12-10-2010

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Research on neighborhood-level effects on intimate partner violence (IPV) has expanded significantly in the past two decades. However, to date, studies have been unable to disentangle compositional and contextual effects on IPV and have rarely considered the social mechanisms that might link neighborhood conditions to IPV. Using data from the Project on Human Development in Chicago Neighborhoods, this study considers individual and contextual influences on violence between partners, and examines the effects of disadvantage and collective efficacy on this type of behavior. Results indicate that neighborhood disadvantage significantly increases and collective efficacy significantly decreases IPV after controlling for individual-level correlates. Our findings add to a growing body of evidence suggesting that as with street crime, neighbor- hood disadvantage also exacerbates rates of IPV. However, unlike street crime, the impact of disadvantage on IPV does not appear to be mediated by collective efficacy. Understanding how collective efficacy affects violence between partners remains an open issue.

Keywords
intimate partner violence; social disorganization theory; collective efficacy; neighborhood disadvantage; domestic violence

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https://doi.org/10.1080/07418825.2010.533687

Introduction

It is well established that the prevalence of street crime is influenced by community-level processes and characteristics (Bursik, 1988; Bursik & Grasmick, 1993; Kubrin & Weitzer, 2003; Sampson, Raudenbush, & Earls, 1997; Shaw & McKay, 1942). However, whether community-level processes also influence other forms of crime, such as violence between intimate partners, is not yet clear. There are theoretical reasons *not* to expect such a link. For example, some have argued that because intimate partner violence (IPV) often occurs in private places, the participants are unlikely to be influenced by community conditions and processes (Gelles, 1983). Community crime-inhibiting processes, which typically involve public surveillance and other forms of informal social control, are assumed to operate only in public places and thus not to penetrate "behind closed doors" (Sampson & Raudenbush, 1999). Another reason to expect weak community-level effects on IPV is that community intervention may not be a shared value among residents. Browning (2002; Browning, Feinberg, & Dietz, 2004) suggests that the likelihood of community intervention in any type of violent situation depends on the degree to which the control of violence is a shared value within the community. Whether the control of violence among inti- mates can be assumed to be a shared value in all communities is debatable.

In spite of these theoretical expectations, however, there is a growing body of evidence suggesting that neighborhood levels of IPV are influenced by the structural characteristics of neighborhoods, such as neighborhood racial and economic make-up (Benson, Fox, DeMaris, & Van Wyk, 2003; Browning, 2002; Lauritsen & White, 2001; Miles-Doan, 1998). Though provocative in that they appear to contradict theoretical expectations, these studies suffer from two shortcomings. First, data limitations have largely prevented previous researchers from using hierarchical modeling techniques in their analyses. Multilevel modeling is necessary in order to properly investigate the effects of individual and ecological variables (Raudenbush & Bryk, 2002) on outcomes such as neighborhood rates of IPV. Failure to use such techniques may lead to erroneous conclusions regarding contextual versus compositional effects on IPV. For instance, the correlated error between characteristics of individuals and the characteristics of the neighborhoods in which they live complicates the identification of their unique effects on the outcome. Standard pooled regression procedures may fail to take this correlation into account and thus over- or under-state the importance of compositional or contextual effects (Raudenbush & Bryk, 2002; Wilcox Rountree, Land, & Miethe, 1994). Thus, while previous research suggests that community characteristics do influence IPV, the case has not yet been shown conclusively.

The second shortcoming follows from the first. With respect to street crime, the influence of the structural characteristics of communities has been shown to operate via intervening social mechanisms, such as collective efficacy and informal social controls (Bellair, 1997; Lowenkamp, Cullen, & Pratt, 2003; Maimon & Browning, 2010; Mazerolle, Wickes, & McBroom, 2010; Morenoff, Sampson, &

Raudenbush, 2001; Sampson & Bartusch, 1998; Sampson & Groves, 1989; Sampson et al., 1997; Silver & Miller, 2004; Warner & Roundtree, 1997). Because of data limitations, most previous IPV research, with the exception of Browning (2002) which we will discuss below, has not modeled these intervening mechanisms. Instead, researchers have demonstrated only that various structural measures of neighborhood disadvantage are related to rates of IPV (Benson et al., 2003; Benson, Wooldredge, Thistlethwaite, & Fox, 2004; Lauritsen & Schaum, 2004; Lauritsen & White, 2001; Miles-Doan, 1998; VanWyk, Benson, Fox, & DeMaris, 2003). Thus, whether community characteristics influence IPV through the same intervening mechanisms as they do street crime is not yet known (Browning, 2002). The present study addresses both of these shortcomings and thereby extends our understanding of the linkages between communities and crime, specifically IPV. Using data from the Project on Human Development in Chicago Neighbor- hoods (Earls, Brooks-Gunn, Raudenbush, & Sampson, 2002), we investigate the effects of neighborhood disadvantage and collective efficacy on IPV, controlling for individual-level covariates. We examine two related questions. First, does neighborhood context matter to IPV, or more precisely, does the apparent relationship between neighborhood disadvantage and IPV represent a true contextual effect, or is it merely a reflection of compositional differences between neighborhood populations? Second, if neighborhood disadvantage does influence
IPV, is this effect mediated by neighborhood collective efficacy?

Community Context versus Population Composition

Marked variations in rates of crime across neighborhoods in US cities have long been observed. Associations have been documented between crime and such neighborhood features as community socioeconomic status, ethnic heterogeneity, residential mobility, family disruption, housing deterioration, residential overcrowding, and population density (Byrne & Sampson, 1986; Greenberg, Rohe, & Williams, 1982; Kasarda & Janowitz, 1974; Sampson, 1986, 1988; Shaw & McKay, 1942). That these associations remain despite the complete turnover of the resident populations suggests to some that the structural features of neighborhoods play a role in the etiology of crime (Bursik & Webb, 1982; Stark, 1987). However, neighborhoods are selective regarding the socio-demographic profiles of the residents they attract, and many of the structural characteristics that previous research has documented as covariates of crime are aggregated characteristics of individual residents. This connection between individual and structural characteristics complicates the identification of contextual effects.
As Sampson notes:

> An aggregate offense rate may be positively related to the percentage of the population that is black because blacks have a higher rate of offending than do whites (an effect of composition) or because blacks in cities with a large black population have higher offending rates than do blacks in areas where they are a minority (an effect of context). (Sampson, 1986, p. 275)

To determine whether neighborhood conditions independently influence the prevalence of any particular form of crime, individual-level covariates must first be controlled. This is necessary to rule out compositional differences between neighborhoods as the explanation for variation in neighborhood rates of crime.

Hierarchical modeling techniques (e.g., Hierarchical Linear Modeling (HLM), Raudenbush & Bryk, 2002) have been developed to address these concerns, and are increasingly being used in place of pooled regression techniques to deter- mine neighborhood effects on outcomes such as crime and victimization rates (e.g., Kubrin & Weitzer, 2003; Wilcox Rountree et al., 1994). Hierarchical modeling is preferred because of its ability to overcome potential sources of bias that may arise when using pooled regression techniques with multilevel data. Three common problems can arise when using pooled regression with multilevel data. First, correlated error can exist among individuals within aggregates because the individuals may not be randomly distributed across the aggregates. Second, heteroskedasticity might exist at the aggregate level because there may be unequal numbers of individuals existing within each aggregate. Finally, tests of null hypotheses at the aggregate level are based on the wrong unit of analysis because they are based on the number of *individuals* within the sample instead of the number of *aggregates* within the sample, which is the appropriate unit of analysis to examine (Raudenbush & Bryk, 2002).

Hierarchical modeling addresses these problems by acknowledging the nested nature of multilevel data. That is, hierarchical techniques recognize that individuals are not independent of the aggregates in which they live, and adjust for the potential problems created by correlated error. Hierarchical modeling also uses generalized least squares to address the heteroskedasticity that can result from unequal numbers of individuals existing within aggregates (Raudenbush & Bryk, 2002). Finally, multilevel modeling bases hypotheses tests at the aggregate level on the number aggregates in the sample instead of the total number of individuals in the sample. Hierarchical techniques have been found to provide reliable hypothesis tests, valid parameter estimates, and consistency in estimates across both individual- and aggregate-levels of analysis (Raudenbush & Bryk, 2002), and have thus become the techniques of choice to use with multi-level data.

It is important to note that the problems described above commonly arise in multilevel datasets where aggregate context impacts the outcome under investigation. While it is possible to adjust for some of these problems when using pooled regression techniques (e.g., using weighted techniques, see Lauritsen, 2001 for instance), hierarchical modeling has nonetheless become the alternative to pooled regression under these situations. Unfortunately, data limitations have precluded previous researchers[1] from using these techniques to examine neighborhood effects on partner violence. We address that limitation here. In doing so, we also investigate more completely than heretofore possible whether social disorganization theory can be applied to IPV.

1. With the exception of Browning (2002).

Individual- and Couple-level Predictors of Intimate Partner Violence

Traditionally, research on IPV has focused on characteristics of the individuals and couples involved in partner violence. At the individual level, a number of characteristics have been identified as significant predictors of IPV, including race, age, socioeconomic status (e.g., Bachman & Saltzman, 1995; DeMaris, Benson, Fox, Hill, & Van Wyk, 2003; Lockhart, 1987; Plass, 1993), employment and educational attainment (e.g., MacMillian & Gartner, 1999), alcohol and drug use (Kaufman Kantor & Straus, 1987), traditional gender ideologies (e.g., Sugarman & Frankel, 1996), and access to social support (e.g., Stets, 1991). Couple-level predictors include relationship status, such as being married, cohabiting, or dating (e.g., Yllo & Straus, 1981), and the number of children in the household (DeMaris et al., 2003).

Specifically, young minority females from low socioeconomic strata with low education and occupational attainment are most at risk to be victimized by IPV (Bachman & Saltzman, 1995). Also, women who abuse substances are at increased risk to experience as well as engage in this type of violence (Caetano, Schafer, & Cunradi, 2001; Kaufman Kantor & Straus, 1987) as are females who receive little to no support from others (Stets, 1991; Van Wyk, Benson, Fox, & DeMaris, 2003). Being in a relationship with a male who abuses substances or who ascribes to traditional gender role ideologies also increases women's risk of victimization (Caetano et al., 2001; Kaufman Kantor & Straus, 1987; Stith, Smith, Penn, Ward, & Tritt, 2004; Sugarman & Frankel, 1996; Thompson & Kingree, 2006). Women who are dating or cohabiting with their significant other but who are not married to them face the highest risk of being victimized (Stets, 1991; Yllo & Straus, 1981). Finally, the number of dependent children in a household also appears positively related to the likelihood of violence in the home (DeMaris et al., 2003; Voydanoff, 1990). Although a variety of theoretical accounts have been put forth to explain these relationships, we do not address them here. We include these measures in our study in order to determine whether neighborhood factors influence IPV after these known correlates of IPV have been accounted for.

Neighborhoods, Collective Efficacy, and Intimate Partner Violence

The influence of neighborhood characteristics on crime is often interpreted using social disorganization theory (Shaw & McKay, 1942). Contemporary formulations of the theory focus on the regulatory capacity of neighborhoods as they relate to local crime rates (Bursik, 1988, 1999; Sampson & Groves, 1989). This capacity is conceptualized as being embedded in the structure of friendship, interactional, and communication ties between residents of local areas (Bursik, 1999; Kasarda & Janowitz, 1974; Sampson et al., 1997). In theory, these ties can serve as sources of social control and internal regulation in communities. The most recent advances in the reformulation of social disorganization theory have been made by Robert Sampson and his colleagues, who argue that when social

ties are activated toward solving local problems they contribute to the collective efficacy of a neighborhood; in this regard, collective efficacy involves the strength of social bonds among residents and their willingness to work collectively to solve neighborhood problems (Sampson et al., 1997).

Contemporary disorganization theory holds that the degree to which community residents can establish strong relational networks is influenced by certain structural characteristics of neighborhoods, such as rates of residential instability and levels of concentrated economic disadvantage. For example, it is presumably more difficult to establish and maintain relational networks in communities characterized by rapid population turnover (Kornhauser, 1978). Likewise, residents of areas characterized by high-level social and economic disadvantage are likely to feel alienated, powerless, and socially isolated (Ross & Mirowsky, 2009; Stark, 1987). These feelings work against the development of collective actions to solve social problems like crime (Sampson et al., 1997). Thus, neighborhoods with high rates of residential instability and economic disadvantage are expected to have low collective efficacy and correspondingly high crime rates. As predicted, variation in collective efficacy has been found to influence street- related crime and violence rates in neighborhoods (Maimon & Browning, 2010; Mazerolle et al., 2010; Morenoff et al., 2001; Sampson & Raudenbush, 1999; Sampson et al., 1997). Indeed, with respect to a wide variety of street crimes, research has now established two important facts: (1) the empirical association between neighborhood structural characteristics and crime is at least partly contextual and not entirely compositional, and (2) the effects of structural characteristics on crime are at least partially mediated by collective efficacy.

The state of knowledge regarding potential neighborhood effects on IPV is currently at the same point that research on street crime was prior to the development of the systemic model (Kasarda & Janowitz, 1974) and the theoretical and methodological advances of Sampson and colleagues. A number of studies have found evidence of neighborhood effects on IPV (see Benson et al., 2003, 2004; Browning, 2002; Lauritsen & Schaum, 2004; Lauritsen & White, 2001; Li et al., 2010; Miles-Doan, 1998; VanWyk et al., 2003), but very little research has explored whether the connection between neighborhood structural characteristics and IPV arises because of variation in the regulatory capacity or collective efficacy of neighborhoods (e.g., Browning, 2002).

In one of the first examinations of neighborhood effects on IPV, Miles-Doan (1998) found that spousal violence was six times higher in areas of concentrated poverty than in other neighborhoods. Research by others has also indicated that disadvantage impacts neighborhood IPV rates. For example, Benson and colleagues found that concentrated disadvantage was related to an increased likelihood of IPV in couples (Benson, Fox, DeMaris, & Van Wyk, 2000; Benson et al., 2003; VanWyk et al., 2003). Consistent with social disorganization expectations, Lauritsen and her colleagues have reported that neighborhood disadvantage is associated with higher risk of victimization by intimates (Lauritsen & White, 2001) and indicators of disadvantage, such as the percentage of female- headed households in an area, maintain a direct effect on community rates of

violence against women (Lauritsen & Schaum, 2004). However, the direct effect of disadvantage on IPV may be relatively weak; Lauritsen and Schaum (2004) demonstrated that one-fourth of the relationship between community context and violence was accounted for by individual- or family-level predictors. Clearly, questions remain regarding the relative effects of contextual and compositional factors on IPV, and further research is needed to clarify these relationships.[2]

Compared to the research on neighborhood disadvantage, the influence of collective efficacy on partner violence has received much less attention. Again, this is largely due to data limitations. Nevertheless, it demonstrates how research in the area has so far failed to keep up with the recent methodological and substantive extensions of the systemic model. There are several reasons to expect that collective efficacy may lower neighborhood partner violence rates. First, collective efficacy involves residents' willingness to intervene for the common good of the neighborhood (Sampson et al., 1997). Men who live in neighborhoods that are high in collective efficacy may expect that neighbors will directly intervene if their wives or cohabiting partners tell others about the violence, and as such they may be less willing to engage in IPV. Thus, collective efficacy may function to deter IPV. Second, collective efficacy may increase the likelihood that an IPV victim will confide in a neighbor or seek help from them (Browning, 2002). Once the violence becomes publically known, the victim's friends and neighbors may then intervene either by helping the victim to leave the violent relationship or by confronting the offender about his behavior. Third, Bursik (1999, p. 95) argues that even if neighbors do not directly intervene in someone's misbehavior, a potential perpetrator may still be deterred from using violence because he believes neighbors could become aware of the misbehavior, and he could become the subject of gossip and ridicule. According to Bursik, this type of effect may even be stronger when the neighbors involved are not close friends but rather mere "nodding" acquaintances. Intimate friends are likely to know more of the exculpating or mediating details of an event. They also know the offender as a whole person, someone who has admirable traits that may counterbalance his or her occasional missteps. But for people who lack this intimate degree of familiarity with the offender, the act becomes the sole basis for judging his or her character. In neighborhoods where many people know one another, even if not intimately, once something like IPV becomes known outside the home, it is likely to spread quickly and widely. Involvement in even one instance of IPV may get one branded with the master status of "wife-beater" (e.g., Bursik, 1999).

2. While concentrated disadvantage has consistently been found to be related to IPV, the same does not appear to be true for residential mobility and IPV. For instance, neither Browning (2002) nor Benson et al. (2003) found residential mobility to be predictive of IPV. Because previous research has largely found residential mobility to be unimportant with respect to neighborhood IPV, we limited our analyses here to concentrated disadvantage and collective efficacy only. We did, however, conduct analyses with residential mobility included in our final models. It was not a significant predictor of neighborhood prevalence rates of IPV and did not change the substantive findings of the final models. It is therefore not reported.

Browning (2002) has conducted the only examination of collective efficacy and IPV to date. He used data from the PHDCN to measure collective efficacy, but he used data from a different study, the Chicago Health and Social Life Survey, to construct his measures of IPV. Using ordered logit models, Browning (2002) found that collective efficacy significantly reduced partner violence against females. However, after controlling for individual and relationship characteristics, he failed to find any relationship between the structural characteristics of neighborhoods (concentrated disadvantage, residential mobility, and immigration) and rates of severe IPV.[3] Accordingly, he concluded that his results "challenged the expectations of social disorganization theory with respect to the impact of neighborhood structure" on IPV (Browning, 2002, p. 848). There are reasons, however, to be cautious about this conclusion. Browning's (2002) analysis of IPV was based on a sample size of only 199 respondents distributed across 77 neighborhoods. As he (2002, p. 848) notes, having so few respondents in each neighborhood makes it difficult to identify neighborhood-level effects. Further, Browning (2002) found that collective efficacy was a powerful predictor of IPV, significantly reducing non-lethal severe partner violence against females even after individual and relationship factors had been considered. Taken together, Browning's (2002) results suggest that collective efficacy is the more relevant and proximate neighborhood influence on IPV than structural disadvantage. However, as our results will show, it is premature to conclude that the structural characteristics of neighborhoods have no effect on rates of IPV or that the impact of collective efficacy on IPV is stronger than that of disadvantage.

Our study moves beyond Browning's important work in several ways. First, our measure of IPV comes directly from the PHDCN Conflict Tactics Scale (CTS) Interview (e.g., Straus, 1979). Using the PHDCN data, we have a significantly larger sample than Browning. The larger sample size at our disposal permits us to disentangle the compositional and contextual effects on IPV using hierarchical Bernoulli modeling techniques to model the individual- and neighborhood- level predictors of IPV. Finally and most importantly, our findings suggest that the relationship between the structural characteristics and IPV may be more pronounced than demonstrated by Browning's (2002) results, while the relationship between collective efficacy and IPV may be weaker than he originally indicated.

3. Browning (2002) also conducted a macro-level analysis of concentrated disadvantage, immigrant concentration, and residential stability on intimate partner homicide (IPH). While he found that concentrated disadvantage significantly impacted partner homicide, we do not focus on those results here for two reasons. First, our outcome, severe IPV, is much different than partner homi- cide, and second, Browning did not examine the influence of disadvantage on IPH after individual- level characteristics (e.g., age, race, marital status) were accounted for. As mentioned, we are concerned with whether disadvantage and collective efficacy influence partner violence after indi- vidual-level correlates have been controlled.

Data and Methods

Data

This study used data from the Project on Human Development in Chicago Neighborhoods (PHDCN; Earls et al., 2002). The PHDCN involves a number of different units of analysis and data collection efforts. Overall, data were collected from 343 neighborhood clusters (NCs) in Chicago. The NCs were derived from 847 contiguous census tracts in the city. The census tracts were grouped by seven categories of racial and ethnic composition (e.g., 75% or more African-Ameri- can) and three levels of socioeconomic status (e.g., high, medium, low); based on these groupings, the census tracts were then collapsed into 343 NCs. Each of the NCs comprised about 8,000 residents.[4] From these NCs, data for the PHDCN were collected in different components. We used data from the Community Survey, the Longitudinal Cohort Study (LCS), and the 1990 United States Census to derive the measures needed for our investigation.

Individual-level predictors of IPV were created from data collected between 1994 and 1997, during the first wave of the LCS. The LCS sampled 6,228 children, adolescents, and young adults from 80 NCs and followed them over a period of seven years. However, the subjects' primary caregivers were also interviewed. The primary caregiver was considered to be the adult male or female who spent the most time taking care of the subject.[5] Young adult subjects of the LCS who were 18 years or older were also asked the same questions as the primary caregivers of younger children. Since our study is concerned with IPV against women in relationships, we focused only on female caregivers and female young adult subjects who reported being in a married, cohabiting, or dating relationship within the year prior to the PHDCN study. Hereafter, we refer to the subjects of this study (e.g., the female caregivers and young adult subjects[6]) as the respondents. Our final sample includes 4,640 respondents who reported being in a relationship during the year prior to the PHDCN study. Data on our dependent variable and the individual-level independent variables are taken from the LCS.

Data for the measure of collective efficacy were derived from the Community Survey portion of the PHDCN. The Community Survey took place between 1994 and 1995, and surveyed a sample drawn from all 343 NCs; residents were asked questions regarding their neighborhood's political and organizational groups, cultural values, social networks, informal and formal social control, and the level of social cohesion between neighbors. The Community Survey segment of the PHDCN followed a three-stage sampling design where city blocks were sampled within each NC, dwelling units were then sampled within blocks, and one adult resident was sampled within each dwelling unit. The present study

4. "Neighborhood clusters" and "neighborhoods" will be used interchangeably throughout the remainder of this study.
5. Most (93.2%) of the primary caregivers in the original PHDCN were females.
6. A total of 242 respondents (5.2%) of our final sample were young adult subjects.

examines the 80 NCs in which the individual respondents from the LCS were nested.[7]

Finally, to measure neighborhood disadvantage, data collected during the 1990 United States Census were abstracted. Recall that each NC was comprised of a number of contiguous census tracts. To provide census information at the NC level, staff at the Interuniversity Consortium for Political and Social Research (ICPSR) matched census tract information with corresponding NCs[8] and calculated census-derived information for each NC. This study uses the data created from ICPSR's endeavor to measure the structural characteristics of the 80 NCs in which the respondents resided.

Measures

Table 1 describes the measures used in this study. All level-one measures were provided by the respondents, and refer to characteristics of the individuals within the relationship (e.g., female's age, male's substance use) or characteristics of the couple (e.g., married, cohabiting, or dating). Because these measures are separate from the neighborhood-level variables, and for ease of interpretation, we hereafter refer to those measures as individual-level or level-one predictors.

Table 1 Descriptive statistics[1]

	$\bar{x}$	SD	Minimum	Maximum
Dependent variable				
IPV	0.15	0.35	0.00	1.00
Level-one independent variables				
Age	31.96	8.62	15.00	82.38
Education	1.97	0.93	1.00	3.00
Latino	0.46	0.50	0.00	1.00
African-American	0.33	0.47	0.00	1.00
Unemployment	0.49	0.50	0.00	1.00
Substance abuse by female	0.03	0.17	0.00	1.00
Substance abuse by male	0.09	0.29	0.00	1.00
Patriarchal views	0.42	0.49	0.00	1.00
Social isolation	0.00	1.00	□0.92	3.31
Family size	5.37	2.03	2.00	14.00
Income	3.95	1.94	1.00	7.00
Not married and cohabiting	0.16	0.37	0.00	1.00
Married and cohabiting	0.57	0.49	0.00	1.00
Level-two independent variables				
Concentrated disadvantage	0.00	1.00	□1.59	2.42
Collective efficacy	□0.01	0.22	□0.46	0.64

[1]Descriptive statistics are based on 4,640 individuals within 80 neighborhood clusters.

7. The data from the Community Survey were provided by respondents who were largely independent of the respondents in the LCS.
8. The matching process was conducted by researchers at ICPSR in order to ensure the confidentiality of the participants of the PHDCN.

Dependent variable

The outcome variable examined in this study was intended to tap the prevalence of severe female IPV victimization. We focus on the prevalence of IPV since this measure has been examined by previous researchers (e.g., Benson, Browning, Lauritsen) and is a standard measure used in the literature. Our measure of IPV was derived from the CTS (Straus, 1979) interview portion of the PHDCN. Respondents were asked how many times during an argument with their partner in the past year their partner had kicked, bit, or hit them with their fist; hit or tried to hit them with something; beat them up; choked them; threatened them with a knife or a gun; and used a knife or fired a gun. These acts of physical aggression are considered severe acts of violence (Straus, 1979; Straus, Hamby, Boney-McCoy, & Sugarman, 1996). IPV was defined as a dichotomous measure, indicating whether the female in the relationship had ever been victimized by any of the above acts of severe violence at least one time during the past year. Table 1 demonstrates that approximately 15% of the women in this sample experienced severe IPV at least one time during the preceding year. This estimate is similar to estimates derived from other large-scales surveys that employed similar operationalizations of IPV. For instance, the National Crime Victimization Survey estimates that approximately 11% of all violence occurs between spouses or non-married partners (Durose et al., 2005), while data from the National Family Violence Survey estimate that number to be over 16% (Straus, Gelles, & Steinmetz, 2006).

Independent variables

Level-one variables. The level-one independent variables were selected based on the relevant predictors of IPV discussed above and follow closely from previous analyses (e.g., Benson et al., 2003; Browning, 2002; Lauritsen & Schaum, 2004; O'Campo et al., 1995). In particular, the victim's age, education, race/ethnicity, employment status, substance abuse, and isolation, and their male partner's substance abuse and patriarchal views were considered to be key predictors of IPV victimization among females. *Age* is the female's age in years, while *education* was an ordinal measure indicating the highest level of education reached by the female (1 = less than high school …, 3 = more than high school). As shown in Table 1, females in this study, on average, were about 32-year old and most had not graduated from high school. Two separate dichotomous variables, *Latino* and *African-American*, tapped the race/ethnicity of the

female.[9] Forty-six percent of the females in this sample were Latino, while 33% were African-American. *Unemployment* denotes that the female was unemployed at the time of the study or had been unemployed during the year prior to the PHDCN study.

Male and female substance abuse was captured with two dichotomous variables (1 = yes, 0 = no). Substance abuse indicates that drinking and/or drug use were reported to have caused problems with the male's or female's health, family, or job, or resulted in encounters with the police. *Patriarchal views* indicated that the male partner in the relationship made most of the decisions in the relationship (coded as 1 = yes, 0 = no). The measure was designed to identify couples in which decision-making power was not equally shared between the partners. Table 1 shows that the male partner made most of the household decisions in 42% of couples.

A scale measuring social isolation among women was derived through principle components analysis of five items (eigenvalue = 2.099; □ = 0.622). Specifically, *social isolation* was composed of variables tapping whether the female has one or more friends that they can tell anything to; whether they feel close to some of their friends; whether they have family members who help them find solutions to their problems; whether they have friends who would take time to talk about their problems; and whether they feel alone even when they are with friends (reverse coded). Responses were given from one to three on a Likert-type scale (e.g., "very true," "somewhat true," "not true"). Higher numbers on this variable reflect higher levels of isolation.

Other level-one predictors of IPV included family size, income, and marital and cohabitation status. *Family size* reflected the number of biological and non-biological members of the family living in the household. *Income* was an ordinal variable (1 = < $5,000; 2 = $5,000–$9,999; 3 = $10,000–$19,999 …, 7 = > $50,000)
denoting the total maximum personal or household income earned in the past year. Most couples reported earning between $10,000 and $19,999 during this time period. *Not married and cohabiting* was a dichotomous variable indicating whether the couple was cohabiting, while *married and cohabiting* was a dichotomous variable indicating whether the couple was married and living together.[10] Most females (57%) in the current study were married and living with their partners during the PHDCN study period.

Level-two variables. The neighborhood-level variables assessed in this study were neighborhood concentrated disadvantage and collective efficacy. Based on research by Sampson et al. (1997), concentrated disadvantage was created through principle components analysis of the NC census data described above.[11] The *concentrated disadvantage* scale included the percent of residents in a NC who were below the poverty line, receiving public assistance,

9. Non-Latino white served as the reference category.
10. Partnered but not cohabiting served as the reference category.
11. Unlike Sampson et al. (1997), however, our principle components analysis was conducted only on the 80 NCs examined in this study.

African-American, unemployed, younger than 18-year old, and living under female-headed households (= 0.70).

To construct the measure of neighborhood collective efficacy, we followed the procedures used in previous analyses of the PHDCN data (e.g., Browning, 2002; Browning et al., 2004; Morenoff et al., 2001; Raudenbush & Sampson, 1999; Sampson & Raudenbush, 1999; Sampson et al., 1997). *Collective efficacy* measured the degree of informal social control and social cohesion between neighbors, and was derived from the Community Survey data. To assess informal social control, residents were asked the likelihood that neighbors could be counted on to intervene if:

(1) children were skipping school and hanging out on a street corner;
(2) children were spray painting graffiti on a local building;
(3) children were showing disrespect to an adult;
(4) a fight broke out in front of their house; and
(5) the fire station closest to their home was threatened with budget cuts.

Responses were given from one to five on a Likert-type scale ranging from "very unlikely" to "very likely."[12] Regarding social cohesion and trust between neighbors, residents were asked how strongly they agreed to the following statements:

(1) People around here are willing to help their neighbors.
(2) This is a close-knit neighborhood.
(3) People in this neighborhood can be trusted.
(4) People in this neighborhood generally don't get along with each other (reverse coded).
(5) People in this neighborhood do not share the same values (reverse coded).

Responses were given from one to five on a Likert-type scale ranging from "strongly disagree" to "strongly agree"[13] (see also Browning, 2002; Browning et al., 2004; Morenoff et al., 2001; Sampson et al., 1997). The internal consistency reliability of this scale at the NC-level was 0.85 (for more details regarding item response scale reliabilities across aggregates, see Raudenbush & Sampson, 1999; Sampson & Raudenbush, 1999).

A three-level item response model estimated using hierarchical modeling techniques (Raudenbush & Bryk, 2002) was used to construct the measure for collective efficacy. For this model, indicators of neighborhood collective efficacy were taken from residents' responses to the PHDCN Community Survey, as described above. The construct of collective efficacy cannot be directly

12. Following from Sampson et al. (1997), "Neither" and "Don't know" categories were combined and coded in the middle category of "neither likely nor unlikely."
13. Following previous research (e.g., Sampson et al., 1997), "Neither" and "Don't know" categories were combined and coded in the middle category of "neither agree nor disagree."

observed and is therefore considered a latent variable (Raudenbush & Bryk, 2002). Collective efficacy is instead measured by several indicators; these indicators are residents' responses to survey questions. Following Sampson et al. (1997), Browning (2002) and his colleagues (2004), and Morenoff et al. (2001), the item response model used the responses to the Community Survey questions to create the measure of collective efficacy. Like these researchers, the level- three residuals from the item response model were used in this study as the neighborhood scores of collective efficacy.[14]

Analytic Strategy

Recall that our research questions attempt to discern whether neighborhood context matters to IPV, and specifically, whether disadvantage and collective efficacy are predictors of this violence. Hierarchical statistical modeling techniques (Raudenbush & Bryk, 2002) were used to construct the measure of collective efficacy, as well as to estimate the separate and combined effects of individual- and neighborhood-level predictors on IPV. Two separate HLM models were used. The first was the three-level item response model that identified and created the measure of collective efficacy, described above. The second set of HLM models were two-level hierarchical Bernoulli models using HLM 6 (Raudenbush, Bryk, Cheong, Congdon, & Toit, 2004) software to examine the effects of neighborhood characteristics on neighborhood prevalence rates of IPV after individual-level effects had been examined.

The hierarchical analyses proceeded in several stages. The first step involved estimating an unconditional model to determine whether the variation in IPV between neighborhoods was significant as well as to estimate the amount of variation in IPV that existed at each level of analysis. This analysis revealed that IPV significantly varied across neighborhoods (p □ 0.001; □^{2} = 0.94964; □ = 0.23644). The second step involved the estimation of the random coefficients model to determine the effects of the individual-level (level-one) predictors on IPV. This model allowed for the examination of the significance of those effects, as well as a determination of which effects differed significantly across neighborhoods (at the p □ 0.05 level). The effects of females' race (e.g., Latino and African-American) and substance abuse as well as males' patriarchal views did not vary significantly across NCs, and were therefore "fixed" for the estimation of all subsequent models (e.g., intercepts-as-outcomes models, described below). All level-one predictors were grand mean-centered in order to remove the compositional differences between neighborhoods. The third step involved the examination of the main effects of neighborhood characteristics on the level-two outcomes (e.g., neighborhood rates of severe female IPV victimization).

14. Due to space considerations, a description of the item response model is not provided here. A full description of the model, however, is available from the first author.

This step also allowed all fixed and varying level-one predictors to influence IPV before the effects of neighborhood variables were estimated.[15]

Results

Tables 2 and 3 present the results of this study.[16] The results of the individual-level predictors in Table 2 demonstrate that older women living in higher- income households are less likely to be victimized by IPV, which is consistent with previous research (e.g., Bachman & Saltzman, 1995). African-American women and females whose partners abuse substances or who hold patriarchal views are more likely to be victimized by IPV, as are those in larger households and who are not married but living with their partners (e.g., Caetano et al., 2001; DeMaris et al., 2003; Kilpatrick, Acierno, Resnick, Saunders, & Best, 1997; Stith et al., 2004; Sugarman & Frankel, 1996). Non-significant variables included

Table 2 Random coefficients model predicting the prevalence of IPV[1]

	□	SE
Intercept	□1.44**	0.03
Level-one independent variables		
Age	□0.02**	0.00
Education	□0.06	0.04
Latino[2]	0.00	0.09
African-American[2]	0.21*	0.09
Unemployment	0.07	0.07
Substance abuse by female[2]	0.18	0.19
Substance abuse by male	0.46**	0.11
Patriarchal views[2]	0.18**	0.05
Social isolation	0.01	0.03
Family size	0.03*	0.02
Income	□0.05**	0.02
Not married and cohabiting	0.21*	0.10
Married and cohabiting	□0.08	0.09
□[2]	115.07**	
□[2]	0.69542	

*p □ 0.05; **p □ 0.01 (two-tailed).

[1]Results are based on 4,640 individuals within 80 neighborhood clusters.

[2]Coefficient does not vary significantly (p □ 0.05) across neighborhood clusters.

15. Although criminologists have begun to examine spatial effects in neighborhood-level research (e.g., Morenoff et al., 2001), we do not consider them here because the 80 NCs analyzed in this study were sampled using a stratified probability design from the larger 343 NCs described above, and are thus not all contiguous.

16. Collinearity was not a problem for any models presented (e.g., tolerance values >0.48, see Allison, 1999).

Table 3 Hierarchical Bernoulli level-two main effects on IPV (level-one intercepts as outcomes)[1]

	Model 1		Model 2		Model 3	
	□	SE	□	SE	□	SE
Intercept	□1.45***	0.03	□1.44***	0.03	□1.45***	0.03
Level-two variables						
Concentrated disadvantage	0.12***	0.04	—	—	0.11**	0.04
Collective efficacy	—	—	−0.25*	0.15	−0.06	0.14
□²	106.00***		113.80***		106.69***	
□	0.10765		0.14063		0.11209	
df	78		78		77	

*p □ 0.10; **p □ 0.05; ***p □ 0.01 (two-tailed).

[1]Based on 80 neighborhood clusters.

female education, Latino race/ethnicity, unemployment, substance abuse, social isolation, and living with one's spouse.

Turning to the neighborhood-level analyses, our results indicate that neighborhood factors significantly impact partner violence even after individual-level predictors have been accounted for. Model 1 in Table 3 shows that contrary to Browning (2002)'s findings, neighborhood-concentrated disadvantage is a powerful predictor of neighborhood prevalence rates of IPV, after controlling for individual-level predictors. These results indicate that IPV is more likely to occur in neighborhoods characterized by disadvantage and poverty. That concentrated disadvantage is a predictor of IPV further suggests that this type of violence is not only an individual-level phenomenon.

The finding that neighborhood disadvantage influences IPV also raises additional theoretical questions regarding the possible effects of collective efficacy on IPV. That is, does this intervening mechanism influence IPV in a fashion similar to its effects on neighborhood levels of street crime? Again, Browning (2002) found strong evidence that neighborhood collective efficacy reduced IPV. Model 2 in Table 3 shows that collective efficacy is a modest but significant predictor of neighborhood prevalence rates of partner violence. Neighborhoods characterized by high levels of cohesion among residents and who share a willingness to intervene in neighborhood problems experienced lower rates of IPV. Thus, it appears that collective efficacy functions as a protective factor against violence between partners just as it does with street crime, although its effect on IPV does not appear to be as strong as its effect on street crime.

However, contrary to Browning's (2002) findings, the results presented in Model 3 suggest that unlike its relationship with street crime collective efficacy does not mediate the relationship between disadvantage and neighborhood rates of IPV. As shown in Model 3, collective efficacy is not significant when it is included in the same model as disadvantage. Although the significance of disadvantage is reduced to the p □ 0.05 level, the magnitude of its

effect remained substantively unchanged in Model 3 compared to Model 1. Thus, our findings regarding disadvantage and collective efficacy differ from those reported by Browning (2002). While he found disadvantage to be unimportant and collective efficacy to be very important to IPV, we found that disadvantage was a stronger predictor of IPV and collective efficacy was a relatively weak predictor.

Discussion and Conclusions

In this study, we have attempted to advance the understanding of IPV and to explore the applicability of social disorganization theory to IPV, a "private" form of crime. First, we focused on determining whether the previously observed relationship between neighborhood context and IPV was contextual or compositional. We used HLM techniques to address this issue. Previous research has suggested that neighborhood disadvantage impacts neighborhood partner violence rates, but limitations in data and modeling techniques largely prevented accurate estimates of the true size of neighborhood effects. Lauritsen and Schaum's (2004) research suggested that up to one-fourth of the relationship between neighborhood factors and IPV could be accounted for by individual-level factors, indicating a strong compositional interpretation of the neighborhood disadvantage and IPV relationship. Browning's (2002) analysis also suggested that variation in IPV across neighborhoods was due to compositional differences in their resident populations, since neighborhood structural factors were not significant predictors of IPV when individual-level characteristics were accounted for. Our analysis, however, showed that neighborhood characteristics significantly influence the level of IPV within neighborhoods even after individual-level predictors have been controlled. Thus, although IPV is impacted by individual- level factors, it does not appear to be an entirely individual-level phenomenon. The answer to our first research question, then, is that the relationship between neighborhood disadvantage and IPV represents a true contextual effect and is not merely a reflection of compositional differences between neighborhood populations.

Second, we examined whether collective efficacy mediates the relationship between neighborhood disadvantage and partner violence, as it has been found to do with other outcomes (e.g., Browning, 2002; Sampson et al., 1997). We found that both structural disadvantage and collective efficacy are related to IPV, with disadvantage being the more powerful predictor of the two. Further- more, it appears that collective efficacy does not mediate the relationship between neighborhood disadvantage and IPV. Thus, contrary to Browning (2002, p. 848), our results suggest that the expectations of social disorganization theory regarding the impact of neighborhood structure on IPV are confirmed rather than challenged.

Exactly how concentrated disadvantage influences violence between partners remains an open question. There are several possibilities. First, regarding IPV,

disadvantage may operate in the same manner that it impacts ordinary street crime, that is, through informal social control. As posited by Kornhauser (1978) and Shaw and McKay (1942), disadvantage may hinder the formation and breadth of social ties between residents, which may then inhibit the application of informal social controls over abusive men, leaving women more vulnerable to violence from their partners (e.g., Stets, 1991).

Second, disadvantaged neighborhood conditions may produce more stress among couples who live there as opposed to couples who live in more advantaged neighborhoods. Disadvantaged neighborhoods are noisy, dilapidated, and crowded. They are physically unpleasant and stressful places to live (Stark, 1987), and fear of confrontations with others is an ever present reality (Ander- son, 1990, 1999). These stressful conditions may provoke depression, anger, and frustration in individuals that is expressed as violence against intimate partners (Ross & Mirowsky, 2009).

Finally, a third possibility is that neighborhood disadvantage may foster social isolation among residents, inhibiting the transmission among residents of mainstream values that disapprove of violence within relationships (see Warner, 2003; Wilson, 1987). If this were the case, however, we might expect to find a significant relationship between social isolation and IPV at the individual-level (which we did not find). One possible explanation of the null effect for social isolation is that our measure simply assesses whether the woman has friends or family members that she feels she could rely on, but it does not gauge whether or not she would actually ask them for help if needed. It is certainly possible that some victimized women do have friends but nevertheless choose not to ask for help or disclose the violence, while it is also possible that some isolated women may rely heavily on the few friends or family members that they have for help. We would also note that our findings regarding social isolation are not unique. Others have also found that measures of social isolation are not related to IPV at the individual level (see Benson et al., 2003). Further, we note that the composition of the sample in this study is unlike many IPV studies in that we include dating couples as well as those who are married or cohabiting. This may have affected our results regarding social isolation. Some research suggests that the social networks of married individuals work differently than those of individuals who have not been married (Hulburt & Acock, 1990), and as such, the networks may provide different levels of support to each group of women. The networks of married individuals tend to be denser and more kin-centered, while never-married individuals tend to have more non-kin friends. Hulburt and Acock (1990) suggest that the dense kin-centered networks of married people may provide more social support than the loose, more friendship-based networks of non- married individuals. Thus, our results regarding social isolation may have been affected if the networks of daters and married women work differently for each group of women.

Our results also have implications for the social disorganization perspective in general. We found that collective efficacy was significantly (although modestly)

related to neighborhood prevalence rates of IPV in the expected negative direction, but it does not appear to be as powerful an inhibitor of IPV as it is of ordinary street crime and it does not mediate the effects of neighborhood disadvantage on IPV. Some have suggested that this is to be expected in light of the private nature of IPV (Gelles, 1983; Sampson & Raudenbush, 1999). Our results, however, demonstrate that the intervening processes identified in the contemporary formulation of disorganization theory somehow do penetrate behind closed doors and are not limited to public places. The precise mechanisms by which collective efficacy protects women from partner victimization are still unknown, but we provide some speculations below.

There may be reason to expect that the effect of collective efficacy on IPV (or other private forms of violence) is partially contingent upon social ties or the level of integration of the perpetrator and/or the victim within the neighbor- hood (Bursik, 1999). That is, due to the private nature of violence between partners, neighborhood social ties with the victim or perpetrator may be necessary in order for others to gain knowledge of the violence. Once the violence is publically known, collective efficacy may then be relevant for intervention purposes. It has been suggested that the more integrated a couple is within the community (i.e., having more social ties or contacts with others), the more likely that social control could be enacted upon them from others (e.g., Stets, 1991; Van Wyk et al., 2003). Thus, the relatively weak effect of collective efficacy on IPV could be due to the fact that violent couples are less integrated into the community and thus less open to social control from neighborhood residents.

On the other hand, our results and those of Browning (2002) suggest that collective efficacy is related to IPV in some way. We suggest that the effect of collective efficacy on partner violence may be more indirect than direct. It is possible that collective efficacy is related to IPV *in*directly, via its effects on help-seeking among victimized women or by increasing other forms of social support among residents in a neighborhood. Browning's (2002) work in this area indicates this is certainly a plausible explanation—he found that collective efficacy increased the likelihood that victimized women disclosed their relationship violence to other people who could help. In addition, as we noted above, it is possible that the level of collective efficacy in neighborhoods influences the likelihood that events such as IPV will become public knowledge. If the likelihood that IPV will become public knowledge is high, then potential offenders may be deterred because they fear that they will become objects of gossip and ridicule. Nevertheless, in light of these conflicting theoretical expectations and empirical findings, it is probably premature at this point in time to draw firm conclusions about the effects of collective efficacy on IPV. Although the findings presented here conflict somewhat with those of Browning (2002), taken together the results from both studies indicate that the precise impact of collective efficacy on IPV remains an open question.

Several potential policy implications arise from the findings that neighbor- hood disadvantage fosters IPV while collective efficacy decreases it. For

instance, police officers patrolling disadvantaged areas and who respond frequently to calls in such neighborhoods would benefit from extra training regarding how to appropriately respond to partner violence situations (Benson & Fox, 2004). Further, these officers should be well acquainted with the service providers for domestic violence in or close to disadvantaged areas so that they can refer victims and offenders to the appropriate services when responding to calls for help. Services for IPV, such as domestic violence shelters, "safe zones," access to counselors, access to safety officers, and access to safe places for children of violent families should be strategically located in disadvantaged areas, as these are the more likely areas to have high concentrations of IPV problems and would thus service the population most at risk for experiencing IPV. Since collective efficacy involves social cohesion and trust among residents, then practices which seek to build relationships and cohesion between neighbors might be a way to begin building collective efficacy. Community programs which attempt to engage residents in neighborhood planning and decision- making might increase the community's capacity and involvement of residents; additionally, those programs that attempt to increase residents' feelings of belonging to or ownership of the community may work to build cohesion between residents (Mazerolle et al., 2010). Block-parties or organizational groups which encourage resident's participation and social engagements may also increase the likelihood that residents get to know one another.

Although we think our findings are meaningful, we must acknowledge some limitations of our study. First, we limited our analyses to severe forms of partner violence (e.g., beating up, choking, etc.) because we believe that severe IPV is a valid indicator of problematic violence between couples. However, other types of violence in couples (e.g., more minor forms) may be less amenable to neighborhood influences than we uncovered here. Future research may want to consider this possibility. Second, we utilized data collected during the CTS interview, where respondents reported to PHDCN interviewers. It is possible that respondents were not accurate in reporting IPV because they did not feel comfortable discussing such acts with strangers. However, we note that the CTS is a well-designed, highly-regarded survey instrument commonly used in IPV studies. In addition, the PHDCN represents a state of the art research program that employs highly trained interviewers to gather sensitive information from respondents. For these reasons, we continue to feel confident in the results of our study.

Overall, the results of this study help to solidify the conclusions found in other studies that neighborhood conditions influence the prevalence of IPV independently of the individual characteristics of their residential populations (e.g., Benson et al., 2003; Browning, 2002; Lauritsen & White, 2001; Miles-Doan, 1998). This pattern of results shows that the destructive effects of neighborhood poverty, disadvantage, and social disorganization extend inside the home and that IPV is not merely an individual- or couple-level problem. Like so many other crime-related problems, IPV has a sociological dimension, which neither policy-makers nor researchers should ignore.

References

Allison, P. D. (1999). *Multiple regression: A primer.* Thousand Oaks, CA: Pine Forge Press, Sage.

Anderson, E. (1990). *Streetwise: Race, class, and change in an urban community.* Chicago: University of Chicago Press.

Anderson, E. (1999). *Code of the street: Decency, violence, and the moral life of the inner city.* New York: WW Norton.

Bachman, R., & Saltzman, L. E. (1995). *Violence against women: Estimates from the redesigned survey.* Washington, DC: Bureau of Justice Statistics Special Report, U.S. Department of Justice.

Bellair, P. E. (1997). Social interaction and community crime: Examining the importance of neighbor networks. *Criminology, 35* (4), 677–704.

Benson, M. L., & Fox, G. L. (2004). *When violence hits home: How economics and neighborhoods play a role.* Washington, DC: National Institute of Justice.

Benson, M. L., Fox, G. L., DeMaris, A. A., & Van Wyk, J. (2000). Violence in families: The intersection of race, poverty, and community context. In G. L. Fox & M. L. Benson (Eds.), *Contemporary perspectives in family research: Families, crime and criminal justice* (Vol. 2, pp. 91–109). New York: Elsevier Science.

Benson, M. L., Fox, G. L., DeMaris, A. A., & Van Wyk, J. (2003). Neighborhood disadvantage, individual economic distress and violence against women in intimate relationships. *Journal of Quantitative Criminology, 19*, 207–235.

Benson, M. L., Wooldredge, J. D., Thistlethwaite, A. B., & Fox, G. L. (2004). The correlation between race and domestic violence is confounded with community context. *Social Problems,* 51, 326–342.

Browning, C. R. (2002). The span of collective efficacy: Extending social disorganization theory to partner violence. *Journal of Marriage and the Family, 64* (4), 833–850.

Browning, C. R., Feinberg, S. L., & Dietz, R. D. (2004). The paradox of social organization: Networks, collective efficacy, and violent crime in urban neighborhoods. *Social Forces, 83* (2), 503–534.

Bursik, R. J. (1988). Social disorganization and theories of crime and delinquency: Problems and prospects. *Criminology, 26* (4), 519–551.

Bursik, R. J. (1999). The informal control of crime through neighborhood networks. *Sociological Focus, 32* (1), 85–97.

Bursik, R. J., & Grasmick, H. G. (1993). *Neighborhoods and crime.* Lanham, MD: Lexington.

Bursik, R. J., & Webb, J. (1982). Community change and patterns of delinquency. *American Journal of Sociology, 88* (1), 24–42.

Byrne, J. M., & Sampson, R. J. (Eds.). (1986). *The social ecology of crime.* New York: Sprinter-Verlag.

Caetano, R., Schafer, J., & Cunradi, C. (2001). Alcohol-related intimate partner violence among white, black, and Hispanic couples in the United States. *Alcohol Research and Health, 25* (1), 58–65.

DeMaris, A. A., Benson, M. L., Fox, G. L., Hill, T., & Van Wyk, J. (2003). Distal and proximal factors in domestic violence: A test of an integrated model. *Journal of Marriage and the Family, 65*, 652–667.

Durose, M. R., Harlow, C. W., Langan, P. A., Motivans, M., Rantala, R. R., Smith, E. L., & Constantin, E. (2005). *Family violence statistics: Including statistics on strangers and aquaintances* (No. NCJ-207846). Washington, DC: Bureau of Justice Statistics.

Earls, F. J., Brooks-Gunn, J., Raudenbush, S. W., & Sampson, R. J. (2002). *Project on Human Development in Chicago Neighborhoods (PHDCN): Wave 1, 1994–1997.* Ann Arbor, MI: Inter-university Consortium for Political and Social Research, Grant 93-IJ-CX-K005.

Gelles, R. J. (1983). An exchange/social control theory. In D. Finkelhor, R. J. Gelles, G. T. Hotaling & M. A. Straus (Eds.), *The dark side of families: Current family violence research* (pp. 151–165). Beverly Hills, CA: Sage.

Greenberg, S. W., Rohe, W. M., & Williams, J. R. (1982). Safety in urban neighborhoods: A comparison of physical characteristics and informal territorial control in high and low crime neighborhoods. *Population and Environment, 5* (3), 141–165.

Hulburt, J. S., & Acock, A. C. (1990). The effects of marital status on the form and composition of social networks. *Social Science Quarterly, 71* (1), 163–174.

Kasarda, J. D., & Janowitz, M. (1974). Community attachment in mass society. *American Sociological Review,* 39, 328–339.

Kaufman Kantor, G., & Straus, M. A. (1987). The "Drunken Bum" theory of wife beating. *Social Problems, 34*, 213–230.

Kilpatrick, D. G., Acierno, R., Resnick, H. S., Saunders, B. E., & Best, C. L. (1997). A 2-year longitudinal analysis of the relationships between violent assault and substance use in women. *Journal of Consulting and Clinical Psychology, 65* (5), 834–847.

Kornhauser, R. R. (1978). *Social sources of delinquency: An appraisal of analytic models.* Chicago: University of Chicago Press.

Kubrin, C. E., & Weitzer, R. (2003). New directions in social disorganization theory. *Journal of Research in Crime and Delinquency, 40* (4), 374–402.

Lauritsen, J. L. (2001). The social ecology of violent victimization: Individual and contextual effects in the NCVS. *Journal of Quantitative Criminology, 17* (1), 3–32.

Lauritsen, J. L., & Schaum, R. J. (2004). The social ecology of violence against women. *Criminology,* 42, 323–357.

Lauritsen, J. L., & White, N. A. (2001). Putting violence in its place: The influence of race, ethnicity, gender, and place on the risk for violence. *Criminology and Public Policy, 1* (1), 37–60.

Li, Q., Kirby, R. S., Sigler, R. T., Hwang, S.-S., LaGory, M., & Goldenberg, R. L. (2010). A multilevel analysis of individual, household, and neighborhood correlates of intimate partner violence among low-income pregnant women in Jefferson County, Alabama. *American Journal of Public Health, 100*, 531–539.

Lockhart, L. L. (1987). A reexamination of the effects of race and social class on the incidence of marital violence: A search for reliable differences. *Journal of Marriage and the Family, 49* (3), 603–610.

Lowenkamp, C. T., Cullen, F. T., & Pratt, T. C. (2003). Replicating Sampson and Groves's test of social disorganization theory: Revisiting a criminological classic. *Journal of Research in Crime and Delinquency, 40* (4), 351–373.

MacMillian, R., & Gartner, R. (1999). When she brings home the bacon: Labor-force participation and the risk of spousal violence against women. *Journal of Marriage and the Family, 61*, 947–958.

Maimon, D., & Browning, C. R. (2010). Unstructured socializing, collective efficacy, and violent behavior among urban youth. *Criminology, 48* (2), 443–474.

Mazerolle, L., Wickes, R., & McBroom, J. (2010). Community variations in violence: The role of social ties and collective efficacy in comparative context. *Journal of Research in Crime and Delinquency, 47* (1), 3–30.

Miles-Doan, R. (1998). Violence between spouses and intimates: Does neighborhood context matter? *Social Forces,* 77 (2), 623–645.

Morenoff, J. D., Sampson, R. J., & Raudenbush, S. W. (2001). Neighborhood inequality, collective efficacy, and the spatial dynamics of urban violence. *Criminology, 39* (3), 517–559.

O'Campo, P., Gielen, A. C., Faden, R. R., Xue, X., Kass, N., & Wang, M.-C. (1995). Violence by male partners against women during the childbearing year: A contextual analysis. *American Journal of Public Health, 85* (8), 1092–1097.

Plass, P. S. (1993). African-American family homicide: Patterns in partner, parent, and child victimization, 1985–1987. *Journal of Black Studies, 23* (4), 515–538.

Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods* (2nd ed. Vol. 1). Thousand Oaks, CA: Sage.

Raudenbush, S. W., Bryk, A. S., Cheong, Y. F., Congdon, R., & Toit, M. D. (2004). *HLM 6: Hierarchical linear and nonlinear modeling*. Lincolnwood, IL: Scientific Software International.

Raudenbush, S. W., & Sampson, R. J. (1999). Ecometrics: Toward a science of assessing ecological settings, with application to the systematic social observation of neighborhoods. *Sociological Methodology, 29*, 1–41.

Ross, C. E., & Mirowsky, J. (2009). Neighborhood disorder, subjective alienation, and distress. *Journal of Health and Social Behavior, 50*, 49–64.

Sampson, R. J. (1986). Crime in cities: The effects of formal and informal social control. In A. J. Reiss & M. Tonry (Eds.), *Communities and crime* (pp. 271–312). Chicago: University of Chicago Press.

Sampson, R. J. (1988). Local friendships ties and community attachment in mass society: A multilevel systemic model. *American Sociological Review, 53*, 766–779.

Sampson, R. J., & Bartusch, D. J. (1998). Legal cynicism and (subcultural?) tolerance of deviance: The neighborhood context of racial differences. *Law & Society Review, 32* (4), 777–804.

Sampson, R. J., & Groves, W. B. (1989). Community structure and crime: Testing social-disorganization theory. *Amercian Journal of Sociology, 94*, 774–802.

Sampson, R. J., & Raudenbush, S. W. (1999). Systematic social observation of public spaces: A new look at disorder in urban neighborhoods. *American Journal of Sociology, 105* (3), 603–651.

Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science, 277* (5328), 918–924.

Shaw, C. R., & McKay, H. D. (1942). *Juvenile delinquency and urban areas: A study of rates of delinquency in relation to differential characteristics of local communities in American cities.* Chicago: University of Chicago Press.

Silver, E., & Miller, L. L. (2004). Sources of informal social control in Chicago neighborhoods. *Criminology, 42* (3), 551–583.

Stark, R. (1987). Deviant places: A theory of the ecology of crime. *Criminology, 25*, 893–909.

Stets, J. E. (1991). Cohabiting and marital aggression: The role of social isolation. *Journal of Marriage and the Family, 53* (3), 669–680.

Stith, S. M., Smith, D. B., Penn, C. E., Ward, D. B., & Tritt, D. (2004). Intimate partner physical abuse perpetration and victimization risk factors: A meta-analytic review. *Aggression and Violent Behavior, 10*, 65–98.

Straus, M. A. (1979). Measuring intrafamily conflict and violence: The conflict tactics (CT) scales. *Journal of Marriage and the Family, 41* (1), 75–88.

Straus, M. A., Gelles, R. J., & Steinmetz, S. K. (2006). *Behind closed doors: Violence in the American family.* New Brunswick: Transaction.

Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The revised conflict tactics scale (CTS2). *Journal of Family Issues, 17* (3), 283–316.

Sugarman, D. B., & Frankel, S. L. (1996). Patriarchal ideology and wife-assault: A meta-analytic review. *Journal of Family Violence, 11*, 13–40.

Thompson, M. P., & Kingree, J. B. (2006). The roles of victim and perpetrator alcohol use in intimate partner violence outcomes. *Journal of Interpersonal Violence, 21*, 163–177. Van Wyk, J., Benson, M. L., Fox, G. L., & DeMaris, A. A. (2003). Detangling individual-, partner-, and community-level correlates of partner violence. *Crime and Delinquency, 49* (3), 412–438.

Voydanoff, P. (1990). Economic distress and family relations: A review of the eighties. *Journal of Marriage and the Family, 52* (4), 1099–1115.

Warner, B. D. (2003). The role of attenuated culture in social disorganization theory. *Criminology, 41* (1), 73–97.

Warner, B. D., & Roundtree, P. W. (1997). Local social ties in a community and crime model: Questioning the systemic nature of informal social control. *Social Problems, 44* (4), 520–536.

Wilcox Rountree, P., Land, K. C., & Miethe, T. D. (1994). Macro-micro integration in the study of victimization: A hierarchical logistic model analysis across Seattle neighborhoods. *Criminology, 32* (3), 387–414.

Wilson, W. J. (1987). *The truly disadvantaged: The inner city, the underclass, and public policy.* Chicago: University of Chicago Press.

Yllo, K., & Straus, M. A. (1981). Interpersonal violence among married and cohabiting couples. *Family Relations, 30* (3), 339–347.