100

Table 4.10
Past-Year Criminal Offenses (n=296)

Type of Crime	Nondelinquent (n = 112)		Low Delinquency (n = 125)		Serious Delinquency (n = 59)	
	Mean	*SD*	Mean	*SD*	Mean	*SD*
Status Offense	0.33	0.57	11.10	20.71	27.68	57.48
Class A Misdemeanor	0.12	0.37	4.05	11.79	16.47	48.31
Class B Misdemeanor	0.00	0.00	4.49	11.59	4.42	9.66
Class A Misdemeanor	0.00	0.00	0.98	2.55	18.90	80.73
Class 4 Felony	0.00	0.00	0.21	0.53	8.37	33.09
Class 3 Felony	0.00	0.00	0.12	0.42	8.07	32.34
Class 2 Felony	0.00	0.00	0.00	0.00	7.51	38.94
Class 1 Felony	0.00	0.00	0.00	0.00	0.86	3.18

Chi-square tests indicate no significant association between level of delinquent behavior and gender, X^2 *(2, N* = 296*)* = 1.37*; p* = .50, ethnicity, X^2 *(2, N* = 296*)* = .54*; p* = .77, or age, X^2 *(8, N* = 296*)* = 3.71*; p* = .88 (Table 4.11).

Table 4.11
Delinquent Behavior by Gender, Ethnicity, and Age

Characteristic	Non-Delinquent (n = 112)	Low Delinquency (n = 125)	Serious Delinquency (n = 59)
Female	49%	54%	46%
Male	51%	46%	54%
Latino	49%	50%	44%
African Am.	51%	50%	56%
13	4%	2%	2%
14	29%	25%	29%
15	17%	21%	25%
16	25%	26%	22%
17	24%	26%	22%

Notes. Delinquency was not significantly associated with age, ethnicity, or gender.

Furthermore, there were no significant associations between the average number of reported activity spaces and level of reported delinquency (Tables 4.12). Nondelinquent youth reported 2.7 activity spaces on average, whereas youths who report engaging in low and serious delinquency reported on average 2.7 and 2.9 activity spaces respectively. Analyses conducted with only nonhome, nonschool locations showed no significant difference between the average number of reported nonhome, nonschool activity spaces and level of reported delinquency. Nondelinquent youth on average reported 1.8 nonhome, nonschool locations, whereas youths

who report engaging in low and serious levels of delinquency reported 1.8 and 2.0 nonhome, nonschool locations, respectively. Chi-square tests further demonstrated no significant differences between the total number of reported activity spaces and level of delinquent behavior (Table 4.13 and 4.14).

Table 4.12
Mean Number of Reported Activity Spaces Reported by Delinquency

Level of Delinquency	All Activity Spaces (n = 819)		Nonhome, Non-School (n = 466)	
	Mean	Std. Dev	Mean	Std. Dev
No Delinquency (n = 112)	2.7	1.1	1.8	0.9
Low Delinquency (n = 125)	2.7	1.0	1.8	0.8
Serious Delinquency (n = 59)	2.9	1.3	2.0	1.1
Total	2.8	1.1	1.8	0.9
	F = 0.66; p = .58		F = 0.78, p = .46	

Table 4.13
Number of Activity Spaces Reported by Delinquency (n = 819)

#	Nondelinquent (n = 112)	Low Delinquency (n = 125)	Serious Delinquency (n = 59)
1	12 (11%)	5 (4%)	6 (10%)
2	41 (37%)	57 (46%)	18 (31%)
3	32 (29%)	41 (33%)	21 (36%)
4	19 (17%)	13 (10%)	7 (12%)
5	7 (6%)	8 (6%)	4 (7%)
6	1 (1%)	1 (1%)	2 (3%)
7	0 (0%)	0 (0%)	1 (2%)

X^2 = 15.62, p = .21
Note. Includes all activity space locations (n = 819)

Table 4.14
Number of Activity Spaces Reported by Delinquency (n = 466)

#	Nondelinquent (n = 112)	Low Delinquency (n = 125)	Serious Delinquency (n = 59)
1	47 (42%)	49 (39%)	24 (40%)
2	47 (42%)	56 (44%)	21 (36%)
3	14 (12%)	19 (15%)	9 (15%)
4	4 (3%)	2 (2%)	3 (5%)
5	1 (1%)	0 (0%)	2 (4%)

X^2 = 5.57, p=.58
Note. Excludes home and school locations (n = 466)

Taken together, these analyses indicate that age, ethnicity, gender, and number of reported activity spaces did not significantly vary by level of self-reported delinquent behavior.

Delinquency and Type of Activity Space

Chi-square analyses indicate a significant association between level of self-reported delinquency and types of reported activity spaces, X^2 *(12, N* = 819*)* = 22.46*; p* = .03 (Table 4.15). Among nondelinquent youths and youths who report engaging in low levels of delinquent behavior, 24% of the places reported were school, compared to 19% of the places reported by youths who report engaging in serious delinquent behavior. Similarly, 23% of the places reported by nondelinquent youths were home, whereas only 19% of the places reported by youths who engaged in low or serious levels of delinquent behavior were home. Furthermore, 12% of the places reported by youths who engaged in serious delinquent behavior were after-school programs or recreational facilities compared to only 6% and 5% of places reported by nondelinquent youths and youths who engaged in low levels of delinquent behavior. Collectively, these findings may point to a potential association between level of delinquency and certain types of reported activity spaces.

Table 4.15
Types of Activity Spaces Reported by Delinquent and Nondelinquent Youth

Level of Delinquency	Home	School	Friend's or Relative's Home	Adult-Owned or -Managed Business or Public Facility	Non-recreational Professional Development Setting	After-school Program or Recreational Facility	Outdoor Public Setting
Nondelinquent	23%	24%	19%	12%	5%	6%	11%
Low Delinquency	19%	24%	30%	11%	3%	5%	8%
Serious Delinquency	19%	19%	26%	10%	3%	12%	11%
X^2 = 22.46, *p = .03*							

A multilevel multinomial analysis confirmed an association between activity space and level of delinquency, revealing that level of self-reported delinquency was significantly associated with reporting a friend's or relative's home, *OR* = 1.59; 95% *CI:* 1.11 to 2.29; $p < .05$, even after controlling for age, ethnicity, and gender (Table 4.16). More specifically, the odds of nondelinquent youths reporting a friend's or relative's home were 1.59 times that of youths who

report engaging in low and serious levels of delinquency. No significant associations, however, were found between self-reported delinquency and reporting an after-school program or recreational center and school—despite cross-tab analyses indicating such differences.

A second model (Table 4.17), including demographic variables, but omitting delinquency, was used to compare models (i.e., one including self-reported delinquency and another excluding delinquency) using a Likelihood-ratio test. Results from the Likelihood-ratio test indicate a significant difference between both models, X^2 (2, N = 819) = 20.9, $p < .01$, suggesting that the model including self-reported delinquency more accurately fits the data compared to the model excluding delinquency.

Significant negative associations were identified between ethnicity and reporting school, *OR* = 0.58; 95% *CI:* 0.38 to 0.89; $p < .05$, a business or public facility, *OR* = 0.48; 95% *CI:* 0.29 to 0.81; $p < .01$, and an outdoor public setting, *OR* = 0.48; 95% *CI:* 0.28 to 0.82; $p < .01$. The odds of an African American youth reporting school, a business or public facility, or an outdoor public setting were 0.58, 0.48, and 0.48 that of Latino youths, indicating Latino youths may in fact spend more time in these types of settings or are more likely to report spending time in these settings compared to African American youth.

Table 4.16

Association between Delinquency and Types of Activity Spaces

Variable	School			Friend's or Relative's Home			Adult-Owned or -Managed Business or Public Facility			Nonrecreational Personal Development Setting			After-school Program or Recreational Facility			Outdoor Public Setting		
	OR	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*
Delinquency (Helmert)																		
Serious and Low (vs. None)	1.10	0.610	[0.77, 1.57]	1.59	0.012	[1.11, 2.29]	1.11	0.630	[0.72, 1.73]	0.74	0.354	[0.39, 1.41]	1.11	0.710	[0.63, 1.98]	0.95	0.838	[0.59, 1.53]
Serious (vs. Low)	0.94	0.445	[0.82, 1.09]	0.89	0.111	[0.77, 1.03]	0.97	0.728	[0.81, 1.16]	1.11	0.467	[0.84, 1.47]	1.18	0.139	[0.95, 1.48]	1.09	0.362	[0.90, 1.32]
Age (13–17)	0.96	0.647	[0.81, 1.14]	0.93	0.378	[0.78, 1.10]	1.11	0.334	[0.90, 1.38]	1.20	0.256	[0.88, 1.65]	0.97	0.821	[0.76, 1.25]	0.96	0.732	[0.77, 1.20]
African Am. (v. Latino)	0.58	0.012	[0.38, 0.89]	0.78	0.239	[0.51, 1.18]	0.48	0.006	[0.29, 0.81]	1.18	0.679	[0.53, 2.64]	1.23	0.534	[0.64, 2.36]	0.48	0.007	[0.28, 0.82]
Male (v. Female)	1.05	0.809	[0.69, 1.61]	0.95	0.812	[0.63, 1.43]	0.79	0.363	[0.47, 1.32]	1.00	0.993	[0.52, 1.91]	1.63	0.132	[0.86, 3.07]	1.26	0.407	[0.73, 2.15]

Log Likelihood = -1441.11

$ICC_{individual}$ = 0.00

Note. Home is excluded from table as it is the reference category

Table 4.17

Association between Age, Ethnicity, and Gender and Types of Activity Spaces

Variable	School			Friend's or Relative's Home			Adult-Owned or -Managed Business or Public Facility			Nonrecreational Personal Development Setting			After-school Program or Recreational Facility			Outdoor Public Setting		
	OR	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*
Age (13–17)	0.96	0.680	[0.79, 1.16]	0.93	0.430	[0.78, 1.11]	1.12	0.320	[0.90, 1.39]	1.20	0.280	[0.86, 1.66]	0.96	0.740	[0.76, 1.22]	0.96	0.700	[0.79, 1.17]
African Am. (v. Latino)	0.58	0.010	[0.39, 0.88]	0.79	0.260	[0.52, 1.19]	0.49	0.010	[0.28, 0.84]	1.16	0.710	[0.52, 2.57]	1.22	0.540	[0.64, 2.32]	0.48	0.010	[0.28, 0.84]
Male (v. Female)	1.03	0.880	[0.70, 1.53]	0.92	0.710	[0.60, 1.41]	0.78	0.350	[0.46, 1.32]	1.02	0.960	[0.47, 2.23]	1.68	0.110	[0.89, 3.18]	1.28	0.370	[0.74, 2.21]

Log Likelihood = -1451.54

$ICC_{individual}$ = 0.00

Note. Home is excluded from table as it is the reference category

Delinquency and Characteristics of Activity Spaces

Associations between level of self-reported delinquency and characteristics of activity spaces—i.e., community context, distance from home, and social and behavioral features—were examined separately for reported home (Tables 4.18–4.20), school (Tables 4.21–4.23), and nonhome, nonschool locations (Tables 4.24–4.25).

Home activity spaces.

Analyses indicate a significant association between self-reported delinquency and levels of adult supervision while spending time at home, *OR* = 0.41, 95% *CI:* 0.22 to 0.79, $p < .01$, even after controlling for age, ethnicity, and gender (Table 4.18). Comparisons of the level of supervision between youths who report engaging in low and serious levels of delinquency and nondelinquent youth reveal that the odds of youths who engage in low and serious levels of delinquency experiencing higher levels of supervision at home is 0.41 that of nondelinquent youth. These results suggest that delinquent youths are less likely to be supervised while spending time at home compared to nondelinquent youths.

Analyses also indicate that being African American is significantly associated with characteristics of reported home locations ($n = 168$), specifically violent crime, $b = 10.20$, $t(162) = 5.44$, $p < .001$, concentrated disadvantage, $b = 1.16$, $t(162) = 7.89$, $p < .001$, and the presence of other youth, *OR* = 0.37, 95% *CI:* 0.15 to 0.93, $p < .05$. The homes of African American youths were on average surrounded by 10.35 more annual violent crimes (within a one-quarter mile radius) and 1.16 higher socioeconomic disadvantage (census-level) compared to Latino youths. Follow-up analyses were conducted using the home locations of all participants ($n = 296$) (Table 4.20). These analyses also indicated significant positive associations between ethnicity and nearby violent crime, $b = 10.1$, $t(290) = 7.55$, $p < .001$, and socioeconomic disadvantage, $b = 1.3$,

$t(290) = 12.07$, $p < .001$, with African American youth living in areas surrounded by 10.1 more annual violent crimes and 1.3 higher socioeconomic disadvantage compared to Latino youth. Finally, the odds of African American youths reporting the presence of other youths at home was 0.37 that of Latino youths.

Age and being male are associated with the presence of related adults, *OR* = 2.08, 95% *CI:* 1.23 to 3.53, $p < .01$, and participating in a goal-oriented activity, *OR* = 0.54, 95% *CI:* 0.29 to 1.01, $p < .05$, while spending time at home. A one-year increase in age is associated with a 2.1 increase in the odds of a related adult being present at home, suggesting that younger youth are less likely to report the presence of a related adult while spending time at home compared to older youth. Furthermore, the odds of males participating in a goal-oriented activity at home are 0.54 that of females, indicating that females are more likely to engage in goal-oriented activities (e.g., chores, schoolwork) while spending time at home compared to males.

Table 4.18

Association between Delinquency and Community Context Surrounding Reported Home Activity Spaces (n = 168)

Variable	Violent Crime			Concentrated Disadvantage		
	b	*p*	95% *CI*	*b*	*p*	95% *CI*
Delinquency (Helmert)						
Serious and Low (v. None)	0.99	0.608	[-2.81, 4.78]	0.20	0.179	[-0.09, 0.50]
Serious (v. Low)	-1.79	0.482	[-6.81, 3.23]	0.12	0.561	[-0.28, 0.51]
Age (13–17)	-1.17	0.117	[-2.66, 0.30]	-0.05	0.440	[-0.16, 0.07]
African Am. (v. Latino)	10.20	0.001	[6.52, 13.97]	1.16	0.001	[0.87, 1.45]
Male (v. Female)	2.14	0.248	[-1.50, 5.78]	0.15	0.294	[-0.13, 0.43]
ICC (neighborhood)		--			--	

Table 4.19

Association between Delinquency and Social and Behavior Features within Reported Home Activity Spaces (n = 168)

Variable	Supervision			Goal-Oriented Activity			Other Youth			Related Adults			Nonrelated Adults		
	OR	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*
Delinquency (Helmert)															
Serious & Low (v. None)	0.41	0.007	[0.22, 0.79]	1.10	0.784	[0.57, 2.14]	1.33	0.500	[0.58, 3.10]	0.92	0.890	[0.27, 3.13]	1.39	0.632	[0.36, 5.26]
Serious (v. Low)	0.57	0.176	[0.25, 1.28]	1.30	0.559	[0.54, 3.10]	1.17	0.783	[0.37, 3.74]	1.19	0.983	[0.21, 4.85]	1.19	0.825	[0.25, 5.81]
Age (13–17)	1.10	0.449	[0.86, 1.40]	1.10	0.453	[0.85, 1.43]	1.19	0.296	[0.86, 1.63]	2.08	0.006	[1.23, 3.53]	1.03	0.897	[0.61, 1.75]
African Am. (v. Latino)	1.01	0.974	[0.55, 1.86]	1.52	0.216	[0.78, 2.94]	0.37	0.034	[0.15, 0.93]	1.38	0.590	[0.42, 4.57]	0.84	0.799	[0.23, 3.10]
Male (v. Female)	0.99	0.977	[0.54, 1.80]	0.54	0.055	[0.29, 1.01]	0.95	0.899	[0.43, 2.12]	0.96	0.947	[0.31, 3.00]	0.74	0.631	[0.21, 2.53]
ICC (neighborhood)		--			0.01			--			0.11			0.1	

Table 4.20

Association between Delinquency and Community Context Surrounding All Home Activity Spaces (n = 296)

Variable	Violent			Concentrated		
	b	*p*	95% *CI*	*b*	*p*	95% *CI*
Delinquency (Helmert)						
Serious and Low (v. None)	-0.54	0.704	[-3.33, 2.25]	0.09	0.437	[-0.13, 0.31]
Serious (v. Low)	-1.45	0.426	[-5.04, 2.14]	0.22	0.136	[-0.07, 0.50]
Age (13–17)	-0.75	0.180	[-1.85, 0.35]	-0.06	0.211	[-0.13, 0.03]
African Am. (v. Latino)	10.13	0.001	[7.49, 12.77]	1.29	0.001	[1.08, 1.50]
Male (v. Female)	0.11	0.937	[-2.54, 2.76]	-0.05	0.626	[-0.26, 0.16]
ICC (neighborhood)		--			--	

School activity spaces.

Analyses indicate no significant association between self-reported delinquency and characteristics of reported school locations (Tables 4.21 and 4.22). Similarly, age and gender are not significantly associated with characteristics of reported school locations. However, ethnicity is significantly associated with features of the community context surrounding reported school locations, particularly violent crime, $b = 6.71$, $t(179) = 2.55$, $p < .05$, and socioeconomic disadvantage, $b = 0.86$, $t(179) = 3.50$, $p < .001$. Among youths who reported school activity spaces ($n = 185$), the schools attended by African American youths are on average surrounded by 6.72 more violent crimes (within a one-quarter mile radius) and have a 0.86 higher level of socioeconomic disadvantage (census tract level) compared to schools attended by Latino youths.

Follow-up analyses conducted using the school locations of all participants ($n = 290$) (Table 4.23) also indicate significant positive associations between ethnicity and nearby violent crime, $b = 6.70$, $t(284) = 3.31$, $p < .001$, and socioeconomic disadvantage, $b = 0.89$, $t(284) = 4.58$, $p < .001$, with African American youths attending schools in areas surrounded by 6.70 more violent crimes and 0.89 higher socioeconomic disadvantage compared to Latino youth. While gender is not significantly associated with distance from home among youth who reported school as an activity space ($n = 185$), gender is significantly associated with distance from home, $b = -0.46$, $z(284) = 2.01$, $p < .05$, when analyzing all school locations ($n = 290$), with males attending schools which are on average 0.46 miles closer to home compared to those attended by females. This finding suggests that females whose schools are farther distances from home are less likely to report school as an activity-space location.

Table 4.21

Association between Delinquency and Community Context Surrounding Reported School Activity Spaces and Distance from Home (n = 185)

Variable	Violent Crime			Concentrated Disadvantage			Distance from Home		
	b	*p*	95% *CI*	*b*	*p*	95% *CI*	*b*	*p*	95% *CI*
Delinquency (Helmert)									
Serious and Low (v. None)	2.29	0.215	[-1.33, 5.91]	0.16	0.401	[-0.16, 0.48]	-0.24	0.409	[-0.80, 0.32]
Serious (v. Low)	0.14	0.954	[-4.75, 5.04]	-0.34	0.070	[-0.83, 0.03]	0.45	0.240	[-0.30, 1.20]
Age (13–17)	1.25	0.085	[-0.17, 2.68]	-0.01	0.885	[-0.14, 0.12]	-0.06	0.596	[-0.28, 0.16]
African Am. (v. Latino)	6.71	0.011	[1.55, 11.87]	0.86	0.001	[0.38, 1.34]	0.34	0.280	[-0.91, 0.95]
Male (v. Female)	1.49	0.381	[-1.84, 4.81]	0.10	0.510	[-0.19, 0.39]	-0.39	0.149	[-0.44, 0.14]
ICC (neighborhood)	0.28			0.33			0.07		

Table 4.22

Association between Delinquency and Social and Behavioral Features within Reported School Activity Spaces (n = 185)

Variable	Supervision			Goal-Oriented Activity			Other Youth			Related Adults			Nonrelated Adults		
	OR	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*
Delinquency (Helmert)															
Serious and Low (v. None)	1.62	0.228	[0.74, 3.53]	--	--	--	--	--	--	1.91	0.390	[0.44, 8.33]	1.02	0.981	[0.29, 3.56]
Serious (v. Low)	2.75	0.087	[0.86, 8.76]	--	--		0.52	0.657	[0.03, 9.03]	0.93	0.936	[0.16, 5.37]	0.76	0.753	[0.14, 4.10]
Age (13–17)	0.94	0.675	[0.71, 1.25]	0.59	0.633	[0.06, 5.26]	1.06	0.921	[0.33, 3.39]	0.91	0.729	[0.53, 1.57]	1.61	0.071	[0.96, 2.72]
African Am. (v. Latino)	0.68	0.260	[0.34, 1.34]	--	--	--	1.10	0.949	[0.06, 19.69]	0.34	0.160	[0.08, 1.52]	0.95	0.945	[0.21, 4.26]
Male (v. Female)	0.96	0.906	[0.49, 1.90]	--	--	--	--	--	--	0.80	0.747	[0.21, 3.03]	1.72	0.383	[0.51, 5.81]
ICC (neighborhood)	--			0.01			--			7.21			0.31		

Table 4.23

Association between Delinquency and Community Context Surrounding All School Activity Spaces and Distance from Home (n = 290)

Variable	Violent Crime			Concentrated Disadvantage			Distance from Home		
	b	*p*	95% *CI*	*b*	*p*	95% *CI*	*b*	*p*	95% *CI*
Delinquency (Helmert)									
Serious and Low (v. None)	0.40	0.775	[-2.33, 3.13]	0.05	0.712	[-0.30 0.20]	0.00	0.996	[-0.49 0.49]
Serious (v. Low)	0.29	0.872	[-3.21, 3.78]	-0.10	0.528	[-0.22 0.42]	0.33	0.307	[-0.30 0.95]
Age (13–17)	0.01	0.986	[-1.07, 1.09]	-0.07	0.187	[-0.17 0.03]	0.03	0.724	[-0.16 0.23]
African Am. (v. Latino)	6.70	0.001	[2.74, 10.67]	0.89	0.001	[0.51 1.27]	0.17	0.570	[-0.41 0.75]
Male (v. Female)	1.43	0.257	[-1.04, 3.90]	0.01	0.923	[-0.22 0.24]	-0.46	0.044	[-0.91 -0.01]
ICC (neighborhood)	0.23			0.29			0.09		

Nonhome, nonschool activity spaces.

Analyses indicate significant associations between self-reported delinquency and supervision, *OR* = 0.64, 95% *CI:* 0.40 to 0.99, $p < .05$, engaging in goal-oriented activities, *OR* = 0.41, 95% *CI:* 0.21 to 0.78, $p < .01$, and the presence of related adults, *OR* = 1.61, 95% *CI:* 1.02 to 2.56, $p < .05$, in nonhome, nonschool activity locations (Tables 4.24–4.25). The odds of youths who report engaging in low and serious levels of delinquency spending time in nonhome, nonschool settings with higher levels of adult supervision are 0.64 times that of nondelinquent youth. Furthermore, the odds of youths who report engaging in low and serious levels of delinquent behavior engaging in goal-oriented activities (e.g., homework, afterschool club, ACT prep course, sports practice) in nonhome, nonschool activity spaces are 0.41 times that of nondelinquent youth. Finally, the odds of youths who report engaging in low and serious levels of delinquency spending time with related adults in nonhome, nonschool settings are 1.61 times that of nondelinquent youths, indicating that delinquent youths are more likely to have related adults present compared to nondelinquent youths in nonhome, nonschool settings. However, no significant differences were found between youths who report engaging in low and serious levels of delinquency with regard to characteristics of nonhome, nonschool activity spaces. Taken together, these findings indicate that nondelinquent youths are more likely to spend time in nonhome, nonschool settings that are adult supervised, engaging in goal-oriented activities, with fewer related adults.

Age is significantly associated with adult supervision, *OR* = 0.84, 95% *CI:* 0.70 to 1.00, $p < .05$, and the presence of a related adult, *OR* = 0.78, 95% *CI:* 0.65 to 0.93, $p < .01$, in nonhome, nonschool spaces. The odds of older youths spending time in nonhome, nonschool spaces with higher levels of adult supervision are 0.84 that of younger youths. Similarly, the odds of older

youths having a related adult present in nonhome, nonschool spaces are 0.78 that of younger youths. Taken together, these findings indicate that older youths are spending time in spaces outside of home and school with less adult supervision and fewer related adults in comparison to younger youths.

Ethnicity was significantly associated with various features of nonhome, nonschool activity spaces, particularly nearby violent crime, $b = 9.27$, $z(454) = 3.72$, $p < .01$, concentrated disadvantage, $b = 0.98$, $z(454) = 6.22$, $p < .01$, and adult supervision, $OR = 1.54$, 95% *CI:* 1.01 to 2.36, $p < .01$. African American youths spent time in nonhome, nonschool spaces characterized by 9.24 more annual violent crimes (within a one-quarter mile radius) and 0.43 higher socioeconomic disadvantage (census level) compared to Latino youths. However, while these spaces are surrounded by higher crime and disadvantage, African American youths report more adult supervision than Latino youths. The odds of African American youths reporting higher levels of adult supervision in nonhome, nonschool activity spaces are 1.54 that of Latino youths.

Gender is also significantly associated with characteristics of nonhome, nonschool activity locations, particularly socioeconomic disadvantage, $b = 0.22$, $z(454) = 2.02$, $p < .05$, distance from home, $b = -0.56$, $z(454) = 1.99$, $p < .05$, and the presence of related adults, $OR = 0.66$, 95% *CI:* 0.43 to 1.01, $p < .05$. Males spend time in nonhome, nonschool spaces surrounded by 0.24 higher socioeconomic disadvantage and located 0.60 miles closer to home compared to females. In addition, the odds of males having a related adult present in nonhome, nonschool spaces are 0.66 that of females.

Table 4.24

Association between Delinquency and Community Context Surrounding Nonhome, Nonschool Activity Spaces and Distance from Home (n = 466)

Variable	Violent Crime			Concentrated Disadvantage			Distance from Home		
	b	*p*	95% *CI*	*b*	*p*	95% *CI*	*b*	*p*	95% *CI*
Delinquency (Helmert)									
Serious and Low (v. None)	0.53	0.763	[-2.88, 3.93]	0.02	0.880	[-0.22, 0.25]	0.20	0.568	[-0.47, 0.86]
Serious (v. Low)	-0.05	0.980	[-4.29, 4.18]	0.13	0.382	[-0.16, 0.42]	0.24	0.564	[-0.58, 1.07]
Age (13–17)	-0.85	0.220	[-2.22, 0.51]	-0.05	0.279	[-0.14, 0.04]	0.19	0.158	[-0.07, 0.45]
African Am. (v. Latino)	9.27	0.001	[4.38, 14.17]	0.98	0.001	[0.67, 1.29]	0.51	0.111	[-0.12, 1.14]
Male (v. Female)	-1.47	0.363	[-4.62, 1.69]	0.22	0.043	[0.01, 0.44]	-0.56	0.050	[-1.19, 0.08]
ICC (individual)	0.24			0.18			0.33		
ICC (neighborhood)	0.16			0.11			--		

Table 4.25

Association between Delinquency and Social and Behavioral Features within Nonhome, Nonschool Activity Spaces (n = 466)

Variable	Supervision			Goal-Oriented Activity			Other Youth			Related Adults			Nonrelated Adults		
	OR	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*
Delinquency (Helmert)															
Serious and Low (v. None)	0.64	0.050	[0.40, 0.99]	0.41	0.007	[0.21, 0.78]	0.43	0.097	[0.16, 1.16]	1.61	0.041	[1.02, 2.56]	0.54	0.080	[0.27, 1.07]
Serious (v. Low)	0.95	0.867	[0.54, 1.67]	1.36	0.475	[0.58, 3.19]	0.51	0.212	[0.18, 1.46]	1.21	0.499	[0.70, 2.10]	0.74	0.484	[0.32, 1.72]
Age (13–17)	0.84	0.050	[0.70, 1.00]	0.95	0.691	[0.73, 3.19]	0.92	0.673	[0.64, 1.34]	0.78	0.006	[0.65, 0.93]	0.87	0.290	[0.67, 1.13]
African Am. (v. Latino)	1.54	0.047	[1.01, 2.36]	1.26	0.468	[0.67, 3.19]	0.61	0.271	[0.25, 1.48]	0.96	0.834	[0.63, 1.46]	1.19	0.623	[0.59, 2.39]
Male (v. Female)	0.82	0.362	[0.53, 1.26]	0.58	0.097	[0.31, 3.19]	1.59	0.301	[0.66, 3.86]	0.66	0.054	[0.43, 1.01]	1.54	0.175	[0.83, 2.89]
ICC (individual)	0.19			0.27			0.41			0.1			0.44		
ICC (neighborhood)	--			0.01			--			--			0.04		

Question 3 Results

The results of analyses to address Question 3 are organized into two sections. Section 1 reports the results of analyses conducted to examine the association between types of settings and youths' evaluations of risk and safety and whether associations vary by youth participation in delinquent behavior. Section 2 reports the results of analyses conducted to examine the associations between the characteristics of these spaces (i.e., community context, distance from home, and social and behavioral features) and youths' evaluations of risk and safety and whether these associations vary by self-reported delinquent behavior.

Type of Activity Space and Youths' Evaluations of Risk and Safety

Table 4.26 shows the relation between the type of activity spaces reported by youths and youths' evaluations of risk and danger within those spaces. Risky places were defined as "places where you or others are more likely to engage in delinquent, threatening, dangerous, or illegal activities," whereas safe places where defined as "places where you are safe from harm or danger."

Schools, *OR* = 4.03, 95% *CI:* 2.49 to 6.54, $p < .001$, friend's or relative's homes, *OR* = 1.67, 95% *CI:* 1.03 to 2.72, $p < .05$, businesses or public facilities *OR* = 4.51, 95% *CI:* 2.48 to 8.20, $p < .001$, and outdoor public settings, *OR* = 25.94, 95% *CI:* 13.53 to 49.72, $p < .001$, were evaluated as riskier by youths compared to home, after controlling for age, ethnicity, and gender. The odds of youths evaluating school, a friend's or relative's home, a business or public facility, or an outdoor public setting as being in a higher category of risk than that of home were 4.03, 1.67, 4.51, and 25.94 times more than that of home, respectively.

For evaluation of safety, schools, *OR* = 3.29, 95% *CI:* 2.03 to 5.32, $p < .001$, businesses or public facilities, *OR* = 5.35, 95% *CI:* 2.97 to 9.63, $p < .001$, and outdoor public settings, *OR* =

22.00, 95% *CI:* 11.64 to 41.60, $p < .001$, were evaluated as less safe by youth compared to home, after controlling for age, ethnicity, and gender. The odds of youths evaluating school, a business or public facility, or an outdoor public setting in a higher category of danger were 3.29, 5.35, and 22.00 times more than that of home. Youths evaluated specific settings—e.g., school, business or public facility, and outdoor public settings—as both riskier and less safe compared to home. However, while youths evaluated a friend's or relative's home as riskier, they did not evaluate this space as more dangerous, suggesting that youths may discern between settings in which they engage in risky behavior and those in which they might experience danger or harm.

Further analyses examined whether these associations varied by self-reported delinquent behavior (Table 4.26). These analyses controlled for age, ethnicity, and gender. There were no significant differences in evaluations of risk by level of delinquent behavior, indicating that youths who engage in varying levels of delinquent behavior evaluate the level of risk within different types of spaces similarly. However, in terms of safety, youths who report engaging in serious delinquency evaluated after-school programs or recreational facilities, *OR* = 8.63, 95% *CI:* 1.23 to 60.86, $p < .05$, and outdoor public settings, *OR* = 5.00, 95% *CI:* 1.04 to 24.02, $p < .05$, as more dangerous compared to youths who report engaging in low levels of delinquency. The odds that youths who report engaging in serious levels of delinquent behavior of evaluating after-school programs or recreational centers and outdoor public settings in a higher category of danger were 8.63 and 5.00 that of youths who report engaging in low levels of delinquency. These settings might be spaces where youths who engage in serious delinquent behavior believe that they are more likely to experience harm or danger compared to youths who engage in low levels of delinquent behavior.

A significant negative association was found between self-reported delinquency and youths' evaluations of danger, *OR* = 1.73, 95% *CI:* 1.06 to 2.83, $p < .05$, after controlling for age, ethnicity, and gender. The odds of youths who report engaging in low or serious delinquent behavior evaluating their activity settings in a higher category of danger were 1.73 that of nondelinquent youth. These results suggest that youths who engage in low or high levels of delinquent behavior believe that they are more likely to experience harm or danger in the same types of settings compared to nondelinquent youth.

Table 4.26

Association between Type of Space and Youths' Evaluations of Risk and Danger

Type of Setting	Risk						Danger					
	OR	*p*	*95% CI*	*OR*	*p*	*95% CI*	*OR*	*p*	*95% CI*	*OR*	*p*	*95% CI*
1. Home (reference category)												
2. School	4.03	0.001	[2.49, 6.54]	5.26	0.001	[2.41, 11.46]	3.29	0.001	[2.03, 5.32]	3.52	0.001	[1.64, 7.53]
3. Friend's or Relative's Home	1.67	0.039	[1.03, 2.72]	2.41	0.041	[1.04, 5.59]	1.18	0.504	[0.73, 1.91]	1.19	0.693	[0.51, 2.77]
4. Businesses or Public Facility	4.51	0.001	[2.48, 8.20]	7.39	0.001	[2.89, 18.87]	5.35	0.001	[2.97, 9.63]	5.86	0.001	[2.35, 14.60]
5. Personal Development Setting	0.92	0.859	[0.37, 2.27]	0.66	0.604	[0.14, 3.14]	1.13	0.788	[0.47, 2.74]	0.95	0.938	[0.25, 3.63]
6. After-school Program or Rec Facility	1.46	0.313	[0.70, 3.02]	2.01	0.270	[0.58, 6.98]	1.27	0.526	[0.61, 2.64]	0.95	0.935	[0.28, 3.27]
7. Outdoor Public Setting	25.94	0.001	[13.53, 49.72]	24.13	0.001	[9.11, 63.95]	22.00	0.001	[11.64, 41.60]	16.44	0.001	[6.43, 42.05]
Delinquency (Helmert contrast)												
Serious and Low (v. None)	--	--	--	--	1.66	0.068	[0.96, 2.86]	--	--	--	--	1.73	0.029	[1.06, 2.83]
Serious (v. Low)	--	--	--	--	1.09	0.803	[0.55, 2.18]	--	--	--	--	0.84	0.585	[0.44, 1.58]
1. Home (reference category)												
2. School												
Serious and Low (v. None)	--	--	--	--	0.68	0.445	[0.25, 1.84]	--	--	--	--	1.05	0.924	[0.39, 2.86]
Serious (v. Low)	--	--	--	--	1.25	0.730	[0.35, 4.51]	--	--	--	--	2.30	0.224	[0.60, 8.78]
3. Friend's or Relative's Home												
Serious and Low (v. None)	--	--	--	--	0.55	0.271	[0.19, 1.60]	--	--	--	--	0.88	0.816	[0.29, 2.63]
Serious (v. Low)	--	--	--	--	1.02	0.975	[0.28, 3.77]	--	--	--	--	0.91	0.896	[0.23, 3.62]
4. Businesses or Public Facility												
Serious and Low (v. None)	--	--	--	--	0.33	0.083	[0.10, 1.15]	--	--	--	--	0.88	0.833	[0.26, 3.00]
Serious (v. Low)	--	--	--	--	0.35	0.215	[0.07, 1.85]	--	--	--	--	1.26	0.786	[0.23, 6.86]
5. Personal Development Setting												
Serious and Low (v. None)	--	--	--	--	1.55	0.667	[0.21, 11.53]	--	--	--	--	1.74	0.559	[0.27, 11.17]
Serious (v. Low)	--	--	--	--	0.57	0.664	[0.05, 7.21]	--	--	--	--	1.86	0.637	[0.14, 24.50]
6. After-school Program or Rec Facility												
Serious and Low (v. None)	--	--	--	--	0.55	0.445	[0.12, 2.58]	--	--	--	--	1.50	0.612	[0.31, 7.27]
Serious (v. Low)	--	--	--	--	1.93	0.488	[0.30, 12.30]	--	--	--	--	8.63	0.030	[1.23, 60.86]
7. Outdoor Public Setting												
Serious and Low (v. None)	--	--	--	--	1.21	0.752	[0.36, 4.04]	--	--	--	--	2.23	0.187	[0.68, 7.34]
Serious (v. Low)	--	--	--	--	1.35	0.703	[0.29, 6.25]	--	--	--	--	5.00	0.045	[1.04, 24.02]
Age (13–17)	1.14	0.172	[0.95, 1.37]	1.12	0.244	[0.92, 1.35]	1.16	0.074	[0.99, 1.36]	1.13	0.142	[0.96, 1.34]
African Am. (v. Latino)	1.31	0.251	[0.83, 2.06]	1.30	0.258	[0.83, 2.05]	0.94	0.756	[0.63, 1.39]	0.95	0.815	[0.64, 1.42]
Male (v. Female)	1.32	0.233	[0.84, 2.07]	1.36	0.189	[0.86, 2.14]	1.12	0.586	[0.75, 1.66]	1.16	0.464	[0.78, 1.73]
ICC (individual)	0.39			0.39			0.28			0.29		

Characteristics of Activity Space and Youths' Evaluations of Risk and Safety

Associations between characteristics of activity spaces—i.e., community context, distance from home, and social and behavioral features—and youths' evaluations of risk and safety and whether these associations varied by self-reported delinquent behavior were examined separately for reported home, school, and nonhome, nonschool locations (Tables 4.20–4.22).

Home activity spaces.

Among youths who reported home activity spaces, level of adult supervision, *OR* = 0.32, 95% *CI:* 0.12 to 0.87, $p < .01$, and the presence of related adults *OR* = 0.29, 95% *CI:* 0.09 to 0.92, $p < .05$, and of other youths *OR* = 4.88, 95% *CI:* 1.49 to 15.96, $p < .01$, were significantly associated with their evaluation of risk, after controlling for age, ethnicity, and gender. The odds of youths who report high and medium supervision (compared to low supervision) of evaluating home in a higher category of risk were 0.32 that of youths who reported low supervision at home. It is important to note that there were no significant differences in youths' evaluations of risk among those who reported medium versus high levels of adult supervision at home, indicating that medium levels of supervision at home are sufficient for youths to believe that they are safe from harm or danger. Furthermore, the odds that youths who reported the presence of a related adult while spending time at home evaluated home as being in a higher category of risk were 0.29 times that of youths who reported no presence of a related adult. Finally, the odds of youths who reported the presence of other youths while spending time at home evaluating home in a higher category of risk were 4.88 that of youths who reported no other youths being present.

For evaluation of safety, high, *OR* = 0.35, 95% *CI:* 0.13 to 0.94, $p < .05$, and medium, *OR* = 0.32, 95% *CI:* 0.15 to 0.68, $p < .01$, levels of supervision and the presence of related adults, *OR* = 0.26, 95% *CI:* 0.08 to 0.82, $p < .05$, are significantly associated with youths'

evaluations of safety after controlling for age, ethnicity, and gender. The odds of youths who report high and medium (compared to low) and high (compared to medium) supervision evaluating home in a higher category of danger were 0.35 and 0.32 that of youths who report lower levels of supervision. Furthermore, the odds that youths who reported the presence of a related adult at home evaluate home as being in a higher category of danger were 0.26 that of youths who reported no presence of a related adult. Taken together, these findings suggest that youths' evaluations of risk and danger are associated with social and behavioral features within the home and not the surrounding community context. Youths perceive their homes as less safe with less adult supervision, without the presence of a related adult, and with the presence of other youths. However, youths evaluate home as riskier when other youths are present, whereas their evaluation of danger is not associated with the presence of other youths, indicating that subjects believe that the presence of other youths at home may increase the likelihood of engaging in risky behavior but does not increase the likelihood of experiencing harm or danger.

Further analyses reveal that level of self-reported delinquency moderates the association between concentrated disadvantage and youths' evaluations of danger, *OR* = 8.17, 95% *CI:* 2.10 to 32.14, $p < .01$, after controlling for age, ethnicity, and gender. A one-unit increase in concentrated disadvantage resulted in an 8.17 increase in the odds of youths who report engaging in low and serious levels of delinquent behavior evaluating home in a higher category of danger compared to nondelinquent youth. No significant differences in the association between disadvantage and their evaluation of danger were found, however, among youths who report engaging in low and serious levels of delinquent behavior.

Level of self-reported delinquency also moderates the relations between adult supervision and youths' evaluations of danger. Among youths who report high and medium levels of

supervision at home (compared to low levels of supervision), the odds of youths who report engaging in low and serious levels of delinquency evaluating home in a higher category of danger are 0.01 times that of nondelinquent youth. Similarly, among youths who report high and medium levels of supervision at home, the odds of youths who report engaging in serious delinquency evaluating home as having a higher category of danger are 0.01 that of youths who report engaging in low levels of delinquency. Among youths who report high levels of supervision at home (compared to medium supervision) and who report engaging in low and serious levels of delinquent behavior, the odds of their evaluating home in a higher category of danger are 0.09 times that of nondelinquent youth. These findings suggest that youths who report engaging in high and low levels of delinquent behavior evaluate home as more dangerous in the absence of adult supervision compared to nondelinquent youth.

While level of self-reported delinquency appears to moderate the association between features of activity space (i.e., disadvantage and adult supervision) and youths' evaluation of danger, level of delinquency did not moderate the association between characteristics of activity space and youths' evaluations of risk, suggesting that features of activity space do not differentially affect evaluation of risk among delinquent and nondelinquent youth.

Table 4.27

Association between Characteristics of Home Activity Spaces and Youths' Evaluations of Risk and Danger (n = 168)

Variable	Risk						Danger					
	OR	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*
Concentrated Disadvantage	1.01	0.953	[0.66, 1.55]	0.94	0.310	[0.52, 1.72]	0.91	0.686	[0.58, 1.42]	0.47	0.054	[0.22, 1.01]
Violent Crime	1.00	0.886	[0.97, 1.04]	1.01	0.647	[0.96, 1.07]	1.00	0.918	[0.97, 1.04]	1.05	0.071	[0.99, 1.11]
Delinquency												
Serious and Low (v. None)	--	--	-- --	2.12	0.990	-- --	--	--	-- --	1.76	1.000	-- --
Serious (v. Low)	--	--	-- --	0.00	0.988	-- --	--	--	-- --	0.00	0.986	-- --
Supervision (Helmert)												
1. High and Medium (vs low)	0.32	0.025	[0.12, 0.87]	0.27	0.019	[0.09, 1.23]	0.35	0.040	[0.13, 0.94]	0.08	0.006	[0.01, 2.34]
2. High (v. medium)	0.51	0.058	[0.25, 1.02]	0.37	0.038	[0.15, 1.05]	0.32	0.010	[0.15, 0.68]	0.18	0.006	[0.05, 1.62]
Goal Oriented Activity	1.78	0.112	[0.88, 3.63]	2.29	0.185	[0.67, 7.85]	0.84	0.628	[0.41, 1.72]	0.71	0.599	[0.20, 2.51]
Individuals Present												
1. Related Adult	0.29	0.037	[0.09, 0.92]	0.18	0.098	[0.02, 1.36]	0.26	0.021	[0.08, 0.82]	0.09	0.014	[0.01, 0.61]
2. Non-related Adult	0.44	0.341	[0.08, 2.36]	0.00	0.993	-- --	0.82	0.797	[0.18, 3.74]	0.00	0.994	-- --
3. Other Youth	4.88	0.009	[1.49, 15.96]	2.55	0.272	[0.48, 13.6]	1.49	0.405	[0.58, 3.78]	0.53	0.403	[0.12, 2.36]
Concentrated Disadvantage x Delinq.												
Serious and Low (v. None)	--	--	-- --	1.29	0.570	[0.54, 3.06]	--	--	-- --	8.17	0.003	[2.10, 32.14]
Serious (v. Low)	--	--	-- --	2.06	0.292	[0.54, 7.92]	--	--	-- --	8.41	0.075	[0.81, 88.23]
Violent Crime x Delinq.												
Serious and Low (v. None)	--	--	-- --	0.97	0.458	[0.90, 1.05]	--	--	-- --	0.84	0.010	[0.75, 0.92]
Serious (v. Low)	--	--	-- --	0.98	0.710	[0.88, 1.09]	--	--	-- --	0.88	0.149	[0.73, 1.05]
High and Medium Supervision (v. Low) x Delinq.												
Serious and Low (v. None)	--	--	-- --	0.52	0.597	[0.05, 5.81]	--	--	-- --	0.01	0.014	[0.00, 0.21]
Serious (v. Low)	--	--	-- --	0.52	0.618	[0.04, 6.82]	--	--	-- --	0.01	0.040	[0.00, 0.81]
High Supervision (v. Medium) x Delinq.												
Serious and Low (v. None)	--	--	-- --	0.16	0.049	[0.03, 0.99]	--	--	-- --	0.09	0.028	[0.01, 0.77]
Serious (v. Low)	--	--	-- --	0.56	0.655	[0.05, 6.89]	--	--	-- --	0.97	0.985	[0.03, 28.79]
Goal Oriented Activity x Delinq.												
Serious and Low (v. None)	--	--	-- --	0.80	0.787	[0.15, 4.14]	--	--	-- --	6.55	0.100	[0.70, 61.56]
Serious (v. Low)	--	--	-- --	3.63	0.234	[0.44, 30.57]	--	--	-- --	65.37	0.029	[1.52, 2835.58]
Related Adult x Delinq.												
Serious and Low (v. None)	--	--	-- --	0.42	0.543	[0.02, 7.03]	--	--	-- --	0.33	0.476	[0.02, 7.03]
Serious (v. Low)	--	--	-- --	0.05	0.141	[0.00, 2.75]	--	--	-- --	0.01	0.089	[0.00, 1.93]
Non-related Adult x Delinq.												
Serious and Low (v. None)	--	--	-- --	--	--	-- --	--	--	-- --	--	--	-- --
Serious (v. Low)	--	--	-- --	--	--	-- --	--	--	-- --	--	--	-- --
Other Youth x Delinq.												
Serious and Low (v. None)	--	--	-- --	--	--	-- --	--	--	-- --	--	--	-- --
Serious (v. Low)	--	--	-- --	--	--	-- --	--	--	-- --	--	--	-- --
Age (13–17)	1.03	0.830	[0.78, 1.36]	1.09	0.593	[0.79, 1.51]	1.39	0.030	[1.03, 1.88]	1.45	0.050	[1.00, 2.10]
African Am. (v. Latino)	0.69	0.375	[0.30, 1.57]	0.72	0.471	[0.30, 1.75]	0.61	0.245	[0.26, 1.40]	0.56	0.241	[0.21, 1.48]
Male (v. Female)	0.63	0.173	[0.33, 1.22]	0.70	0.341	[0.33, 1.46]	0.77	0.443	[0.39, 1.52]	0.83	0.676	[0.35, 1.97]

School activity spaces.

No characteristics of activity space are associated with youths' evaluations of risk for reported schools. Ethnicity, however, is significantly associated with how youth evaluate reported school spaces, *OR* = 2.00, 95% *CI:* 1.08 to 3.71, $p < .05$. The odds of African American youth evaluating school as being in a higher category of risk were 2.0 that of Latino youth.

Furthermore, youths' evaluations of danger are significantly associated with low supervision in school, *OR* = 0.11, 95% *CI:* 0.02 to 1.31, $p < .05$, after controlling for age, ethnicity, and gender. The odds of youth who report medium or high supervision evaluating school in a higher category of danger are 0.11 times that of youth who report low supervision. These findings indicate that low supervision within the school context is particularly salient in influencing youths' beliefs regarding experiencing harm or danger in school. It is important to note that there were no significant differences in youths' evaluations of danger among those who report medium versus high levels of supervision, indicating that medium levels of supervision are sufficient for youth to believe that they are safe from harm or danger.

Finally, the association between characteristics of activity space and evaluations of risk and danger did not vary by level of self-reported delinquency, suggesting that delinquent (i.e., those who report engaging in low and serious levels of delinquent behavior) and nondelinquent youth do not differ in their evaluation of characteristics of the school context.

Table 4.28

Association between Characteristics of School Activity Spaces and Youths' Evaluations of Risk and Danger (n = 185)

Variable	Risk						Danger					
	OR	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*
Concentrated Disadvantage	0.80	0.137	[0.60, 1.07]	0.82	0.412	[0.51 1.32]	0.81	0.158	[0.61, 1.08]	-0.26	0.297	[-0.75, 0.23]
Violent Crime	1.00	0.953	[0.98, 1.03]	0.99	0.547	[0.94 1.03]	1.02	0.210	[0.99, 1.04]	0.02	0.353	[-0.02, 0.07]
Distance from Home	0.88	0.133	[0.75, 1.04]	0.92	0.522	[0.72 1.19]	0.86	0.050	[1.36, 1.01]	-0.10	0.426	[-0.35, 0.15]
Delinquency												
Serious and Low (v. None)	--	--	-- --	--	--	-- --	--	--	-- --	--	--	-- --
Serious (v. Low)	--	--	-- --	--	--	-- --	--	--	-- --	--	--	-- --
Supervision (Helmert)												
1. High and Medium (vs low)	0.30	0.200	[0.05, 1.90]	--	--	-- --	0.11	0.030	[0.02, 1.31]	--	--	-- --
2. High (v. medium)	0.73	0.350	[0.39, 1.40]	0.53	0.220	[0.19 1.48]	0.58	0.110	[0.30, 1.13]	-0.44	0.425	[-1.51, 0.64]
Goal Oriented Activity	--	--	-- --	--	--	-- --	1.17	0.919	[0.06, 24.29]	0.29	0.855	[-2.83, 3.42]
Individuals Present												
1. Related Adult	0.95	0.933	[0.28, 3.19]	0.49	0.493	[0.07 3.71]	1.04	0.952	[0.29, 3.78]	-1.40	0.272	[-3.89, 1.10]
2. Non-related Adult	1.35	0.580	[0.47, 3.94]	1.53	0.658	[0.23 10.07]	3.19	0.051	[1.00, 10.18]	1.06	0.258	[-0.78, 2.89]
3. Other Youth	7.12	0.222	[0.30, 167.34]	--	--	-- --	2.13	0.649	[0.08, 54.60]	--	--	-- --
Concentrated Disadvantage x Delinq.												
Serious and Low (v. None)	--	--	-- --	1.01	0.974	[0.57 1.80]	--	--	-- --	0.06	0.842	[-0.54, 0.66]
Serious (v. Low)	--	--	-- --	1.17	0.674	[0.57 2.41]	--	--	-- --	-0.10	0.803	[-0.85, 0.66]
Violent Crime x Delinq.												
Serious and Low (v. None)	--	--	-- --	1.02	0.494	[0.96 1.08]	--	--	-- --	0.00	0.893	[-0.07, 0.06]
Serious (v. Low)	--	--	-- --	1.02	0.583	[0.95 1.11]	--	--	-- --	0.03	0.449	[-0.05, 0.11]
Distance from Home x Delinq.												
Serious and Low (v. None)	--	--	-- --	0.90	0.545	[0.64 1.26]	--	--	-- --	-0.11	0.543	[-0.45, 0.24]
Serious (v. Low)	--	--	-- --	1.10	0.685	[0.70 1.73]	--	--	-- --	0.32	0.160	[-0.13, 0.77]
High and Medium Supervision (v. Low) x Delinq.												
Serious and Low (v. None)	--	--	-- --	--	--	-- --	--	--	-- --	--	--	-- --
Serious (v. Low)	--	--	-- --	--	--	-- --	--	--	-- --	--	--	-- --
High Supervision (v. Medium) x Delinq.												
Serious and Low (v. None)	--	--	-- --	1.00	0.996	[0.16 6.05]	--	--	-- --	-1.05	0.270	[-2.93, 0.82]
Serious (v. Low)	--	--	-- --	0.29	0.399	[0.02 5.26]	--	--	-- --	0.19	0.904	[-2.84, 3.21]
Goal Oriented Activity x Delinq.												
Serious and Low (v. None)	--	--	-- --	--	--	-- --	--	--	-- --	--	--	-- --
Serious (v. Low)	--	--	-- --	--	--	-- --	--	--	-- --	--	--	-- --
Related Adult x Delinq.												
Serious and Low (v. None)	--	--	-- --	0.00	0.993	-- --	--	--	-- --	-4.80	0.993	-- --
Serious (v. Low)	--	--	-- --	0.00	0.991	-- --	--	--	-- --	-14.15	0.990	-- --
Non-related Adult x Delinq.												
Serious and Low (v. None)	--	--	-- --	0.47	0.543	[0.04 5.37]	--	--	-- --	0.18	0.892	[-2.71, 2.36]
Serious (v. Low)	--	--	-- --	0.34	0.486	[0.02 7.10]	--	--	-- --	-0.06	0.973	[-3.41, 3.53]
Other Youth x Delinq.												
Serious and Low (v. None)	--	--	-- --	--	--	-- --	--	--	-- --	--	--	-- --
Serious (v. Low)	--	--	-- --	--	--	-- --	--	--	-- --	--	--	-- --
Age (13–17)	0.92	0.446	[0.73, 1.15]	0.95	0.645	[0.74 1.20]	1.01	0.942	[0.80, 1.27]	0.05	0.710	[-0.20, 0.29]
African Am. (v. Latino)	2.00	0.027	[1.08, 3.71]	1.85	0.063	[0.97 3.53]	0.99	0.981	[0.53, 1.86]	-0.01	0.967	[-0.68, 0.65]
Male (v. Female)	1.33	0.300	[0.77, 2.29]	1.39	0.268	[0.78 2.48]	1.11	0.726	[0.63, 1.93]	0.04	0.892	[-0.56, 0.64]

Nonhome, Nonschool activity spaces.

Among youths who reported nonhome, nonschool activity spaces, high and medium levels of adult supervision, *OR* = 0.28, 95% *CI:* 0.17 to 2.10, $p < .001$ and *OR* = 0.62, 95% *CI:* 0.38 to 1.01, $p < .05$, participating in goal-oriented activities, *OR* = 0.49, 95% *CI:* 0.27 to 0.91, $p < .05$, and the presence of related adults, *OR* = 0.42, 95% *CI:* 0.25 to 0.71, $p < .001$, were significantly associated with youths' evaluation of risk, after controlling for age, ethnicity, and gender. Among youths who reported high and medium levels of supervision, the odds of evaluating nonhome, nonschool spaces in a higher category of risk were 0.28 and 0.62 that of youths who reported lower levels of supervision. Furthermore, for youths who reported engaging in goal-oriented activities, the odds of evaluating nonhome, nonschool spaces in a higher category of risk were 0.49 that of youths who reported engaging in non-goal-oriented activities. Finally, among youths who reported the presence of a related adult, the odds of evaluating nonhome, nonschool spaces in a higher category of risk were 0.42 that for youths who reported no presence of a related adult.

Similarly, high and medium levels of adult supervision, *OR* = 0.31, 95% *CI:* 0.19 to 1.99, $p < .001$ and *OR* = 0.52, 95% *CI:* 0.31 to 1.17, $p < .01$, participating in goal oriented activities, *OR* = 0.48, 95% *CI:* 0.28 to 0.84, $p < .01$, and the presence of related adults, *OR* = 0.46, 95% *CI:* 0.29 to 0.74, $p < .001$, were also significantly associated with youths' evaluations of danger within nonhome, nonschool spaces, after controlling for age, ethnicity, and gender. The odds of youth who report high or medium levels of supervision evaluating nonhome, nonschool spaces in a higher category of danger was 0.31 that of youths who report low levels of adult supervision. In addition, the odds of youth who report high levels of adult supervision evaluating nonhome, nonschool spaces in a higher category of danger were 0.52 that of youths who reported medium

levels of supervision. Furthermore, the odds among youths who reported engaging in goal-oriented activities of evaluating nonhome, nonschool spaces in a higher category of danger were 0.48 that of youths who reported engaging in non-goal-oriented activities. Finally, the odds of evaluating nonhome, nonschool spaces in a higher category of danger among youths who reported the presence of a related adult were 0.46 that of youths who report no related adult.

Collectively, these findings suggest that youths' evaluations of risk and danger in nonhome, nonschool spaces are related to the social and behavioral features within these spaces, rather than the surrounding community context or distance from home. Furthermore, features within these spaces—i.e., supervision, goal-oriented activity, and presence of a related adult—are associated with youths' beliefs regarding risk and safety.

Further analyses reveal that level of self-reported delinquency moderates the association between nearby violent crime and youths' evaluations of risk, $OR = 1.03$, 95% *CI:* 1.00 to 1.06, $p < .05$, and danger, $OR = 1.03$, 95% *CI:* 1.00 to 1.06, $p < .05$, after controlling for age, ethnicity, and gender. A one-unit increase in violent crimes within a one-quarter mile radius of nonhome, nonschool locations results in youths who report engaging in serious and low levels of delinquent behavior being 1.03 times more likely to evaluate their activity spaces as being in higher categories of risk and danger than nondelinquent youth. These findings indicate that delinquent youths' evaluations of risk and danger are related to the surrounding community context—specifically the presence of violent crime—whereas nondelinquent youths' evaluations are not. It is important to note that the association between violent crime and youths' evaluations of risk and danger did not differ between youths who report engaging in low levels of delinquency and youths who report engaging in serious levels of delinquent behavior.

In summary, these findings indicate that delinquent youths' evaluations of risk and danger in nonhome, nonschool spaces are related to both the surrounding community context and features within these spaces, whereas nondelinquent youths' evaluations are only related to features within these spaces.

Table 4.29

Association between Characteristics of Nonhome, Nonschool Activity Spaces and Youths' Evaluations of Risk and Danger (n = 466)

Variable	Risk						Danger					
	OR	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*	*OR*	*p*	95% *CI*
Concentrated Disadvantage	1.07	0.508	[0.87, 1.32]	1.25	0.208	[0.88, 1.79]	1.09	0.387	[0.90, 1.32]	1.16	0.356	[0.85, 1.58]
Violent Crime	0.99	0.074	[0.98, 1.00]	0.97	0.011	[0.95, 0.99]	0.99	0.232	[0.98, 1.00]	0.98	0.046	[0.96, 1.00]
Distance from Home	0.91	0.047	[0.84, 1.00]	0.88	0.149	[0.74, 1.05]	0.94	0.126	[0.87, 1.02]	1.01	0.889	[0.88, 1.16]
Delinquency												
Serious and Low (v. None)	--	--	--	--	0.60	0.420	[0.17, 2.10]	--	--	--	--	0.81	0.720	[0.26, 2.53]
Serious (v. Low)	--	--	--	--	1.14	0.872	[0.23, 5.75]	--	--	--	--	0.06	0.001	[0.01, 3.43]
Supervision (Helmert)												
1. High and Medium (vs low)	0.28	0.001	[0.17, 2.10]	0.26	0.001	[0.15, 0.46]	0.31	0.001	[0.19, 1.99]	0.26	0.001	[0.16, 2.23]
2. High (v. medium)	0.62	0.050	[0.38, 1.01]	0.63	0.089	[0.37, 1.07]	0.52	0.005	[0.33, 1.22]	0.52	0.010	[0.31, 1.17]
Goal Oriented Activity	0.49	0.025	[0.27, 0.91]	0.47	0.109	[0.19, 1.19]	0.48	0.011	[0.28, 0.84]	0.43	0.044	[0.19, 0.79]
Individuals Present												
1. Related Adult	0.42	0.001	[0.25, 0.71]	0.38	0.034	[0.16, 0.93]	0.46	0.001	[0.29, 0.74]	0.38	0.016	[0.18, 0.84]
2. Non-related Adult	0.84	0.503	[0.50, 1.40]	0.58	0.205	[0.25, 1.35]	1.00	0.983	[0.63, 1.60]	0.79	0.521	[0.38, 1.65]
3. Other Youth	0.88	0.732	[0.43, 1.80]	0.51	0.369	[0.12, 2.20]	0.67	0.240	[0.34, 1.31]	0.77	0.695	[0.21, 2.83]
Concentrated Disadvantage x Delinq.												
Serious and Low (v. None)	--	--	--	--	0.78	0.247	[0.51, 1.19]	--	--	--	--	0.91	0.637	[0.63, 1.34]
Serious (v. Low)	--	--	--	--	0.99	0.979	[0.59, 1.68]	--	--	--	--	1.60	0.061	[0.98, 2.62]
Violent Crime x Delinq.												
Serious and Low (v. None)	--	--	--	--	1.03	0.050	[1.00, 1.06]	--	--	--	--	1.03	0.040	[1.00, 1.06]
Serious (v. Low)	--	--	--	--	0.99	0.717	[0.96, 1.03]	--	--	--	--	1.01	0.694	[0.97, 0.96]
Distance from Home x Delinq.												
Serious and Low (v. None)	--	--	--	--	1.02	0.869	[0.83, 1.25]	--	--	--	--	0.90	0.211	[0.76, 1.06]
Serious (v. Low)	--	--	--	--	0.91	0.396	[0.72, 1.14]	--	--	--	--	1.08	0.445	[0.88, 1.34]
High and Medium Supervision (v. Low) x Delinq.												
Serious and Low (v. None)	--	--	--	--	1.64	0.406	[0.51, 5.31]	--	--	--	--	0.86	0.780	[0.30, 2.46]
Serious (v. Low)	--	--	--	--	1.65	0.481	[0.41, 6.69]	--	--	--	--	0.89	0.859	[0.24, 3.32]
High Supervision (v. Medium) x Delinq.												
Serious and Low (v. None)	--	--	--	--	0.77	0.637	[0.26, 2.26]	--	--	--	--	0.43	0.101	[0.16, 1.17]
Serious (v. Low)	--	--	--	--	2.57	0.171	[0.66, 9.94]	--	--	--	--	2.00	0.299	[0.54, 7.39]
Goal Oriented Activity x Delinq.												
Serious and Low (v. None)	--	--	--	--	1.21	0.768	[0.34, 4.22]	--	--	--	--	1.51	0.493	[0.47, 4.90]
Serious (v. Low)	--	--	--	--	0.47	0.387	[0.08, 2.61]	--	--	--	--	0.69	0.664	[0.13, 3.71]
Related Adult x Delinq.												
Serious and Low (v. None)	--	--	--	--	1.01	0.979	[0.34, 3.06]	--	--	--	--	1.12	0.829	[0.41, 3.03]
Serious (v. Low)	--	--	--	--	1.51	0.550	[0.17, 2.59]	--	--	--	--	0.41	0.176	[0.11, 1.49]
Non-related Adult x Delinq.												
Serious and Low (v. None)	--	--	--	--	1.66	0.370	[0.55, 5.00]	--	--	--	--	1.39	0.512	[0.52, 3.78]
Serious (v. Low)	--	--	--	--	0.68	0.599	[0.16, 2.85]	--	--	--	--	0.46	0.258	[0.12, 1.77]
Other Youth x Delinq.												
Serious and Low (v. None)	--	--	--	--	2.09	0.401	[0.37, 11.70]	--	--	--	--	1.28	0.762	[0.26, 6.35]
Serious (v. Low)	--	--	--	--	1.38	0.731	[0.22, 8.50]	--	--	--	--	25.28	0.001	[0.26, 167.67]
Age (13–17)	1.08	0.412	[0.90, 1.31]	1.11	0.293	[0.91, 1.35]	0.99	0.925	[0.84, 1.17]	0.97	0.712	[0.82, 1.15]
African Am. (v. Latino)	1.33	0.292	[0.78, 2.27]	1.26	0.411	[0.73, 2.18]	0.95	0.829	[0.60, 1.51]	0.85	0.489	[0.53, 1.35]
Male (v. Female)	1.31	0.246	[0.83, 2.10]	1.32	0.245	[0.83, 2.12]	1.00	0.994	[0.68, 1.49]	1.02	0.925	[0.68, 1.52]
ICC (individual)	0.24			0.23			0.07			0.02		

CHAPTER 5

DISCUSSION

The purpose of this study was to advance understanding of where and how youth spend their time, and to determine if there are associations between activity space and youth involvement in delinquent behavior. Using cross-sectional data gathered from a sample of 296 minority youths ages 13 to 17 who reside in high-burden urban neighborhoods in Chicago, the current study explored three questions: (1) In what types of settings do urban adolescents spend their time? (2) Do adolescents who report engaging in delinquent behavior spend time in different types of settings than adolescents who do not report engaging in delinquent behavior but also live in the same neighborhoods? and (3) What aspects of activity spaces are associated with adolescents' evaluations of risk and safety, and do these associations vary by youth reports of involvement in delinquent behavior?

The present study, informed by Bronfenbrenner's (1979, 1988, 1995) developmental-ecological perspective and social disorganization theory, is based in the frame that individual development is influenced by complex, multilayered social systems. While distal characteristics of environments that are outside of the individual's direct experiences have important implications for human development, this study focused on proximal processes, the reciprocal interactions between developing individuals and the symbols, objects, and people they encounter, as the "engines of development" (Bronfenbrenner, 1995). Furthermore, as previously mentioned, given the cross-sectional nature of these data, it was difficult to distinguish between processes of selection and socialization with regard to the relation between youth involvement in delinquent behavior and where and how youth spend their time. While these analyses were modeled in a

manner that implied selection, these findings could have important implications for processes of socialization.

This study focused on three aspects of the activity spaces of urban youth: community context surrounding these spaces, social and behavioral features within these spaces, and distance from home. This approach provided greater understanding of the complex, multilayered social systems where urban youth spend time, focusing on the proximal features of these spaces (i.e., social and behavioral features within these settings) and the distal characteristics of these spaces (i.e., features of the surrounding community context, specifically levels of socioeconomic disadvantage and violent crime). Much of the previous scholarship has examined differences in features of the broader community context between high- and low-risk neighborhoods to understand variation in youth involvement in delinquent behavior (Bellair & McNulty, 2009; Chung & Steinberg, 2006; De Coster, Heimer, & Wittrock, 2006; Gorman-Smith, Tolan, & Henry, 2000; Haynie, Silver, & Teasdale, 2006; Kirk, 2008; Mrug & Windle, 2009; Peeples & Loeber, 1994; Zimmerman & Messner, 2010, 2011). The present study, however, intentionally focused on youth who reside within high-risk urban neighborhoods to examine variation in the places where adolescents spend time and whether aspects of these places are associated with youth self-reports of involvement in delinquent behavior. This approach offers a more nuanced understanding of how place, particularly within high-risk urban settings, relates to involvement in delinquent behavior.

Findings indicate that urban youth spend much of their time in locations geographically removed from their homes, although usually within the same geographic area of the city as their home (i.e., south side, west side, near south side, or near west side). Furthermore, youth report that indoor settings located within high-risk community contexts are often characterized by

protective features, particularly adult supervision, adult presence, and goal-oriented activities. These findings are consistent with earlier research and Bronfenbrenner's conceptualization of the role of proximal and distal processes, with characteristics of the proximal context particularly salient. Delinquent behavior and youths' beliefs about their environments were associated with social and behavioral features within the activity space (i.e., proximal processes) and were not associated with features of the surrounding community context or distance from home (i.e., distal processes). Delinquent youth were less likely to spend time in settings characterized by higher levels of adult supervision and youth engagement in goal-oriented activities compared to nondelinquent youth.

Characteristics of Urban Youths' Activity Spaces

Youths reported spending much of their time in locations outside their homes, although usually in the same geographic area of the city as their home (e.g., south side, west side). The most frequently reported activity spaces were a friend's or relative's home (25%), followed by school (23%), home (21%), business or public facility (11%), an outdoor public setting (e.g., a park or neighborhood street) (10%), an after-school program or recreational center (7%), and a nonrecreational personal development setting (4%). Excluding the 168 activity spaces that were homes, 77% of reported activity spaces were outside of youths' residential census tracts, with average distances from home ranging from 1.1 miles to 3.6 miles. However, these spaces, even though far removed from youths' homes, were typically located in the same geographic area of the city as their home (i.e., south side, west side, near south side, near west side). It may be that within the highly segregated city of Chicago, youth are familiar traveling within the broad, but racially homogeneous region of the city, but are less likely to cross regional boundaries into communities where the majority of residents are from different racial/ethnic backgrounds.

Indoor settings located within high-risk community contexts were characterized by protective features, particularly adult supervision, adult presence, and activities of a goal-oriented nature. Indoor settings—such as home, a friend's or relative's home, or an after-school program or recreational facility—while located within violent and disadvantaged neighborhood contexts, were characterized by high levels of adult supervision, adult presence, or engagement in goal-oriented activities. However, outdoor public spaces (e.g., parks or neighborhood streets), while also located within high-risk community contexts, were characterized by low levels of adult supervision and adult presence and minimal youth engagement in goal-oriented activities. It may be that outdoor spaces are particularly difficult for family and community members to monitor within high-burden urban environments, whereas it is more feasible for adults to monitor youths and their activities within an enclosed space, such as a home, school, or after-school program.

It is interesting to note that the majority of reported activity spaces were often located close to home (i.e., within 1.5 miles of youths' homes). After-school programs and recreational facilities, however, were on average located 2.5 miles from youths' homes, still within high-risk community contexts (second to home for highest level of violent crime and socioeconomic disadvantage). One possible explanation for this traveling around the broad geographic area of the city could be that these after-school programs and recreational facilities are located near youths' schools (located 1.9 miles from youths' homes on average), allowing for easy access to these spaces. Another explanation could be that youths travel to other neighborhoods within their geographic region of the city (e.g., south side, west side) to attend an after-school program or recreational center due to the absence of such facilities within their residential neighborhoods.

Delinquency and Characteristics of Urban Youths' Activity Spaces

Youth who report engaging in delinquent behavior were less likely to spend time in settings characterized by higher levels of adult supervision and youth engagement in goal-oriented activities compared to nondelinquent youth. Specifically, youth who report engaging in delinquent behavior were less likely to experience higher levels of adult supervision or to engage in goal-oriented activities while spending time at home or nonhome, nonschool spaces compared to nondelinquent youth. Youth who report engaging in delinquent behavior, however, were no more likely to spend time in neighborhoods with higher levels of crime and socioeconomic disadvantage than nondelinquent youth. This is not surprising given the study's intentional sampling of youth who reside in high-risk urban neighborhoods in Chicago. It may be that delinquent and nondelinquent youth who live in high-burden urban areas also spend time in areas characterized by high levels of socioeconomic disadvantage and violent crime. These findings point to the importance of developing a nuanced understanding of where urban youth spend time beyond features of the surrounding community context to examine variation, within high-risk urban communities, in the places where youth spend time and how these places are associated with involvement in delinquent behavior.

For reported school activity spaces, however, no associations were found between self-reported delinquent behavior and contextual features of the surrounding community context or social and behavioral features within the school. This does not mean that school environments have no impact on engagement in delinquent behavior. The majority of youths reported the presence of adults, high levels of adult supervision, and engagement in goal-oriented activities while at school. It may be that other proximal features within schools not measured in the present study—such as the student-teacher relationship, school culture, or youth involvement in school programming—are related to youth engagement in delinquent behavior, whereas features that are

typically present within schools—i.e., adult supervision, adult presence, and youth engagement in goal-oriented activities—are not.

Youths' Evaluations of Risk and Safety

Locations such as a friend's or relative's home and public spaces provide the least supervision and are perceived by youth to carry the most risk. Youths were more likely to evaluate businesses or public facilities and outdoor public settings as riskier and more dangerous compared to home. These settings may be places where youths not only engage in risky behavior but also experience physical harm or danger. A friend's or relative's home, however, was evaluated as riskier (in terms of engagement in risky behavior) compared to home, but not more dangerous. It may be that youths perceive friends' or relatives' homes as spaces where youths engage in risky behavior but would not experience physical harm or victimization. These findings suggest that urban youths are able to discern between spaces in which they are more likely to engage in risky behavior and those in which they are more likely to experience harm or danger.

Level of self-reported delinquency was found to moderate the association between type of setting and evaluation of safety. Youth who report engaging in serious levels of delinquent behavior evaluated after-school programs or recreational centers and outdoor public settings as more dangerous than youth who report engaging in low levels of delinquency and nondelinquent youth. It may be that youths who report engaging in serious delinquency interact with other individuals or engage in activities that expose them to harm and danger within these settings, whereas the interactions and activities of nondelinquent youths and youths who report engaging in low levels of delinquency do not expose them to harm or danger.

Social and behavioral features—proximal processes—were found to be associated with youths' evaluations of risk and danger at home, school, and nonhome, nonschool activity spaces, whereas the surrounding community context—distal features—and distance from home were not. Higher levels of supervision, the presence of a related adult, and engaging in a goal-oriented activity were associated with evaluation of home as being safer and less risky. Youths evaluated the presence of other youths while at home as being associated with higher risk but not as more dangerous. This may indicate that spending time in spaces with other youths increases the likelihood that youths will engage in risky or delinquent behavior but does not increase the likelihood of their experiencing harm or danger. Furthermore, while higher levels of adult supervision were associated with youths' evaluation of schools as being safer, no proximal features within the school were associated with youths' evaluations of risk at school. For nonhome and nonschool spaces, high levels of adult supervision, the presence of a related adult, and engaging in a goal-oriented activity were associated with youths' evaluation of these spaces as less risky and safer than spaces lacking these social and behavioral features. Collectively, these findings suggest that youths' beliefs about their activity spaces with regard to risk and safety are associated with the proximal features of such spaces.

It is important to note, however, that level of self-reported delinquency moderated the association between features of the community context and evaluations of risk and safety for home and nonhome, nonschool activity spaces. Increased levels of concentrated disadvantage surrounding youths' homes were positively associated with youth who report engaging in delinquent behavior evaluating home as riskier and more dangerous, whereas no association was found among nondelinquent youths. Similarly, increased levels of violent crime surrounding nonhome, nonschool spaces were positively associated with youth who report engaging in

delinquent behavior evaluating these spaces as risker and more dangerous, whereas no association was found among nondelinquent youths. It may be that delinquent youths have a heightened sense of environmental features, which may compromise their safety or increase their likelihood of engaging in risky activity compared to their nondelinquent peers.

Implications for Theory

The present study underscores the importance of a more nuanced approach to understanding urban youths' social ecology. By focusing on high-risk urban communities, this study provided a deeper understanding of the range of daily contexts frequented by urban youth in Chicago. Findings indicate that youths spend their time in a variety of activity settings both within and outside of their residential neighborhoods and that these settings vary with respect to the surrounding community context (i.e., distal features), social and behavioral features (i.e., proximal features), and distances from home. Understanding the characteristics of places where youths, particularly those who live in high-risk urban communities, spend their time in addition to the characteristics of their residential neighborhoods—both proximal and distal features—can provide researchers with a more comprehensive understanding of urban youths' daily experiences.

Furthermore, this study highlights the importance of examining variation within high-risk urban contexts regarding the places where urban youth spend time and whether features of these places are associated with youth self-reports of involvement in delinquent behavior. Much of the previous scholarship, based in social disorganization theory, has focused on differences in the structural conditions of high- and low-risk neighborhoods to understand differences in youth involvement in delinquent behavior. The present study, by intentionally focusing within high-risk urban communities, underscores the importance of proximal processes or the daily

interactions between developing individuals and the symbols, objects, and people they encounter, when examining the relation between place, youth behavior, and youths' evaluations of risk and safety. Results suggest that both self-reported delinquent behavior and youths' evaluations of risk and safety are associated with the social and behavioral features of youths' activity spaces (i.e., proximal features). These findings align with Bronfenbrenner's assertion (1979, 1988, 1995) that proximal processes are the "engines of development" or the direct experiences that drive development (Bronfenbrenner, 1995). Furthermore, these findings also give credence to developing more nuanced approaches to understanding place within high-risk urban contexts to identify variation in delinquent behavior among urban youth.

The findings also highlight that certain features of the surrounding community context, specifically, violent crime and socioeconomic disadvantage, were significantly associated with youth who report engaging in delinquent behavior's evaluations of risk and safety. Prior research has largely explored person-place interactions within the context of youths' residential neighborhoods. This study's findings offer evidence that such interactions exist also within the broader context of youths' daily activity settings.

Practice Implications

There are multiple avenues for intervention to reduce engagement in delinquent behavior among youth residing in high-risk urban environments. Findings from this study advance the knowledge of the range of daily contexts where urban youth who reside in high-burden communities in Chicago spend time and enhances the ability to identify high-risk settings for potential points of intervention. For example, settings such as outdoor public settings (e.g., public parks) or business or public facilities (e.g., malls, movie theaters, restaurants), which are

characterized by low levels of adult supervision and adult presence, may be potential targets for community- or family-based interventions that ensure adult monitoring or presence.

Findings from this study could also inform prevention or intervention strategies that reduce the likelihood of youth engagement in delinquent behavior. Findings indicate that the proximal features of activity spaces and not distal features or distance from home, are associated with delinquent behavior, offering several malleable targets for family- and community-level intervention. The finding that higher levels of adult supervision at home are associated with nondelinquent behavior could inform parenting practices, ensuring that children are supervised while spending time at home. Findings also indicate that youths who spend time in nonhome, nonschool settings characterized by the presence of adult relatives, higher levels of adult supervision, and engagement in goal-oriented activities are less likely to engage in delinquent behavior compared to youths who do not. Given that 57% of youths reported engaging in non-goal-oriented activities in after-school programs or at recreational facilities, these settings might be an important context in which to integrate activities of a goal-oriented nature. Furthermore, given findings that outdoor public settings—such as public parks—are characterized by low levels of adult supervision, community-level efforts ensuring increased adult presence and monitoring within these spaces might be a critical point of intervention. The underlying theme among all these intervention approaches is to address malleable proximal features of youths' activity settings to decrease the likelihood of youths engaging in delinquent behavior.

Furthermore, understanding the features of activity spaces that relate to youths' evaluations of risk and danger could identify potential targets for family- and community-level prevention and intervention. Outdoor public settings, schools, and business or public facilities are considered to be both dangerous and high risk for youth (i.e., places where youths are most

likely to engage in delinquent, threatening, dangerous, or illegal activities), whereas a friend's or relative's home is considered risky but not dangerous. In addition, proximal features within these settings are associated with youths' evaluations of risk and danger. Settings characterized by low levels of supervision, the absence of related adults, and non-goal-oriented activities are considered to be higher risk and more dangerous. Collectively, these findings provide an understanding of the types and characteristics of settings that youth consider to be high risk and dangerous and could serve as potential targets for family- and community-level interventions.

Limitations

The present study, while contributing valuable insights, has limitations. First, the unstructured free response method used in this study to document urban youths' activity spaces may not accurately capture all locations urban youth frequent during a typical week. For example, a substantial proportion of youths did not report home (43%) or school (38%) as an activity space, despite providing home and school addresses as part of their demographic information. Future studies might consider using a structured interview method to ask youths about the activity spaces they frequent during different periods of the day, specifically asking youths about home and school settings. Such an approach would provide more complete and accurate information regarding the daily activity spaces where youths spend their time.

Despite these limitations, the documentation of urban youths' activity spaces is an important step forward in place-based research, as previous scholarship has largely focused on the characteristics of urban youths' residential neighborhoods rather than the specific settings where they spend time. Given that the majority of urban youths' nonhome activity spaces are located outside their residential neighborhoods (Browning et al., 2015), examining the settings where urban youth spend time and the relation of those settings to health and behavior would offer a more comprehensive understanding of the relation between place and youth health and behavior.

Another limitation of this study is the cross-sectional nature of its data. The analyses were unable to determine whether characteristics of urban youths' activity spaces, evaluations of risk and danger, and level of delinquent behavior change across time. To date, the majority of research has examined the relation between characteristics of activity space and youth health and behavior using cross-sectional data. An important next step in this field of study would be to

collect data at different time points to account for within-person differences across time. Longitudinal studies assessing the influence of characteristics of activity spaces and youth health and behavior would increase understanding of the influence of various aspects of activity space on youth health and behavior.

A final limitation of this study is its reliance on youth self-report to measure delinquent behavior. Future studies examining the relation between activity space and youth involvement in delinquent behavior should integrate other measures, in addition to youth self-report, such as parent and teacher report and official crime data, to more accurately measure youth involvement in delinquent behavior.

Directions for Future Research

This study found that neighborhood-level characteristics are associated with characteristics of urban youths' activity spaces (i.e., yielded a significant ICC), even after controlling for delinquency, age, gender, and ethnicity. However, the study provides little insight into the mechanisms by which neighborhood-level characteristics are associated with features of urban youths' activity spaces. It may be that the social features of youths' residential neighborhoods, such as informal social control or neighborhood resources, may affect the level of adult supervision, individuals present, or the types of activity going on within the activity setting. Little research, however, has examined whether or how neighborhood-level processes are associated with features within urban youths' activity settings. Understanding such mechanisms is necessary to understanding how youths' places of residence influence the characteristics of the settings in which they spend time.

Little research has explored how characteristics of residential neighborhoods are associated with the spaces in which urban youth spend time (Browning et al., 2017). Browning

and colleagues (2017) reported that youth who reside in majority African American neighborhoods were more likely to spend time in spaces surrounded by (i.e., within a one-quarter mile radius) higher rates of violent crime compared to youth who do not live in majority African American neighborhoods. Features of residential neighborhoods are likely to influence the features of urban youths' activity spaces. More research is needed to understand the association between features of youths' residential neighborhoods and characteristics of their activity spaces.

Furthermore, given that little research has simultaneously captured the multiple aspects of activity spaces (i.e., surrounding community context, social and behavioral features, and distance from home), how these features of activity space are associated with youth health and behavior has yet to be fully explored. Previous scholarship has typically focused on a single aspect of activity space (i.e., social or behavioral features or surrounding community context) and youth health and behavior. The results of the current study indicate that proximal features of youths' activity spaces—i.e., level of adult supervision, type of activity, and individuals present—are related to delinquent behavior. More research is needed to explore the relation between various aspects of activity space and health (both physical and mental) and behavioral outcomes (such as substance use or sexually risky behavior).

Conclusion

The present study expands on previous studies of the environments of urban youth by exploring how those environments are associated with youth self-reports of involvement in delinquent behavior and youths' beliefs about their environments. This study is unique in that it integrates multiple aspects of activity space within a single study. Expanding the scope of research to date, which has largely focused on characteristics of youths' residential neighborhoods, the present study provides insight into the places where urban youth spend time

both within and outside of their residential neighborhoods. Furthermore, by intentionally focusing on youth who reside within high risk urban neighborhoods, this study offers a more nuanced understanding of variation in the places where youth spend time and whether and how aspects of those places relate to youth health and behavior.

Findings indicate that self-reported involvement in delinquent behavior is related to the proximal features of settings within and outside of their residential neighborhoods, specifically level of adult supervision, individuals present, and engagement in goal-oriented activities, rather than the features of the surrounding community context or distance from home. Future research will benefit from examining the association between these various aspects of activity spaces and other youth problem behavior.

Social and behavioral features within activity spaces were found to be directly associated with youths' evaluations of risk and danger, whereas features of the surrounding community context were not. Features of the surrounding community context—particularly levels of violent crime and socioeconomic disadvantage—affected delinquent youths' evaluations of risk and danger, but not those of nondelinquent youth. These findings suggest that proximal features of activity spaces are especially salient in youths' evaluations of risk and safety and that the association between features of the surrounding community context and evaluations of risk and safety differ by level of delinquency. Ultimately, researchers should consider where urban youth spend time—and not just where they reside—along with various aspects of these settings when examining the relation between place and youth health and behavior.

References

Ackerman, J. M., & Rossmo, D. K. (2014). How far to travel? A multilevel analysis of the residence-to-crime distance. *Journal of Quantitative Criminology*, *31*(2), 237–262. doi:10.1007/s10940-014-9232-7

Aizer, A. (2002). Home alone: Supervision after school and child behavior. *SSRN Electronic Journal, 88*(9-10), 1835-148. doi:10.2139/ssrn.337780

Anderson, A. L., & Hughes, L. A. (2008). Exposure to situations conducive to delinquent behavior. *Journal of Research in Crime and Delinquency*, *46*(1), 5–34. doi:10.1177/0022427808326587

Andresen, M. A., Frank, R., & Felson, M. (2013). Age and the distance to crime. *Criminology & Criminal Justice*, *14*(3), 314–333. doi:10.1177/1748895813494870

Basta, L. A., Richmond, T. S., & Wiebe, D. J. (2010). Neighborhoods, daily activities, and measuring health risks experienced in urban environments. *Social Science & Medicine*, *71*(11), 1943–1950. doi:10.1016/j.socscimed.2010.09.008

Bauer, D. J., & Sterba, S. K. (2011). Fitting multilevel models with ordinal outcomes: Performance of alternative specifications and methods of estimation. *Psychological Methods*, *16*(4), 373–390. doi:10.1037/a0025813

Bellair, P. E., & McNulty, T. L. (2009). Gang membership, drug selling, and violence in neighborhood context. *Justice Quarterly*, *26*(4), 644–669. doi:10.1080/07418820802593394

Bernasco, W. (2010). A sentimental journey to crime: Effects of residential history on crime location choice. *Criminology*, *48*(2), 389–416. doi:10.1111/j.1745-9125.2010.00190.x

Bernasco, W., Ruiter, S., Bruinsma, G., Pauwels, L., & Weerman, F. (2013). Situational causes of offening: A fixed-effects analysis of space-time budget data. *Criminology*, *51*(4), 895–926. doi:10.1111/1745-9125.12023

Bichler, G., Christie-Merrall, J., & Sechrest, D. (2011). Examining juvenile delinquency within activity space: Building a context for offender travel patterns. *Journal of Research in Crime and Delinquency*, *48*(3), 472–506. doi:10.1177/0022427810393014

Bohnert, A. M., Richards, M. H., Kohl, K., & Randall, E. (2009). Relationships between discretionary time activities, emotional experiences, delinquency and depressive symptoms among urban African American adolescents. *Journal of Youth and Adolescence*, *38*(4), 587–601. doi:10.1007/s10964-008-9336-1

Bohnert, A. M., Richards, M. H., Kolmodin, K. E., & Lakin, B. L. (2008). Young urban African American adolescents' experience of discretionary time activities. *Journal of Research on Adolescence*, *18*(3), 517–539. doi:10.1111/j.1532-7795.2008.00569.x

Bowen, N. K., & Guo, S. (2012). *Structural equation modeling*. Oxford, New York: Oxford University Press.

Bronfenbrenner, U. (1988). Interacting systems in human development. Research paradigms: Present and future. In N. Bolger, A. Caspi, G. Downey, & M. Moorehouse (Eds.), *Human development in cultural and historical contexts. Persons in context: Developmental processes* (pp. 25–49). New York, NY: Cambridge University Press.

Bronfenbrenner, U. (1996). *The ecology of human development: Experiments by nature and design*. Cambridge, MA: Harvard University Press.

Bronfenbrenner, U. (1999). Environments in developmental perspective: Theoretical and operational models. In S. L. Friedman & T. D. Wachs (Eds.), *Measuring environment across the life span: Emerging methods and concepts* (pp. 3–28). doi:10.1037/10317-001

Bronfenbrenner, U. (n.d.). The bioecological model from a life course perspective: Reflections of a participant observer. In P. Moen, G. H. Elder, Jr., & K. Lüscher (Eds.), *Examining lives in context: Perspectives on the ecology of human development* (pp. 599-618). doi:10.1037/10176-017

Brook, J. S., Whiteman, M., Gordon, A. S., & Cohen, P. (1986). Dynamics of childhood and adolescent personality traits and adolescent drug use. *Developmental Psychology*, *22*(3), 403-414. http://dx.doi.org/10.1037/0012-1649.22.3.403

Brown, B. B., Dolcini, M. M., & Leventhal, A. (1997). Transformations in peer relationships at adolescence: Implications for health-related behavior. In J. Schulenberg, J. L. Maggs, & K. Hurrelmann (Eds.), *Health risks and developmental transitions during adolescence* (pp. 161-189). New York, NY: Cambridge University Press.

Browning, C. R., Burrington, L. A., Leventhal, T., & Brooks-Gunn, J. (2008). Neighborhood structural inequality, collective efficacy, and sexual risk behavior among urban youth. *Journal of Health and Social Behavior*, *49*(3), 269–285. doi:10.1177/002214650804900303

Browning, C. R., Calder, C. A., Ford, J. L., Boettner, B., Smith, A. L., & Haynie, D. (2016). Understanding racial differences in exposure to violent areas. *The ANNALS of the American Academy of Political and Social Science*, *669*(1), 41–62. doi:10.1177/0002716216678167

Browning, C. R., & Soller, B. (2014). Moving beyond neighborhood: Activity spaces and ecological networks as contexts for youth development. *Cityscape (Washington, D.C.)*, *16*(1), 165–196. Retrieved from PubMed. (25105172)

Bursik, Jr., R. J., & Grasmick, H. G. (1993). *Neighborhoods and crime: The dimensions of effective community control*. New York, NY: Lexington Books.

Byrnes, H. F., Miller, B. A., Wiebe, D. J., Morrison, C. N., Remer, L. G., & Wiehe, S. E. (2015). Tracking adolescents with global positioning system-enabled cell phones to study contextual exposures and alcohol and marijuana use: A pilot study. *Journal of Adolescent Health*, *57*(2), 245–247. doi:10.1016/j.jadohealth.2015.04.013

Cairns, R. B., & Cairns, B. D. (1994). *Lifelines and risks: Pathways of youth in our time*. New York, NY: Harvester Wheatsheaf

Cairns, R. B., & Kroll, A. B. (1994). Developmental perspectives on gender differences and similarities. In M. Rutter & D. F. Hay (Eds.), *Development through life: A handbook for clinicians* (pp. 350-372). Oxford, UK: Blackwell Scientific.

Chung, H. L., & Steinberg, L. (2006). Relations between neighborhood factors, parenting behaviors, peer deviance, and delinquency among serious juvenile offenders. *Developmental Psychology*, *42*(2), 319–331. doi:10.1037/0012-1649.42.2.319

Dishion, T., Patterson, G. R., & Reid, J. (1988). Parent and peer factors associated with early adolescent drug use: Implications for treatment. In E. Rahdert & J. Grabowski (Eds.), *Adolescent drug abuse: Analyses of treatment research, NIDA Research Monograph 77* (pp. 69-93). Washington, DC: U.S. Government Printing Office.

Dishion, T. J., Spracklen, K. M., Andrews, D. W., & Patterson, G. R. (1996). Deviancy training in male adolescents friendships. *Behavior Therapy*, *27*(3), 373-390.

Eiser, J. R., Morgan, M., Gammage, P., Brooks, N., & Kirby, R. (1991). Adolescent health behavior and similarity-attraction-friends share smoking-habits (really), but much else besides. *British Journal of Social Psychology*, *30*(4), 339-348.

Elliott, D. S., Huizinga, D., & Ageton, S. S. (1985). *Explaining delinquency and drug use*. Beverly Hills, CA: Sage Publications.

Elliott, D. S., Wilson, W. J., Huizinga, D., Sampson, R. J., Elliott, A., & Rankin, B. (1996). The effects of neighborhood disadvantage on adolescent development. *Journal of Research in Crime and Delinquency*, *33*(4), 389–426. doi:10.1177/0022427896033004002

Farrell, A. D., & Danish, S. J. (1993). Peer drug associations and emotional restraint: Causes or consequences of adolescents' drug use? *Journal of Consulting and Clinical Psychology*, *61*(2), 327-334

Felson, M., & Boba, R. (2010). *Crime and everyday life*. doi:10.4135/9781483349299

Gorman-Smith, D., Tolan, P. H., & Henry, D. (1999). The relation of community and family to

risk among urban-poor adolescents. In P. Cohen, C. Slomkowski, & L. N. Robins (Eds.), *Historical and geographical influences on psychopathology* (pp. 349–367). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Gorman-Smith, D., Tolan, P. H., & Henry, D. B. (2000). A developmental-ecological model of the relation of family functioning to patterns of delinquency. *Journal of Quantitative Criminology*, *16*(2), 169–198. doi:10.1023/A:1007564505850

Graham, J. W. (2009). Missing data analysis: Making it work in the real world. *Annual Review of Psychology*, *60*(1), 549–576. doi:10.1146/annurev.psych.58.110405.085530

Hawkins, J. D., Lishner, D. M., & Catalano, R. F. (1985). Childhood predictors and the prevention of adolescent substance abuse. *National Institute on Drug Abuse: Research Monograph Series*, 56, 75-126.

Hedeker, D. (2008). Multilevel models for ordinal and nominal variables. In J. de Leeuw & E. Meijer (Eds.), *Handbook of Multilevel Analysis* (pp. 237–274). doi:10.1007/978-0-387-73186-5_6

Henry, D., Gorman-Smith, D., Schoeny, M., & Tolan, P. (2014). "Neighborhood matters": Assessment of neighborhood social processes. *American Journal of Community Psychology*, *54*(3–4), 187–204. doi:10.1007/s10464-014-9681-z

Hirschi, T. (1969). *Causes of delinquency*. Berkeley, CA: University of California Press.

Hoeben, E., & Weerman, F. (2013). Situational conditions and adolescent offending: Does the impact of unstructured socializing depend on its location? *European Journal of Criminology*, *11*(4), 481–499. doi:10.1177/1477370813509346

Inagami, S., Cohen, D. A., & Finch, B. K. (2007). Non-residential neighborhood exposures suppress neighborhood effects on self-rated health. *Social Science & Medicine*, *65*(8), 1779–1791. doi:10.1016/j.socscimed.2007.05.051

Keenan, K., Loeber, R., Zhang, Q., Stouthamer-Loeber, M., & Van Kammen, W. B. (1995). The influence of deviant peers on the development of boys' disruptive and delinquent behavior: A temporal analysis. *Development and Psychopathology*, *7*(4), 715-726.

Kirk, D. S. (2008). The neighborhood context of racial and ethnic disparities in arrest. *Demography*, *45*(1), 55–77. doi:10.1353/dem.2008.0011

Klein, K., Forehand, R., Armistead, L., & Brody, G. (1994). Adolescent family predictors of substance use during early adulthood: A theoretical model. *Advances in Behaviour Research and Therapy*, *16*(4), 217-252.

Kling, J. R., Ludwig, J., & Katz, L. F. (2005). Neighborhood effects on crime for female and

male youth: Evidence from a randomized housing mobility experiment. *Quarterly Journal of Economics*, *120*, 87–130.

Krivo, L. J., Washington, H. M., Peterson, R. D., Browning, C. R., Calder, C. A., & Kwan, M.-P. (2013). Social isolation of disadvantage and advantage: The reproduction of inequality in urban space. *Social Forces*, *92*(1), 141–164. doi:10.1093/sf/sot043

Kwan, M.-P. (2009). From place-based to people-based exposure measures. *Social Science & Medicine*, *69*(9), 1311–1313. doi:10.1016/j.socscimed.2009.07.013

Larson, R. W., Richards, M. H., Sims, B., & Dworkin, J. (2001). How urban African American young adolescents spend their time: Time budgets for locations, activities, and companionship. *American Journal of Community Psychology*, *29*(4), 565–597. doi:10.1023/a:1010422017731

Leventhal, T., & Brooks-Gunn, J. (2000). The neighborhoods they live in: The effects of neighborhood residence on child and adolescent outcomes. *Psychological Bulletin*, *126*(2), 309–337. doi:10.1037/0033-2909.126.2.309

Little, R. J. A., & Rubin, D. B. (2002). *Statistical analysis with missing data: Statistical analysis with missing data*. doi:10.1002/9781119013563

Luthar, S. S., & D'Avanzo, K. (1999). Contextual factors in substance use: A study of suburban and inner-city adolescents. *Development and Psychopathology*, *11*(4), 845-867.

Maas, C. J. M., & Hox, J. J. (2005). Sufficient sample sizes for multilevel modeling. *Methodology*, *1*(3), 86–92. doi:10.1027/1614-2241.1.3.86

Mahoney, J. L., & Stattin, H. (2000). Leisure activities and adolescent antisocial behavior: The role of structure and social context. *Journal of Adolescence*, *23*(2), 113–127. doi:10.1006/jado.2000.0302

Mahoney, J. L., Stattin, H., & Magnusson, D. (2016). Youth recreation centre participation and criminal offending: A 20-year longitudinal study of Swedish boys. *International Journal of Behavioral Development*, *25*(6), 509–520. doi:10.1080/01650250042000456

Manski, C. F. (1995). *Identification problems in the social sciences*. Cambridge, MA: Harvard University Press.

Mason, M., Cheung, I., & Walker, L. (2004). Substance use, social networks, and the geography of urban adolescents. *Substance Use & Misuse*, *39*(10–12), 1751–1777. doi:10.1081/ja-200033222

Mason, M. J. (2010). Attributing activity space as risky and safe: The social dimension to the meaning of place for urban adolescents. *Health & Place*, *16*(5), 926–933. doi:10.1016/j.healthplace.2010.05.004

Mason, M. J., & Korpela, K. (2009). Activity spaces and urban adolescent substance use and emotional health. *Journal of Adolescence*, *32*(4), 925–939. doi:10.1016/j.adolescence.2008.08.004

Mason, M., Mennis, J., Way, T., Light, J., Rusby, J., Westling, E., … McHenry, C. (2015). Young adolescents' perceived activity space risk, peer networks, and substance use. *Health & Place*, *34*, 143–149. doi:10.1016/j.healthplace.2015.04.005

Mennis, J., & Mason, M. J. (2011). People, places, and adolescent substance use: Integrating activity space and social network data for analyzing health behavior. *Annals of the Association of American Geographers*, *101*(2), 272–291. doi:10.1080/00045608.2010.534712

Mennis, J., Mason, M., Light, J., Rusby, J., Westling, E., Way, T., … Flay, B. (2016). Does substance use moderate the association of neighborhood disadvantage with perceived stress and safety in the activity spaces of urban youth? *Drug and Alcohol Dependence*, *165*, 288–292. doi:10.1016/j.drugalcdep.2016.06.019

Miller, H. J. (1991). Modelling accessibility using space-time prism concepts within geographical information systems. *International Journal of Geographical Information Systems*, *5*(3), 287–301. doi:10.1080/02693799108927856

Moberg, D. P., & Hahn, L. (1991). The adolescent drug involvement scale. *Journal of Adolescent Chemical Dependency*, *2*(1), 75–88. doi:10.1300/J272v02n01_05

Mott, J. A., Crowe, P. A., Richardson, J., & Flay, B. (1999). After-school supervision and adolescent cigarette smoking: Contributions of the setting and intensity of after-school self-care. *Journal of Behavioral Medicine*, *22*(1), 35–58. doi:10.1023/A:1018747602026

Mrug, S., & Windle, M. (2008). Moderators of negative peer influence on early adolescent externalizing behaviors. *The Journal of Early Adolescence*, *29*(4), 518–540. doi:10.1177/0272431608324473

Osgood, D. W., & Anderson, A. L. (2004). Unstructured socializing and rates of delinquency. *Criminology*, *42*(3), 519–550. doi:10.1111/j.1745-9125.2004.tb00528.x

Osgood, D. W., Anderson, A. L., & Shaffer, J. N. (2005). Unstructured leisure in the after-school hours. In J. L. Mahoney, R. W. Larson, & J. S. Eccles (Eds.), *Organized activities as contexts of development: Extracurricular activities, after-school and community programs* (pp. 45–64). Mahwah, NJ: Lawrence Erlbaum Associates Publishers.

Osgood, D. W., Wilson, J. K., O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (1996). Routine activities and individual deviant behavior. *American Sociological Review*, *61*(4), 635. Retrieved from ABI/INFORM Collection; Sociological Abstracts; Worldwide Political Science Abstracts. (218812518; 02963651)

Park, R. E., Burgess, E. W., & McKenzie, R. D. (1925). *The City*. Chicago, IL: The University of Chicago Press.

Ratcliffe, J. H. (2004). Geocoding crime and a first estimate of a minimum acceptable hit rate. *International Journal of Geographical Information Science*, *18*(1), 61–72. doi:10.1080/13658810310001596076

Richards, M. H., Larson, R., Miller, B. V., Luo, Z., Sims, B., Parrella, D. P., & McCauley, C. (2004). Risky and protective contexts and exposure to violence in urban African American Young adolescents. *Journal of Clinical Child & Adolescent Psychology*, *33*(1), 138–148. doi:10.1207/s15374424jccp3301_13

Rorie, M., Gottfredson, D. C., Cross, A., Wilson, D., & Connell, N. M. (2011). Structure and deviancy training in after-school programs. *Journal of Adolescence*, *34*(1), 105–117. doi:10.1016/j.adolescence.2010.01.007

Sampson, R. J. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science*, *277*(5328), 918–924. doi:10.1126/science.277.5328.918

Sampson, R. J., Morenoff, J. D., & Gannon-Rowley, T. (2002). Assessing "Neighborhood Effects": Social processes and new directions in research. *Annual Review of Sociology*, *28*(1), 443–478. doi:10.1146/annurev.soc.28.110601.141114

Sastry, N., Pebley, A. R., & Zonta, M. (2002). *Neighborhood definitions and the spatial dimension of daily life in Los Angeles.* Paper presented at the 2002 annual meeting of the Population Association of America, Atlanta, GA.

Sharkey, P. T., Tirado-Strayer, N., Papachristos, A. V., & Raver, C. C. (2012). The effect of local violence on children's attention and impulse control. *American Journal of Public Health*, *102*(12), 2287–2293. doi:10.2105/ajph.2012.300789

Sutherland, E. H., & Cressey, D. R. (1974). *Criminology* (9th ed.). Philadelphia, PA: Lippincott.

Terziyan, V. (2017). Social distance metric: From coordinates to neighborhoods. *International Journal of Geographical Information Science*, *31*(12), 2401–2426. doi:10.1080/13658816.2017.1367796

Tompsett, C. J., Amrhein, K. E., & Hassan, S. (2014). Travel beyond the home neighborhood for delinquent behaviors: Moderation of home neighborhood influences. *Journal of Adolescence*, *37*(4), 325–333. doi:10.1016/j.adolescence.2014.02.001

Weller, S., & Romney, A. (1988). *Qualitative research methods*: *Systematic data collection*. doi:10.4135/9781412986069

Wiebe, D. J., Guo, W., Allison, P. D., Anderson, E., Richmond, T. S., & Branas, C. C. (2013).

Fears of violence during morning travel to school. *Journal of Adolescent Health*, *53*(1), 54–61. doi:10.1016/j.jadohealth.2013.01.023

Wiehe, S. E., Hoch, S. C., Liu, G. C., Carroll, A. E., Wilson, J. S., & Fortenberry, J. D. (2008). Adolescent travel patterns: Pilot data indicating distance from home varies by time of day and day of week. *Journal of Adolescent Health*, *42*(4), 418–420. doi:10.1016/j.jadohealth.2007.09.018

Wiehe, S. E., Kwan, M.-P., Wilson, J., & Fortenberry, J. D. (2013). Adolescent health-risk behavior and community disorder. *PLoS ONE*, *8*(11), e77667. doi:10.1371/journal.pone.0077667

Wills, T. A., & Cleary, S. D. (1999). Peer and adolescent substance use among 6th – 9th graders: Latent growth analyses of influence versus selection mechanisms. *Health Psychology*, *18*(5), 453-463.

Wilson, D. R., & Martinez, T. R. (1997). Improved heterogeneous distance functions. *Journal of Artificial Intelligence Research*, *6*, 1–34. doi:10.1613/jair.346

Zimmerman, G. M., & Messner, S. F. (2010). Neighborhood context and the gender gap in adolescent violent crime. *American Sociological Review*, *75*(6), 958–980. doi:10.1177/0003122410386688

Zimmerman, G. M., & Messner, S. F. (2011). Neighborhood context and nonlinear peer effects on adolescents violent crime. *Criminology*, *49*(3), 873–903. doi:10.1111/j.1745-9125.2011.00237.x

Appendix A

Principle Component Analysis Results

for Concentrated Disadvantage (2011)

Table A1
Factor Extraction for Principle Component Analysis (PCA)

Factors	Extraction
Percent Owner Occupied Housing Units	0.47
Percent Families Below the Poverty level	0.78
Percent Female Headed Household	0.69
Percent Unemployed	0.60

Table A2
Total Explained Variance for Components of PCA

Component	Total	% of Variance	Cumulative %
1	2.540	63.50	63.50
2	0.698	17.45	80.96
3	0.446	11.15	92.11
4	0.316	7.89	100.00

Table A3
Factor Extraction for Component 1 of PCA

Factors	Component 1
Percent Owner Occupied Housing Units	0.83
Percent Families Below the Poverty level	0.78
Percent Female-headed Household	0.88
Percent Unemployed	-0.68

Appendix B

Tests for Skewness and Kurtosis of Continuous Activity-Space Variables (n = 819)

Table B1
Tests for Skewness and Kurtosis of Continuous Activity-Space Variables

Continuous Variable	MIN	MAX	MEAN	SKEWNESS		KURTOSIS	
	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Concentrated Disadvantage	-1.27	4.68	1.49	0.77	0.09	-0.56	0.17
Violent Crime (# of incidents within one-quarter mile radius)	0	82	20.7	1.05	0.08	1.36	0.17
Distance from Home (miles)	0	12.08	1.48	1.7	0.09	3.5	0.17

Appendix C

Self-Report Delinquency Questionnaire

by Prior-Year Offense Type

Class A Misdemeanor (10 questions)

1. How many times have you wrecked other people's property in the past year? That means have you ever purposely damaged or broke up or destroyed something that belonged to somebody else in the past year?
2. How many times have you purposely set fire to a house, building, car or other property; or tried to do so in the past year?
3. How many times have you stolen or tried to steal money or things worth between $5 and $100 in the past year?
4. How many times have you taken something from a store without paying in the past year?
5. How many times have you knowingly bought, sold, held stolen goods or tried to do any of these things in the past year?
6. How many times have you thrown objects such as rocks or bottles at people in the past year?
7. How many times have you stolen or tried to steal a skateboard or bicycle in the past year?
8. How many times have you taken money from a home in the past year?
9. How many times have you taken something from a car in the past year?
10. How many times have you stolen money, goods, or property from a place where you have worked in the past year?

Class B Misdemeanor (1 question)

1. How many times have you used marijuana in the past 12 months?

Class C Misdemeanor (7 questions)

1. How many times have you been loud, rowdy, or unruly in a public place so that people complained about it or you got in trouble in the past year?
2. How many times have you made obscene telephone calls, such as calling someone and saying dirty things in the past year?
3. How many times have you been drunk in a public place in the past year?
4. How many times have you avoided paying for things such as the movies, a bus ride, subway ride, food or computer services in the past year?
5. How many times have you stolen or tried to steal money or things worth $5 or less in the past year?
6. How many times have you been arrested or detained by the police in the past year in the past year?
7. How many times have you been given a ticket in the past year?

Class 1 Felony (2 questions):

1. How many times have you attacked someone with a weapon with the idea of seriously hurting or killing them in the past year?

2. How many times have you used a weapon, force or bullying to get money or things from people in the past year?

Class 2 Felony (3 questions):

1. How many times have you carried a hidden weapon in the past year?
2. How many times have you gone into a building or somebody's house, yard or garage and taken something that did not belong to you in the past year?
3. How many times have you sold marijuana or hard drugs in the past year?

Class 3 Felony (2 questions):

1. How many times have you snatched someone's purse or wallet or picked someone's pocket in the past year?
2. How many times have you hit someone with the idea of hurting them in the past year?

Class 4 Felony (6 questions):

1. How many times have you stolen or tried to steal money or things worth $100 or more in the past year?
2. How many times have you gone joyriding, that is, taken a motor vehicle such as a car or motorcycle for a ride without the owner's permission in the past year?
3. How many times have you used checks illegally or used a slug or fake money to pay for something (includes intentional overdrafts) in the past year?
4. How many times have you been involved in a gang fight in the past year?
5. How many times have you taken anything at school from the teacher or other kids that did not belong to you in the past year?
6. During the LAST 12 MONTHS, on how many occasions (if any) have you used any of these other types of drugs...Cocaine (crack, rock, powder) Amphetamines / uppers (Speed, Methamphetamine, Ritalin) Heroin other Narcotics (Codeine, Oxycotton) Inhalants Ecstasy and other psychedelics / hallucinogens (LSD, PCP, acid) Tranquilizers (valium) Barbituates / downers Quaaludes?

Appendix D

Activity Space Ecological Interview

Part 1

Now I'm going to ask you questions about where you spend time in your daily life— places where you spend time with friends, family, and other people, or on your own. I would like for you now to think of your typical or average week and to think about where you spend your time. **I'll make a list of the places you tell me and then ask you some questions about them.**

1. **Tell me the places that you most often go to in a typical week.**

   Interviewers:

   - *Prompt for respondent who needs more clarity about a "typical week": 'By a typical week, we mean the whole week, including the weekdays and the weekends.'*
   - *Gather up to 10 locations (max = 10).*
   - *For each location listed, ask the respondent to identify what is at that location. Also get specific information of locations in the following order: addresses; cross streets; names of businesses; landmarks. The more specific geographic information, the better. If the subject cannot come up with a cross street ask about close schools, parks, restaurants. If not in Chicago, always ask what city is the place located.*

   a. _____

   b. _____

   c. _____

   d. _____

   e. _____

   f. _____

   g. _____

   h. _____

   i. _____

   j. _____

2. From the list of places you just named, what are the five places you go most often?

Place #1: _____

(A) How many days per week do you usually go there?
- a. every day
- b. most days
- c. some days
- d. one day or fewer

(B) How much time do you usually spend there on a typical day that you are there?
- a. less than 30 minutes
- b. one hour
- c. 1 to 3 hours
- d. 4 to 5 hours
- e. more than 5 hours

(C) How do you usually get there?
- a. Walk
- b. Car – Drive myself
- c. Car – an adult drives me
- d. Car – another teenager drives me
- e. Bus
- f. EL
- g. Bike
- h. Other [write-in]

(D) How do you usually get home from there?
- a. Walk
- b. Car – Drive myself
- c. Car – an adult drives me
- d. Car – another teenager drives me
- e. Bus
- f. EL
- g. Bike
- h. Other [write-in]

(E) What do you usually do when you are there? [write-in response]

(F) Who is usually at that place with you when you are there? [choose all that apply]
- a. friends
- b. parents/guardians
- c. adult relatives
- d. siblings
- e. other youth relatives
- f. other youth/participants (not friends)

g. other adults
h. other [write-in]

(G) Are there ever adults present and/or paying attention to what you are doing at this place?
a. Yes
b. No *[if no, skip next item]*

(H) If so, how often are those adults paying attention to/monitoring/supervising what you are doing at this place?
a. Always
b. Almost always
c. Sometimes
d. Rarely
e. Almost never
f. Never

(I) How safe is this place? By "safe," I mean safe from harm or danger.
a. Very safe
b. Safe
c. Neutral
d. Unsafe
e. Very unsafe

(J) How risky is this place? By "risky," I mean you or others are more likely to engage in delinquent, threatening, dangerous, or illegal activities.
a. Not risky at all
b. Not risky
c. Neutral
d. Risky
e. Very risky

Place #2: _____ ***[repeat items A – J for Locations #2-5]***

3. **From the entire list of places that you have just named, which one is the SAFEST place for you?** (The place where you feel ***safest*** from harm or danger).

    a. What makes this place the safest place? [write-in response]

4. **From the entire list of places that you have just named, which one is the MOST UNSAFE place for you?** (The place where you feel ***least safe*** from harm or danger).

    a. What makes this place the most unsafe place? [write-in response]

5. **From the entire list of places that you have just named, which one is LEAST RISKY place for you?** (The place where you are ***least likely*** to engage in delinquent, threatening, dangerous, or illegal activities).

    a. What makes this place the least risky place? [write-in response]

6. **From the entire list of places that you have just named, which one is the RISKIEST place for you?** (The place where you are ***most likely*** to engage in delinquent, threatening, dangerous, or illegal activities).

    a. What makes this place the riskiest place? [write-in response]

7. **From the entire list of places that you have just named, which one is the FAVORITE place to you?** (The place that you find the most important, meaningful, or highly valued).

    a. What makes this place your favorite place? [write-in response]