

# **Distance Matters: Examining the Factors that Impact Prisoner Visitation in Minnesota**

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## **Research Summary**

One of the untested assumptions within the prison visitation literature is that inmates receive fewer visits when visitors must travel long distances to prisons. Measuring distance by comparing the addresses of the prisons where offenders were confined to the residential addresses of those who visited them, we tested this hypothesis by estimating the effects of distance on the number of times Minnesota prisoners were visited. We estimated the effects of distance by performing multilevel repeated measure analyses, measuring the frequency of visitation across the different facilities at which inmates were housed, the different neighborhoods from which they received visits, and between-inmate differences in visitation frequency. Besides distance, we also estimated the effects of social disorganization on the frequency of visitation. Finding that distance does indeed decrease the frequency of prison visitation, as does concentrated disadvantage in neighborhoods, we discuss the implications of this research for prison administrative policies.

## **Introduction**

Despite the well-documented benefits of prison visitation, visits from family, friends and volunteers remain elusive for many prisoners. Recent scholarship has shown that prison visitation reduces institutional misconduct (Cochran, 2012; Siennick, Mears, & Bales, 2013) and is associated with significant reductions in recidivism (Bales & Mears, 2008; Cochran, 2014; Duwe & Clark, 2013; Mears, Cochran, Siennick, & Bales, 2012). Yet, anywhere from 39 percent (Duwe & Clark, 2013) to 74 percent (Cochran et al., 2015) of prisoners do not receive a single visit in prison.

Researchers have theorized that some prison inmates receive few or no visits due to restrictive and abstruse prison visitation policies (Arditti, 2003; Austin & Hardyman, 2004; Farrell, 2004), less than welcoming visitation settings (Sturges, 2002), the financial costs associated with travel and lodging (Christian, 2005; Fuller, 1993) and, perhaps most limiting, distance (Casey-Acevedo & Bakken, 2002; Cochran et al., 2015; Schirmer, Nellis, & Mauer, 2009; Tewksbury & DeMichele, 2005). Prisoners tend to come from urban areas and heavily populated city centers, while most prisons are located in rural areas far from major cities and public transportation systems (Austin & Hardyman, 2004; Cochran et al., 2015; Coughenour, 1995; Holt & Miller, 1972; Schirmer et al., 2009).

As with the criminological literature in general, existing research on prison visitation has focused mostly on the individual, examining the effects of visits on offender's rule-breaking behavior (prison misconduct or recidivism) or the factors that predict which prisoners will be more likely to receive visits. In this study, we use a multi-level repeated measures approach to examine inmate characteristics, the facilities at which they were housed, the neighborhoods from which prison visitors traveled, and whether these variables

influence the frequency of prison visitation. By focusing on the neighborhoods where visitors live, rather than the counties from which prisoners are committed, we empirically examine the previously untested hypothesis that the physical distance between a prisoner and his/her potential visitors is negatively associated with visitation. That is, as the distance between prisoners and potential visitors increases, the rate of visitation is assumed to decrease. We therefore extend the literature on prison visitation by examining whether distance matters and, if so, whether the distance-visitation effects are more pronounced among visitors who live in economically disadvantaged communities.

### **Prior Research on Prison Visitation**

A growing number of recent studies have demonstrated the beneficial effects of prison visitation. Research has shown, for example, that visitation can reduce prison misconduct. In a study on Florida prisoners incarcerated between 2000 and 2002, Cochran (2012) found that visitation, especially when it was more consistent throughout prisoner confinement periods, was associated with fewer disciplinary reports. In another study that examined the relationship between visitation and misconduct among Florida prisoners, Siennick, Mears, and Bales (2013) reported that disciplinary infractions dropped prior to visits, increased immediately after visits, and then gradually declined to average levels.

Several studies have also found that visitation is associated with reduced recidivism. The findings from recent studies on prisoners from Florida (Bales & Mears, 2008; Cochran, 2014; Mears et al., 2012), Minnesota (Duwe & Clark, 2013), and Canada (Derkzen, Gobeil, & Gileno, 2009) suggest that offenders who are visited more often in prison are less likely to recidivate. Although Cochran (2014) found lower recidivism rates for offenders who were visited early during their incarceration, the results from the Bales and Mears (2008) and

Duwe and Clark (2013) studies suggest that visits occurring closer to an offender's release from prison were more important in reducing recidivism. In addition, Duwe and Clark (2013) found that recidivism decreased as the number of individual visitors an offender had increased.

Many of these studies have examined whether some offender-visitor relationships are more beneficial than others in reducing recidivism. The results from two of the Florida studies suggest that visits from spouses or significant others were associated with better recidivism outcomes compared to visits from other relatives, friends, or other unrelated persons (Bales & Mears, 2008; Mears et al., 2012). In their study on visitation with Minnesota prisoners, Duwe and Clark (2013) analyzed the effects of visitor type on recidivism in greater detail by examining 16 offender-visitor relationship categories. They found that visits from siblings, in-laws, fathers, clergy and, to a lesser extent, mentors were the most beneficial in reducing the risk of recidivism. In contrast, visits from ex-spouses significantly increased the risk of recidivism in several of the models they estimated.

Despite the generally positive outcomes associated with prison visitation, the extant literature indicates that many offenders are not visited at all in prison. Based on a sample of released Minnesota prisoners, Duwe and Clark (2013) found that nearly 40 percent of prisoners did not receive any visits during their entire periods of incarceration. Separate studies using Florida prison data revealed that the rate of unvisited offenders has varied from a low of 58 percent (Bales & Mears, 2008) to a high of 74 percent (Cochran et al., 2015). In an effort to better understand why some offenders get visited more often in prison, Tewksbury and Connor (2012) analyzed visitation among a sample of 585 male prisoners. Offenders received significantly more visits when they were white, younger, more educated,

and admitted to prison on a new sentence. In contrast, they received fewer visits when they were identified as gang members or had longer criminal histories and disciplinary records in prison (Tewksbury & Connor, 2012). Similar findings were reported by Cochran, Mears, and Bales (2014) and Cochran et al. (2015) among Florida inmates.

### Barriers to Prison Visitation

Scholars often cite four likely reasons for why so many prisoners do not receive visits. First, visitation policies can be difficult for would-be visitors to navigate, and the regulations may preclude some individuals from visiting altogether (Austin & Hardyman, 2004; Farrell, 2004). Most prisons generally require visitors to submit an application well in advance of their first visit, have a government-issued identification card, and submit to a background check. Potential visitors with criminal histories, outstanding criminal charges or warrants; visitors who are currently under correctional supervision; or those who lack documentation might be deterred or prohibited from visiting. Moreover, prison visitation is always secondary to the safety and security needs of prison facilities, and visitation programs require additional staff time and resources (Farrell, 2004). Thus, visiting times are generally limited to a few hours and a few days per week, and not at all on national holidays. Besides the time constraints on actual or would-be visitors, these limited windows of visitation time might also conflict with the work and programming schedules of prisoners.

Second, prison visitation programs often provoke stress and discomfort among visitors, who may encounter long lines, a lengthy check-in process, intrusive security screenings, and sometimes abrasive security staff (Arditti, 2003; Austin & Hardyman, 2004; Comfort, 2008; Sturges, 2002). The prison environment could be particularly intimidating and traumatic for child visitors (Fritsch & Burkhead, 1981; Murray & Farrington, 2008;

Poehlmann, 2005). Visitors must make it through a lengthy application process, a check-in process, and security only to meet with prisoners for a limited amount of time, and physical contact is usually very limited and closely monitored. Visits may also be unwelcome by some prisoners given that many prisons require inmates to go through an unclothed body search after contact visits.

Third, for some prisoners, the lack of visits may be due to strained relationships with potential visitors. Many prisoners have lengthy histories of substance abuse, and friends and family members are frequently the victims of their criminal behavior, some of it violent. This background of addiction and abuse can exact a heavy toll on the would-be visitors of prisoners, generating dissatisfaction in the offender's behavior, a lack of trust, and ambivalence over an uncertain future (Christian and Kennedy, 2011; Comfort, 2008). Therefore, by the time some offenders (re)enter prison, their family members and (former) friends may prefer to cease all contact, including visitation.

Finally, distance is a commonly cited impediment to prison visitation. Prisons tend to be located in rural areas, while prisoners tend to come from more densely-populated urban areas (Austin & Hardyman, 2004; Coughenour, 1995; Holt & Miller, 1972). For example, only 5 percent of Florida inmates are housed in Dade County, while nearly a third of all Florida prisoners are from the Miami-Dade County region (Austin & Hardyman, 2004, 23). Moreover, research on inmates in state prisons has found that more than half of those with children lived 100 miles or more from where they lived prior to incarceration, and 10 percent lived more than 500 miles away (Mumola, 2000; Schirmer et al., 2009). The distance from home is even greater for federal prisoners, as Mumola (2000) reported that more than 80 percent of the inmates with children were housed at facilities 100 miles or farther from their

last place of residence (Mumola, 2000). And roughly half of federal prisoners are incarcerated at facilities that were 250 miles or more from their release residence (United States General Accounting Office, 1999).

Several prior studies have explored the relationship between distance and prison visitation. In a study examining prison visitation in Nevada, Jackson, Templer, Reimer, and LeBaron (1997) administered a survey to 212 prisoners that included an item asking respondents whether the place they call home is within the state or outside of Nevada. Although it is not clear how distance was measured in this study, Jackson et al. (1997) reported that offenders incarcerated at facilities more distant from their homes were less likely to be visited.

In her study on Arizona prisoners, Tasca (2015) evaluated the influence of distance, along with prison security level, child situational factors, and child and prisoner characteristics, on parental parent visitation. Distance was measured as the geographic distance between an offender's home zip code and the facility where s/he was incarcerated. Using a dichotomous measure for distance (100 miles or more = 1; 99 miles or less = 0), Tasca (2015) found that offenders housed in facilities 100 miles or more from their home zip codes were significantly less likely to receive visits from their children.

Examining visitation among Florida prisoners, Cochran et al. (2015) reported that a large proportion of the state's prison capacity is in its northern and central regions, making it likely that prisoners from the southern region of the state will be placed far from their home counties. The inmates in their sample were placed an average of 205 miles from their home counties, while inmates from seven counties in the southern region of the state were placed an average of 250 miles from home. Given that a large proportion of Florida's Latino

population is located in the southern region of the state, Cochran et al. (2015) found that Latino inmates are placed farther away from their home counties, on average, compared to White and Black inmates (47 and 35 miles further away, respectively). Although Black and Latino inmates were significantly less likely to receive any visits compared to White inmates, the relationship between Latino ethnicity and the likelihood of visitation was rendered non-significant after controlling for the distance between the inmates' home counties and prison placements. Among the inmates housed within an hour of their home counties, Latino inmates had the greatest likelihood of receiving any visits compared to White and Black inmates. Thus, the reduced likelihood of Latino inmates receiving any visits during incarceration was likely due to their geographic disadvantages.

### **Home Community Characteristics and Prison Visitation**

Social disorganization theory posits that some neighborhoods have higher rates of crime due to less informal surveillance, social control, and collective efficacy (Sampson, Raudenbush, & Earls, 1997; Shaw & McKay, 1942). Neighborhood-level factors such as poverty, high residential turnover, and family disruption encumber local residents' abilities to prevent and ward off crime (e.g., Sampson & Groves, 1989; Sampson et al., 1997; Morenoff, Sampson, & Raudenbush, 2001). Just as crime is concentrated in socially disorganized neighborhoods, so too are outgoing and incoming prisoners. That is, many prisoners come from and return to socially disorganized neighborhoods, particularly prisoners who are racial and ethnic minorities (Hipp, Turner, & Jannetta 2010; LaVigne et al., 2003; Massoglia, Firebaugh, & Warner, 2013). State and federal prison populations grew dramatically from the 1970s through the 2000s, but have, on the whole, shown a modest decrease in recent years (Carson, 2014). As the number of offenders entering prison increased, so did the volume of

inmates getting released from prison. Even though the growth in prisoner reentry has often been characterized as a broad social trend, research indicates the effects of mass incarceration have been concentrated among a relatively small number of disadvantaged urban communities (Clear, 2007; Sampson & Loeffler, 2010), which may lead, as some have argued (Rose and Clear, 1998), to an increase in crime.

Keeping with the growing tradition of contextual analyses in criminology, more recent prison visitation studies have examined the relationship between prison visitation and the community characteristics that prisoners are committed from. Cochran et al. (2014) examined whether county-level factors, in addition to individual-level inmate characteristics, may affect visitation. Based on their analysis of visitation data among nearly 18,000 inmates admitted to, and released from, Florida prisons between November 2000 and April 2002, the authors found that inmates committed from counties with higher rates of prison admissions or with higher levels of charitable giving were visited more frequently. Counties with higher prison admission rates may have better informal networks that facilitate prison visitation. Given that more of their county residents have been in and out of prison, other residents can more easily navigate prison bureaucracy and support other local residents attempting to visit prisoners. Likewise, higher levels of charitable giving in a county could be indicative of social altruism, which can benefit prisoners and the community residents that want to visit them in prison.

Because neighborhood disadvantage is generally associated with undesirable outcomes, some researchers might expect community-level disadvantage to lower the likelihood or rate of prison visitation. Residents of economically disadvantaged communities likely have fewer resources to put towards the costs associated with visiting prisoners,

including transportation costs and time off from work. Contrary to this expectation, Cochran et al. (2014) did not find a significant relationship between county-level economic disadvantage and the rate of prison visitation.

A subsequent study using Florida data suggests that the relationship between community-level economic disadvantage and prison visitation is more complex than some observers might assume. Cochran et al. (2015) found that county-level disadvantage did not significantly affect the likelihood of prison visitation for their full sample of White, African American, and Latino prisoners. However, in separate models that examined the race and ethnic groups separately, the authors found that disadvantage significantly reduced the likelihood of visitation for White and Latino inmates.

Although disadvantage did not significantly affect the likelihood of visitation for Black inmates, the analyses found that Black inmates from the least disadvantaged counties had a lower likelihood of visitation than White and Latino prisoners from the most disadvantaged counties (Cochran et al., 2015). Moreover, an interaction term revealed that distance exacerbated the effects of community disadvantage on the likelihood of visitation only for Black prisoners imprisoned within a few hundred miles from their home counties. Distance has a sharper negative effect on the likelihood of visitation for Black inmates up until about 350 miles, after which greater community disadvantage *increased* the likelihood of prison visitation. It is possible that, much like would-be visitors from counties with more prison admissions, the residents of disadvantaged counties are more familiar with the prison visitation process, and may be more willing to help other local residents plan and embark on lengthy trips for visits (Cochran et al., 2015).

### **Contributions to the Prison Visitation Literature**

This study makes several contributions to the prison visitation literature. As indicated earlier, it has been widely assumed that the extent to which an offender gets visited in prison is inversely related to the distance between the facility where he/she is incarcerated and the area where his/her friends and family members live. We attempt to fill this gap by testing whether distance significantly affects the number of visits received by Minnesota prisoners. We measure distance by comparing the addresses of the correctional facilities where these offenders were incarcerated to the residential addresses of those who visited them. We examine all visits that offenders received from the date of their most recent admission to prison to the date they were released in 2013. In doing so, we capture visitation over the entirety of each prisoner's period of incarceration, including periods of incarceration at multiple facilities.

Because we are using the address information of actual visitors, we will only be able to test the effects of distance on the number of visits received among offenders who were visited. Ideally, a study examining the influence of distance on visitation would be able to assess its effects for all prisoners, not just those who were visited. To do so, however, we would need the residential addresses of all potential visitors for each released offender, and those data are not available. While pre-incarceration address information for Minnesota prisoners could potentially serve as a proxy for where their potential visitors live, valid and reliable data do not exist because this information is neither consistently recorded nor verified by Minnesota Department of Corrections (MnDOC) staff. Nevertheless, focusing on the visited offenders is important because, as we indicated earlier, prior research has found that visitation frequency is negatively associated with prison misconduct (Cochran, 2012) and recidivism (Bales & Mears, 2008; Duwe & Clark, 2013). Developing strategies to

increase visitation among the visited therefore holds the promise of further improving offender behavior both before and after release from prison.

Prior research has assumed that the county of commitment for offenders is an adequate proxy of their home communities, which presumably encapsulates not only where they lived prior to coming to prison but also where all of their potential visitors live (Cochran et al., 2014; Cochran et al., 2015). The data used in this study, however, indicate this may not always be a safe assumption to make. Nearly one-third of the offenders examined in this study were released from prison to a county that was different than their county of commitment. Moreover, among the individuals who visited the prisoners included in this study, only 42 percent lived in a county that was the same as the commitment county for the offender they were visiting. Given that prisoners do not necessarily come from the same locations as their visitors, we believe that using visitor address data is a more accurate approach for analyzing the impact of distance on visitation—at least for the offenders we examined who were visited.

Using visitor address information also enables us to more precisely examine the neighborhood characteristics where visitors live. More specifically, we connected the residential address information for visitors with census tract-level data from the U.S. Census Bureau's American Communities Survey (ACS). To date, the two studies that have examined the effects of community-level factors on visitation relied on county-level data (Cochran, Mears, et al., 2014; Cochran, Mears, et al., 2015). Counties may be too high of a level of measurement given that a broad range of socioeconomic and demographic characteristics can exist within one county. For example, Miami-Dade County is the largest county in Florida, and it is home to one of the most economically disadvantaged and one of the most affluent

cities in the state (Opa-Locka and Golden Beach, respectively). Because census tract data provide more precise measures of neighborhood-level factors than county-level data, this study contributes to the prison visitation literature by capturing more closely the characteristics of the communities from which prison visitors travel.

### **Data and Methodology**

The data for this study were derived from all releases from Minnesota adult prisons in 2013. Some individuals may be released more than once in a given year, so we limited the sample to each inmate's first release in 2013. We based our cohort on a sample of released prisoners to capture each individual's entire length of stay in prison. To ensure that prisoners had the opportunity to receive at least one visit, we eliminated stays at prisons that lasted 30 days or less. Also, as explained earlier, we had to limit the sample to prisoners that received at least one visit. Based on those limitations, we had a total sample size of 2,817 inmates and 7,154 visitors. Considering there were 6,836 unique individuals released from Minnesota state prisons in 2013, 59 percent of those inmates did not receive a single visit during their entire confinements.

Visitors would often come together in small groups from the same households and neighborhoods. To simplify the data, we collapsed those visitor groups based on the neighborhoods from which they were came. Thus, the neighborhood, including its distance from the prison and demographic characteristics, is considered a proxy for the visitor(s).

The inmates in this sample stayed at an average of two prison facilities during their total periods of incarceration, and the range of facility movement was one to seven different facilities. They received visits from an average of two and a half different neighborhoods, and the total number of neighborhoods for each inmate ranged from one to 35. In some

instances, visitors visited prisoners at one of the facilities at which they were housed, but not every facility. Given that visitor lists for offenders are maintained in the Correctional Operations Management System (COMS), the MnDOC's centralized database, we assumed the visitor list for an inmate at one facility should mirror the visitor lists at all of the facilities where the inmate spent time during the incarceration period included in this study. Thus, even though we had to limit our sample to prisoners that received at least one visit, it is possible to have zero visits between a neighborhood and prison if the prisoner received visits from a particular neighborhood during an incarceration period at one facility but not at the other(s).

### **Dependent Variable**

The dependent variable in this study is a count of the number of visits the inmate received from each neighborhood at each facility where they were housed. For example, if an inmate received a visit from two different visitors from the same neighborhood, that visit was collapsed into two visits from that neighborhood.

### **Independent Variables**

#### ***Level 1 – Visitor Neighborhoods***

The main independent variable in this study is the distance between the visitor(s)'s neighborhood and the prison the inmate was housed in at the time of the visit. The distance was measured by first geocoding the addresses of the prisons and the visitor addresses. Based on the latitude and longitude coordinates of the prison facilities and census tracts, the distance was calculated using the Haversine formula. In the analyses, distance is in one-hundredths of miles, so that, for example, 100 miles is equal to one mile increments. Based on prior research and the logical limitations that distance can place on prison visitation

(Casey-Acevedo & Bakken, 2001; Cochran et al., 2015; Schirmer et al., 2009; Tewksbury & DeMichele, 2005), we expect that distance will be negatively associated with the frequency of visitation. Given that Cochran et al. (2015) found that there was a curvilinear relationship in the distance between the prison where an inmate is housed and his/her home county, we also included a quadratic distance term.

To capture the socioeconomic characteristics of the visitor(s)'s neighborhoods, we included a scale of concentrated disadvantage. Concentrated disadvantage is a factor score comprised of census tract-level measures from the U.S. Census Bureau's 2013 ACS (5 year estimates). The measures included were the following: (1) percentage of households headed by single females, (2) percentage of households living under the poverty line, (3) percentage of unemployed persons, (4) percentage of households receiving cash assistance, and (5) percentage of households participating in the Supplemental Nutrition Assistance Program (SNAP). These measures together loaded strongly on a single factor (eigenvalue = 3.69) with factor loadings ranging between 0.78 and 0.95. Given the limited economic and social resources available in disadvantaged neighborhoods, we expect concentrated disadvantage to significantly reduce the frequency of visitation.

Because residential instability is another common indicator of neighborhood disadvantage (e.g., Clear, Rose, & Ryder, 2001; Kubrin & Weitzer, 2003; Shaw & McKay, 1942), we included an indicator of this concept in the present study. Residential instability is a factor score based on the percentage of owner-occupied homes in a census tract along with the percentage of residents that have occupied the same homes for five years or more. For ease of interpretability, this score was reverse-coded so that positive values are indicative of more instability and negative values of less instability. Not only does residential instability

commonly exist alongside economic disadvantage, but it also likely impedes the ability for neighborhoods to develop supportive networks, which could facilitate prison visitation. We expect residential instability to be negatively associated with the frequency of visitation.

### ***Level 2 – Inmate Facilities***

One factor that may have been overlooked in similar prior research is the security level of the facilities. In Minnesota, each prison facility is classified on the basis of its security level, which is, in turn, based on the types of inmates it houses. Prisons that house inmates that are not considered to be a threat to themselves, staff, other inmates, and the public, and that are a low-risk for escape are minimum-security facilities. Conversely, inmates that are considered to be a threat to the aforementioned categories and/or that have a history of escape or attempted escape from custody are housed at maximum-security facilities. The security level of a prison facility affects several aspects of its operations, including the availability of visitation. Within Minnesota, inmates in close and maximum security prisons have more limited visiting privileges compared to inmates at minimum or medium security prisons. For example, offenders are allowed up to 16 visiting hours per month at close and maximum custody facilities, 24 hours at medium custody facilities, and 36 hours at minimum custody facilities.

The MnDOC has four classification levels for prisons that range from Level 2 (minimum security) to Level 5 (maximum security [MnDOC 2015]). The availability of visitation at the Level 2 and Level 3 facilities are very similar. Thus, we collapsed those two types of facilities into one dummy variable, which serves as the reference category. Visitation is increasingly restricted at Level 4 and Level 5 facilities, which each serve as separate dummy variables.

As of 2013, Minnesota had two minimum-security correctional boot camp facilities (one for male inmates and one for female inmates) that housed inmates in the Challenge Incarceration Program (CIP [Duwe & Kerschner, 2008]). While these facilities can be considered minimum security, visitation is more limited during this six-month program than at most other facilities, particularly in the early months of the program. We created a separate dummy variable for inmates housed at CIP.

### *Level 3 – Inmate Characteristics*

We included several inmate characteristics that have been linked with the likelihood of prison visitation in prior research (Cochran, Mears et al., 2014; Cochran, Mears, et al., 2015; Tewksbury & Connor, 2012). Previous studies have indicated that males are visited less often than females and racial and ethnic minorities less often than white inmates. Age and the number of prior admissions have been negatively associated with visitation likelihood and frequency in the prior literature, with older inmates and inmates with more prior admissions receiving fewer or no visits than younger inmates and inmates on their first admission to prison. In addition to the number of prior admissions to prison, we also included an indicator of whether the inmate was committed to prison for a new offense conviction, as opposed to an admission for a violation of post-release supervision conditions.

We included an indicator of whether the inmate was committed from the Minneapolis-St. Paul seven-county metropolitan area. Not only are half of Minnesota's 10 adult prisons in or very near the seven-county metropolitan area—making them easier to visit for the roughly half of inmates committed from that region—but we expect that inmates socially connected to the area will be connected to more resources and organizations that can facilitate and encourage prison visitation. Also unique to this study is a count measure of

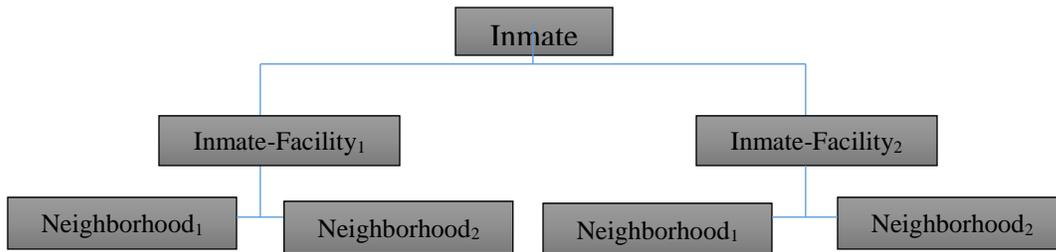
discipline convictions. While previous research has shown that visitation can influence institutional misconduct (Cochran, 2012; Siennick et al., 2013), it is also conceivable that misconduct influences the likelihood or frequency of visitation. Discipline convictions can result in the loss of visiting privileges or placement in isolation, wherein visitation is not permitted.

### **Analytic Strategy**

Given that prisoners often stayed at multiple prison facilities and had multiple visitors at each of those facilities, we treated these data as three-level repeated measures data. That is, for each inmate (the third level of data) we track instances of visitation across each of the facilities where the inmates were housed (the second level of data), and between the neighborhoods where visitors lived (the first level of data). Thus, we are measuring within-inmate changes in the rates of visitation across the different neighborhoods from which inmates received visits, and across the different facilities at which they were housed. The study design is similar to other criminological studies of individual offending based on local life circumstances (e.g., Horney, Osgood, & Marshall, 1995; Sampson, Laub, & Wimer, 2006). However, rather than time being nested within individuals, visitor neighborhoods are nested within the different facilities inmates were incarcerated, which are then nested within the inmates. An example diagram of the data structure is displayed in Figure 1. In this example, one inmate stayed at two facilities during his or her entire period of incarceration, and received visits from at least two different neighborhoods.

Differences in the frequency of visitation between inmates based on stable inmate characteristics (e.g., gender, age at release, race/ethnicity) are estimated at the third level of data. Differences in the frequency of visitation based on facility characteristics are estimated

**Figure 1. Prison Visitation Data Structure**



at the second level of data. The frequency of visitation based on the distance between the prison facility and the visitor(s)'s neighborhood, as well as the level of concentrated disadvantage and residential instability in that neighborhood is estimated at the first level of data.

Because the data are nested with three levels, this study used Hierarchical Linear and Non-Linear Modeling (HLM, version 7 [Raudenbush et al., 2011]). Multilevel modeling techniques provide more accurate tests of significance and unbiased coefficients for nested data. This analytic technique will also allow us to measure the extent to which visitation frequency varies between inmates and between facilities. The outcome is a count of visits received from each neighborhood at each facility, so we used the Poisson distribution with the number of months spent at each facility as the exposure term. The model also specified that the outcome is over-dispersed.

## **Results**

### **Descriptive Statistics**

A descriptive account of the data is displayed in Table 1, and visitor-neighborhood characteristics are at the top of the table. There was an average of nearly 7 visits between each neighborhood and facility; however, relative to the amount of time inmates spent at

each facility, the average number of visits was less than one per month (0.84 visits). The inmates spent an average of nearly 14 months at each of the facilities where they were housed. The visitor(s)'s neighborhoods were located an average of nearly 129 miles from each facility that individuals visited, or could have visited. Because they are both factor scores, concentrated disadvantage and residential instability have means of zero and standard deviations of one.

Turning to the characteristics of the facilities at which inmates were housed (middle of Table 1), a slight majority of the facilities where inmates received, or could have received, visits were Level 4 facilities, which are just a step below maximum-security facilities in Minnesota. Level 4 facilities were followed closely by Level 2 and 3 facilities (42 percent), CIP facilities (6 percent), and Level 5 (maximum-security) facilities (1 percent).

Referencing the bottom of Table 1, a large majority (89 percent) of the inmates included in this study were male. Forty-two percent of the inmates were not white or were of Hispanic origin,<sup>1</sup> and the average age of the inmate sample was 33.5 years old. The inmate sample had a total average length of incarceration of 20 months, during which time they received an average of 4.3 discipline convictions. Eighty-three percent of the inmates were committed to prison on a new sentence (as opposed to a release violation admission), about half were committed from the Minneapolis-St. Paul seven-county metropolitan area and, on average, they had a little less than 1 prior admission to prison.

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<sup>1</sup> Of the 42 percent of inmates that were not white or were Hispanic, a majority (69 percent) were African American, followed by American Indian (15 percent), white-Hispanic (11 percent), and Asian (5 percent) inmates.

**Table 1. Variable Descriptions, Means, Standard Deviations, and Ranges**

<i>Variable</i>	<i>Variable Descriptions</i>	<i>Mean or %</i>	<i>SD</i>	<i>Range</i>
<i>Dependent Measure</i>				
Number of Visits	The raw number of visits the inmate received from each neighborhood at each facility they were housed	6.7	19.8	0 to 388
<i>Visitor-Neighborhood Level Measures (Level 1)</i>				
Distance (miles)	The distance between the visitor(s)'s neighborhood and the facility in which the inmate was housed; measured using the Haversine formula (straight-line distance)	128.6	284.3	0 to 9,389
Duration at Facility (months)	The amount of time the inmate spent at the facility	13.8	21.1	1 to 231
Concentrated Disadvantage	A factor score comprised of the following five measures: percentage of (1) households headed by single females; (2) households with incomes below the poverty line; (3) unemployed persons; (4) households participating in the Supplemental Nutrition Assistance Program	0	1	-1.2 to 5.4
Residential Instability	A factor score comprised of the percentage of owner-occupied homes and the percentage of residents that have occupied the same home for five or more years	0	1	-1.66 to 5.36
<i>Inmate-Facility Characteristics (Level 2)</i>				
Custody Level	Three binary indicators that represent the custody (or security) level of the facility in which the inmate is housed: Level 4 (close custody), Level 5 (maximum custody), and Challenge Incarceration Program ([CIP] minimum security with restrictive visiting policies); Level 2 (minimum) and Level 3 (medium) facilities serve as the reference category			
	Level 4	51%	--	--
	Level 5	1%	--	--
	CIP	6%	--	--

**Table 1. Variable Descriptions, Means, Standard Deviations, and Ranges (Continued)**

<i>Variable</i>	<i>Variable Descriptions</i>	<i>Mean or %</i>	<i>SD</i>	<i>Range</i>
<i>Inmate Characteristics (Level 3)</i>				
Gender (male)	Binary indicator of whether inmate is male (1); females serve as the reference category (0)	89%	--	--
Race/Ethnicity (minority)	Binary indicator of whether inmate is non-white or is white-Hispanic (1); white/non-Hispanic inmates serve as the reference category (0)	42%	--	--
Age at Release (years)	The inmate's age at the time of release from prison	33.5	9.8	18 to 80
Married	Binary indicator of whether inmate was married at the time of release from prison (1); unmarried inmates serve as the reference category (0)	11%	--	--
Total Length of Stay (months)	The inmate's total amount of confinement time during the present incarceration period	20.0	26.6	1 to 331
Discipline Convictions	The number of institutional misconduct convictions received during the present incarceration period	4.3	12.0	0 to 246
New Commitment	Binary indicator of whether inmate was committed to prison for a new offense conviction (1); inmates admitted to prison for supervised release violations serve as the reference category (0)	83%	--	--
Metro Commitment	Binary indicator of whether inmate was committed to prison from the seven-county Minneapolis-St. Paul metropolitan area	50%	--	--
Prior Admissions	The number of times the inmate was previously committed to state prisons, including admissions for new convictions and supervised release violations	0.93	1.3	0 to 9
Type of Offense	Five binary indicators of whether the inmate's most serious current offense is a drug, criminal sexual conduct (CSC), property, felony driving while intoxicated (DWI), or other type of offense; person (violent) offenses serve as the reference category			
	Drugs	25%	--	--
	CSC	14%	--	--
	Property	14%	--	--
	DWI	11%	--	--
	Other	15%	--	--

*Note:* Level 1 units,  $n = 15,238$ ; Level 2 units,  $n = 5,407$ ; Level 3 Units  $n = 2,817$ ; CSC = Criminal Sexual Conduct; DWI = Driving While Intoxicated; the seven-county Minneapolis-St. Paul metropolitan area includes Anoka, Dakota, Carver, Hennepin, Ramsey, Scott, and Washington counties

Drug-related convictions accounted for the largest percentage of the inmate sample (25 percent), followed closely by person convictions (i.e., violent offenses aside from sex crimes, 22 percent). Criminal sexual conduct (CSC) and property convictions each accounted for 14 percent of the convictions, followed by “other” types of offenses (mostly weapons-related offenses and failure to register as a predatory offender, 15 percent), and felony driving while intoxicated (DWI) convictions (11 percent).

### **Multilevel Poisson Analyses<sup>2</sup>**

Table 2 contains the results of the three-level Poisson analyses. The bottom of Table 2 displays the reliability estimates and variance components for each higher level of data. The size and reliability of the Level 3 variance component reveals that there is significant variation in the frequency of visitation between inmates. Conversely, the same indicators for the second level of data suggest that visitation frequency does not vary significantly between the different facilities at which inmates were incarcerated.

The top of Table 2 displays the level one coefficients, which represent within-facility variations in visitation frequency across the different neighborhoods visitors came from. As expected, distance significantly reduces the frequency of visitation. For every 100 miles that separated the neighborhoods visitors came from and the prison facilities they visited, visitation decreased by almost 20 percent ( $\exp[-0.219]$ ,  $p < 0.001$ ). However, as indicated by the quadratic distance term, as distances became much greater, the frequency of prison visitation increased slightly by 0.2 percent ( $\exp[0.002]$ ,  $p < 0.001$ ). Referencing the

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<sup>2</sup> Because similar research (Cochran et al., 2015) uncovered interaction effects between distance and neighborhood disadvantage, we also conducted analyses that included interaction terms between distance and concentrated disadvantage. We did not find any significant interaction effects between distance and concentrated disadvantage. Further, we also conducted analyses that included multiple indicators of different racial and ethnic groups (as opposed to a single minority group indicator), but did not find that visitation frequency varied significantly among these groups relative to white inmates.

indicators of neighborhood social disorganization, an increase in concentrated disadvantage was associated with a roughly 4 percent decrease ( $\exp[-0.036]$ ,  $p < 0.05$ ) in the frequency of visitation, while residential instability did not have a significant effect on the frequency of prison visitation (although the direction of the effect was negative).

**Table 2. Multilevel Poisson Models with Over-Dispersion Predicting Number of Prison Visits**

		b	SE	ERR
Intercept, $\gamma_{000}$		-0.388***	0.025	0.678
<i>Visitor-Neighborhood</i>				
<i>(Level 1)</i>				
Distance (100 <sup>th</sup> miles)		-0.221***	0.014	0.802
Distance <sup>2</sup>		0.002***	0.000	1.002
Concentrated Disadvantage		-0.035*	0.017	0.966
Residential Instability		-0.026	0.019	0.974
<i>Inmate-Facility</i>				
<i>(Level 2)</i>				
Custody Level 4		0.235***	0.038	1.265
Custody Level 5		-0.307*	0.159	0.736
Challenge Incarceration Program		-0.391***	0.081	0.676
<i>Inmate Characteristics</i>				
<i>(Level 3)</i>				
Male		-0.218**	0.082	0.804
Minority (non-white)		-0.029	0.054	0.971
Age at Release (years)		-0.026***	0.003	0.974
Married		0.382	0.073	1.465
Discipline Convictions		-0.024***	0.002	0.976
New Commitment		-0.474***	0.077	0.623
Metro Commitment		0.100*	0.051	1.105
Prior Admissions		0.021	0.020	1.021
<u>Offense Type</u>				
Drugs		0.277***	0.073	1.319
CSC		0.002	0.088	1.002
Property		0.363***	0.086	1.437
DWI		0.310***	0.089	1.364
Other		0.374***	0.079	1.453
<i>Variance Components</i>		Reliability	Variance	$\chi^2$
Level 2		0.058	15.557	1,447.532
Level 3		0.391	0.614	5,845.4***

Note. Level 1 units,  $n = 15,238$ ; Level 2 units,  $n = 5,407$ ; Level 3 Units  $n = 2,817$ ; Exposure term = number of months at facility; CSC = Criminal Sexual Conduct; DWI = Driving While Intoxicated

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$

The Level 2 coefficients (inmate-facility) display the between-facility effects on the frequency of visitation. Compared to Level 2 and Level 3 security facilities, being housed at a Level 4 facility significantly increased the frequency of visitation by nearly 27 percent. This finding is contrary to what we expected because Level 4 facilities generally have more restrictive visitation policies than Level 2 and 3 facilities. Incarceration at MnDOC's lone Level 5 facility or at one of the CIP facilities decreased the frequency of visitation, but this effect was only significant for CIP. While incarcerated at CIP facilities, inmates experienced an approximately 32 percent reduction in visitation ( $\exp[-0.681]$ ,  $p < 0.001$ ) relative to being housed at a Level 2 or 3 facility.

As shown in the bottom portion of Table 2 (between-inmate differences in the frequency of visitation), we found that male inmates received significantly fewer visits than female inmates. Relative to females, male inmates had a 20 percent reduction in the rate of visitation ( $\exp[-0.223]$ ,  $p < 0.001$ ). Unlike prior research (Cochran et al., 2014; Cochran et al., 2015; Tewksbury & Connor, 2012), the present analyses did not find a large or significant relationship between racial and ethnic group status or the number of prior admissions to prison and the frequency of prison visitation. Consistent with the same prior literature, an increase in inmate age was significantly and negatively associated with the frequency of prison visitation. As an inmate's age increases, the frequency of prison visitation decreases by about 2 percent ( $\exp[-0.023]$ ,  $p < 0.001$ ).

As we expected, an increase in disciplinary convictions significantly decreased the frequency of visitation by 2.5 percent ( $\exp[-0.025]$ ,  $p < 0.001$ ). Roughly half of all Minnesota prisoners are committed from the seven-county Twin Cities (Minneapolis and St. Paul) metropolitan area, and most of the 10 MnDOC facilities are located in close proximity to this

geographic area. Consistent with the expectation that offenders with ties to the Twin Cities would receive more visits, we found that being admitted to prison from the seven-county metropolitan area was positively and significantly associated with the frequency of prison visitation (10.3 percent =  $\exp[0.098]$ ,  $p < 0.05$ ). Being committed to prison for a new offense conviction (as opposed to being admitted to prison for a release violation) is associated with a roughly 37 percent ( $\exp[-0.466]$ ,  $p < 0.001$ ) reduction in the frequency of visitation.

Relative to inmates convicted of person-related offenses, inmates convicted of drug, property, DWI, and “other” types of offenses were all significantly and positively associated with the frequency of prison visitation (32 percent, 41 percent, 36 percent, and 44 percent increases, respectively). The relationship between sex offenses and prison visitation frequency was very small and non-significant ( $b = 0.001$ ,  $p > 0.05$ ).

### **Discussion and Conclusion**

This study represents the first empirical test of whether and to what extent physical distance between visitors and prisons affects the frequency of visitation. In line with what many observers and researchers expected (e.g., Austin & Hardyman, 2004; Christian, 2005; Coughenour, 1995), as distance between visitors and prisons increases, the frequency of visitation decreases. The average distance between visitor neighborhoods and prison facilities in this sample was approximately 129 miles. If 50 miles is roughly equal to an hour of driving time (Cochran et al., 2015), that translates to an average of two and a half hours of travel time between visitor neighborhoods and prison facilities. Because the formula we used calculated distance as a Euclidian, straight-line measure (i.e., “as the crow flies”), it is likely that the distance between each facility and visitor neighborhood is even greater in terms of highway distance.

It is worth noting, however, that the average distance between neighborhoods and facilities was skewed towards larger values (the median distance was about 60 miles). About 95 percent of the neighborhoods were within 400 miles of the facilities their residents were visiting. A small minority of visitors came from as far away as Florida, Arizona, and California, for example. Regardless, even a distance as short as 60 miles (a little over an hour of driving time) could effectively cut visitors off from prison facilities. Most Minnesota prisons are not connected to public transportation systems.

Unlike analogous research (Cochran et al., 2014; Cochran et al., 2015), the present study found that concentrated disadvantage significantly decreased the frequency of visitation. This finding is consistent with what we expected. Although residents of disadvantaged neighborhoods are likely more familiar with prison visitation programs, which could increase visitation frequency, it seems intuitive that residents of more disadvantaged neighborhoods would also be less able to afford the costs associated with travel to distant prison facilities.

Our results diverged from previous research for three likely reasons. First, we were not estimating whether inmates received any visits, but rather the frequency of visitation only among the visited. Second, our measure of concentrated disadvantage was based on the neighborhood where visitors were living, and not the county where inmates committed their offenses. Lastly, the present study's measure of concentrated disadvantage is more localized at the census tract level as opposed to the county level.

While this research makes an important contribution to the prison visitation literature, it does have some limitations. First, we were only able to estimate the effect of distance among inmates that received at least one visit. Thus, this study was not able to estimate

whether or distance influenced the likelihood of inmates receiving any visits. Second, we are using neighborhood characteristics as a proxy for visitor characteristics, which may or may not be accurate for all visitors. In other words, census tract-level concentrated disadvantage is a more precise measure compared to county-level economic disadvantage, but these contextual statistics do not always represent individual characteristics.

These limitations notwithstanding, our findings may help further explain, in small part, why mass incarceration generally hits disadvantaged communities the hardest. Such communities are afflicted by multiple layers of disadvantage, including higher levels of poverty, unemployment, residential turnover, and family disruption. With higher rates of crime, these communities are more likely to be home to those under correctional control, including sex offenders (Clark & Duwe, 2015). While prisoners are more likely to come from, and return to, disadvantaged communities, research also suggests that concentrated disadvantage makes desistance more difficult (Kubrin & Stewart, 2006).

The decreased visitation we observed among those living in disadvantaged communities likely stems, in part, from the fact that visitation requires access to resources, and the relative lack of these resources is a hallmark of concentrated disadvantage. The result, however, may be that prison tends to be more isolating for offenders who come from disadvantaged neighborhoods, which could have a more disruptive impact on relationships with friends and family members. Although limited contact with family and friends is one of the many collateral consequences of incarceration, many released prisoners rely on friends and family for necessities such as housing (Nelson, Deess, & Allen, 1999; Visser, La Vigne, & Travis, 2004) and employment (Berg & Huebner, 2010), which are both important milestones for successful community reentry. But for prisoners from disadvantaged

communities, who are more likely to be racial and ethnic minorities, the impact of prison on sources of social support, which is a protective factor against reoffending, may further lower the odds of successful reentry. While research suggests that prison visitation can be an effective reentry tool (Bales & Mears, 2008; Cochran, 2014; Duwe & Clark, 2013; Mears, Cochran, Siennick, & Bales, 2012), social relationships between prisoners and people on the outside have been more difficult to maintain (Lynch & Sabol, 2001), as prison populations (Carson, 2014) and sentence lengths (Pew Center on the States, 2012) have increased over the past few decades.

Given the findings presented here, is there anything that can be done to mitigate the effects of physical distance and concentrated disadvantage on prison visitation? As we noted above, prison visitation is associated with reduced recidivism, and physical distance is negatively related to visitation frequency. It may be tempting, therefore, to conclude that, as a matter of policy, correctional administrators should place offenders at facilities closest to their home communities to facilitate greater visitation. But facility placement decisions are often made on the basis of a host of considerations, including custody level designation, bed availability, length of time left to serve, and programming needs. At a minimum, however, home community location should be included among the myriad considerations for facility placement. Similarly, while existing prisons cannot be moved to more convenient locations, policymakers would be wise to carefully consider the locations of new facilities and the potential effects on visitation.

Prison visitation entails a cost to correctional systems, in terms of staff time and security issues, but it is still much less expensive and potentially more cost-effective than many other correctional interventions. For the benefit of prisoners' family and friends, as

well as public safety, efforts could be made to further increase prison visitation opportunities. For example, prison systems could invest in, and support, programs that provide transportation to the families of prisoners. Moreover, an increasing number of local jails and state prison systems, including Minnesota, have implemented video visitation. Nevertheless, it remains to be seen whether virtual visits have the same public safety benefits as in-person visits.

Regardless of the relationship between video visitation and recidivism, however, virtual visits are promising for several reasons. First, video visitation may be helpful in lessening the effects of distance on visitation. Indeed, for offenders confined at facilities that are geographically distant from where their potential visitors reside, video visits may represent the best, and perhaps only, means of staying connected with pro-social sources of support. Second, video visits may be more cost-effective, not only for correctional agencies but also for prisoners and their visitors. Whether video visitation is more cost-effective for prisoners and visitors, particularly in comparison to in-person visits, depends largely on the fees that correctional agencies establish for virtual visits, which are borne by the prisoner and/or visitor. If the fees are made affordable for lower-income families, then video visitation may also help lessen the effects of concentrated disadvantage.

Yet, to substantially increase visitation opportunities for prisoners, whether through transportation programs or video visitation, correctional systems will likely need to make visitation more of a priority. To this end, we suggest that visitation should be regarded as an effective intervention just as educational programming, chemical dependency treatment, or cognitive-behavioral therapy are widely considered to be effective interventions. In delivering programming to offenders, many correctional agencies in the U.S. rely on the risk-

needs-responsivity (RNR) model, which recommends matching program intensity to recidivism risk level, targeting known criminogenic needs, and delivering programming that is tailored to the learning styles, strengths, and motivations of offenders (Andrews & Bonta, 2010). If visitation was recognized more widely as a correctional intervention that should operate within the RNR framework, then correctional agencies would likely make a greater effort to promote more visitation, particularly among unvisited, or seldom visited, inmates. After getting assessed for risk, needs, and responsivity, higher-risk offenders with a greater need for social support (i.e., anti-social peers is a major criminogenic needs area) might then be prioritized for visitation programming opportunities.

To illustrate, let us assume we have an inmate who has been assessed as high risk for recidivism, and his/her predominant needs area is anti-social peers. Moreover, let us further assume this offender has not been visited in prison and is unlikely to receive any visits during his/her confinement. If the lack of visits for this offender are due to distance and disadvantage for his/her potential visitors, then video visitation or a transportation program could be used to provide him/her with much needed social support. Yet, for many offenders, their criminal behavior prior to coming to prison has badly damaged important relationships, which means that visits from friends and family members may not be an option even with video visitation or transportation programs. Again, however, if visitation is recognized as an effective intervention, then correctional agencies may feel a stronger obligation to undertake outreach efforts or develop contracts with non-profit organizations in an effort to attract community volunteers to serve as mentors. Moreover, to promote greater community volunteer involvement, correctional agencies may consider waiving fees that would otherwise apply to video visits or transportation assistance.

Because this study is the first to empirically assess the relationship between distance and visitation frequency, there is much that remains to be learned about prison visitation. In addition to examining whether virtual visits significantly reduce recidivism, future studies should evaluate the cost-effectiveness of video visitation and the effects, if any, it has on the frequency of in-person visits. Moreover, just as existing research has examined the relationship between in-person visitation and prison misconduct, these studies should also attempt to determine whether video visits have the same effect on disciplinary infractions. Lastly, although it was outside the scope of this study, future research should attempt to connect the relationship we observed here between distance, disadvantage, and visitation frequency with recidivism outcomes.

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