

Murders and Aggravated Assaults in Indianapolis, 2004-2009

Since 2008 the Center for Criminal Justice Research (CCJR) has compiled a number of databases describing patterns of crime in Marion County as part of a partnership with Indiana Project Safe Neighborhoods (PSN) and local public safety agencies. These databases (all covering the years 2004-09)—Uniform Crime Reports, Homistat (describing all homicides), Gun Recoveries (describing cases involving firearms seized within the service area), and Shots Fired (describing calls for service in response to shots fired)—have allowed CCJR researchers to analyze some simple, but interesting, research questions about violent crime within Marion County. For example, Stucky and Ottensmann (2006) recently demonstrated

that land-use patterns (e.g., commercial activity, school presence) vary closely with different types of violent crime. Moreover, an earlier research brief (Nunn, Quinet, Stucky, Lisby, & Newby, 2009) plotted the spatial distribution of gun violence over time, showing that a relatively small number of locations persistently experienced a disproportionate amount of gun violence. These reports suggest it may be profitable if public safety resources are allocated in a more focused way to areas with consistently high levels of violent crime.

Building on this work, the current research brief employs information from the Indianapolis Metropolitan Police Department (IMPD) homicide data base (called Homistat)

and uniform crime reports (UCR) assault data spanning 2004 to 2009, disaggregated to Indianapolis census tracts.

Assaultive violence and homicide share several empirical regularities. Both are more common in densely populated urban areas characterized by socioeconomic deprivation. In this brief, we ask (a) whether these two forms of violent crime are spatially located in similar types of areas in Marion County,

and (b) if they vary systematically with one another over time.

Based on prior social science research, there are good reasons to believe that places with higher rates of homicide will also have higher rates of assault. Some researchers argue that in neighbor-



hoods marked by elevated levels of poverty, residential turnover, and joblessness, unique cultural “rules” emerge that emphasize honor, discourage police interaction, and justify retaliatory aggression as a response to insults and threats (Anderson, 1999). For example, studies conducted in St. Louis find that retaliatory killings generally occur in the poorest areas of the city, where many residents are deeply distrustful of law enforcement and express strong concerns about being perceived as vulnerable if they fail to respond aggressively to personal threats (Kubrin & Weitzer, 2003). Combined, these ideas suggest that rates of assault and homicide will both be spatially concentrated in distressed areas of Marion County.



Conversely, both forms of violence will occur at relatively lower rates in areas that are not characterized by socioeconomic adversity.

But beyond this shared spatial proximity, criminologists also speculate that certain types of assault will be less common in places where lethal violence is *more* common, and that these dynamics will be pronounced in impoverished environments. Stated otherwise, the threat of a lethal attack may deter less serious forms of violence within select environments. Antagonists are liable to harbor strong concerns about the reactions of potential adversaries when the consequences of challenging them are potentially catastrophic (Felson 1993; Felson, 2009, p. 32). Under these circumstances, would-be attackers will often refrain from assaulting a target because this action is expected to prompt lethal retaliation (Pruitt & Rubin, 1986). If such an “adversary effect” is authentic, then in locations where killings are more common, the rate of non-gun assaults will be lower relative to areas that report fewer homicides. Adversary effects may also incite a form of contagion within a geographic setting, whereby both non-disputants and disputants arm themselves in anticipation of lethal altercations, ultimately increasing the probability that incidents of physical violence will have a fatal outcome. According to the foregoing ideas, we should see a negative relationship between homicide and non-gun assault in poor locations within Marion County. This brief cannot sort out the many complicated research hypotheses offered by this particular literature. But it can begin to address them in a systematic manner to determine how lethal and non-lethal violence may interact to influence the incidence of one another.

Few empirical studies have looked closely at violent crime trends in Marion County. PSN’s mandate is to respond to violent crime involving firearms, so it has a legitimate interest in knowing how gun crimes—and violent crime more generally—vary within its service area. By identifying these patterns within the county, perhaps this information could be used to inform the investment of the limit-

ed public safety and public health resources that we have available within Marion County.

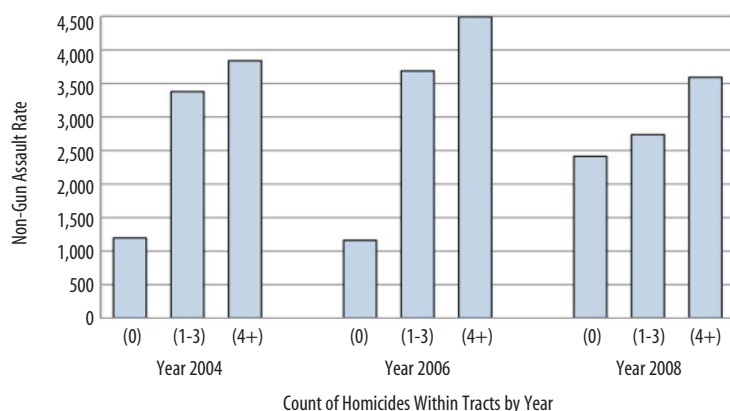
DATA AND METHODOLOGY

The spatial unit of analysis in the current study is Indianapolis census tracts. Social science researchers routinely study census tracts as approximations of traditional neighborhoods. In order to control for other frequently cited covariates of criminal homicides and aggravated assaults, several sources of data are combined and applied to census tracts for the years 2004 through 2009¹ and the months that comprise the time period. Five highly correlated socioeconomic measures were culled from the 2000 census files and combined into an index of *structural disadvantage*: percent unemployed, percent of female-headed households, percent African-American, percent in poverty, and median income. Two variables were also combined into a weighted index to capture *residential instability*: percent of owner-occupied housing units and percent of residents who have remained in the neighborhood for the past five years. From the census files, the study incorporates measures of *percent foreign born*, *population size*, and the percent of the population between the *ages of 18 and 34*. Each of the foregoing census-derived measures is specified as an independent variable in the multivariate analysis. The study also incorporates the rate of *gun aggravated assault* and the rate of *non-gun aggravated assault*; both measures were derived from the 2004-2009 UCR data and are available at the tract level on an annual and monthly basis. Aggravated assault is an attack by one or more persons on another with the purpose of inflicting serious bodily injury, including threats and attempts, or an assault committed with a dangerous weapon—an “aggravating” condition (Federal Bureau of Investigation, 2006). Also included is the rate of *gun homicides* and rate of *non-gun homicides*, which are calculated at the tract level on an annual and monthly basis using data from the IMPD Homistat and UCR files.

For parts of the analysis the study combines non-gun and gun assaults into a single variable and a similar compu-

¹For 2009, crime data are only available through the month of August, resulting in 68 months of data all together.

Figure 1: Non-gun assault rates by counts of total homicide



tation is made for the homicide measures. The violence variables are expressed as rates per 100,000 population to facilitate comparative interpretations. The data are combined into a pooled cross section file with each of the 212 census tracts registering six waves of data (i.e., 2004-2009), and to carry out more refined analysis, another pooled cross section is created with each tract indexed at 68 months of data (i.e., January 1, 2004 through August 30, 2009).

RESULTS

Figure 1 illustrates the overlap between homicide and non-gun aggravated assault within Indianapolis neighborhoods across select years. Figure 1 indicates that in 2004, neighborhoods with zero homicides exhibited, on average, approximately 1,100 non-gun aggravated assault per 100,000 popu-

lation, whereas neighborhoods with four or more homicides displayed an average rate of just under 4,000 per 100,000 population. These patterns indicate that places with above average levels of homicide also experience higher rates of assault. A similar pattern is observed in subsequent years.

According to Figure 1, during 2004 and 2006 the most pronounced differences across neighborhoods with regard to rates of non-gun assault were among those with no homicides and those with *any* homicides. In 2004, among neighborhoods with at least four killings, the rate of non-gun assault was 3.2 times greater in magnitude than in

places with zero homicides. But in 2008 this gap was not as wide; the non-gun assault rate was only 1.48 times greater in high homicide neighborhoods (4+) compared to neighborhoods with no homicides. This pattern appears to be a product of the fact that the average rate of non-gun aggravated assault in neighborhoods with zero homicides was substantially greater in 2008 compared to earlier years.

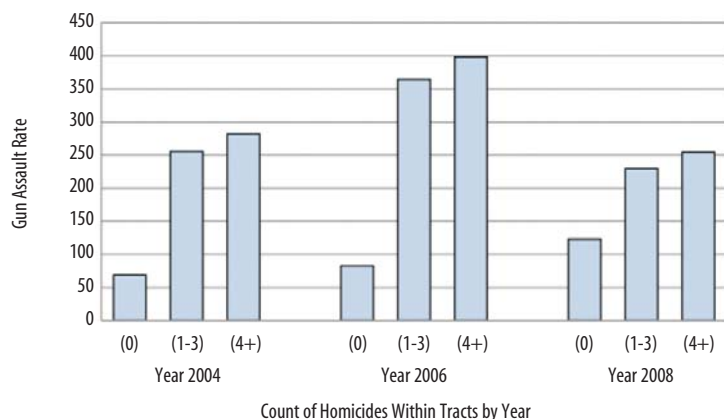
Figure 2 displays average rates of gun aggravated assault across levels of homicide at select years. Here again, rates of gun assault are higher in neighborhoods that report a higher number of killings. Alternatively, gun assault was least common across all three years in neighborhoods that reported zero homicides. Similar to what was observed in Figure 1, the patterns in Figure 2 suggest that gun assault rates were

higher in 2008 – nearly twice as high – within neighborhoods with zero homicides compared to earlier years. On average, gun assault in high homicide neighborhoods (4+) was slightly less common in 2008 than in prior years.

Taken together Figures 1 and 2 suggest that, on average, rates of non-lethal and lethal violence vary with one another in terms of their spatial location. Rates of both gun and non-gun aggravated assaults are highest among Indianapolis neighborhoods where a greater number of killings occur; moreover, this pattern is fairly regular over time.

Next, we use pooled cross-sectional analysis to determine the extent to which aggravated assault

Figure 2: Gun assault rates by counts of total homicide



**Table 1:** Effect of neighborhood characteristics on assault rate and homicides (annual data)

	Outcome: Aggravated Assault Rate ^a		Outcome: Homicide Counts ^b	
	Effect	Statistically Significant*	Effect	Statistically Significant*
Structural Disadvantage	+	yes	+	yes
Residential Instability	-	yes	-	no
Percent Foreign Born	-	no	-	no
Percent 18-34	+	yes	-	no
Population Size	+	yes	+	yes

(n=1,226)

^a Generalized least squares (GLS) random effects mode^b Over-dispersed Poisson random effects model

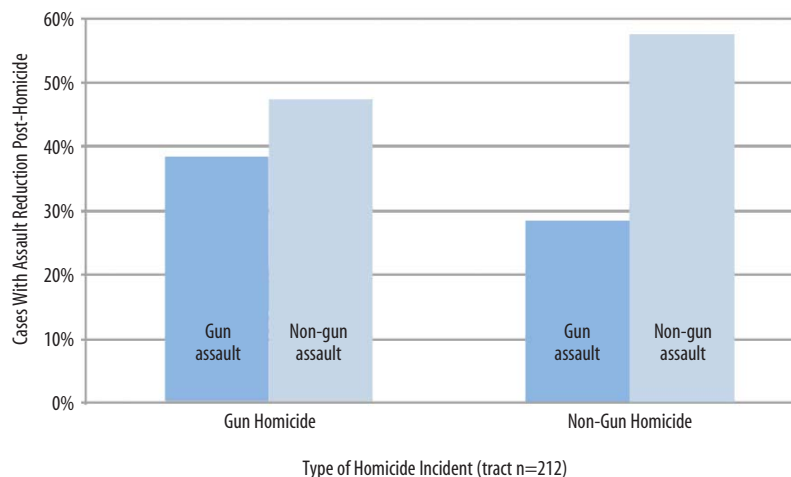
*At 95% confidence level

and homicide are influenced by similar neighborhood social conditions. For this portion of the analysis, we employ *annual* neighborhood data. Table 1 displays the results from this exercise. Looking at the left-hand side of the table, we find that structural disadvantage has a positive (+) and statistically significant effect on rates of aggravated assault. The results indicate that unstable neighborhoods (i.e., those with high rates of population turnover) have significantly lower rates of assault. A higher percentage of foreign born in a neighborhood did not have a significant statistical effect on the rate of aggravated assault. Considering output on the right-hand side of Table 1, the estimates show that the risk of homicide is higher in more disadvantaged neighborhoods. Further, although residential instability displays a negative relationship with homicide, the effect is not statistically significant by conventional standards. Consistent with previous macro-level criminological research (e.g., Peterson, Krivo, & Harris, 2000) the results reported in Table 1 suggest that serious violence – homicide and aggravated assault – occur more frequently in neighborhoods exhibiting higher levels of structural disadvantage. In the Marion County context, aggravated assault is less common in “unstable” neighborhoods, and instability does not meaningfully influence risk of homicide.

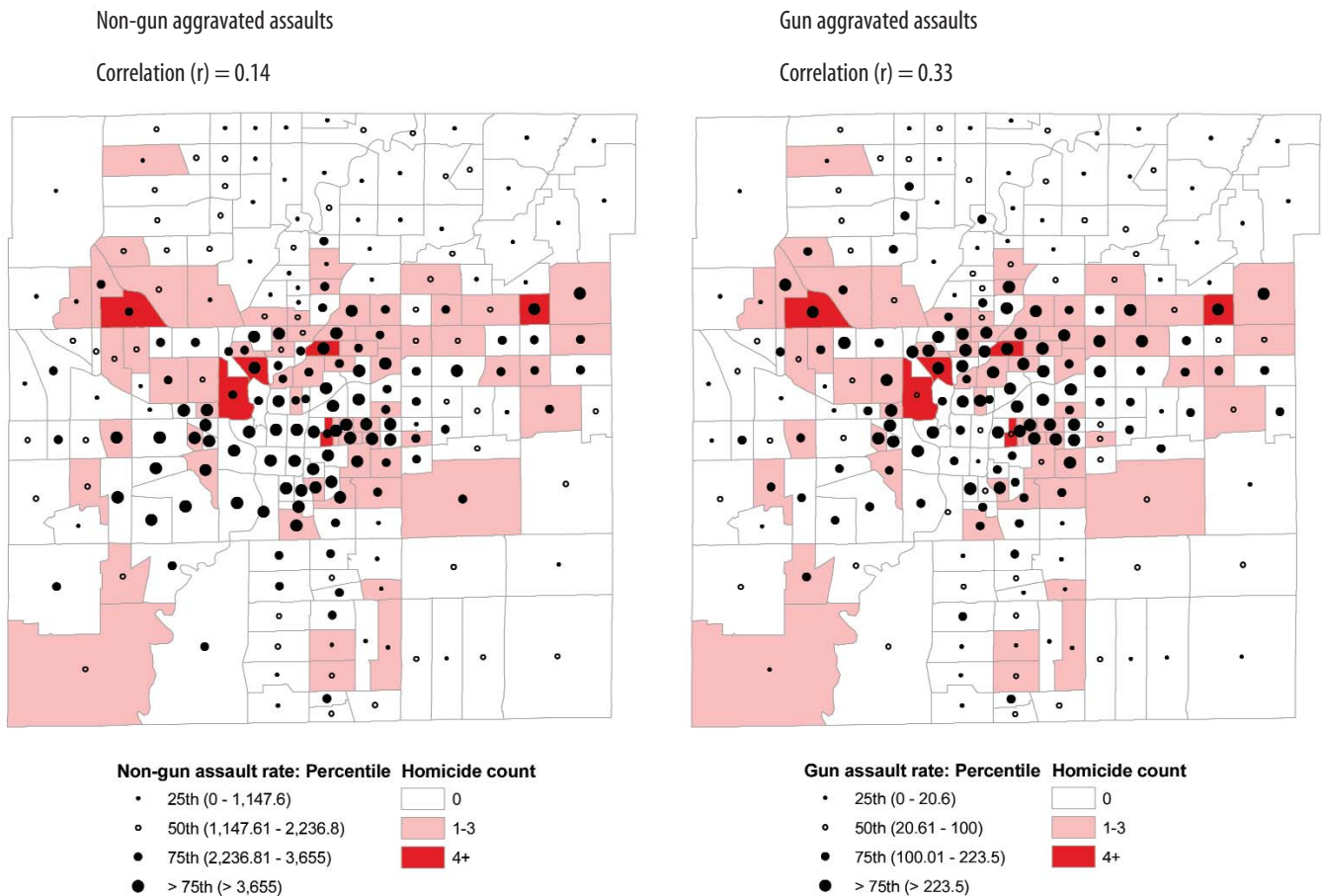
So far, we have determined that (a) the frequency of two forms of serious violence, aggravated assault and homicide, overlap in the same environment; moreover, (b) both forms are influenced by a similar set of social conditions. Next, we turn to our monthly data to examine the relationship between homicide and the incidence of assaultive violence within Indianapolis neighborhoods.

To reiterate, some believe lethal violence will discourage less serious violence. As noted earlier, this idea implies that when lethal violence is more common it will prevent less serious incidents from occurring. From this perspective, it is reasonable to assume that neighborhoods that experience a homicide in one month will experience a reduction

in assaults in subsequent months, relative to the month in which the homicide occurred. Research offers little guidance as to the temporal interval of these dynamics—that is, how long a homicide might have a dampening effect on future assaults—and thus, we do not know whether such effects, if any, would be restricted to one week, two months, or a year or more (see Felson, 2009). In this analysis, we use an interval of one month, a reasonably conservative time period to consider from an empirical viewpoint.

Figure 3: Percentage of neighborhoods with assault reductions in the month after homicides, by type of homicide and assault, 2004-2009

Map 1: Homicides and aggravated assault rates per 100K population, 2008



Source: Indianapolis Metropolitan Police Department, UCR

Note: Rates calculated using 2000 U.S. Census Bureau populations.

Before we turn to the multivariate monthly analysis, we plot the spatial organization of homicide and both forms of assault in order to provide a visual illustration. Map 1 displays assault in homicide patterns Indianapolis census tracts in 2008. The plot on the left-hand side of the map shows the spatial overlay of homicide counts and percentiles of the non-gun assault rate; the plot on the right-hand side displays percentiles of the gun assault rate. Looking at the correlation coefficient directly above both plots in Map 1, we see that homicide has a stronger bivariate relationship with the gun assault rate than the non-gun assault rate. Overall, Map 1 suggests that both forms of assault are spatially concentrated

in tracts with a greater amount of homicide, but this is especially true for gun assault.

Figure 3 displays results from a cross-tabulation analysis of the link between homicide and aggravated assault during a monthly interval. It reports the proportion of neighborhoods (i.e., census tracts) that experienced a decrease in assaults during the month after a homicide, while controlling for the type of homicide (gun or non-gun) and the type of assault (gun or non-gun). Looking at the set of columns on the left hand side of Figure 3, approximately 38 percent of neighborhoods with *at least one* gun homicide during month T saw a reduction in the rate of gun assault in the subsequent month



Table 2: Effect of homicide rate and interactive homicide rate and neighborhood disadvantage term on non-gun assault rate (monthly)

Panel I	Outcome: Non Gun Assault Rate (T+1) ^a	
	Effect	Statistically Significant [*]
Homicide Rate (T)	+	no
Panel II	Outcome: Non Gun Assault Rate (T+1) ^a	
	Effect	Statistically Significant [*]
Homicide Rate (T)* Str. Disadvantage	-	yes

(n=14,416)

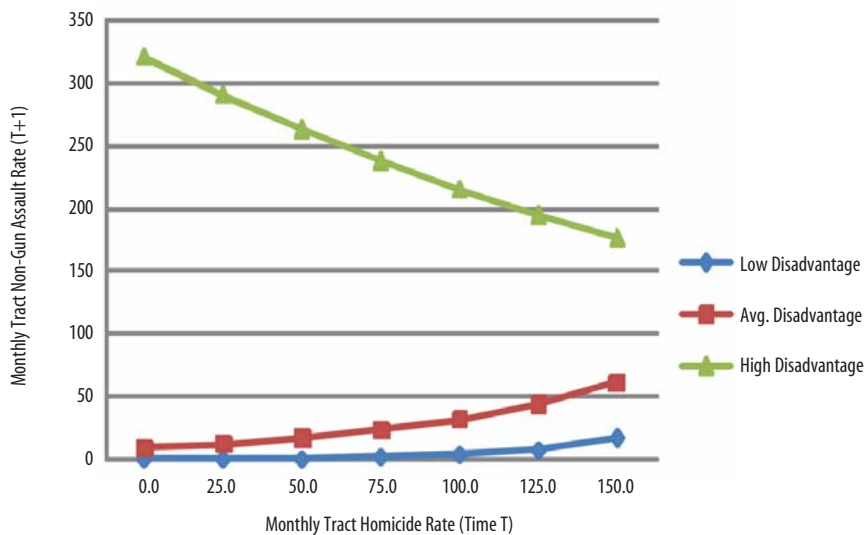
^a GLS random effects model, controlling for all study predictors along with yearly time dummy measures

^{*} At 95% confidence level

(i.e., month T+1) relative to rates at month T. Moreover, approximately 45 percent of neighborhoods with a gun homicide at month T experienced a reduction in the rate of non-gun assault during the subsequent month. Turning to the set of columns on the right side of Figure 3, we see that roughly 30 percent of neighborhoods with *at least one* non-gun homicide in month T reported fewer gun assaults in T+1 relative to month T; however, slightly more than 55 percent of neighborhoods experienced a reduction in non-gun assaults. Compared to gun homicides, non-gun killings are associated with a relatively larger reduction in non-gun assault. Perhaps because a non-gun dispute turned deadly at month T, residents interpreted the costs of committing a non-gun assault to be rather high, and ultimately this translated into a lower rate of non-gun assault following a non-gun killing.²

Next, we assess the causal relationship between homicide and assault in a multivariate framework that controls for the full array of study predictors in order to guard against possibly spurious conclusions about the linkage between murders and assault. Panel A of Table 2 uses the monthly data to examine whether homicide at month T-1 reduces the rate of non-gun assault in subsequent months. Although the table suggests homicides have a positive effect

Figure 4: Influence of homicide on gun assault rate by levels of neighborhood disadvantage



²Figure 3 gauges whether or not neighborhoods displayed *any* reduction in the rate of assault at month T+1 in the wake of *one or more* killings at month T. Hence, the table does not convey information about the size of the reduction in the rate of assault, nor does it measure whether patterns of assault at month T+1 differ according to the number of homicides at month T.

Table 3: Violence ratios by quintiles of neighborhood disadvantage, annual data

Panel A: Homicide Rate and Total Assault Rate			
Neighborhood Disadvantage	Homicide Rate	Total Assault Rate	Ratio
1st Quintile (low)	1.61	659.57	409.67
2nd Quintile	4.30	1407.88	327.41
3rd Quintile	10.31	2643.58	256.35
4th Quintile (high)	24.68	3831.23	155.23
Overall Average	10.26	2142.58	208.82
Panel B: Homicide Rate and Non-Gun Assault Rate			
Neighborhood Disadvantage	Homicide Rate	Total Assault Rate	Ratio
1st Quintile (low)	1.61	640.32	397.71
2nd Quintile	4.30	1347.18	313.23
3rd Quintile	10.31	2493.32	241.18
4th Quintile (high)	24.68	3510.81	142.25
Overall Average	10.26	2004.30	195.35

on the rate of non-gun assaults, the estimate is not statistically significant.

However, an interpretation of the *adversary effects* hypothesis noted earlier suggests that lethal violence will prevent less serious forms of violence, but only in very poor neighborhoods where the probability of serious violence is already at a maximum. Panel B of Table 2 examines this possibility by assessing whether the homicide-assault relationship is contingent on levels of neighborhood disadvantage. According to the estimate in Panel B, the positive effect of homicide on non-gun assault is weaker in more disadvan-

tagged neighborhoods.³ For example, Figure 4 illustrates the effects derived from the interactive product term (homicide rate X neighborhood disadvantage) in Panel B. Within neighborhoods characterized by average or low levels of disadvantage,⁴ an increase in the homicide rate has a rather small positive effect on the next month's rate of non-gun assault. An opposite effect emerges in high disadvantage neighborhoods: when the rate of homicide increases in month T, the rate of non-gun assault in month T+1 decreases. However, it should be noted that highly disadvantaged neighborhoods have higher rates of assault compared to other neighborhoods, irrespective of their rates of homicide.⁵ Nevertheless, the findings suggest that homicide in one month may reduce less serious forms of violence in the subsequent month, but only in the most disadvantaged neighborhoods.

Are lethal outcomes more common among serious conflicts that transpire in disadvantaged neighborhoods? One approach to answering this question is the use of a *lethality ratio*, which can

be calculated as the number of aggravated assaults (both gun and non-gun) for every homicide (Rosenfeld, 2009). The ratio is, in effect, a measure of the incidence of killings relative to the incidence of all assaults. Higher lethality ratios mean that there are more assaults for every homicide; low lethality ratios mean fewer assaults for every homicide. Panel A of Table 3 reports the lethality ratio, by quintiles of neighborhood disadvantage. These numbers are calculated using the annual pooled data, with assault translated into rates per 100,000 population. According to Panel A, within the most

³To ease interpretation, the direct effects of the product term are not displayed in Panel B of Table 3. Results from the analysis shows that the homicide and disadvantage coefficients are both positive alongside the product term. It is important to note that the coefficient for the product term ($= -.012$) is rather weak and so is the direct effect of homicide ($= .015$), though both are statistically significant at the 95% level.

⁴Average is defined as neighborhoods at the mean of structural disadvantage and *low* disadvantage characterizes neighborhoods one standard deviation below the mean, and *high* characterized neighborhoods one standard deviation above the mean.

⁵Gun and non-gun homicides were combined for this analysis to enhance statistical power.



affluent neighborhoods – those in the first quintile – the ratio is 410 aggravated assaults for every homicide. By contrast, in the most disadvantaged neighborhoods, or those in the fourth quintile, there are 155 assaults for every homicide. Citywide there are 209 assaults for every killing, therefore killings are less common for every assault in more affluent areas. Panel B displays the rate of non-gun assault for every homicide.⁶ As expected, a similar pattern emerges in which the lethality ratio is largest in the most affluent areas. Thus, when violent altercations occur in poor neighborhoods they are more likely to result in murder, meaning violent conflicts have a higher potential to be lethal in these neighborhoods compared to more affluent locations.

DISCUSSION AND POLICY IMPLICATIONS: How Can These Findings Be Used to Inform Crime-Control Policy?

To recap, a series of analyses conducted in this study has revealed four main findings about serious violence in Indianapolis neighborhoods: (1) aggravated assault and homicide vary directly with one another; (2) both types of serious violence are more common in places defined by high levels of structural disadvantage; (3) within structurally disadvantaged neighborhoods, an increase in the homicide rate contributes to a modest month-to-month reduction in the rate of non-gun assault—that is, lethal violence has a modest negative effect on future assault rates in disadvantaged neighborhoods; and (4) violent events have a higher potential to be lethal, on average, within impoverished locations.

Before considering the implications for developing policies to address differential levels of serious violence in Marion County neighborhoods, the possibility of alternative explanations and the effects of other unmeasured variables should be noted. For instance, we are unable to determine the extent to which the estimates may be affected by spatial variation in the timeliness and rate of police reporting by victims. Insofar as assault victims from the most impoverished

neighborhoods are especially reluctant to enlist police services (Berg, Slocum, & Loeber, 2010), then the analysis would falsely inflate the negative relationship between homicide and assault in highly disadvantaged neighborhoods. Furthermore, the fact that assaults are fewer in number in the wake of a homicide may be explained by the increase in law enforcement activity in these areas after a killing occurs. If so, then the analysis is partially confounding the deterrent effect of law enforcement with that of homicide itself. Finally, while criminologists would agree that variation in the lethality ratio may reflect variation in the way conflicts are socially controlled, from the perspective of public health and emergency management, the marked differences in lethality may be explained by differential access to effective emergency medical care. Hence, an assault may be more likely to evolve into a killing in certain places owing to inadequate or untimely access to emergency resources.

Nevertheless, despite the absence of measures that might account for differential rates of crime reporting across neighborhoods, post-homicide police initiatives, and access to emergency services, several conclusions about policy can still be drawn from the results of this study to inform Marion County public safety practices. To reiterate, aggravated assault and homicide overlap in similar environments. Assaults seem to be particularly lethal in the most disadvantaged environments, suggesting that perhaps people feel more compelled to kill their adversaries in these places. If a policy goal is to reduce the incidence of homicide, then perhaps officials should either attempt to ameliorate the conditions that promote physical conflict (i.e., aggravated assault) or, alternatively, minimize the degree to which conflicts evolve into killings. But history tells us that this is a difficult objective to accomplish. Anthropologists note that violence is but one way, among many, that human beings manage conflicts (Pitt-Rivers, 1966). On a practical level, serious attempts should be made to improve the legitimacy of the police and restore public confidence in the ability of law enforcement

⁶Ideally, the denominator in these equations would constitute a wider array of conflicts, including simple and aggravated assaults. By using only a police recorded measure of aggravated assault, these estimates cannot fully speak to the lethality ratio of conflicts in Indianapolis.



officials to control crime, especially in historically disenfranchised, impoverished neighborhoods. A specific goal of such an effort should be to encourage disputants to enlist the police to mediate their disagreements. In addition, interpersonal dispute resolution skills and services should be made more widely available to the residents of structurally disadvantaged neighborhoods. Other neutral third parties, including local clergy or respected elders from the community, may fulfill this role if they are provided adequate resources to operate in such a capacity. Additionally, research conducted in poor Chicago neighborhoods finds that former offenders—who have street credibility—have been successful at preventing conflicts from erupting into killings (Skogan, Hartnett, Hump, & Dubois, 2008).

Meanwhile, in Marion County, programs developed by Indianapolis PSN and the Comprehensive Anti-Gang Initiative (CAGI) subgrantees may also be profitable from the perspective of encouraging alternative forms of conflict management among disputants in poor neighborhoods. For instance, the Community Clergy, a trained group of volunteers working in partnership with the Indianapolis Metropolitan Police Department, aim to develop good quality relations between citizens and police in high-crime areas, and increase awareness of the important role played by law enforcement in controlling crime. Moreover, members of the clergy are periodically deployed as neutral third parties to intervene in violent incidents and resolve them peacefully so to inhibit the occurrence of retaliatory violence (see Quinet, Stucky, Nunn, & Newby, 2009). Another violence prevention initiative known as the Watch Club, which began at Warren Central High School (WCHS), focuses on educating youth about non-violent methods of

conflict resolution, the importance of reporting crime to the authorities, and the adverse consequences of gun violence. If successful, the Watch Club may reduce violence, particularly retaliation, in the area where WCHS is located because the program teaches local youth alternative ways to manage disputes, while emphasizing conventional forms of social behavior. In addition, several CAGI-funded programs targeting youths at high risk of gun crime and gang involvement

(e.g., Peace Learning Center, Christamore House, Forest Manor Multi-Service Center) have at least the potential to introduce better dispute resolution skills to juveniles and young adults residing in disadvantaged neighborhoods.

But how does one reconcile the foregoing policy recommendation (i.e., improving police-citizen relations and promoting non-violent means of dispute resolution) with the fact that we found homicide to be a crime control mechanism in its own right? Homicide may in fact drive out less serious forms of violence, but the minor reduction in assault that we observed came at a cost to human life. But beyond this point, it is important to note that lethal violence often diffuses in a

contagious process, whereby gun homicide begets further gun homicide (Cork, 1999; Griffiths & Chavez, 2004). This phenomenon reflects the fact that when an antagonist perceives a potential adversary as particularly dangerous, they are likely to enhance their capacity to overcome the adversary with force. The real or perceived threat of homicide may reduce the incidence of less serious conflicts; however, at the same time, it may cause people to arm themselves with lethal weapons, ultimately increasing the rate of killings. Researchers argue that when homicide becomes a popular form of self-help it consequently may provoke “system-wide” effects across an urban landscape (Jacobs & Wright,

Assaults seem to be particularly lethal in the most disadvantaged environments, suggesting that perhaps people feel more compelled to kill their adversaries in these places.



2006). This sort of “arms race” has been implicated as a driving force behind the sharp uptick in gun homicides among urban males during the late 1980s and early 1990s. Echoing an earlier point, we thus recommend that policy makers develop programs which make homicide a less appealing form of “social control” for actors involved in disputes, particularly in impoverished areas of Marion County. City officials should perhaps attempt to manage the threat of retaliation, which would reduce the incentive for victims to act as vigilantes and perpetrate lethal counterattacks.

Finally, and at a minimum, the analyses reported here help identify the areas within Marion County that constantly exhibit higher levels of the most lethal forms of interpersonal violence and, in so doing, can demarcate the neighborhoods and locales that require focused applications of preventive public safety resources. Regardless of whether homicidal violence leads, lags, dampens, or increases other less serious forms of interpersonal violence, the fact remains that we know where killings consistently occur within Marion County, and this knowledge should inform the spatial allocation of future public safety resources.



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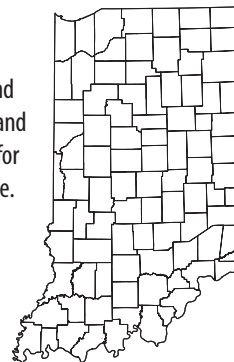


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The Indiana University Center for Criminal Justice Research is a nonpartisan applied research organization in the School of Public and Environmental Affairs at Indiana University–Purdue University Indianapolis. Researchers at CCJR work with public safety agencies and social services organizations to provide impartial applied research on criminal justice and public safety issues. CCJR and the Center for Urban Policy and the Environment are applied research centers currently affiliated with the Indiana University Public Policy Institute.

Limited resources make it necessary for public safety and public health officials to carefully plan the implementation of services. Information regarding patterns of crime can assist decision making. This issue brief presents data on the relationship between homicides and aggravated assaults, with and without guns, and where these crimes occur in Marion County.



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