

**Intimate Partner Violence: An Examination of Ecological Factors**

by

**Sheetal Ranjan**

A dissertation submitted to the Graduate Faculty in Criminal Justice in  
partial fulfillment of the requirements for the degree of Doctor in Philosophy

The City University of New York

2009

© 2009  
Sheetal Ranjan  
All Rights Reserved

This manuscript has been read and accepted for the  
Graduate Faculty in Criminal Justice in satisfaction of the  
dissertation requirement for the degree of Doctor of Philosophy.

Dr. Maureen O'Connor, Ph.D.

---

Date

---

Chair of Examining Committee

Dr. Karen Terry, Ph.D.

---

Date

---

Executive Officer

---

Dr. James P. Lynch, Ph.D.

---

Dr. Juliana A. Maantay, Ph.D.

---

Dr. Chitra Raghavan, Ph.D.

Supervisory Committee

THE CITY UNIVERSITY OF NEW YORK

**ABSTRACT****INTIMATE PARTNER VIOLENCE:  
AN EXAMINATION OF ECOLOGICAL FACTORS**

by

Sheetal Ranjan

Adviser: Professor Maureen O'Connor, Ph.D.

Intimate Partner Violence has commonly been examined using an individual-psychological or a socio-structural perspective. Little research has examined IPV using an integrated approach. Specifically, little research has focused on understanding IPV in the context of neighborhood or ecology. In ecological studies the units of analysis are spatially defined population aggregates (Anselin, Cohen, Cook, Gor and Tita 2000). The Steering Committee for the Workshop on Issues in Research on Violence against Women, National Research Council clearly identifies the need for ecological research in relation to IPV: "The committee recommends research to estimate the extent of variation in violence against women among census tracts or small neighborhoods, police precincts or districts, or other theoretically meaningful social area aggregations. Research should also be aimed at determining which features of area composition influence rates and types of violence against women." (Kruttschnitt, McLaughlin and Petrie, 2004, p5). The

present study, therefore, uses both individual level and community level data to understand the features of area composition that influence IPV. A combination of primary data from survey participants and secondary data from the Census, Infoshare, New York Police Department (NYPD) and the Domestic Violence Research Unit of the NYS Division of Criminal Justice Services were modeled using Hierarchical Linear Models (HLM) software. The data were also geo-coded on electronic maps using Geographic Information Systems (GIS) software. Multi-level binomial regression results indicate no neighborhood effects for the survey sample, whereas Moran's I tests using Geoda software indicate significant spatial clustering of IPV rates in police precincts. Further, regression analysis shows that concentrated disadvantage ( $\beta=.55$ ), immigrant concentration ( $\beta=-.22$ ) and community violence ( $\beta=.31$ ) significantly predict IPV rate in police precincts accounting for about 71 percent of variance in the model.

This dissertation is dedicated to my mother  
Late Aruna Jain

## ACKNOWLEDGEMENTS

I thank my late mother for making education the topmost priority in my life and opening my eyes to social issues that affect the people around us. I thank my father from who I inherited a love for numbers, though I did not quite use it for balancing account books. My teachers through the years who taught me all that I needed to know to get here and most of all nurtured my quest for knowledge. God, you know I believe in you deeply. My husband who loves me so much and supports me in everything I do. My daughter and son who *still* think I am the smartest person around, I hope they will *always* think that way! I also thank them for their remarkable patience in the past five years and numerous adjustments they have made in their lives to allow mommy the time to work on her PhD. Thanks is due to my sister who has been my dissertation coach; and her husband who has been my statistics coach; my brother, who gave me the courage to come to the United States for my PhD; and all my friends and colleagues who have been extraordinarily supportive and helpful.

This dissertation would not have been possible without the support of many individuals who supported my academic work during the past few years. I thank Dr. Chitra Raghavan for generously allowing me use of data collected by her; Dr. Maureen O'Connor for just simply being the best mentor anyone can ever have; Dr. Juliana Maantay for teaching me so many things including GIS; Dr. Jim Lynch for patiently spending long hours helping me with the intricacies of multi-level models and making me embrace theory. I also thank Dr. Clear, Dr. Terry & Paul for all their help.

## TABLE OF CONTENTS

ABSTRACT .....	IV
ACKNOWLEDGEMENTS.....	VII
TABLE OF CONTENTS.....	VIII
TABLE OF TABLES.....	XII
TABLE OF EXHIBITS.....	XIII
<b>CHAPTER 1: INTRODUCTION .....</b>	<b>I</b>
PROBLEM STATEMENT .....	I
DEFINITIONAL AND MEASUREMENT ISSUES.....	5
<b>CHAPTER 2: THEORETICAL FRAMEWORK.....</b>	<b>8</b>
SOCIAL DISORGANIZATION AND COLLECTIVE EFFICACY .....	9
SUBCULTURAL THEORY.....	II
GENERAL STRAIN THEORY .....	19
COMMUNITY VIOLENCE AND IPV.....	23
<b>CHAPTER 3: REVIEW OF LITERATURE .....</b>	<b>25</b>
REVIEW OF THE ECOLOGICAL EFFECTS LITERATURE.....	25
REVIEW OF IPV LITERATURE.....	27
<i>Individual Factors</i> .....	28
<i>Social Factors</i> .....	31

REVIEW OF ECOLOGICAL IPV RESEARCH .....	34
<i>Review of Ecological IPV Research Organized by Data Source</i> .....	35
<i>Review of Ecological IPV Research Organized by Theoretical Framework</i> .....	38
RESEARCH QUESTIONS .....	43
<b>CHAPTER 4: MATERIAL AND METHODS.....</b>	<b>45</b>
DATASETS USED .....	45
<i>Primary Data from Survey Participants</i> .....	45
<i>Secondary Data Sources</i> .....	47
RESEARCH DESIGN.....	50
<i>Analysis-1: Dependent variable (IPV) from survey data</i> .....	51
<i>Analysis-2: Dependent variable (IPV) from police data</i> .....	52
UNITS OF ANALYSIS.....	53
STUDY VARIABLES .....	53
<i>Dependent Variables</i> .....	54
<i>Independent &amp; Control Variables – Individual Level</i> .....	57
<i>Independent Variables – Neighborhood Level</i> .....	59
<b>CHAPTER 5: DATA EXPLORATION .....</b>	<b>62</b>
CHARACTERISTICS OF SURVEY RESPONDENTS .....	62

<i>Demographic Information</i> .....	62
<i>Other Individual &amp; Social Variables</i> .....	67
<i>IPV Variables</i> .....	68
CHARACTERISTICS OF ZIP CODES.....	68
CHARACTERISTICS OF POLICE PRECINCTS .....	74
<b>CHAPTER 6: RESULTS OF ANALYSIS I</b> .....	<b>77</b>
EXAMINATION OF INDIVIDUAL LEVEL COVARIATES .....	77
EXAMINATION OF ZIP CODE LEVEL VARIANCE .....	79
MAPPING ZIP CODE LEVEL VARIABLES.....	84
SUMMING UP ANALYSIS I.....	91
<b>CHAPTER 7: RESULTS OF ANALYSIS II</b> .....	<b>94</b>
MAPPING POLICE PRECINCT LEVEL VARIABLES.....	94
EXAMINATION OF SIGNIFICANT SPATIAL CLUSTERING OF IPV .....	97
TESTING SOCIAL DISORGANIZATION THEORY, COMMUNITY VIOLENCE AND IPV .....	100
SUMMING UP ANALYSIS II.....	106
<b>CHAPTER 8: DISCUSSION</b> .....	<b>108</b>
ANAYSIS-I RESULTS, LIMITATIONS AND CHALLENGES.....	108
ANAYSIS-2 RESULTS, LIMITATIONS AND CHALLENGES.....	113

COMPARING RESULTS OF ANALYSIS I AND 2.....	115
CONNECTION TO THEORY.....	116
CONNECTION TO EXISTING LITERATURE .....	118
FUTURE DIRECTIONS.....	119
<b>APPENDIX-1: VISUAL REPRESENTATION OF THE THEORETICAL MODEL .....</b>	<b>122</b>
<b>APPENDIX-2: VISUAL REPRESENTATION OF INDIVIDUAL AND SOCIAL FACTORS.....</b>	<b>123</b>
<b>APPENDIX-3: TIMELINE OF IPV &amp; ECOLOGICAL FACTORS RESEARCH .....</b>	<b>124</b>
<b>APPENDIX-4: DATA SOURCES AND FINDINGS OF ECOLOGICAL IPV RESEARCH.....</b>	<b>125</b>
<b>APPENDIX-5: SURVEY INSTRUMENT.....</b>	<b>128</b>
<b>REFERENCES .....</b>	<b>162</b>

## TABLE OF TABLES

Table 1: Conflict Tactics Scale Items.....	55
Table 2: Demographic Characteristics of Survey Participants.....	63
Table 3: Financial Characteristics of Survey Participants.....	64
Table 4: Housing & Living Arrangements of Survey Participants.....	65
Table 5: Relationship Status of Survey Participants.....	66
Table 6: Other Individual & Social Characteristics of Survey Participants .....	67
Table 7: Descriptive Statistics of IPV .....	68
Table 8: Characteristics of Zip Codes in NYC (Census 2000) .....	69
Table 9: Characteristics of Zip Codes (Survey Responses) .....	70
Table 10: Characteristics of NYC Police Precincts (Census 2000).....	75
Table 11: IPV Rates in NYC Police Precincts (DIR 2004).....	76
Table 12: Total Counts of IPV & Other Violent Crimes in NYC Police Precincts.....	76
Table 13: Summary of Logistic Regression Analysis for Individual and Social Variables Predicting Any IPV victimization and Severe IPV victimization.....	78
Table 14: Multilevel Model Results Predicting Any IPV .....	82
Table 15: Summary of Logistic Regression Analysis for Neighborhood Variables Predicting Any IPV victimization and Severe IPV victimization.....	83
Table 16: Correlations of All Variables in Analysis-2.....	94
Table 17: Global Moran's I Statistics for DIR Partner Violence .....	99
Table 18: Descriptive Statistics of Social Disorganization and Community Violence.....	101
Table 19: Median IPV rates in NYC Police Precincts.....	102
Table 20: Summary of Regression Analyses for Variables Predicting DIR Partner Violence Rate .....	104
Table 21: Summary of Regression Analyses for Variables Predicting Criminal DIR Partner Violence Rate .....	105

## TABLE OF EXHIBITS

Exhibit 1: Number of Survey Participants by Zip Code .....	47
Exhibit 2: Address Level Information of NYC Homicide from <i>NY Times</i> .....	50
Exhibit 3: NYC Zip Code Percent Below Poverty .....	71
Exhibit 4: NYC Zip Code Percent Receiving Public Assistance.....	71
Exhibit 5: NYC Zip Code Percent Unemployed.....	72
Exhibit 6: NYC Zip Code Percent Under Age 18.....	72
Exhibit 7: NYC Zip Code Percent Female Headed Households.....	73
Exhibit 8: NYC Zip Code Percent Households not Moved Since 1995.....	73
Exhibit 9: NYC Zip Code Percent Owner Occupied Homes .....	74
Exhibit 10: NYC Zip Code Percent Foreign Born.....	74
Exhibit 11: NYC Zip Code Social Disorganization – Concentrated Disadvantage .....	84
Exhibit 12: NYC Zip Code Social Disorganization – Immigrant Concentration.....	85
Exhibit 13: NYC Zip Code Social Disorganization – Residential Stability.....	85
Exhibit 14: NYC Zip Code Community Violence – Homicide Rate .....	86
Exhibit 15: NYC Zip Code Collective Efficacy – Informal Social Control.....	86
Exhibit 16: NYC Zip Code Collective Efficacy – Social Cohesion .....	87
Exhibit 17: NYC Zip Code Neighborhood – Physical Disorder .....	87
Exhibit 18: NYC Zip Code Neighborhood – Alcohol & Drugs Disorder.....	88
Exhibit 19: NYC Zip Code Neighborhood – Criminal Activity Disorder.....	88
Exhibit 20: NYC Zip Code Exposure to Violence Score.....	89
Exhibit 21: NYC Zip Code PVCR – Avoiding Reaction.....	89
Exhibit 22: NYC Zip Code PVCR – Negative Reaction .....	90
Exhibit 23: NYC Zip Code PVCR – Helping Reaction .....	90
Exhibit 24: NYC Zip Code Minor IPV Victimization.....	91
Exhibit 25: NYC Zip Code Severe IPV Victimization .....	91
Exhibit 26 & Exhibit 27: NYC Police Precincts SD – Concentrated Disadvantage .....	95
Exhibit 28 & Exhibit 29: NYC Police Precincts SD – Residential Stability.....	96
Exhibit 30 & Exhibit 31: NYC Police Precincts SD – Immigrant Concentration.....	96
Exhibit 32 & Exhibit 33: NYC Police Precincts Community Violence.....	97
Exhibit 34: Moran’s I with Empirical Bayes Standardization .....	98
Exhibit 35: Moran’s I with Empirical Bayes Standardization .....	98

## CHAPTER I: INTRODUCTION

### Problem Statement

“Approximately 1.3 million women and 835,000 men are physically assaulted by an intimate partner annually in the United States” (Tjaden and Thoennes, 2000, p iv). A large scale representative survey by Tjaden and Thoennes (2000) reports that 22.1 percent of surveyed women and 7.4 percent of surveyed men reported they were physically assaulted by a current or former spouse, cohabiting partner, boyfriend or girlfriend, or date in their lifetime. In the same survey, it was reported that 1.3 percent of surveyed women and 0.9 percent of surveyed men reported experiencing such violence in the previous 12 months. By another measure, more in the realm of family conflict studies, where incidence of intimate partner violence (IPV) is not exclusively physical assault, but includes other forms of abuse, the rates of IPV are even higher with about 1 in 6 couples experiencing one act of IPV every year (Schafer, Caetano, and Clark, 1998; Straus and Gelles, 1986). These results suggest that IPV is a common phenomenon and needs thorough examination.

IPV rates in New York City (NYC) are especially alarming and a matter of great concern to the city. There were 71 family related homicides in 2006 (NYPD Website, 2006). Also, over 15,000 orders of protection were granted in a six month

period from January to June 2006. Eighty three percent of family related homicide cases had no known prior police contact and 94 percent of these cases had no current Order of Protection. These numbers encompass a broader definition of domestic violence (violence between people living under the same roof), but typically at least fifty percent of the above cited cases involve intimate partners (Hiselman, 1999). These figures suggest the seriousness and pervasiveness of IPV in NYC. A thorough examination of the factors associated with IPV in NYC provides a clearer picture of the problem to policy makers and service providers. Moreover, integrated analyses of individual, social and ecological factors that compare both survey and police data can inform our overall understanding of IPV and improve policy recommendations.

The Steering Committee for the Workshop on Issues in Research on Violence against Women, National Research Council clearly identifies the need for ecological research in relation to IPV. The report is based on the presentations and deliberations of a workshop convened in January 2002, at the request of Congress, to develop a detailed research agenda on violence against women. The committee asserts that,

Ecological factors affect not only rates of violence but also the effectiveness of legal sanctions and social interventions. A new program of research on

these issues is needed to address important aspects of neighborhood and community life and their implications for violence against women. For example, research should address how individual factors and area conditions interact to affect rates of violence against women and violence against men in the same social areas. (Kruttschnitt, McLaughlin & Petrie, 2004. p. 99).

While some of the research recommendations in a 1996 report have been funded and executed, the workshop demonstrated that important gaps remain. It has been argued that individuals are rooted within a community and that community factors may be pertinent in comprehending individual and family functioning (Yllo, 1984; Bronfenbrenner, 2005; Cicchetti and Lynch, 1993). Specifically, ecologically informed research with larger samples and larger communities enables further exploration into how violence in the community affects individuals' experiences with IPV. Including pertinent variables such as experiences and perceptions of violence in community and neighborhood structural characteristics might help in understanding the causes and consequences of IPV (Bogat, Levendosky, and Eye, 2005).

Though The Steering Committee for the Workshop on Issues in Research on Violence against Women - National Research Council has articulated the need for such research in its full report (Kruttschnitt et al., 2004), the possibility of actually conducting this research has been difficult for two reasons:

(I) Inter-disciplinary research examining psychological, sociological, criminological and ecological approaches that encompass a broad overview of the

problem has been uncommon because most empirical research is narrow in scope and discipline specific.

(2) Such studies have lacked statistical tools. With the development of Geographical Information Systems (GIS) in the 1970s and its wide availability in the software market since the 1990s, spatial analyses of data have been increasingly possible. Census information has also been available in GIS formats through the TIGER files of The Census (U.S. Census Bureau). Finally, developments in Multi-level Modeling theory in the 1980s (Raudenbush and Bryk, 1987) and the software Hierarchical Linear Models (HLM) to carry them out in the late 1990s (<http://www.ssicentral.com/hlm/history.html>) enabled estimation of the model at both the individual and community level of analysis.

One approach to addressing these issues is to conduct research specifically designed to uncover the spatial concentration of IPV and understand it in the context of ecological (or spatial, or environmental, or neighborhood, or macro) theories of crime. Within such a framework, IPV could well be concentrated in communities with low socio-economic status (Benson, Fox, DeMaris & Van Wyk, 2003; Benson, Wooldredge, Thistlewhite & Fox, 2004; DeMaris, Benson, Hill & Van Wyk, 2003; Cunradi, Caetano, Clark & Schaffer, 1999; Fox & Benson, 2002 &

2006; Miles-Doan and Kelly, 1997; Miles-Doan, 1998; Pearlman, Zierler, Gjelsvik, 2003; Wooldredge & Thistlewhite, 2003; Bartolo, 2001; Lauritsen & Shaum, 2001; Van Wyk, 1999; Van Wyk, Benson & Fox, 2003) or high levels of community violence (Raghavan, Mennerich, Sexton and James, 2006). Before presenting the theoretical considerations for these hypotheses, the next section will discuss definitional issues related to IPV, highlighting controversies concerning measurement.

### **Definitional and Measurement Issues**

How IPV is defined and measured greatly influences results and conclusions reached about its scope, prevalence, and impact. Measuring intimate partner violence is a current debate of national importance. The National Institute of Justice website states that “How researchers define terms and pose survey questions matters. Measuring intimate partner violence—often called “domestic violence”—can produce different results depending on the instruments used, the focus of the survey (crime, safety, health), and the severity of injuries” (Office of Justice Programs website). In the United States, two major prevalence surveys measure IPV: the Bureau of Justice Statistics (BJS) National Crime Victimization Survey (NCVS) and the National Institute of Justice (NIJ)/Centers for Disease Control and Prevention

(CDC)-sponsored National Violence Against Women Survey (NVAWS). The NCVS is the nation's primary source of information on criminal victimization. The partner violence data are a good measure of the frequency of occurrence, but IPV incidence is collected along with and within the context of general crime victimization. It is therefore believed that respondents would have the general crime context in mind while answering the survey and therefore might not provide a complete picture of partner violence. There is also the possibility that the NCVS may report less crime because it combines several different incidents in a 6-month period if the victim is unable to recall the details of each crime (<http://www.ojp.usdoj.gov/nij/topics/crime/intimate-partner-violence/measuring.htm>). Whereas, the NVAWS, uses the Conflicts Tactics Scale (CTS) reporting a much higher incidence of IPV because questions are more behaviorally oriented. These issues are further complicated by research design considerations and sampling methodology. Given all these factors, defining IPV is complicated. Nonetheless, a commonly accepted definition of IPV is: physical, sexual, or psychological harm by a current or former partner or spouse. This type of violence can occur among heterosexual or same-sex couples and does not require sexual intimacy. IPV can vary in frequency and severity. It occurs on a continuum, ranging from one hit that may or may not inflict pain or suffering on the victim to

chronic, severe battering. The main types of intimate partner violence are (Saltzman et al., 2002):

- (1) Physical violence,
- (2) Sexual violence,
- (3) Threats of physical or sexual violence
- (4) Psychological/emotional violence.

And a newer one, fast gaining prominence in the IPV literature,

- (5) Stalking

Other debates about measurement of IPV center on interviewing practices, training, sampling, mode of inquiry, situating the event in relation to others, etc (Walby and Myhill, 2001). These debates raise important issues, but the paucity of space preempts such a discussion here.

## CHAPTER 2: THEORETICAL FRAMEWORK

The primary intent of this research is to examine whether and to what extent IPV is concentrated in certain neighborhoods and, if so, then to understand why. The framework for understanding the ‘why’ of IPV spatial concentration in certain communities is grounded in ecological theories from the sociological and criminological literature (see Appendix-I for diagrammatic representation). Three theories have been used often in ecologically based research to explain community differences in crime rates: social disorganization, subculture and strain theories. Another perspective that has been less frequently examined but may be pertinent to IPV is the community violence framework. The present research examines the spatial concentration of IPV measured at the individual level. This study uses multi-level models to examine the relationship between individual level and community level variables and how community level variables might explain the expected concentration of IPV. An examination of these theories and framework is, therefore, essential to an understanding of “why” and “which” community factors account for this concentration. The next four sections present a discussion of these theories and frameworks.

## Social Disorganization and Collective Efficacy

*Social disorganization* is one of the most common community level perspectives used to examine a range of adverse outcomes such as crime and violence. Originally postulated by Shaw and McKay (1942) and further extended by Kornhauser (1978) the social disorganization theory postulates that neighborhood poverty, residential instability, and ethnic heterogeneity reduce a community's capacity to regulate local crime. In simple words, social disorganization refers to the inability of local communities to achieve the common goals and values of their residents or solve commonly experienced problems. It postulates that neighborhoods are regulated through private, parochial, and public institutions that serve as sources of social control (Kornhauser, 1978). Bursik (1988) can be credited with the revival of the social disorganization perspective. He took stock of the criticisms that were leveled at the theory and attempted to provide clarifications enabling its usage in more recent times to explain crime and violence in the context of neighborhoods (for a detailed discussion see Bursik, 1988). The social disorganization perspective achieved the status of a "classic" in the research of Sampson and Groves (1989). They used data from 238 neighborhoods from the British Crime Survey to test the mediating effect of social disorganization on the relationship between community level variables and crime rates. They contend that structural community level

variables such as urbanization, residential mobility, ethnic heterogeneity, socio-economic status, and degree of family disruption affect “formal” and “informal” social controls imposed by the community on both members and strangers. These effects are reflected in indicators of social disorganization such as reduced local friendship networks, involvement in organizations, and supervision of teenage peer groups. Social disorganization in turn reduces levels of social control and increases rates of crime and delinquency. Also, disorganization within society manifests itself in different forms. For example, a socially disorganized society may lack the wherewithal to mobilize itself to procure sufficient resources to meet the needs of the community. Later work provides further confirmation that social ties and social control help lower neighborhood crime rates (Bellair 1997, 2000; Elliott et al. 1996, Markowitz et al. 2001; Sampson 1997). Growing out of this body of research and specifically explaining how some neighborhoods have low rates of crime despite the existence of variables that represent social disorganization, the concept of collective efficacy was developed to explain how social control works to reduce crime.

*Collective Efficacy* is “social cohesion among neighbors combined with their willingness to intervene on behalf of the common good” (Sampson and Raudenbush, 1999). Collective efficacy captures the linkage of trust and intervention for the common good (Sampson, 1997; Sampson et al., 1999). Sampson’s multilevel

analyses in Chicago show that collective efficacy is negatively associated with neighborhood rates of violence, after controlling for individual-level characteristics and prior violence. Moreover, collective efficacy largely reduces the effects of concentrated disadvantage and residential instability on violence.

Through structural equation modeling, Veysey and Messner (1999) found that SES had a substantial indirect effect on crime ( $\beta = -.14$ ). The same test also revealed that unsupervised peer groups ( $\beta = .33$ ), urbanization ( $\beta = .22$ ) and family disruption ( $\beta = .21$ ) had the strongest direct effects on total victimization rate. These findings suggest that urbanization and family disruption can co-exist and have direct effects on crime. To further understand this linkage, the next section provides a discussion of urbanization theory within the subcultural framework.

### **Subcultural Theory**

Subcultural theory addresses the existence of groups of people within the larger structure of the society that have their own sets of norms, values and beliefs. Subcultural theory draws on differential association and social-learning theory stating that the norms and values of communities lead some individuals to believe that unconventionality or crime is a desirable or justifiable response in certain situations.

*Urbanism*: Subculture as a concept was introduced to understand the social effects of urbanism. “A "subculture" is a set of modal beliefs, values, norms, and customs associated with a relatively distinct social subsystem (a set of interpersonal networks and institutions) existing within a larger social system and culture.” (Fischer, 1975, p.1323). In plain terms what this implies is that even while existing within a larger culture, a certain group of people (subculture) follow their own set of beliefs, values, norms and customs. Within his theory of the subculture of urbanism (1980), Fisher made a set of propositions which he later refined in 1995:

- Larger places develop a greater number of specialized subcultures than do less populous ones and are therefore more culturally heterogeneous. For example, New York, the largest city in the US has a greater variety of subcultures.
- Subcultures in populous places are both more distinct and more intense compared to less populated places. Here “intensity” refers to the level of institutionalization within the subculture.
- Between-group contact leads to mutual influence.
- The more urban the place, the higher the rates of unconventionality.

Fischer (1995) argues that his theory has not been subject to empirical examination. While some research has tested his theory at the individual level (Tittle, 1989), in Fischer's view, little systematic research at the aggregate level has examined non-criminal deviance. He believes the test of this theory is when "places will be used as the unit of analysis; directly measuring intervening sub-cultural processes such as group concentration. . . .controlling for truly spurious factors and examining a range of subcultures (not just ethnic groups) and a range of unconventional outcomes (not just crimes) (Fischer, 1995)."

The present research is an ideal testing ground for this theory, especially because it meets Fischer's four requirements : the use of place as unit of analysis; controlling for other variables (individual/psychological and social) that can explain variance in IPV; examining subcultures based on ethnicity *and* immigrant status; and examination of an unconventional outcome such as IPV. The reason IPV fits the definition of an "unconventional" outcome is because IPV has not traditionally been considered a crime. For many years, IPV was within the realm of the household and considered the private affair of a couple; reporting of IPV is low even in recent times. Moreover, New York City has a large in flow of new immigrants who cluster in space for two reasons: it is one of the largest cities in the United States offering a large number of work opportunities and proximity to family and friends. While

examining the spatial concentration of IPV, it is probable that Fischer's sub-cultural theory of urbanism could explain why IPV is concentrated in certain communities (if at all). If a concentration of IPV is found in particular neighborhoods, it could be due to: patriarchal values brought in by new immigrants from their host cultures; lack of knowledge of how to behave in the new host culture; or strain from the process of acculturation and assimilation which manifests itself in the home where displays of aggression may be more acceptable than in public.

*Violence.* The sub-culture of violence theory was originally proposed to explain variation in homicide rates based on race (Wolfgang, 1966). The theory posits that while a subculture exists in society, no subculture can be totally different from or totally in conflict with the society of which it is a part. To establish the existence of a subculture of violence does not require that the actors sharing in these basic value elements express violence in all situations. The potential or willingness to resort to violence in a variety of situations is more important. The theory suggests that a violent attitude may be shared by all age-groups in the subculture but is most common from late adolescence to middle age. Violence in such subcultures is the norm and not adhering to it could result in sanctions or exclusion from the group. Drawing from differential learning and association theories (Sutherland, 1939), subculture of violence theory states that favorable attitudes towards use of violence

usually involves a process of learning marked by differential learning, association or identification.

Dietz (1968) applied this theory to inter-personal violence and presented a discussion of why people use violence in a subculture. She states that when violence is used as a punishment in a subculture, it is reserved for family members or subordinates. It can be meted out to those who violate the code of the group, regardless of sex. She outlines the reasons as follows:

- Retribution: as a form of punishment is more widely practiced in a violent subculture and more accepted in the larger culture. It is similar to the traditional “eye for an eye” types of punishment. It is usually accepted that in retribution the violence will go beyond the degree of injury that was suffered and will be comparable to the “indignity that was suffered from having been injured without justification” (p. 42).
- Control: in a subculture of violence, violence is a process to both prevent another from taking an action and to force others to comply. Examples cited include, punishing a child from preventing harm to himself. The primary objective of this type of violence is to ‘impose the will of the actor on the victim’ (p. 43).

- Prestige or position: Engaging in violence and coming out victorious is a measure of position in the violent subculture. This status is achievable by all age and sex groups in the subculture.
- Release of tension: Here, violence is compared to physical labor or sport; the other person is merely an “object” and the person is not responding to the victim personally, but rather as a response to one’s own “internal state”; the difference from real sport is that the victim is not a willing participant. Dietz proposes that the growing number of assaults is a result of not having socially acceptable situations for release of tension. She suggests that there are (maybe because of city life) no acceptable sources for release of physical energies. This explanation has striking similarities to the general strain theory discussed below.

She presents her explanations as features of interpersonal violence that are common in subcultures. The same can be applied to intimate partner violence as well. Research has examined control, power and gender status in the context of intimate partner violence (Anderson, 1998; Figuerdo, Corral, Frias, Bachar, White and McNeill, 2001; Hornung, McCullough, and Sugimoto (1981); Finkelhor, Gelles, Hotaling, and Straus, 1983; Gelles and Straus 1979; Straus 1973 and 1991),

but none has examined it ecologically in the context of subcultures. Also, the explanation of retribution in the context of indignity and release of tension can be uniquely applied in the context of IPV. These might not fall within mainstream norms of justification but can likely be justified within certain cultures. When these cultures migrate to urban neighborhoods and concentrate in certain localities they form subcultures where such norms are acceptable. The subculture of violence perhaps co-exists with the subculture of urbanism, or perhaps urbanism is conducive to the formation of subcultures of violence and this could possibly explain concentration of IPV in certain communities.

*Code of the Street*: Elijah Anderson's ethnography concerning the "code of the street" discusses a street level subculture drawing from social disorganization and strain theories (1998). He argues that a "code of the street" develops in response to conditions of life in impoverished inner-city communities. He discusses the economic, racial and social elements that have led to those conditions, emphasizing how deindustrialization and the movement from a manufacturing to service and high technology economy have left these neighborhoods with few jobs and made it impossible for inner-city residents to earn a decent living. More recently, at the 2007 annual meeting of the American Society of Criminology, he attributes the influx of immigrants as a contributing factor to lack of jobs in these neighborhoods. He

contends that welfare dependency, drug problems, and violence are not a consequence of “moral turpitude” but rather owing to economic forces that have destabilized black, urban plebeian life. He insists that much of this behavior stems from frustration and an incapacity to adapt to economic dislocation. The most interesting aspect of Anderson’s argument is his insistence that the individual not be blamed exclusively for this behavior. The socioeconomic structure of these neighborhoods caused by endemic joblessness and persistent racism is more blameworthy because it creates a vicious cycle engaging many young black inner city men and women in violence.

This research does not try to explain the establishment of the code of the street. Nevertheless, the powerful arguments put forth by Andersen are worthy of examination in the context of IPV. *Code of the Street* examines subcultural behavior through the lens of elements of social disorganization and strain theory; it discusses issues of poverty, mobility and frustration resulting in violent behavior. The present study explores some of the same theoretical concerns to understand whether those factors that produce the code of the street explains the prevalence of IPV in impoverished inner-city communities.

## General Strain Theory

Agnew (1999) extended his original General Strain Theory (GST) to explain community differences in crime rates. GST derives from relative deprivation theory but goes beyond that basic principle and describes additional ways in which community conditions may produce strain and generate criminal/violent responses to this strain. The main tenet of this theory is that community characteristics such as economic deprivation, inequality, large, dense, overcrowded neighborhoods and high population mobility all contribute to strain and reaction to strain.

*The failure to achieve positively valued goals:* Positively valued goals in almost all communities are economic success; status/respect; fair treatment devoid of class, race, or ethnic discrimination. Economic status is one of the factors that distinguish high crime from low crime communities. In low income communities, this goal blockage creates frustration with one's monetary situation and leads to both income generating crimes, aggression, and drug use (Agnes 1992; Agnew et al 1996; Wilson 1996). These communities cause goal blockage by placing emphasis on money, and deprivation in this context can cause severe frustration. In addition, the inability of communities to provide means of achieving economic goals further exacerbates the situation causing frustration. Also, close to the desire for money is

the desire for status (Cohen, 1955), especially “masculine status” (Messerschmidt, 1993). Individuals in such communities, especially non-whites, frequently face status problems (Anderson 1998; Brezina 1996; Cohen 1955). This inability to achieve the desired status can result in frustration and reaction to the stress in the form of aggressive behavior at home. Alternatively, an adoption of the “code of the street” or a tough disposition that counters very small slights in a violent manner (Anderson, 1998) may occur. The desire to be treated fairly can be another source of stress in such neighborhoods. Racial, ethnic, or class discrimination may result in an inability to achieve economic success and status (Anderson, 1998). That, with the knowledge of being discriminated against may result in negative individual responses. These negative responses may manifest themselves in IPV in the home.

*Relative deprivation:* Most goal blockages are seen not just in the context of the self but rather in comparison to others. In the context of New York City, most people travel in and out of their places of residence to places of work or education and are able to see and understand that the conditions of their life are quite different from others in the same city. Media representations of goals in combination with real life experiences may create a deeper understanding of relative deprivation and therefore a more severe reaction to it. Thus, relative deprivation may increase the overall level of crime within that community, perhaps beginning at the home-front

where the partner is the first target of such stressful reactions. This reaction can explain both male to female and female to male partner violence.

*Loss of positive stimuli/presentation of negative stimuli:* Strain results not only when others prevent you from achieving your goals but also when others present you with negatively valued stimuli and remove positively valued stimuli (Agnew 1992). Among the commonly faced negative stimuli are verbal slights or physical abuse. This in fact is the basis for formation of subcultures (discussed in earlier section). But this could be beginning of mild forms of IPV turning to more serious physical IPV. Within the GST, this has been identified as causing family disruption, exposure to a host of incivilities in communities, and social cleavages.

*Frequency of interaction with angry/frustrated people:* Agnew (1999) states that high crime communities not only produce angrier and more frustrated people but also increase the possibility of exchanges between them. This can cause increase in strain because such people are more likely to react to each other in a negative manner. For example, day-to-day interactions – on the street, in traffic, the subway or the grocery store in an overcrowded community may increase the level of stress and frustration which then produces a violent reaction first at home (causing family disruption) and then in the overall rate of crime within the community.

The GST encompasses **community characteristics** such as economic deprivation; inequality; large, dense, overcrowded neighborhoods; and high population mobility. It also includes **intervening factors** such as selection/retention of strained individuals; goal blockage accompanied by economic strain, status deprivation and discrimination; relative deprivation; loss of positive stimuli and presence of negative stimuli, including economic/job adversity, family disruption and other forms of abuse, social cleavages, and vicarious strain; frequency of interaction with angry frustrated people creating an **aggregated negative** affect such as anger or frustration. Other **conditioning variables** are also involved in this model of GST such as alternative goals and identities; public nature of adversity; external attribution of blame; low coping ability; low social support; low social control; opportunities for crime; values conducive to crime and the presence of criminal others. All of these factors contribute to a general increase in crime rates within a community.

The importance of GST is in its ability to explain the mechanism by which community-level variables influence crime rates. This research will examine the effects of ability to engage in legitimate behavioral coping, social support, or values conducive to crime (subculture argument) influence the likelihood of violent behavior in intimate relationships.

## Community Violence and IPV

A review of the theories above suggests that certain neighborhoods are indeed prone to higher levels of *all* crime and definitely more *violent* crime. It is, therefore, possible that a community with a high level of violence will likely show evidence of a high level of IPV. Much research has examined community violence in the context of other non-intimate crimes. It has been suggested that living in high crime neighborhoods may result in multiple experiences with violence, including being an offender, witnessing violence, or being victimized (Felson, 1997; Halliday-Boykins and Graham, 2001). Recent studies have started examining the relevance of community violence to IPV. Bogat, Leahy, Eye, Maxwell and Levendosky (2005), focusing on examining the mental health outcomes for abused women, made one of the first attempts to integrate individual- and neighborhood-level community violence data to examine women's experiences of IPV. The sample included 94 women who lived in communities for which the researchers were able to obtain officially recorded police crime data. The results indicated that community violence was not predictive of IPV (Bogat et al., 2005). Another recent study using a small urban sample of 50 low income non-shelter women reported that increased exposure to community violence was significantly associated with a higher level of IPV (Raghavan, Mennerich, Sexton, and James, 2006). Raghavan et al. (2006) did not

test for mediators between community violence and IPV but were able to offer some explanations. They suggested that being exposed to violence in the community could legitimize its existence in the private sphere. Alternatively, fear of crime from the violence outside the home could result in the ignorance of violence within the home front..

According to the overall theoretical framework, the same reasons (subculture, social disorganization, and general strain) that explain community violence may be able explain IPV concentration in communities. However, because high levels of community violence co-exist with high levels of IPV, the banalization of violence due to increased acceptance of it in the public sphere may have a unique effect on IPV.

## CHAPTER 3: REVIEW OF LITERATURE

While, the sociological and criminological theories discussed in the previous chapter present a framework for understanding IPV within the community, the ecological or neighborhood effects literature and the intimate partner violence literature merits a separate examination. This section first reviews the sociological and criminological literature on neighborhood effects and intimate partner violence literature drawn from sociology, criminology, and psychology. Next, it highlights recent efforts in understanding the effect of neighborhood on IPV and presents a thorough literature review of the ecological IPV research.

### **Review of the Ecological Effects Literature**

The recent advent of GIS technology spawned a growing interest in and ability to conduct neighborhood effects research. In an effort to synthesize the research and to examine its pitfalls, Sampson and Morenoff (2002) summarized the efforts of about 40 neighborhood effects studies (see Sampson and Morenoff, 2002 for a complete listing). They examined persistent patterns that link problem- and health-related behaviors with concentrated poverty and other indicators of residential differentiation. They identified consistent patterns over various studies:

- (I) Concentrated disadvantage and geographic isolation of African-

Americans are connected; (2) many social problems come bundled together at the neighborhood level such as crime, adolescent delinquency, social and physical disorder, low birth weight, infant mortality, school dropout, and child maltreatment; (3) concentrated disadvantage and geographic isolation are related in themselves - neighborhood predictors common to many child and adolescent outcomes include the concentration of poverty, racial isolation, high rates of single-parent families, and low rates of home ownership and length of tenure; (4) empirical results do not vary much with the operational unit of analysis. The place stratification of local communities in American society by factors such as social class, race, and family status is a robust phenomenon; and (5) the ecological concentration of poverty and affluence at the lower and upper end of the income scales, respectively, appear to have increased significantly during recent decades.

Based on the above examination, it is evident that certain “neighborhood effects” exist and may be correlated with crime, adolescent delinquency, social and physical disorder, school dropouts, and other variables. One challenging phenomenon that might benefit greatly from using an integrated approach to examine neighborhood effects along with known individual and social predictors is intimate partner violence. The primary objective of the current research is to conduct an integrated analysis to examine how these effects could be related to IPV.

While the research studies mentioned in Sampson and Morenoff (2002) provide the methodological foundation for this research, none of the forty studies have applied this approach to IPV. Other research not appearing in their article has applied the ecological framework to IPV, but before we begin to examine those, it is important to understand the current state of knowledge with regard to risk factors, explanations and variables related to IPV drawing from sociological, criminological, psychological, social work, feminist, nursing and other disciplines. Such an examination is called for because the present research is inter-disciplinary and attempts to provide an integrated view of the problem.

### **Review of IPV Literature**

There is a plethora of IPV research concerning individual (example: age, gender, etc.) and social factors (example: status incompatibility, support, etc.). The best understood variables are briefly discussed in the next two sections in order to develop a background for this research (also see Appendix-2 for a visual representation of the various individual and social factors).

### *Individual Factors*

*Age:* Research indicates that a woman's young age is a significant risk factor for abuse (Vest, Catlin, Chen, and Brownson, 2002) with an odds ratio of 2.65 (Walton-Moss, Manganello, Frye, and Campbell, 2005). *Gender:* With regard to gender as a risk factor for either victimization or perpetration, studies report conflicting results. Most studies report higher rates of male to female partner violence whereas others find similar rates (Archer, 2000; Straus, 2006). *Race:* Results of the relationship of race to IPV have been mixed, mostly because of the definitional issues and challenges in the classification of race and ethnicity categories. In addition, issues of race are often conflated by issues of gender, social class and income (Collins, 1991; Crenshaw, 1997). The literature indicates that African American and Hispanic women are subject to a greater risk of poverty which may in turn increase their risk for IPV (Benson, Fox, DeMaris, and Van Wyk, 2000; Van Wyk, Benson, Fox and DeMaris, 2003; Crenshaw 1997). More recent academic research suggests that intersections of race, class, and gender can make the experience of IPV unique and distinctive for different sub-groups (Della-Guistina, 2005). *Immigrant Status:* IPV in the immigrant population is a serious problem. The rates of IPV for immigrant women are much higher compared to the general population with about 30 to 50 percent of immigrant women experiencing physical or sexual

IPV (Dutton, Orloff and Hass, 2000; Raj and Silverman, 2002; Rodriguez and Brindis, 1995; Song, 1996) as compared to 22.1 percent in the general population as reported in the NVAW survey (Tjaden, 2000). *Level of education:* lacking a high school diploma doubles the odds of perpetrating IPV (Haj-Yahia, 1998; Walton-Moss, Manganello, Frye and Campbell, 2005). Other studies have reported that lower education level for females predicts their victimization. (Kyriacou et al., 1999). *Psychopathology:* Different studies report that psychopathological factors are both predicted by and predictive of IPV. Some studies predict PTSD or other mental health problems to be an outcome of IPV (Golding, 1999), whereas others predict that being in fair or poor mental health or experiencing it during adolescence increases the likelihood of abuse (Bogat et al., 2005; Keenan-Miller, Hammen and Brennan, 2007; Vest et al., 2002). *Alcohol and Substance Use:* Alcohol use by either the perpetrator or the victim is a strongly supported risk factor in IPV literature (Coker, Smith, McKeown and King, 2000; Cunradi, Caetano, and Schafer, 2002; Schafer, Caetano, and Cunradi, 2004). Research reports have indicated odds ratio of IPV ranging from 1.22 to eightfold for alcohol use (Walton-Moss, Manganello, Frye and Campbell, 2005; Cunradi, 2007; Lipsky, Caetano, Field and Bazargan, 2005). Increased risk of IPV with substance abuse has also been commonly reported (Coker et al., 2000; Cunradi, Caetano, and Schafer, 2002; Coker et al., 2000) with

an odds ratio of 1.94 (Walton-Moss, Manganello, Frye and Campbell, 2005). A recent meta-analysis examining the risk of IPV and its relation to alcohol consumption suggests that the relationship between the two may be biased by more frequent publication of positive rather than negative results. (Gil-González, Vives-Cases, Álvarez-Dardet and Latour-Pérez, 2006). *Relationship*: Living-in (not married), being single, divorced or separated increased the odds of victimization (Kenney and McLanahan, 2006; Lipsky et al., 2005; Vest et al., 2002; Walton-Moss, Manganello, Frye and Campbell, 2005; Kenney and McLanahan, 2006). Research also suggests that a relationship of greater than a year increases the odds of perpetration two-fold (Walton-Moss, Manganello, Frye and Campbell, 2005).

*Childhood Experience*: Life experiences that seem to increase the risk of victimization include witnessing parental violence (Lipsky et al., 2005; Whitfield 2003, Widom, 2000) and experiencing physical or sexual abuse in childhood (Schafer et al., 2004; Whitfield, 2003). It has also been noted that childhood physical and sexual abuse while living with a battered mother increases risk of victimization and perpetration more than three-fold for both men and women (Whitfield, 2003). Also, men who have experienced physical abuse as children are more likely to be perpetrators of IPV (Jurkovich, Rivara, Johansen and Maier, 2004). *Jealousy*: Numerous studies have established an association between jealousy

and IPV (Archer and Webb, 2006; Babcock, et al., 2004; DeSteno, Valdesolo, and Bartlett, 2006; Follingstad, Bradley, Laughlin and Burke, 1999; Holtzworth-Munroe, Stuart, and Hutchinson, 1997; Wilson and Daly, 1996). Several studies have also found distinct sex differences where men are more likely to act violently when jealous. Men known to be violent reported significantly higher levels of jealousy than non-violent men (Babcock, et al., 2004; Holtzworth-Monroe, et al., 1997).

### *Social Factors*

*Income, Poverty, Socioeconomic status:* Various studies have observed a strong relationship between low-income, high debts, job instability, perceived economic distress and IPV (Benson, Wooldredge, Thistlethwaite, and Fox, 2004; Firestone, Lambert and Vega, 2000). Low income of perpetrator and/or victim not only increases the likelihood of victimization but also increases the seriousness of IPV (Van Wyk et al., 2003). Women with low family incomes are more often victims of partner abuse of all types including physical, psychological, and sexual victimization (Haj-Yahia, 1998; Lambert and Firestone, 2000). Similar relationships were observed with a specific Black population (Cunradi, Caetano and Schafer, 2002). Though the income, poverty, and socio-economic status findings seem

plausible, there have been contradictory findings. McCloskey, for example, found no substantial relationship between total household income and wife abuse (McCloskey, Treviso, Scionti and Dal Pozzo, 2002, McCloskey, 1996). *Status Incompatibility*: mixed effects have been demonstrated in the literature. Partner violence is seen to be highest among couples where the male has no college education and the female is college educated. Violence is least likely among couples who are both college educated (Van Wyk et al., 2003). In a similar comparison about employment, men were found to use more coercive control tactics when their wives are employed and they are unemployed; being employed triples a woman's risk of being systematically abused, when her husband is unemployed (Gartner and Macmillan, 1999). *Gender Role Ideology and Marital Power*: The general sense is that couples who are egalitarian report the lowest levels of IPV (Yllo 1984; Coleman and Straus, 1986; Kim and Emery, 2003). Violence by males is quite high where the wife is a dominant decision maker and even higher where the husband is a dominant decision maker. In general husbands who have less power are found to be abusive towards their wives (Yllo, 1984; Babcock, Waltz, Jacobson and Gottman, 1993). It has also been seen that high dependency on marriage (economic and perceived) can result in more IPV experiences for women than those who have a low dependency on marriage; wherein perceived dependency was related to minor violence, economic

dependency was related to severe violence (Kalmuss and Strauss, 1982). Patriarchal beliefs are a primary predictor variable of IPV for college males who were respondents of the Violence against Women Survey (Schwartz, DeKeseredy, Tait, and Alvi, 2001; Schwartz and DeKeseredy, 2000; Lenton, 1995). Contrastingly, Sugarman and Frankel's findings do not support the patriarchal theory of wife assault (Sugarman and Frankel, 1996). *Social Support and Social networks:* Research about these in relation to IPV has been limited due to the different constructs used and varying methods of operationalization. Embeddedness in primary networks appeared to be more closely related with low spousal slapping for black couples than for white couples. For black couples increased number of years in the neighborhood; children; and non-nuclear family members were all found to be related to low levels of spouse abuse (Cazenave and Straus, 1979). Also, peer informational support was seen to directly affect the likelihood of perpetrating IPV (Schwartz et al., 2001; Schwartz and DeKeseredy, 2000; Silverman and Williamson, 1997).

While the individual and social factors discussed above present some account of IPV prevalence and associated risk factors, they do not provide a complete picture because they lack an integrated approach. Also, addressing these factors at the individual level does not explain the spatial concentration of IPV (if at all). First, it

is important to examine the spatial distribution of IPV. Next, an understanding of the community factors associated with IPV is required for two purposes: (1) to understand the reason for the spatial concentration; and with that understanding (2) to be able to provide community based solutions that will work towards resolving the problem at both the individual and community level. The next section explores ecologically grounded IPV research as a foundation and springboard for the present research.

### **Review of Ecological IPV Research**

As detailed in the timeline in Appendix-3, interest in ecological factors related to IPV started after the first study by Miles-Doan (1997). The few ecological IPV studies that exist can be categorized based on the data used (see Appendix-4 for data sources and findings). Most of these studies have combined census variables with their data to explain community level factors associated with IPV. A few have used multiple datasets from different sources to explore the spatial concentration of IPV. It is important to examine this literature with reference to the datasets used as it presents a clearer understanding of the strengths and limitations of the studies in the context of available data.

## *Review of Ecological IPV Research Organized by Data Source*

### *Police Reported Data*

A few studies have used police reported data (Miles Doan, 1998; Miles-Doan and Kelley, 1997; Pearlman, Zierler, Gjelsvik, and Verhoek-Oftedahl, 2003; Wooldredge and Thistlewhite, 2003; Bartolo, 2001; Bartolo and Carpenter, 2001) and have tried to explore the spatial concentration of IPV and its relation to community factors such as concentrated disadvantage, resource deprivation, and racial composition of neighborhood. These studies show a spatial concentration of IPV in disadvantaged and low socio-economic status neighborhoods, but due to the limitations of the datasets these studies cannot answer a number of crucial questions such as whether race is a critical variable. One study reports support for a racial invariance thesis (Pearlman et al., 2003) and one does not (Wooldredge and Thistlewhite, 2003). All of these studies have been important in shaping our understanding of spatial concentration of IPV, yet their influence in shaping theory is limited by their use of police data only. Police data provide limited variables for further analysis of spatial concentration of IPV; also, they do not represent unreported cases.

### *Survey Data*

Many studies in the ecological-IPV literature have used survey data to explore

the spatial concentration of IPV and neighborhood effects (Lauritsen and Schaum, 2004; Browning, 2002; McQuestion, 2003; Cunradi et al, 2002; DeKeseredy et al, 2003; Series of research by Benson, Fox, DeMaris and VanWyk, 1999, 2000, 2002, 2003, 2004 and 2006). These studies have used a number of extant datasets to explore the spatial concentration of IPV (see Appendix-4 for a complete listing of data sources and findings) and present a more nuanced understanding of spatial concentration of IPV as they examine more variables than is typically provided in police based datasets. These studies have their relative strengths and weaknesses based on the nature of the data source; the primary criticism being the limited scope of the measures used to elicit the data. Most of these studies are limited to measures and variables on the extant survey data set they are using. These datasets were not designed to address ecological questions. Also, in most surveys, the measure of the dependent variable (IPV) is not satisfactory because it is based on questions that are designed towards the objectives of the specific survey. For example, in the study by Lauritsen and Schaum (2004), which uses the National Crime Victimization Survey data, women who reported at least one incident of attempted or completed assault, robbery, rape or sexual assault over the past six months were coded as victims of violence. If the offender was a spouse, ex-spouse, boyfriend or ex-boyfriend it was coded as intimate partner violence. In the Benson et al analyses using the National

Survey of Families and Households, respondents are asked how often during the past year arguments with the respondent's spouse or partner resulted in the respondent hitting, shoving or throwing things at the spouse or partner. Respondents also are asked how often arguments resulted in the spouse or partner becoming similarly violent toward the respondent. Though these studies have been exploratory and important in understanding the spatial concentration of IPV, the abbreviated measures of IPV derived from the extant datasets do not provide a complete picture of IPV. This weakness has been acknowledged by the researchers.

### *Community Sample*

More recently a few studies have used small community samples to explore additional neighborhood factors, especially community violence and its relation to IPV (Bogat et al., 2005; Raghavan et al, 2006). One study found no linkage between community violence and IPV (Bogat et al., 2005), and one did (Raghavan et al, 2006). These are important first contributions suggesting the need for a more thorough analysis of a possible linkage.

None of the above studies have yet taken an integrated approach to studying IPV as they are limited by the datasets used (extant or police data). Also, none of the studies have used a combination of police and survey data allowing a comparison between the two. The next section organizes ecological IPV research and relevant

findings by theoretical framework used to better understand the strengths and limitations of these existing studies.

*Review of Ecological IPV Research Organized by Theoretical Framework*

*The Social Disorganization Model and IPV*

Some studies have tested (or attempted to provide explanations of) IPV in the context of social disorganization theory (Van Wyk, Benson, Fox and DeMaris, 2003; Benson, Fox, Demaris and Van Wyk, 2003; VanWyk, 2000). This set of studies has all been done using data from waves-I and -2 of the National Survey of Families and Households-1994 and Census data -1990. Van Wyk (2000) finds that male to female partner violence is lowest for couples who reside in neighborhoods that are less socially disorganized (3.5 percent) than those that are more socially disorganized (4.9 percent) with the rate increasing to 7.9 percent in neighborhoods that are highly disorganized. While this study indicates that the neighborhood context affects the likelihood of female IPV victimization, it does not specify if the same is also true for male victimization. Benson, Fox, Demaris and Van Wyk, (2003) report that controlling for violence at time-I and other individual characteristics, neighborhood economic disadvantage, neighborhood residential instability, male employment instability and subjective financial strain influence the

likelihood of violence at time-2. Another notable point is that the mean age of the sample in these studies was in the mid 40's, whereas, other research has indicated that the odds of victimization are highest in the 18-30 year range (Vest et al., 2002; Walton-Moss et al., 2005). For this reason, the present study focuses attention on survey participants who are college freshmen and fall in the younger age group.

### *Collective Efficacy Model and IPV*

DeKeseredy et al., (2003) set out to test the social disorganization-collective efficacy model using individual level data to measure “notions” or perceptions of collective efficacy. Four variables were measured and then combined to create a variable termed “collective efficacy,” they measured: (1) Social Ties (Involvement) with neighbors which measures how often people get together with their neighbors; (2) Social cohesion and trust reflecting how well people feel their neighborhood melds together; (3) Parochial control which is also referred to as informal social control (Sampson et al., 1997) and involves monitoring and watching over others and preventing public order offenses in the community; (4) Membership in Local Organizations tests the idea that formal organizations can tie neighbors together by fostering networks in the local community. The results of the study indicated a weak but statistically significant relationship between collective-efficacy and IPV. Also, it was observed that people who perceive their neighborhoods as being low in

collective efficacy are more likely to identify themselves as victims of intimate partner violence. In the NIJ-funded study by Block and Skogan (2001), where the units of analysis were individuals, no relationship between collective efficacy and IPV was observed. Conversely, Browning (2002) found a negative association between collective efficacy and non-lethal partner violence. More important, he found that it wields a more powerful regulatory effect on non-lethal violence where tolerance of IPV is less. Also, collective efficacy increases the likelihood that women will talk about IPV to sources of support. Support for this can be found in Morenoff, Sampson and Raudenbush (2001), who found that neighborhoods with higher collective efficacy have lower homicide rates.

The findings in this area may be mixed because of different operationalizations of the concepts and whether the data were individual or aggregate measurements. Browning (2002) was the only study that used data at both individual and aggregate level. Also, if collective efficacy is high, the likelihood is that the communities are able to mobilize the necessary support for political action and move policy to provide better services and thereby reduce violence.

### *Neighborhood Disadvantage and IPV*

A few other IPV studies have discussed social disorganization within the ecological framework but have tested variables related to poverty, concentrated

disadvantage or socioeconomic status (SES) (Miles Doan, 1998; O'Campo et al., 2005; Cunradi et al., 2000; Pearlman et al., 2003). Mean rates of spousal and intimate violence were found to be approximately six times higher in concentrated-poverty neighborhoods (Miles-Doan, 1998). In this study, concentrated poverty neighborhoods were defined as those with a component score more than twice the median for neighborhood resource deprivation, regardless of levels of structural density and mobility. Neighborhoods with high concentrations of residents living in poverty, of unemployed males, and of female heads of household with young children have dramatically higher rates of spouse and intimate violence than other neighborhoods (Miles-Doan, 1998). Van Wyk (2003) found that neighborhood disadvantage significantly affects risk of IPV, even when prior victimization is considered. In this study, neighborhood disadvantage indexed study respondents into quartiles based on (1) the percentages of single parents, (2) percent of non-white residents, (3) percent unemployed, (4) percentage of families on public assistance, and (5) percent below the poverty. For the first three quartiles, no relationship between disadvantage and IPV appeared. On the other hand, for the last quartile (representing the most concentrated disadvantage), the rate of IPV was found to be double that of any of the first three groups. Cunradi et al. (1995) also found similar significant results in the association between impoverished

neighborhoods and male to female partner violence with an odds ratio of 2.87 for black couples; they found significant results for female to male partner violence with an odds ratio of 2.35 for black couples and 4.12 for white couples.

Risk estimates calculated by Pearlman et al., (2003) showed an inverse relationship between IPV and socio-economic status of the neighborhood. Reports of IPV were 2.5 times greater in “poverty areas” than in areas where only 5 percent or less of the population was living below the poverty line. Similar patterns were seen in areas with high and low unemployment levels and high and low college graduates. Women living in relative poverty (20 percent or more of population living within 200 percent of the poverty line) were 3.5 times more likely to experience IPV. A linear regression model revealed that, for all women, increases in levels of poverty, unemployment, and under-education independently translated to increases in risk of IPV (Pearlman et al., 2003). Pearlman et al (2003) acknowledge certain limitations to their findings; the IPV rates were calculated using incident-based police reporting form, thus not capturing the unreported cases. Also reporting usually varies from precinct to precinct which may have an impact on the rates as well.

#### *Residential Instability, Ethnic Heterogeneity and IPV*

Yllo and Straus (1990) found that structural density and residential mobility were not significantly associated with rates of IPV, suggesting that high rates of

neighbor turnover and densely populated neighborhoods may not represent the danger of non-stranger violence that was originally expected and currently theorized. Regardless of both residential mobility and structural density, neighborhoods with concentrated poverty (those with a component score of twice the median level of resource deprivation) had six times higher rates of IPV than those without concentrated poverty. Rates of IPV were found to be significantly higher in those areas with higher rates of concentrated disadvantage (Yllo and Straus, 1990).

### **Research Questions**

Given the vast literature dedicated to understanding IPV in general and the relatively smaller body of literature examining the ecological correlates of IPV, this study presents an integrated approach to examining IPV complemented with GIS technologies adding to the emerging picture of IPV. This dissertation seeks to answer the following questions:

1. Do individual and social characteristics have an effect on the prevalence of IPV?
2. Do neighborhood community characteristics, controlling for individual and social characteristics, have an independent effect on the

incidence of IPV?

3. Is there any spatial clustering (concentration) of IPV?
4. Does (a) sub-cultural theory, (b) general strain theory, (c) social disorganization theory, or (d) community violence explain concentration of IPV in some communities?

## CHAPTER 4: MATERIAL AND METHODS

In an attempt to provide answers to the proposed research questions a comprehensive integrated approach will be used to study the individual and contextual effects using standard statistical procedures on a combination of datasets. The standard statistical procedures will be complemented with GIS analytical procedures to enable visualization and examination of significant spatial clusters of IPV. This chapter describes the datasets, the statistical techniques and provides an overview of the research strategy implemented.

### Datasets Used

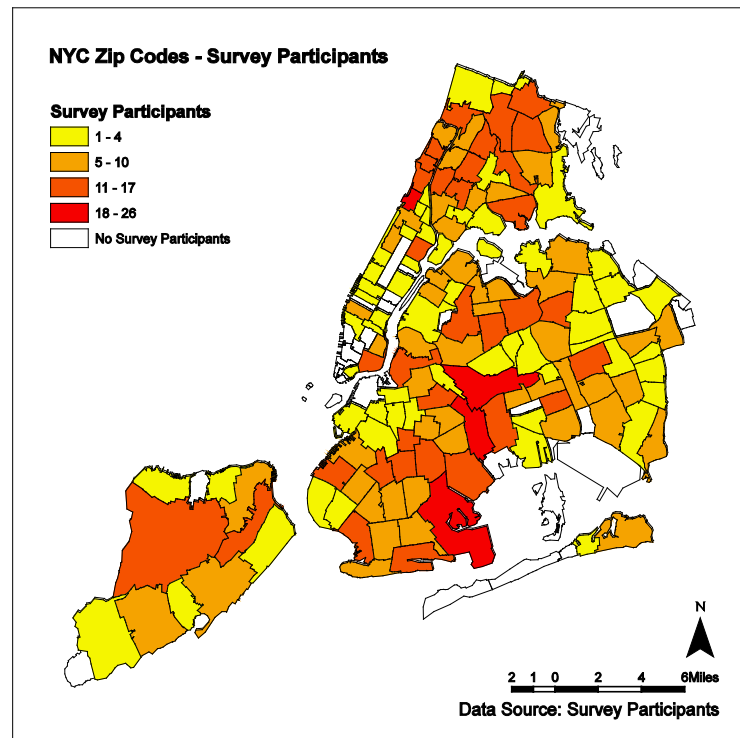
Multiple datasets from different sources were used for this dissertation. The next two sections describe these datasets and sources under two separate headings, individual level data derived from survey participants and secondary data derived from multiple sources.

#### *Primary Data from Survey Participants*

The individual level data was collected as part of a larger study on dating relationships by Dr. Raghavan and her colleagues (Raghavan, Rajah, Gentile, Collado, & Kavanagh, 2009). The participants included 1,121 undergraduate

students at a diverse, urban university in New York City (NYC). Students participated in a larger IRB approved study investigating dating relationships during a required class and received class credit for participating. The original dataset includes people who also reside outside NYC (for example Upstate New York or New Jersey). Only residents of NYC were selected for the present research because it is not feasible to conduct a community level analysis on the neighboring areas, making the current sample size  $n=1066$  at the individual level. Also, since there were no survey participants from some zip codes, the final zip code sample size was  $n=147$ . The final dataset included participants from across NYC (see Exhibit-I). The survey (Appendix-5) was exhaustive and included sections related to demographic information, general hassles, relationship behaviors, alcohol and substance use, mood and feelings, social support, stalking, everyday life, important life events, community, gender role attitudes, jealousy, and life satisfaction some of which provided independent, dependent and control variables for this dissertation. These variables were used (1) at the individual level and (2) aggregated to the neighborhood level to provide individual and community level correlates.

Exhibit I: Number of Survey Participants by Zip Code



### *Secondary Data Sources*

To investigate the neighborhood community factors that could have an effect on IPV, this study uses secondary data about New York City, procured, derived and compiled from a variety of sources. Most of these sources provide independent variables that are neighborhood level correlates. Domestic Incident Report (DIR) data also provide the dependent variable for one of the analyses in this dissertation. The secondary data sources and their descriptions are listed below.

### *Domestic Incident Report*

Domestic Incident Report (DIR) count data for NYC at the police precinct level was provided by the Domestic Violence Research Unit of Bureau of Justice Research and Innovation – New York State Division of Criminal Justice Services. This data includes DIR counts for all reported IPV incidents within police precincts, including all reported incidents and incidents classified as criminal. The Bureau provided data for the years 2003, 2004 and 2005. For the purposes of this analysis, data from year 2004 are used because the survey data is also from 2004. These data serve as the dependent variable in some of the analyses.

### *NYC GIS Files*

Spatial data about community districts were downloaded from BYTES of the BIG APPLE. This is a family of software, data, and geographic base map files for the City of New York maintained by the NYC Department of City Planning. It is available at <http://www.nyc.gov/html/dcp/html/bytes/applbyte.shtml>. These files (date of data: September 2008) are essential to conduct spatial analyses for New York City in geographic mapping software.

### *Census Files*

Census data for the year 2000 were downloaded from the US Bureau of The Census website ([www.census.gov](http://www.census.gov)) for the zip code level information and from

Infoshare <sup>1</sup> ([www.infoshare.org](http://www.infoshare.org)) for the police precinct level information. Relevant community variables were downloaded consistent with the theoretical framework from SF-1, SF-2 & SF-3 tables of the census: population, households, families, poverty, public assistance, unemployment, age, race, female headed households, people in households longer than five years, owner occupied and foreign born.

### *NYC Homicide*

Given the accurate reporting of homicide, it is often used as a reliable indicator for violent crime (Sampson, Raudenbush & Earls, 1997). These data are available as counts within police precincts and are usually unavailable at the address level, but in an unusual investigative report the *New York Times* made address level information available at its website at

[http://www.nytimes.com/packages/html/nyregion/20060428\\_HOMICIDE\\_MAP.htm](http://www.nytimes.com/packages/html/nyregion/20060428_HOMICIDE_MAP.htm). The information for each incident is available as a marker on the map. See

Exhibit-2. These addresses were read one at a time from the map and the incidents were entered into excel spreadsheets and geo-coded to NYC maps as point data.

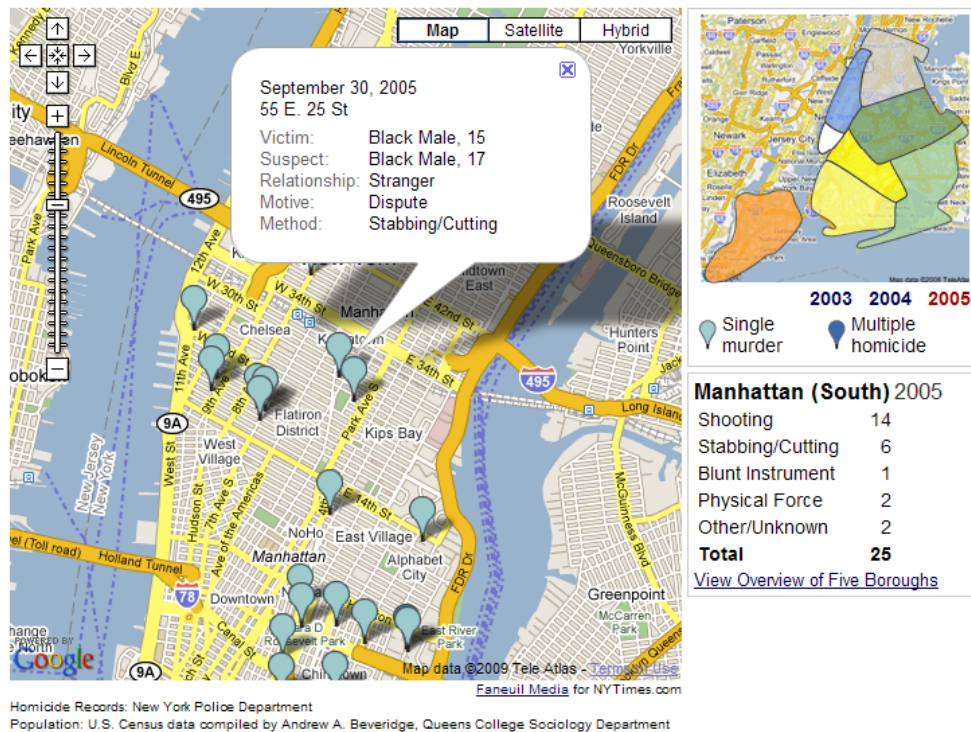
Point data provide total control for use within any neighborhood aggregation for

---

<sup>1</sup> Infoshare Online is hosted and maintained by Community Studies of New York, Inc., a non-profit corporation based in New York City. Infoshare is a sophisticated tool that lets researchers view and analyze a vast array of community and regional data. Infoshare Online includes over 3000 neighborhood definitions and 50,000 items of data gathered during the last decade on the neighborhoods of New York City and New York State.

both GIS and multi-level analyses. With the use of GIS this data can be manipulated for use at any level of ecological aggregation.

Exhibit 2: Address Level Information of NYC Homicide from *NY Times*



## Research Design

Using the above mentioned datasets and HLM6 (Hierarchical Linear Models, version 6) this research examines the ecological factors for IPV outcomes in the same manner as recent criminological research has done for a variety of outcome variables (Browning 2002; Raudenbush and Bryk, 2002; Sampson et al., 2002;

Taylor, 1997; Wright 2008). Also, in the manner of some studies across disciplines that have started using a combination of multi-level models and spatial models to compare ecological effects (Finklestein, Khavjou & Will, 2004; Merlo & Chauvin, 2006), this dissertation uses both multi-level statistical models and spatial methods to understand the ecological factors associated with IPV. It utilizes two strategies for analysis: (1) one is based on the analysis of survey data where individual responses are systematically linked with neighborhood level information obtained from the survey participants and neighborhood level information from secondary sources such as census and homicide; (2) the other is based on the analysis of the Domestic Incident Report (DIR) data where the rates of partner violence in each police precinct are systematically linked with information about the precinct such as census variables and homicide rate. The logic of these two analyses and the steps followed are discussed below.

*Analysis-1: Dependent variable (IPV) from survey data*

1. The individual level covariates of IPV are examined using standard logistic regression procedures in SPSSv15 software (Statistical Package for Social Sciences, version 15).
2. The community level variance and related covariates are examined using HLMv6

(Hierarchical Linear Models, version 6).

3. ArcMap9.2 (Geographic Mapping Software) is used to map IPV and community level variables in each neighborhood in NYC to enable visual interpretation.

*Analysis-2: Dependent variable (IPV) from police data*

1. ArcMap9.2 is used to map IPV and community level variables in each police precinct.
2. GeoDa<sup>2</sup> is used to examine statistically significant spatial clustering of IPV rates from the police data.
3. ArcMap9.2 and SPSS are used to replicate Miles Doan (1997) analysis and to test social disorganization theory using police and community data.
4. OLS regression models are built using social disorganization and community violence variables.

---

<sup>2</sup> GeoDa is the latest incarnation of a collection of software tools designed by Luc Anselin and associates to implement techniques for exploratory spatial data analysis (ESDA) on lattice data. It is intended to provide a user friendly and graphical interface to methods of descriptive spatial data analysis, such as autocorrelation statistics and indicators of spatial outliers.

## **Units of Analysis**

The units of analysis in this research are driven by two levels in the multi-level model and the two analyses discussed above. They are:

(1) Individual level - based on psycho-social characteristics, behavior and attitudes of the survey participants. This was used only in analysis-I.

(2) Neighborhood level, based on characteristics of the neighborhood derived from various secondary datasets and variables from survey data aggregated to the community level. Two units of analysis were used at the community level (a) Zip code for analysis-I and (b) police precinct for analysis-2. The selection of these units of analysis is guided by theoretical and practical considerations.

## **Study Variables**

The study variables for this research are derived from a variety of sources (as detailed above) including the survey instrument (see Appendix-5). The survey instrument was designed to capture information on a wide variety of variables. The scales/variables pertinent to this analysis are detailed in the following sections.

### *Dependent Variables*

#### *Survey Data*

The survey data included questions from the Conflicts Tactics Scale (CTS2). (Strauss, Hamby, Boney-McCoy, and Sugarman, 1996). The CTS2 is the most widely used instrument for measuring violence against a partner in a dating or marital relationship. It is a self-report measure that includes questions to measure both victimization and perpetration of violence between partners. It measures victimization in the past 12 months. The responses to each question are indicated on a six-point scale (0 = never happened to 6 = happened more than twenty times). The CTS has reliability coefficients ranging from .34 to .94, with a mean of .77 (Straus 2004) and have also been used in national surveys such as National Family Violence Survey (Straus and Gelles, 1990), the National Violence Against Women Survey, and the National Survey of Child and Adolescent Well-Being.

In analysis-I prevalence of partner violence victimization was used as a dependent variable. Specifically this was categorized into two types of victimization: (1) Any IPV victimization, which included an affirmative response to any one of the items that measure minor or severe violence; (2) Severe IPV victimization, which included an affirmative response to any one of the items that measure severe violence. The variables were coded dichotomously with 0 = no and 1 = yes. For

details of questions that characterize the different categories of violence see Table-I.

These two variables measuring IPV prevalence were used in the logistic regression models, the multi-level models and as counts in the GIS models.

**Table I: Conflict Tactics Scale Items**

<b>Minor IPV items</b>	<b>Yes %</b>
My partner grabbed me	28.5
My partner pushed or shoved me	24.7
My partner twisted my arm or hair	15.2
My partner threw something at me that could hurt	14.9
My partner slapped me	13.8
<b>Severe IPV items</b>	
My partner punched or hit me with something that could hurt	10.2
My partner choked me	7.8
My partner beat me up	6.5
My partner slammed me against the wall	6.3
My partner used a knife or gun on me	5.5
My partner kicked me	1.1
My partner burned or scalded me on purpose	0.9

#### *Domestic Incident Report (DIR) Data*

DIR data are used for analysis-2 in this research. New York State law mandates that the Domestic Incident Report (DIR) (NYS DCJS 322I-6/2005) be used in the reporting, recording and investigation of *all* alleged domestic incidents, regardless of whether an arrest is made,<sup>3</sup> and regardless of whether a crime has been

---

<sup>3</sup> Refer to the New York State Criminal Procedure Law Section 140.10(5) and the New York State Executive Law, Section 837(15).

committed.<sup>4</sup> A domestic incident can include any disturbance, dispute, violence - threatened or actual- or report of an offense between individuals within a domestic relationship where police intervention occurs. A domestic incident is not necessarily a violation of law. DIR User Guide (2005) states that domestic violence is a pattern of behavior involving coercion exerted by one family member or intimate partner over another with the goal of establishing, demonstrating, or maintaining power and control. The guide mandates that officers shall respond to and document all domestic incidents reported to the police. In the course of their investigation, officers must determine whether or not domestic violence is occurring.

The DIR captures all incidents, but for the purposes of analysis-2 the dependent variables are counts of (1) of intimate partner incidents and (2) criminal partner incidents reported in the year 2003. Intimate partner incidence are those DIR reports where the incident was reported between married, divorced, co-habiting and non-cohabiting or other intimate partners and includes both same-sex and heterosexual couples. Criminal partner incidents are incidents involving disorderly conduct, harassment in the first degree, harassment in the second degree, aggravated harassment in the second degree, stalking in the first degree, stalking

---

<sup>4</sup> NYS Model Domestic Violence Policy for Counties, NYS Office for the Prevention of Domestic Violence, January 1998.

in the second degree, stalking in the third degree, stalking in the fourth degree, menacing in the second degree, menacing in the third degree, reckless endangerment, assault in the second degree, assault in the third degree or an attempted assault between spouses or former spouses (Cr. Procedure Law, Sec § 530.11).

### *Independent & Control Variables – Individual Level*

To understand IPV using an integrated framework, variables at both the individual, social, and community levels were used in the statistical model. This section lists the variables, sources of the scales, and data transformation procedures used in preparation for the analyses.

#### *Demographic Information*

Relevant demographic data such as age, race, immigrant status, income, etc. were collected in the survey. Race was dummy coded Black, Latino and Other with White as the reference category. Immigrant Status was dummy coded as Second Generation if the survey participant was born in the United States (US) and parents were not born in the US; and First Generation if the survey participant was not born in US and both parents were not born in US; the reference category being participants who were born in US and had at least one parent born in US. Financial stress was used as a measure for economic status where the survey participant

responded affirmative to the item “had trouble paying bills in the last 12 months”.

*Other Individual and Social variables used*

*Jealousy* - The 10-item jealousy scale was included in the survey and included questions related to feelings of jealousy. This scale is based on the original scale of Mathes & Severa (1981) and shortened by Follingstad (1988). The responses to the ten items were scored and summed to generate a score for each individual in the survey. *Social Support Network Scale* - Social Support Network Scale (Block, 2000), consists of 12 items and has reliability coefficient Alpha = .8359. The scale provides a measurement of the helping network available to the survey participants.

*The Traumatic Life Events Questionnaire (TLEQ)* (Kubany, Liesen, Kaplan & Kelly, 2000) assesses exposure to 16 types of potentially traumatic incidents including natural disasters; motor vehicle accidents involving death or injuries; other accidents involving injuries or death; childhood physical abuse etc. For the purposes of this research, principal component factor scores were computed on (1) items related to experience with violence other than family and (2) incidents involving witnessing or experiencing abuse at home. Items involving partner abuse were not included in either variable.

### *Independent Variables – Neighborhood Level*

#### *Social Disorganization*

Social disorganization variables include structural features of a community were constructed with data from the 2000 Decennial Census. Social disorganization was operationalized into three separate variables: (1) Concentrated disadvantage (percent on public assistance, percent below poverty, percent unemployed, percent female headed households, percent under age 18); (2) Residential stability (percent owner occupied, percent not moved since 1995); (3) Immigrant concentration (percent foreign born). A separate measure for social disorganization was also computed for the police precincts in analysis-2 using 2000 Decennial Census data from [www.infoshare.org](http://www.infoshare.org).

#### *Collective Efficacy*

Collective Efficacy was operationalized by combining items related to informal social control and social cohesion in the survey. The items used in this scale were derived from the collective efficacy items in the Project of Human Development in Chicago Neighborhoods and included the following items (1) Informal social control: Children were skipping school, Children were spray-painting graffiti, Children were showing disrespect to an adult, A fight broke out in front of your house, The fire station was threatened with budget cuts (2) Social cohesion and

trust: People in the neighborhood can be trusted, This is a close-knit neighborhood, People around here are willing to help, People in this neighborhood do not share the same values, People in the neighborhood generally do not get along. Principal Component scale scores were estimated for each individual in a zip code. The individual scores were then aggregated to zip code level by creating a mean value for each zip code in the analysis.

### *Community Violence*

Using homicide as an indicator for violence, a measure for community violence was derived by calculating the rate in the ecological units (zip code or police precinct). The sub-set of numbers that was related to intimate partner homicide was removed from the counts to get an unbiased indicator of community violence.

### *Perceived Neighborhood Disorder Scale (NLIF)*

Several questions related to perceptions of disorder in the neighborhood (Alvi, Schwartz, & DeKeseredy, 2001) were included in the survey. A list of concerns was provided and respondents selected one of the following options: more of a problem, less of a problem, about the same, or not a problem since you first moved here. Principal component analyses tapped into three clusters: (1) physical disorder, (2) criminal activity and (3) drugs & alcohol. Principal component scale scores were estimated for each individual and then aggregated to the zip code level.

### *Partner Violence Community Response Scale (PVCR)*

To assess community response to partner violence a number of questions were included in the survey (unpublished, Raghavan 2003, 2004 Version I and 21-item Version) with the prompt “Could you count on members of your community to do the following if they witness a couple fighting (e.g. pushing each other) in the neighborhood?” The response categories were five point Likert type (ranging from *definitely* to *definitely not*). Principal component analyses of the sixteen items on the scale tapped into three main clusters: (1) negative reaction towards the couple; (2) helping reaction; (3) avoidance of the incident. Factor scores were estimated for each individual and aggregated to the zip code level.

### *Exposure to Violence Scale*

To assess exposure to community violence at the individual level the adult version (personal communication of Dr. Raghavan with Buka, 2002) of the My Exposure to Violence Scale (Selner-O’Hagan, Kindlon, Buka, Raudenbush, & Earls, 1998) was used. Participants were asked to indicate whether they witnessed ten different forms of non-intimate violence in the past six months, including seeing someone being chased, threatened, or physically assaulted. The item responses were dichotomous and were summed to provide a single score for each person. These were then aggregated to zip code scores by calculating mean values for each zip code.

## CHAPTER 5: DATA EXPLORATION

This chapter provides basic descriptive statistics about the survey sample and an overview of the socioeconomic characteristics of New York City (for zip codes and police precincts). In addition, it presents summary level statistics for NYC on select reported violent crimes.

### Characteristics of Survey Respondents

#### *Demographic Information*

Table-2 below provides details of the demographic characteristics of the survey participants and wherever possible a comparison to NYC population. The gender composition of the sample shows a majority of female respondents (female = 55.7 percent, male = 44.3 percent). The majority of the sample subjects are self identified Latino (51.8 percent) which is more than the NYC general population percentage (27 percent) suggesting an over representation of the Latino ethnic group in the sample. The average age of the subject at the time of the interview is 19 years old ( $M=18.77$ ,  $SD=1.46$ ) with minimum age of 15 and the maximum age of 29.

Table 2: Demographic Characteristics of Survey Participants

Demographics	Survey Sample	NYC Census 2000
N	1066	-
Gender		
Male	44.3%	47.4%
Female	55.7%	52.6%
Race		
White	20.6%	44.7%
Black	23.1%	26.6%
Hispanic/Latino	43.2%	-
Other	13.1%	-
Self Identified Latino des-		
Yes	51.8%	27.0%
No	48.2%	-
Self Identified Caribbean Des-		
Yes	37.9%	-
No	62.1%	-
Age		
Min-Max	15-29	-
Mean (SD)	19 (1.46)	-
Language Spoken at Home		
Mostly English	47.4%	-
English & Another lan-	37.8%	47.6%
Mostly Another lan-	14.7%	-
Immigrant Status		
First Generation*	28.4%	35.9%
Second Generation**	33.7%	-
Rest ***	37.9%	-

\* Defined as not born in US and parents not born in US

\*\* Defined as born in US and parents not born in US

\*\*\* Defined as born in US and one or more parents born in US

Language spoken at home is evenly distributed between only English speakers and bilingual with a good percentage speaking mostly another language (mostly English =47.4 percent, bilingual=37.8 percent, mostly another language 14.7

percent), the last two percentages roughly mirror the percentage of all NYC residents who are bilingual (47.6 percent). The immigrant status of the survey participants is fairly evenly distributed between first generation (28.4 percent), second generation (33.7 percent) and the rest (37.9 percent). The percentage foreign born in this sample (28.4 percent) is fairly similar to the percent foreign born in NYC (35.9 percent).

Table-3 below provides details about the income and financial situation of the survey participants.

**Table 3: Financial Characteristics of Survey Participants**

Income & Financial Situation	
N	1066
Annual Income	
Less than \$30,000	53.6%
\$30,000 to \$60,000	29.2%
\$60,000 & above	17.3%
Receive Financial Aid	
Yes	73.0%
No	27.0%
Trouble Paying Bills (last 12 months)	
Yes	28.6%
No	71.4%

More than half of the participants had annual income less than \$30,000. About one third had annual income in the range of \$30,000 to \$60,000. The rest (17.3 percent) had incomes more than \$60,000. A large proportion of the survey

participants received financial aid for college (73 percent) and a large proportion (71.4 percent) did not have any trouble paying bills in the last 12 months.

Table-4 below presents details about the housing and living arrangements of the survey participants. A disproportionately large majority of them (79.3 percent) lived with their parents; this is understandable given that the sample was recruited from entering freshmen; few lived with their partners (5.5 percent) or by themselves (5.1 percent). Even though a large majority of the participants were living with their parents most of them (67.3 percent) lived in a rented apartment or house. As can be seen from the comparisons, on many aspects, the survey sample mirrors the population of NYC.

**Table 4: Housing & Living Arrangements of Survey Participants**

Housing/Living Arrangements	Survey Sample	NYC Census 2000
N	1066	-
Live With		
Partner	5.5%	-
Roommate or Alone	5.1%	-
With Parents	79.3%	-
Other	10.3%	-
Home		
Rented Apartment/House	67.3%	69.8%
Owned Apartment/House	32.7%	30.2%

**Table 5: Relationship Status of Survey Participants**

Relationship Questions	
N	1066
Relationship Status	
In a relationship now for at least one month	52.3%
Not in a relationship now but have had one	39.2%
Never been in a relationship that lasted more than one month	8.5%
Relationship Status - Current	
Yes	55.3%
No	44.7%
Relationship Type	
Dating	90.7%
Cohabiting	1.4%
Engaged	6.5%
Married	1.3%
Sex Part of Relationship?	
Yes	73.6%
No	26.4%

Table-5 presents the relationship status of the survey participants. Most of the survey participants were either in a relationship (52.3 percent) or had been in one in the last year at the time of taking the survey. Only a small percentage (8.5 percent) indicated that they had never been in a relationship before. On another question 55.3 percent of the participants validated the question that they were currently in a relationship. Most of the students were in a dating relationship (90.7 percent) while others were either cohabiting or engaged; a small percentage (1.3

percent) was married. A large majority of the participants indicated that sex was a part of their relationship (73.6 percent).

### *Other Individual & Social Variables*

Table-6 below shows the descriptive statistics on the other individual and social variables for the survey participants.

**Table 6: Other Individual & Social Characteristics of Survey Participants**

Scaled Scores	Min.	Max.	Mean	SD
N = 1066				
Jealousy	10	90	52.66	16.85
Social Support Network	0	9	8.18	1.50
TLEQ Physical Violence				
Witnessed Violence	0	6	0.93	1.68
Experienced Assault	0	6	0.54	1.16
Was Threatened	0	6	0.66	1.34
TLEQ Violence Growing Up				
Physical Abuse	0	6	1.10	2.07
Family Violence	0	6	1.48	2.30

Jealousy scores very high with a mean of 52.66 indicating that, overall, this sample reacted strongly to jealousy related items. Social support network appears to be strong for this sample with a mean of 8.18 on a scale of 9 which is understandable given that many respondents were still living with their parents. In

response to the Traumatic Life Events Questionnaire items used for this research, responses to items related to experience with violence while growing up was generally much higher than experience with other physical violence.

### *IPV Variables*

Table-7 shows the descriptive statistics on the IPV outcome variables used in this dissertation. About 37 percent of the sample had experienced some form of IPV victimization, whereas about 12 percent had experienced severe victimization. These numbers are comparatively higher from national representative studies (Tjaden & Thoennes, 2000).

**Table 7: Descriptive Statistics of IPV  
for Survey Participants**

Variables (N=1066)	
Any IPV	37%
Severe IPV	12%

### **Characteristics of Zip Codes**

As discussed earlier, different definitions of neighborhoods were proposed for use with the survey data. Table-8 describes the characteristics of the zip codes in NYC that were included in the analyses. These variables are from sample and universe data collected by the 2000 Census (Summary Files 1 and 4). Mean

percentage below poverty is 20 percent. The range is wide for this variable with some zip codes having only about 4 percent population below poverty whereas the highest was a zip code with 48 percent below poverty level.

**Table 8: Characteristics of Zip Codes in NYC (Census 2000)**

Zip codes (N=147)	Mean (SD)	Median	Min	Max
Percent Below Poverty	0.20 (0.11)	0.17	0.04	0.48
Percent on Public Assistance	0.08 (0.06)	0.06	0.00	0.25
Percent Foreign Born	0.34 (0.14)	0.32	0.10	0.70
Percent Unemployed	0.03 (0.02)	0.04	0.01	0.09
Percent Under 18 years age	0.24 (0.07)	0.25	0.06	0.37
Percent Black	0.27 (0.28)	0.15	0.00	0.94
Percent Latino	0.27 (0.21)	0.20	0.03	0.82
Percent Female Headed Households	0.40 (0.10)	0.38	0.21	0.63
Percent Owner Occupied	0.33 (0.22)	0.28	0.03	0.82
Percent in Households not moved since 1995	0.24 (0.16)	0.20	0.02	0.67

Percent on public assistance in zip codes ranged from 0 percent to 25 percent with 8 percent being the mean. Percent foreign born had a wide range with the lowest being 10 percent and the highest zip code having 70 percent foreign born indicating that immigrants tend to concentrate in certain zip codes. Percent unemployed and percent under 18 years had a wide range as well. The widest range is for the race variables percent Black (Min=0 percent and Max=94 percent) and percent Latino (Min=3 percent and Max=82 percent) indicating that certain zip

codes are predominantly Black and Latino while others have few Blacks and Latinos. These numbers present a general idea of the characteristics of NYC zip codes, especially the wide gaps in the racial distribution and residential ownerships of some zip codes.

The individual level survey data was aggregated to zip code level and used as indicators of neighborhoods defined by zip codes. Table-9 displays the distribution of these variables.

**Table 9: Characteristics of Zip Codes (Survey Responses)**

Zip codes (N=147)	Mean (SD)	Median	Min	Max
Exposure to Violence	2.67 (1.54)	2.67	0.00	9.00
NLIF: Physical Disorder	0.18 (0.16)	0.17	0.00	0.83
NLIF: Drugs & Alcohol Disorder	0.29 (0.21)	0.30	0.00	1.00
NLIF: Criminal Activity Disorder	0.19 (0.13)	0.08	0.00	0.53
CE: Informal Social Control	1.93 (0.55)	1.89	0.50	4.00
CE: Social Cohesion	2.04 (0.45)	2.11	0.80	3.52
PVCR: Negative Reaction	0.05 (0.54)	0.07	-2.23	1.55
PVCR: Helpful Reaction	-0.02 (0.44)	0.00	-2.15	1.23
PVCR: Avoiding Reaction	-0.02 (0.52)	0.01	-2.11	1.96

Exhibits 3 to 10 display the distribution of these variables in the various zip codes using Choropleth maps. The maps are classified in standard deviation units. The distribution of most of the variables on the maps is quite clustered indicating that there are pockets in NYC where many problems come bundled together; this

has implications for social disorganization theory. The maps also show clustering by race and immigrant status. This has implications for the sub-cultural theory.

Exhibit 3

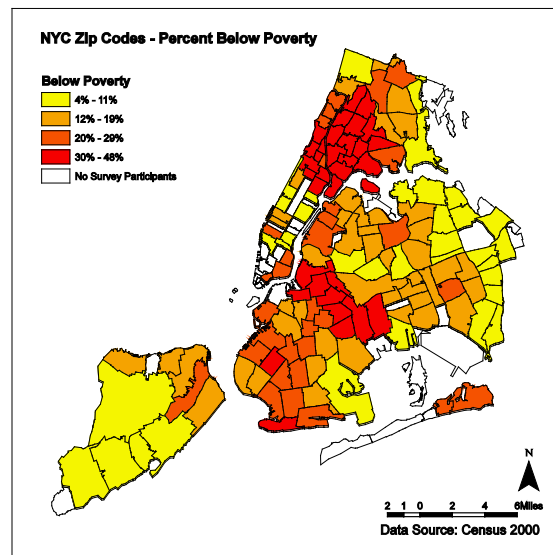


Exhibit 4

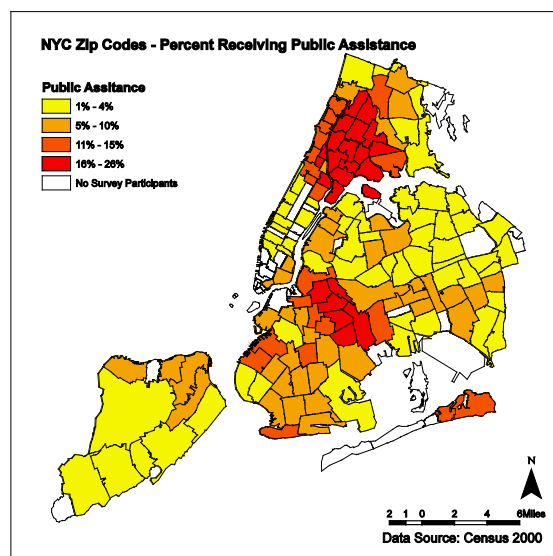


Exhibit 5

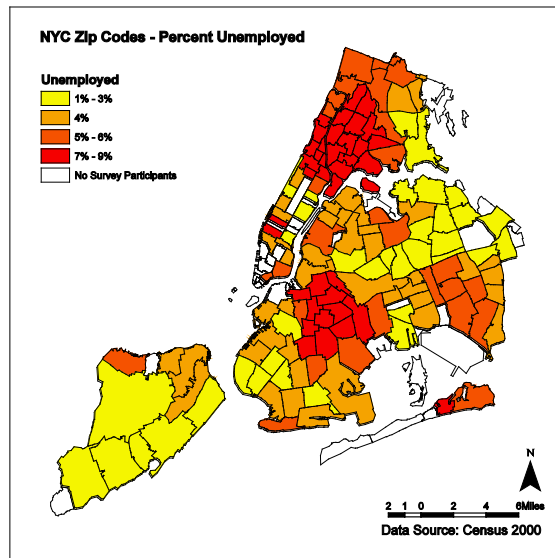


Exhibit 6

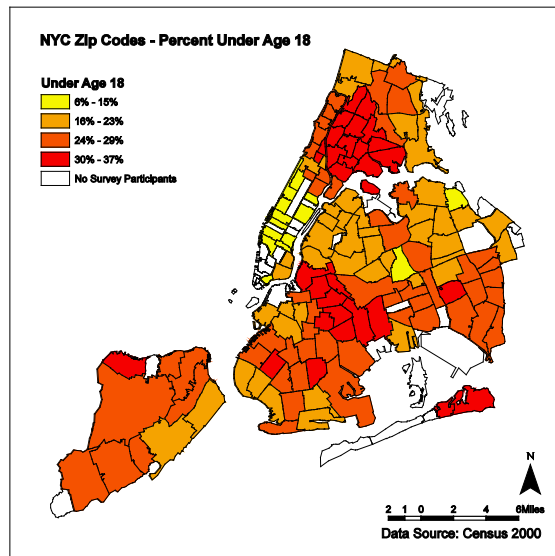


Exhibit 7

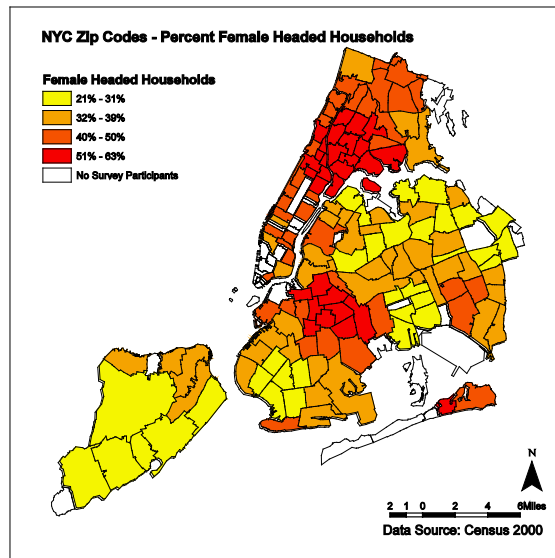


Exhibit 8

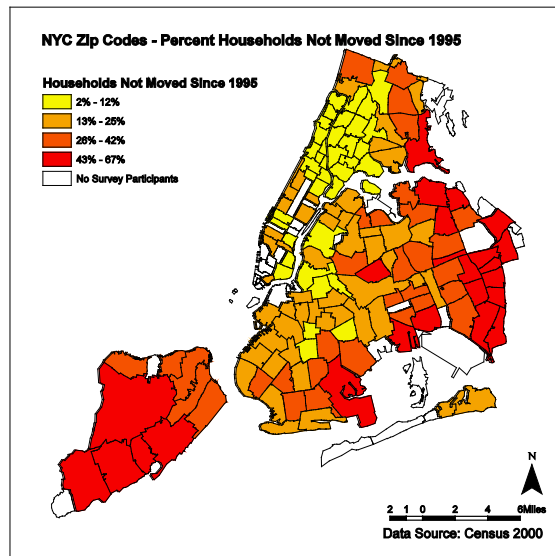


Exhibit 9

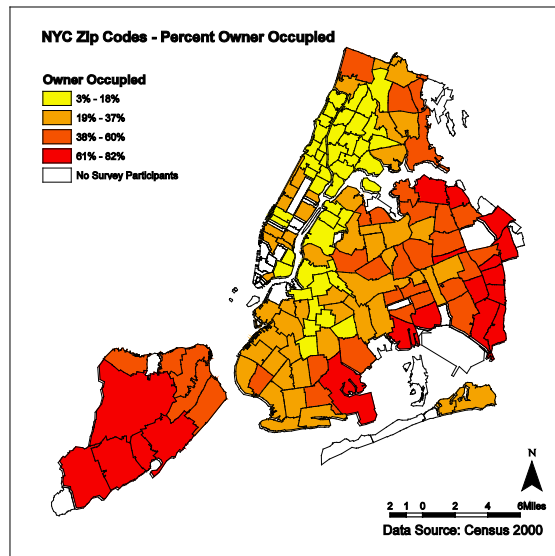
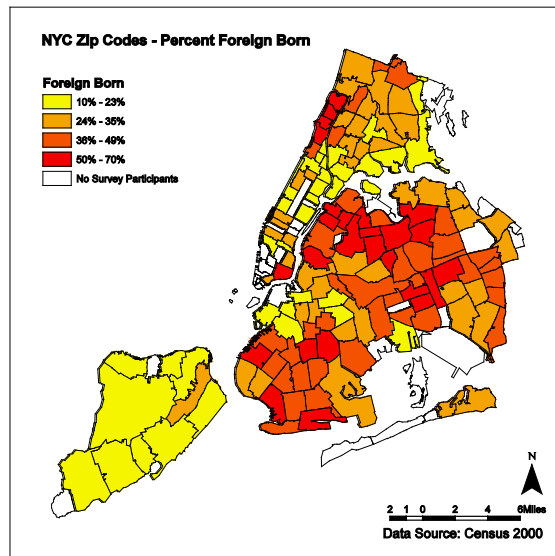


Exhibit 10



### Characteristics of Police Precincts

Police precincts (N=74) were used as the unit of analysis for some of the

analyses. The table below describes the characteristics of these precincts based on the Census 2000 (short and long form) data derived from [www.infoshare.org](http://www.infoshare.org). A comparison between the zip code level (Table-8) and the police precinct level (Table-10) variables indicate that the distinct characteristics of the ecological units remain fairly similar across the two units of analyses (zip code and police precincts).

**Table 10: Characteristics of NYC Police Precincts (Census 2000)**

Police Precincts (N=74)	Mean (SD)	Median	Min	Max
Percent Below Poverty	0.22 (0.11)	0.19	0.05	0.45
Percent on Public Assistance	0.08 (0.07)	0.06	0.01	0.25
Percent Foreign Born	0.33 (0.13)	0.31	0.12	0.67
Percent Unemployed	0.05 (0.02)	0.04	0.02	0.08
Percent Under 18 years age	0.22 (0.07)	0.22	0.04	0.34
Percent Black	0.28 (0.27)	0.18	0.01	0.91
Percent Latino	0.26 (0.20)	0.19	0.05	0.75
Percent Female Headed Households	0.28 (0.12)	0.25	0.07	0.51
Percent Owner Occupied	0.28 (0.17)	0.24	0.04	0.76
Percent in Households not moved since 1995	0.08 (0.05)	0.07	0.02	0.24

Table-II present the descriptive statistics related to the rates of IPV in Police Precincts for all partner violence related incidents and criminal partner violence related incidents. About one half of all DIR partner incidents are reported as criminal incidents.

**Table II: IPV Rates in NYC Police Precincts (DIR 2004)**

DIR IPV Rate 2004 (N=74)		
Mean		142.46
Median		116.18
Percentiles	25	80.46
	50	116.18
	75	195.60
DIR Criminal IPV Rate 2004 (N=74)		
Mean		71.98
Median		56.63
Percentiles	25	37.42
	50	56.63
	75	94.12

$$\text{Rate} = (\text{IPV count}/\text{population}) * 10000$$

Table-12 presents, for comparison purposes, the summary count of all DIR partner violence incidents and DIR criminal partner violence incidents along with all other community crimes. The last row includes murder incidents with intimate partner incidents removed to get an indicator of general community violence.

**Table 12: Total Counts of IPV & Other Violent Crimes in NYC Police Precincts (NYPD & DIR 2004)**

(N=74)	Mean (SD)	Median	Min	Max	Sum
DIR IPV	1378 (803)	1314	196	3681	101973
DIR Criminal IPV	692 (620)	620	126	2190	51223
Murder	7.6 (6.9)	5	0	29	565
Rape	19 (12)	18	1	58	1412
Aggravated Assaults	391 (246)	309	95	1391	28921
Murder (without partner incidents)	6.7 (6)	5	0	26	491

## CHAPTER 6: RESULTS OF ANALYSIS I

This chapter discusses the results based on analysis-I. In the first step of this analysis survey data was used to examine the individual level covariates of IPV.

### **Examination of Individual Level Covariates**

For this analysis, drawing from the vast literature on IPV, gender, race, immigrant status, financial stress, and jealousy and childhood victimization were modeled on two dependent variables Severe IPV victimization and Any IPV victimization. The outcome variable for both forms of victimization is dichotomous (1=Victim, 0 = Not a victim) and therefore logistic regression was used. As can be seen in Table-I3, most individual level covariates were not significant predictors of Severe IPV victimization. Only TLEQ-violence growing up was significant predictor of severe IPV victimization (Lipsky et al., 2005; Whitfield 2003, Widom, 2000). In contrast, many of the variables were significant covariates of the outcome variable Any IPV victimization. This coding included minor and severe victimization questions. Gender was a significant predictor of Any IPV victimization with females more likely to experience victimization (Archer, 2000; Straus, 2006). Immigrant status was a significant protective factor for Any IPV victimization with both first generation and second generation immigrants less likely to experience Any

IPV victimization. Financial stress significantly increased the likelihood of any IPV victimization (Benson, Wooldredge, Thistlethwaite, and Fox, 2004; Firestone, Lambert and Vega, 2000; Van Wyk, 2003). Jealousy was significant but did not increase the odds of both Severe and Any IPV victimization greatly. Experiencing childhood physical violence increased the odds of Any IPV victimization.

**Table I3: Summary of Logistic Regression Analysis for Individual and Social Variables Predicting Any IPV victimization and Severe IPV victimization**

Predictor	Severe IPV Victimization			Any IPV Victimization		
	<i>B</i>	<i>SE B</i>	<i>e<sup>β</sup></i>	<i>B</i>	<i>SE B</i>	<i>e<sup>β</sup></i>
Individual & Social						
Gender	.14	.25	1.15	.48**	.17	1.62
Race - Black <sup>a</sup>	.02	.29	1.02	.06	.21	1.07
Race - Latino <sup>a</sup>	-.33	.27	.72	.00	.18	1.00
Imm. Status: 2 <sup>nd</sup> Generation <sup>b</sup>	.10	.27	1.11	-.61***	.18	.54
Imm. Status: 1 <sup>st</sup> Generation <sup>b</sup>	.01	.28	1.01	-.55***	.19	.58
Financial Stress	.25 <sup>#</sup>	.14	1.28	.22*	.11	1.23
Jealousy	.01*	.01	1.01	.02***	.01	1.02
TLEQ-Physical violence	.18	.09	1.20	.25**	.08	1.28
TLEQ-Viol. growing up	.21*	.10	1.24	.11	.07	1.11
Constant	-3.116			-1.71		
$\chi^2$	20.04**			60.68***		
<i>df</i>	9			9		
Percentage correctly classified	88.4%			64.6%		

Note: *e<sup>β</sup>* = exponentiated *B*. *a* – Race: White is the reference category.

*b* – Immigrant Status: US born with at least one US born parent is the reference category.

<sup>#</sup>*p* < .1, \**p* < .05, \*\**p* < .01, \*\*\**p* < .001.

## Examination of Zip Code level Variance

Much research of urban neighborhoods has indicated that social disorganization and collective efficacy are related to crime related outcomes (Sampson & Groves 1989; Sampson et al., 1997; Morenoff et al., 2001; Rosenfeld et al., 2001; Putnam, 2000). Specifically, research by Browning (2002) and Wright (2008) has indicated that these constructs have a significant relationship to partner violence related outcomes as well. Both these studies have used the PHDCN data of Chicago neighborhoods to understand these relationships. This section seeks to contribute to this debate by exploring the association between community factors such as social disorganization; collective efficacy; neighborhood disorder; neighborhood interaction with violence; police reported violence and community response to partner violence and partner violence outcomes.

The first series of multi-level models tested in this section focuses on Any IPV victimization as reported by the survey respondents. This outcome was examined in the previous section of this chapter using an individual-level framework. A multi-level approach allows for the assessment of the influence of varying zip-code level neighborhood conditions on the likelihood of Any IPV victimization. The outcome is a binomial variable following a Bernoulli-type distribution. There is no

need to establish an additional parameter for over-dispersion (Mean=0.37, Variance=0.23). Models are based on a logit-link function. Estimates are produced using penalized quasi-likelihood (PQL) estimates with unit-specific effects. Odds ratios are presented below for each of the estimation routines (Table-I4). Because the question involves how a level-2 predictor affects the proportion observed in each group, the unit-specific results are appropriate (Neuhaus, Kalbfleisch, and Hauck, 1991).

Table-I4 shows the odds ratio of the variables from seven different models starting with the unconditional model. As can be seen in Model-0, there is little variance between neighborhoods for this sample (variance component = .06) for IPV prevalence (Any IPV). In Model-I the individual level variables are added to the model. Gender, immigrant status of first generation and second generation, financial stress, jealousy, and TLEQ physical violence and violence growing up were significant predictors of Any IPV prevalence. These results are similar to the logistic regression model in Table-I3; the results in this model indicate significance for TLEQ violence growing up in addition to all the other significant predictors in Table-I3. The variance component for this model is 0.18.

Thereafter, a variety of models were created by introducing the ecological

variables at the zip code level while controlling for individual level variables. In Model-2 homicide rate was introduced as an indicator of violence in the neighborhood. In Model-3 the social disorganization factors were introduced into the model. Model-4 introduced the collective efficacy variables, Model-5 the exposure to violence variable, Model-6 the Neighborhood Life (NLIF) variables and Model-7 the Partner Violence Community Response (PVCR) variables.

All of these models show little change between variance (ranging from 0.16 to 0.21). Also, the model chi square, though significant after introduction of individual level variables, does not change much across models 2 through 7 ranging from  $\chi=171.52$  to  $\chi=178.87$ . None of the neighborhood level variables are significant predictors of IPV prevalence. The social disorganization variable immigrant concentration appears to move towards significance with the odds ratio of 0.39 suggesting that there may be a protective factor in immigrant concentrated neighborhoods. Exposure to violence in neighborhoods also appears to move towards significance with the odds ratio of 1.14 suggesting that the odds of experience with Any IPV may be higher for people residing in zip codes with high exposure to violence.

Table I4: Multilevel Model Results Predicting Any IPV

	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Individual Level Covariates</b>								
Gender - Female		1.57**	1.60**	1.60**	1.57**	1.59**	1.58**	1.57**
Race - Black <sup>a</sup>		1.11	1.20	1.16	1.09	1.03	1.11	1.08
Race – Latino <sup>a</sup>		1.05	1.10	1.12	1.03	1.00	1.05	1.02
2 <sup>nd</sup> Gen Immigrant		0.54***	0.53***	0.56***	0.54***	0.55***	0.54***	0.54***
1 <sup>st</sup> Gen Immigrant		0.62**	0.62**	0.65**	0.62**	0.62**	0.62**	0.62**
Financial Stress		1.22***	1.22*	1.21*	1.22*	1.22*	1.22*	1.22*
Jealousy		1.02***	1.02***	1.02***	1.02***	1.02***	1.02***	1.02***
TLEQ: PhyVio		1.35**	1.36**	1.36**	1.33**	1.32**	1.35**	1.33**
TLEQ: Violence growing up		1.17**	1.18**	1.19**	1.16**	1.16**	1.17**	1.16**
Support		0.95	0.94	0.95	0.95	0.94	0.94	0.94
<b>Zip code Level Covariates</b>								
Homicide Rate 2005			0.97#					
SD Con. Disadvantage				0.89				
SD Residential Stability				1.02				
SD Immigrant Con.				0.39#				
CE Info Soc Control					1.13			
CE Social Cohesion					1.15			
Exposure to Violence						1.14#		
NLIF Physical disorder							0.40	
NLIF Drug & Alc disor							1.37	
NLIF Crim Acti disor							1.04	
PVCR Nega Reaction								0.82
PVCR Help Reaction								1.17
PVCR Avoid Reaction								1.01
Constant		0.26*	0.26*	0.26*	0.25*	0.27*	0.27*	0.26*
Between Var (Uoj)	0.06	0.18	0.16	0.16	0.20	0.21	0.21	0.21
Chi Square for Var (Uoj)	70.82#	178.87*	174.92*	171.52*	178.95**	178.18**	178.18**	178.78**

# $p < .1$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ . *a* – Race: White is the reference category. *b* Immigrant Status: US born with at least one US born parent is the reference category.

Similar analysis was repeated for the outcome Severe IPV, but the model failed to converge for the unconditional model indicating no between neighborhood

variance. Because the multi-level models did not indicate between neighborhood variance, logistic regression models with community level variables controlling for individual covariates were built. See results in Table-15.

**Table 15: Summary of Logistic Regression Analysis for Neighborhood Variables Predicting Any IPV victimization and Severe IPV victimization**

Predictor	Severe IPV Victimization			Any IPV Victimization		
	<i>B</i>	<i>SE B</i>	<i>e<sup>B</sup></i>	<i>B</i>	<i>SE B</i>	<i>e<sup>B</sup></i>
Neighborhood						
Homicide Rate	-.04	.02	.96	-.04*	.02	.96
SD Concentrated Disadvantage	.04	.14	1.04	-.10	.10	.90
SD Residential Stability	-.02	.19	.98	-.04	.13	.96
SD Immigrant Concentration	.95	1.07	.38	-1.14	.71	.32
CE Informal Social Control	.38	.33	1.46	.24	.21	1.27
CE Social Cohesion	-.02	.33	.98	-.09	.23	.92
PVCR Negative Reaction	-.43	.34	.64	-.32	.23	.73
PVCR Helping Reaction	.24	.41	1.27	.08	.27	1.08
PVCR Avoid Reaction	-.21	.32	.82	-.15	.22	.86
Constant	-2.62			-1.11		
$\chi^2$		31.66*			73.83***	
<i>df</i>		18			18	
Percentage		88.4%			63.4%	

*Note: e<sup>B</sup> = exponentiated B. Control variables are Gender, Race, Immigrant Status, Jealousy, Financial Stress, Childhood Experiences.*  
 $\#p < .1$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

None of the neighborhood level predictors, except homicide rate, are significant for either Severe IPV or Any IPV. Homicide rate 2005 is significant at  $p < .05$  level indicating a minor reduction in Any IPV outcome. This result has no theoretical basis.

## Mapping Zip Code Level Variables

Given the results in the previous two sections that indicate no neighborhood variation in IPV for this sample, community level variables were mapped on NYC base maps using GIS to see if there are any differences in these variables across zip codes. A comparative visual examination of Exhibits I I to 25 reveals no consistent pattern across the predictor and outcome variables. A clustering pattern is evident in the social disorganization and homicide rate variables but the same pattern does not carry forth to the other variables. Multiple approaches were tried to generate the Choropleth maps to see if any patterns emerge, but the spatial distribution appears to be similar.

Exhibit I I

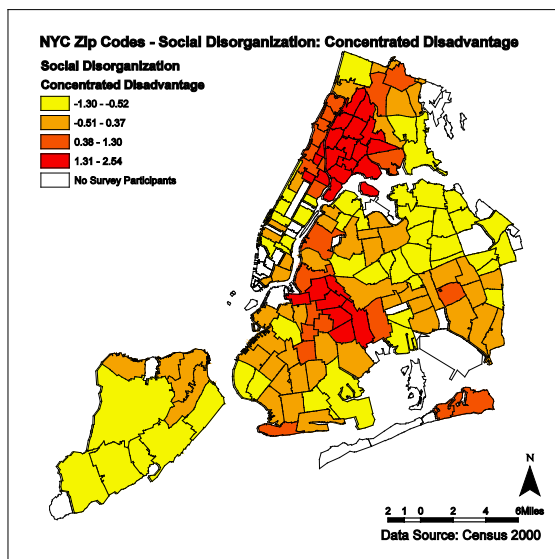


Exhibit I2

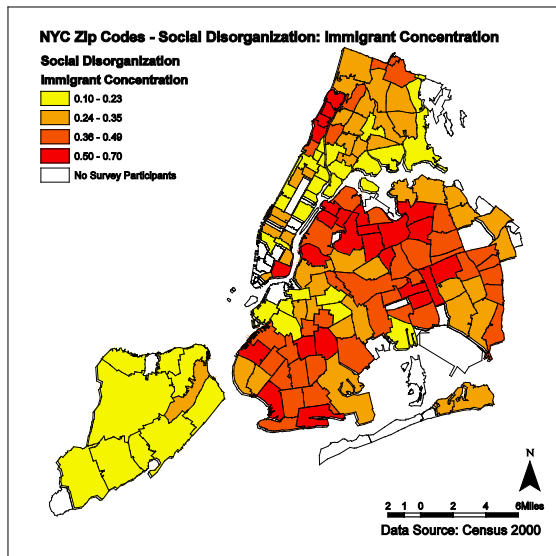


Exhibit I3

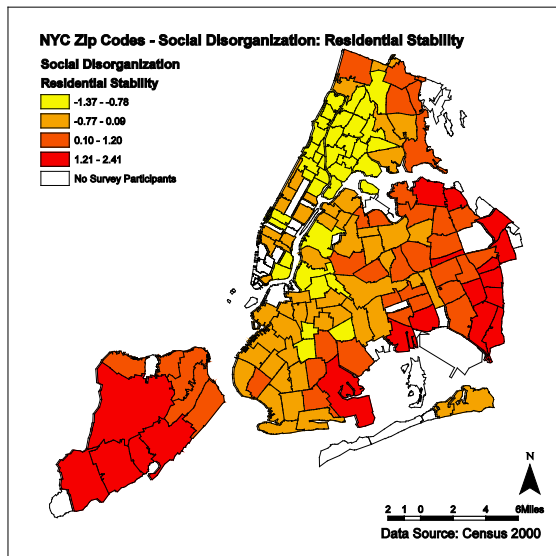


Exhibit I4

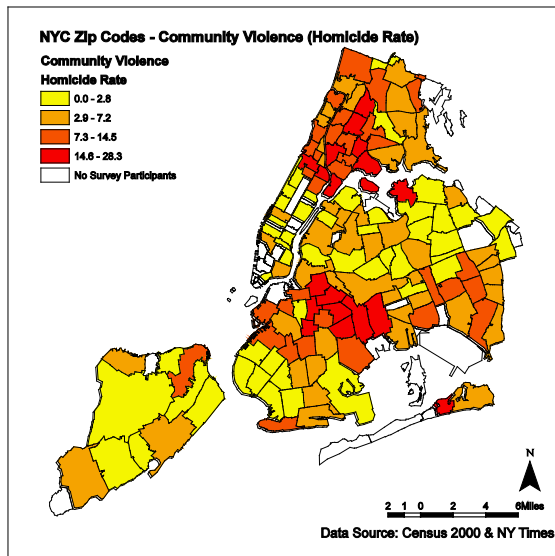


Exhibit I5

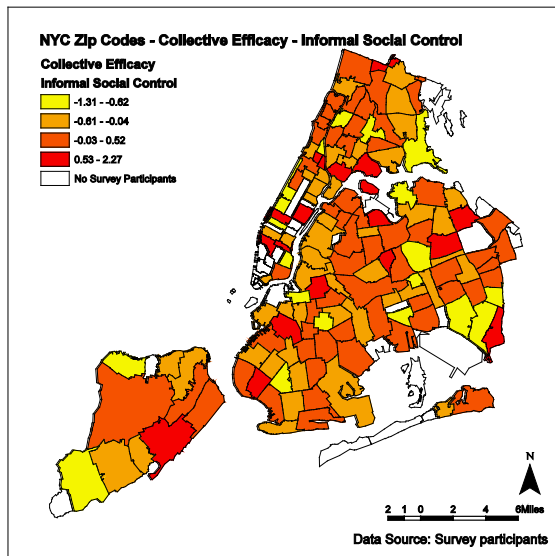


Exhibit I6

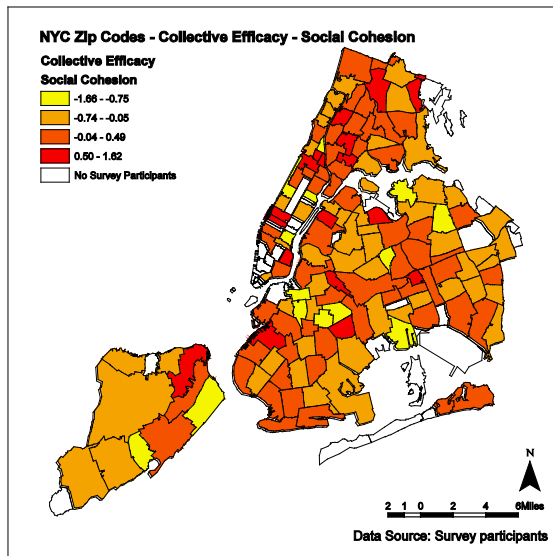


Exhibit I7

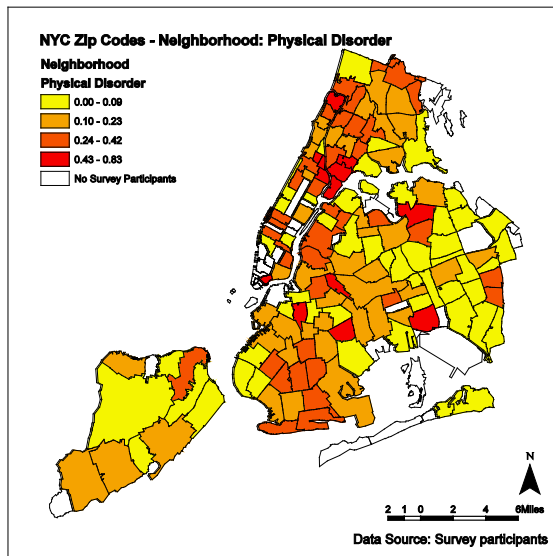


Exhibit I8

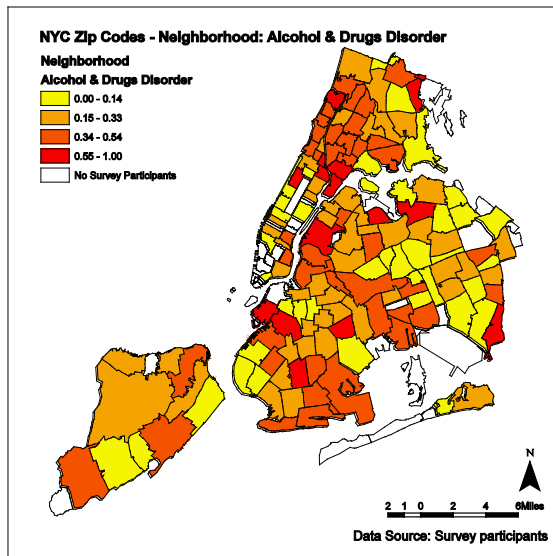


Exhibit I9

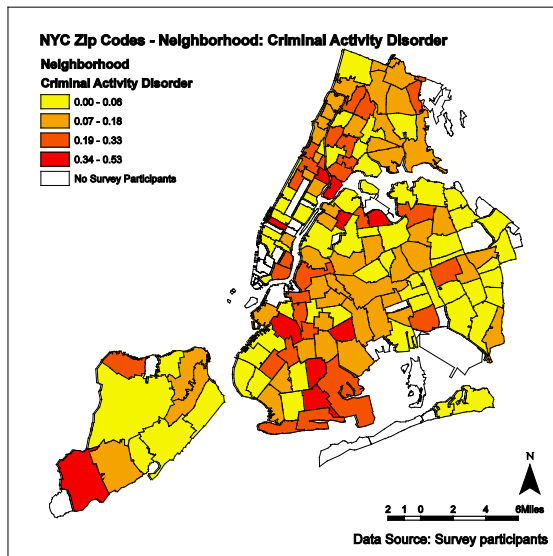


Exhibit 20

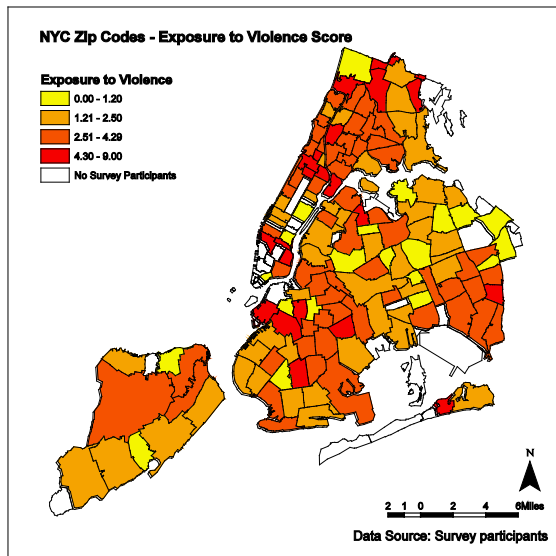


Exhibit 21

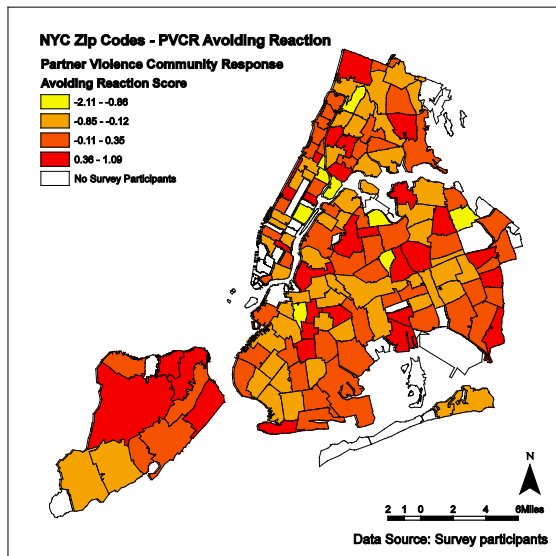


Exhibit 22

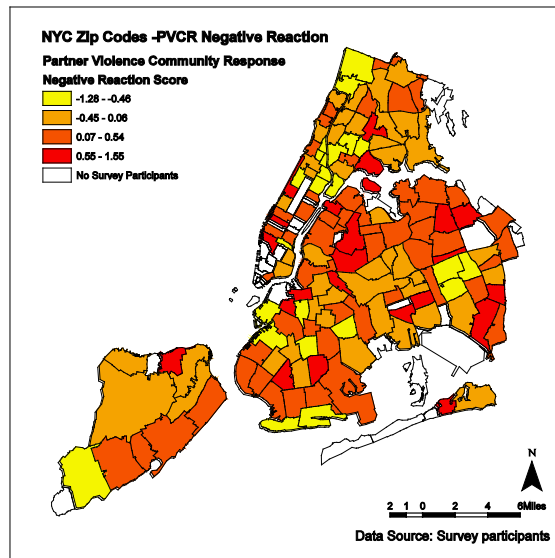


Exhibit 23

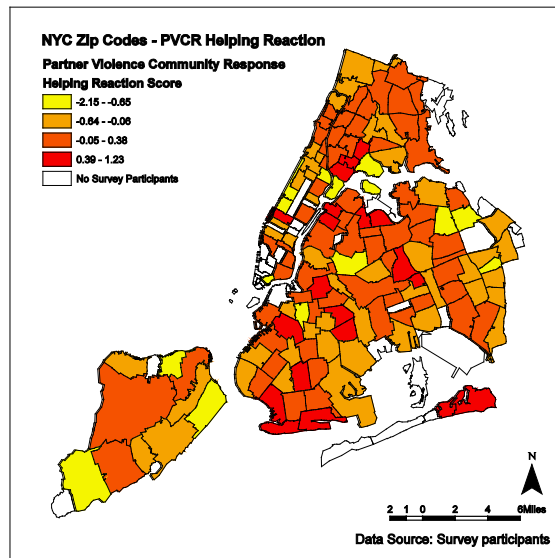


Exhibit 24

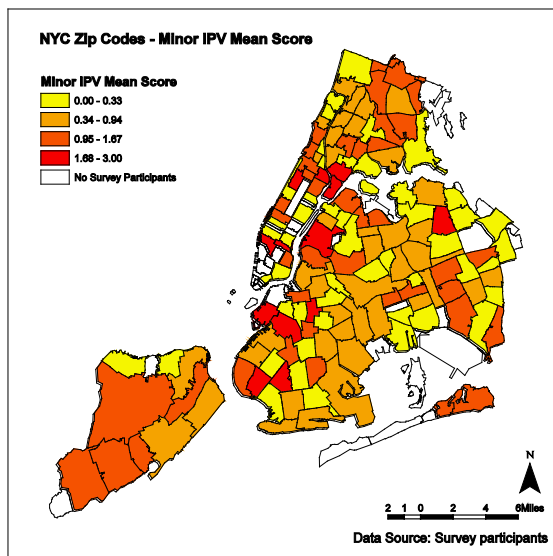
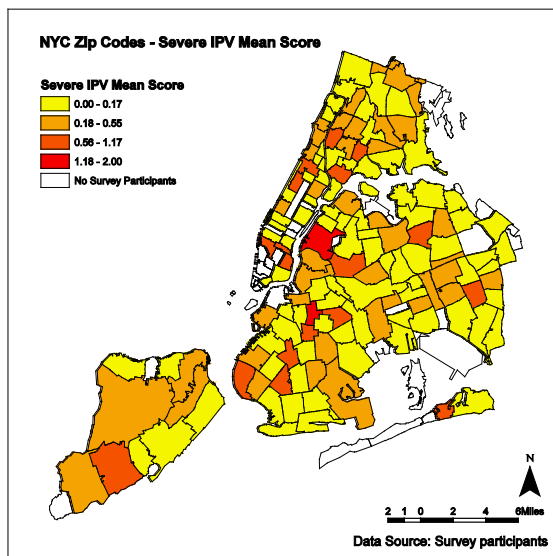


Exhibit 25



### Summing Up Analysis I

Both the logistic regression and multi-level HLM models indicate that

individual level variables – gender, immigrant status, financial stress, jealousy, and TLEQ variables – are significant predictors of Any IPV. The logistic regression model indicates that financial stress, jealousy, and TLEQ violence experienced while growing up are significant predictors of Severe IPV. These findings answer the first research question: individual and social variables have an effect on IPV prevalence.

The protective effect of the immigrant status provides support for the subculture of urbanism theory that certain cultures do maintain a “set of modal beliefs, values, norms, and customs associated with a relatively distinct social subsystem within a larger social system and culture”. If we extend this explanation by arguing that because of these beliefs, values, norms and customs, partner violence rates are different for these groups compared to other groups, these findings can provide support for research question 4a: subculture of urbanism theory can explain variation in IPV.

The HLM multi-level unconditional model produced a small variance component indicating little variation between zip codes for Any IPV prevalence. Entering the ecological zip code level variables after controlling for the individual level covariates produced very little change in the variance component and none of these predictors were significant. These analyses were repeated using standard

logistic regression procedures where again none of the ecological zip code level variables were significant. Further, mapping of these variables also indicates a lack of consistent patterns. These findings answer research question 2: do neighborhood community characteristics, controlling for individual and social characteristics, have an independent effect on the incidence of IPV? For this sample, there is little variance between neighborhoods after controlling for individual and social factors.

Given the lack of neighborhood effects for this sample of 18-22 year old college students using survey data it is not possible to answer research questions 4b, 4c and 4d, whether general strain theory, social disorganization theory, or community violence explain concentration of IPV in some communities. The next section presents analyses which attempt to answer these questions using DIR IPV data

## CHAPTER 7: RESULTS OF ANALYSIS II

This chapter discusses the results of analysis-2. The first step in that process is mapping the predictor and outcome variables for the police precinct data.

### Mapping Police Precinct Level Variables

Thematic Choropleth quartile maps generated in ArcGIS display social disorganization variables as well as the IPV partner violence and criminal partner violence rates mapped on NYC police precincts. A comparative observation of the maps indicates a pattern between social disorganization and IPV variables as well as community violence and IPV variables. The correlation coefficients of these relationships are presented in Table-I6.

**Table I6: Correlations of All Variables in Analysis-2**

N=75	(1)	(2)	(3)	(4)	(5)	(6)
DIR Criminal IPV Rate 2004	-					
DIR IPV Rate 2004	.98***	-				
SD Concentrated Disadvantage Score	.76***	.76***	-			
SD Residential Stability Score	-.46***	-.43***	-.58***	-		
SD Immigrant Concentration Score	-.33**	-.32**	-.07	-.04	-	
Criminal Violence Rate 2004	.68***	.71***	.65***	-.42***	-.20#	-

# $p < .1$ , \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ .

Significant positive correlations exist between partner violence and concentrated disadvantage as well as community violence. Significant negative

correlations exist between partner violence and social disorganization variables, residential stability and immigrant concentration. These relationships are further analyzed using regression models in the next section. Before that, a visual examination of the variables using Choropleth maps overlaid with quantitative symbols (Exhibits-26 to 33) will provide a better understanding of the relationships between the independent and dependent variables.

Exhibit 26

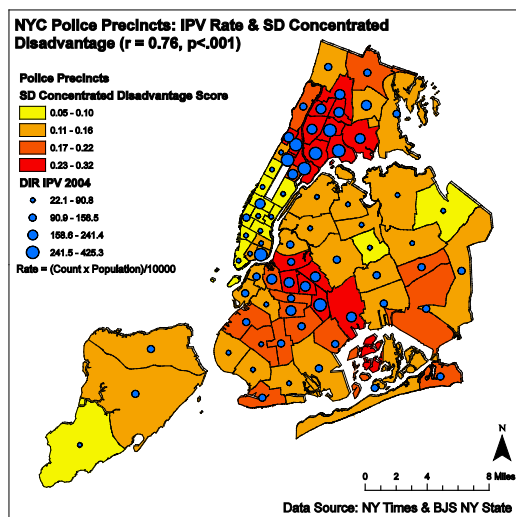


Exhibit 27

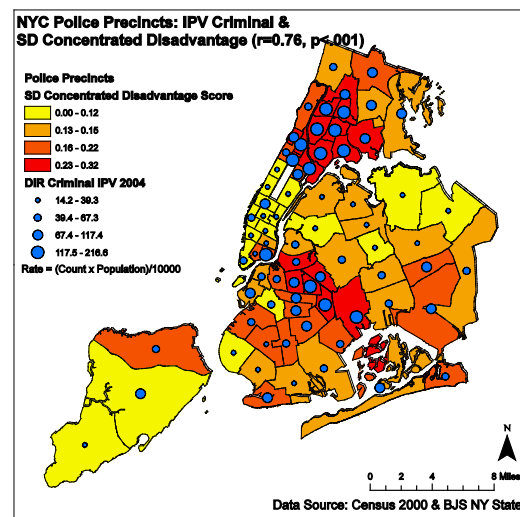


Exhibit 28

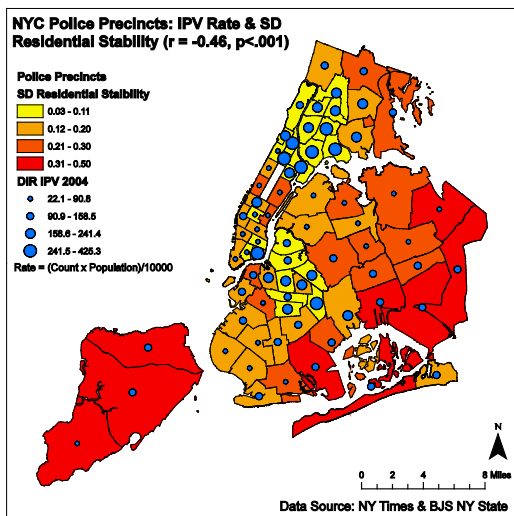


Exhibit 29

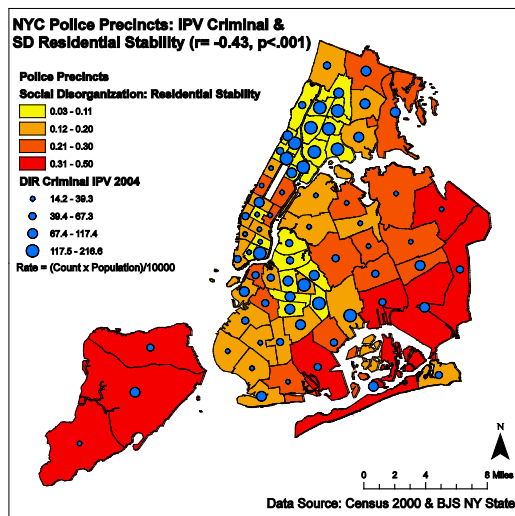


Exhibit 30

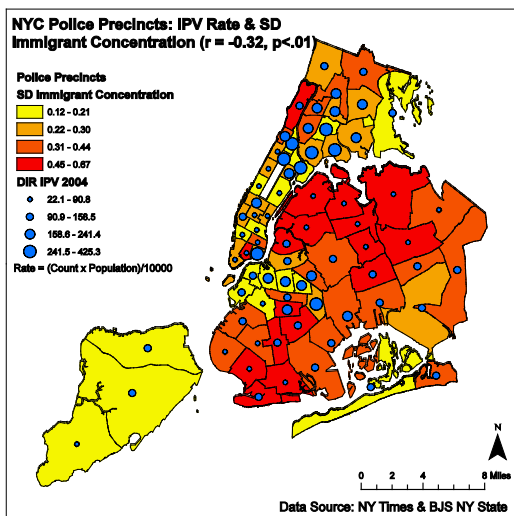


Exhibit 31

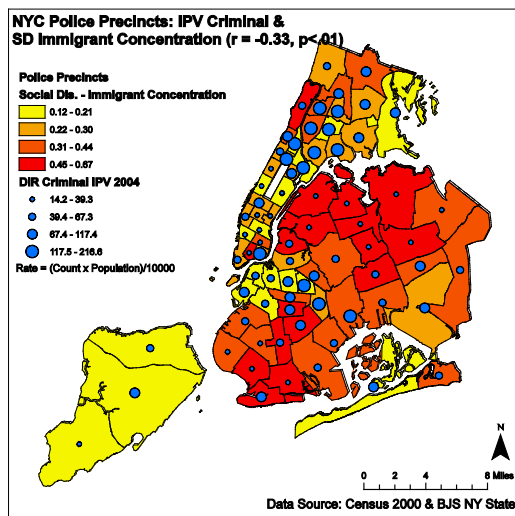


Exhibit 32

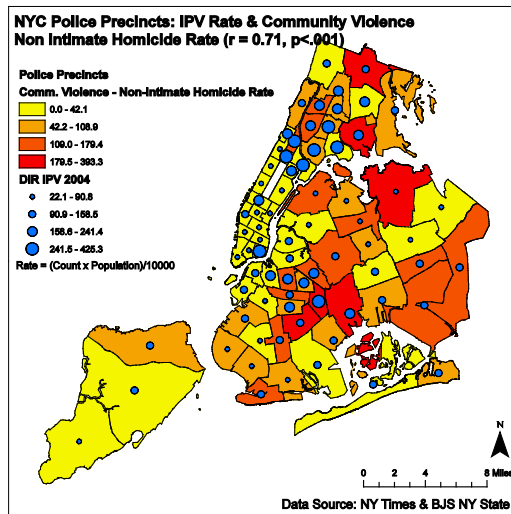
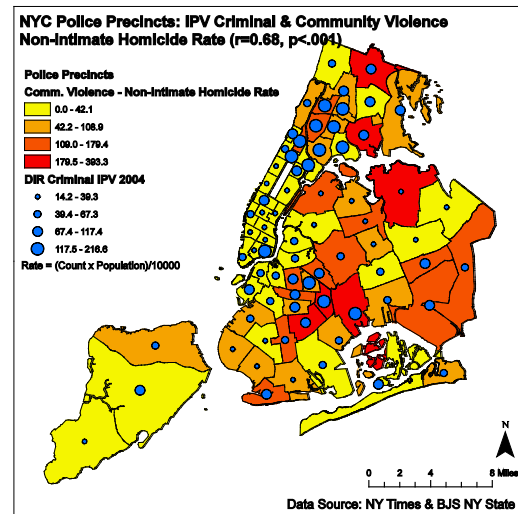


Exhibit 33



### Examination of Significant Spatial Clustering of IPV

To further examine if the spatial clustering of IPV is significant and test the null hypothesis that there is no spatial clustering of Domestic Incident Reports (DIR) Moran's I was calculated and Moran scatterplot maps were generated using GeoDa. This was done for three definitions of DIR across three years of data availability to see if the spatial pattern holds significance across definitions and time. The results of only one year of data (2004) are presented here<sup>5</sup>. A police precinct polygon centroids weights file was generated in GeoDa based on k-nearest neighbor

<sup>5</sup> Similar analyses for years 2003 and 2005 are available on request from the author.

methodology using a fixed number of six neighbors.

Exhibit 34: Moran's I with Empirical Bayes Standardization for DIR Partner Incidents 2004

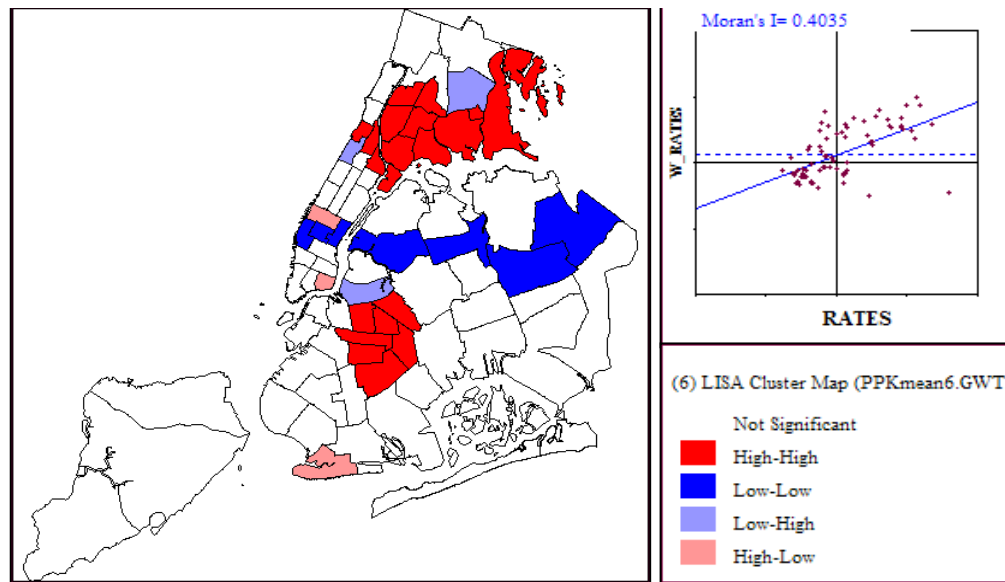
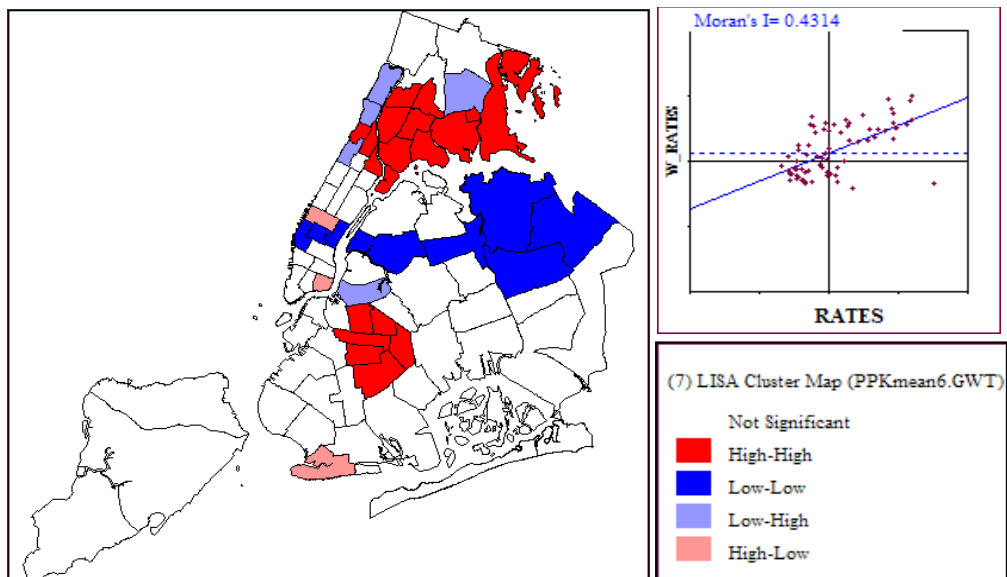


Exhibit 35: Moran's I with Empirical Bayes Standardization for DIR Criminal Partner Incidents 2004



This was done because New York City police precincts typically have three to four contiguous neighbors and selecting six neighbors created a ring of first and second order contiguous precincts. Using the six nearest neighbor weights file, Global Moran's I with Empirical Bayes standardization was calculated for the rates of DIRPART and DIRCRIM in 2004 as depicted in Exhibit 34 & 35.

**Table 17: Global Moran's I Statistics for DIR Partner and DIR Partner Criminal Incidents in Police Precincts (N=75)**

Year	DIR-Partner incidents Rate	DIR-Criminal Incidents Rate
2004	.4035*	.4314*

*\*p<.05*

The results in Table-17 indicate that the null hypothesis of spatial randomness is rejected across both definitions of IPV (DIR partner IPV & DIR criminal IPV). The results provide evidence of a significant spatial pattern. Exhibit 34 & 35 also show Moran scatter plots of DIRPART rate and DIRCRIM rate for 2004. The dark red precincts are significant spatial clusters of high rates and the pink are significant spatial outliers of high rates (that is they do not cluster in space with other high rates). The dark red clusters clearly indicate that there is a consistent significant spatial cluster of high DIR partner violence and criminal partner violence rates in certain precincts such as those in and around Flatbush in Brooklyn and Morris Heights in Bronx.

### Testing Social Disorganization Theory, Community Violence and IPV

Table-18 provides the descriptive statistics of social disorganization factors (concentrated disadvantage, residential stability and immigrant concentration) derived from the Census 2000 data using the Infoshare online website. It also provides the statistics for the community violence variable where non-intimate homicide is used an indicator of such violence.

**Table 18: Descriptive Statistics of Social Disorganization and Community Violence Factors in Police Precincts (N=75)**

Social Disorganization: Concentrated Disadvantage Score		
Mean		0.17
Median		0.15
Percentiles	25	0.12
	50	0.15
	75	0.22
Social Disorganization: Residential Stability Score		
Mean		0.18
Median		0.16
Percentiles	25	0.10
	50	0.16
	75	0.24
Social Disorganization: Immigrant Concentration Score		
Mean		0.33
Median		0.31
Percentiles	25	0.21
	50	0.31
	75	0.43
Community Violence Rate		
Mean		0.70
Median		0.45
Percentiles	25	0.24
	50	0.45
	75	1.18

Following the analyses of Miles Doan (1997) and further to test the social disorganization and community violence hypotheses, social disorganization and community violence variables were partitioned into quartiles and an independent t-test was conducted to assess the significant difference between the first three quartiles and the last quartile for the IPV outcomes DIR Partner IPV and DIR

Criminal IPV. Table 19 shows the results of these analyses.

**Table 19: Median IPV rates in NYC Police Precincts  
Comparing 75<sup>th</sup> quartile (N=18) precincts with other precincts. (N=56)**

DIR 2004	DIR Partner IPV	DIR Criminal IPV
SD Concentrated Disadvantage		
Fourth Quartile	245.80***	132.90***
Other Three Quartiles	109.25***	50.97***
SD Residential Stability		
First Quartile	135.48*	59.50*
Other Three Quartiles	99.49*	50.36*
SD Immigrant Concentration		
First Quartile	142.56	64.76
Other Three Quartiles	110.13	54.46
Community Violence 2004		
Fourth Quartile	226.59***	118.20***
Other Three Quartiles	98.25***	50.08***

*Mean difference significant at \*\*\* $p < .001$ , \*\* $p < .01$  \* $p < .05$*

The mean differences were significant for concentrated disadvantage, residential stability and community violence between the disadvantaged quartile and the other three quartiles. Immigrant concentration did not show a significant mean difference; this could be because of the curvilinear relationship between immigrant concentration and partner violence.

To further understand further the relationships between social disorganization and partner violence variables hierarchical OLS regression models were built for the DIR Partner Violence Rate (Table-20) and DIR Criminal Partner Violence Rate (Table-21). Appropriate diagnostics were performed; the scatterplot

did not indicate any outliers. Variance Inflation Factor (VIF) was in the range of 1.8 to 2.1 indicating that collinearity was not present. Further, regression standardized residuals indicated that normality assumptions are not violated.

Table 20: Summary of Regression Analyses for Variables Predicting DIR Partner Violence Rate  
(N = 74 police precincts)

Variable	(1)			(2)			(3)			(4)		
	B	SE B	$\beta$	B	SE B	$\beta$	B	SE B	$\beta$	B	SE B	$\beta$
Constant	-13.05	16.90		-16.29	29.61		53.31	32.37		47.15	30.08	
SD Concentrated Disadvantage	924.25	92.59	.76***	933.02	114.08	.77***	889.02	104.70	.73***	666.65	116.02	.55***
SD Residential Stability				9.75	73.05	.01	-14.95	66.96	-.02	4.04	62.37	.01
SD Immigrant Concentration							-176.78	45.24	-.28***	-143.72	43.03	-.22***
Community Violence										41.66	11.88	.31***
R <sup>2</sup>		.58			.58			.66			.71	
F		99.65***			49.15***			44.44***			41.79***	

p<.001

Table 2I: Summary of Regression Analyses for Variables Predicting Criminal DIR Partner Violence Rate  
(N = 74 police precincts)

Variable	(1)			(2)			(3)			(4)		
	B	SE B	$\beta$	B	SE B	$\beta$	B	SE B	$\beta$	B	SE B	$\beta$
Constant	-10.97	8.95		-6.81	15.67		31.82	16.94		29.18	16.20	
SD												
Concentrated Disadvantage	492.95	49.02	.76***	481.68	60.36	.75***	457.26	54.79	.71***	362.00	62.47	.56***
SD Residential Stability				-12.53	38.66	-.03	-26.23	35.04	-.06	-18.10	33.58	-.04
SD Immigrant Concentration							-98.13	23.66	-.29***	-83.97	23.17	-.25***
Community Violence										17.85	6.40	.25**
R <sup>2</sup>		.58			.59			.67			.70	
F		101.12***			49.99***			46.64***			40.32***	

p<.001

Regression results indicate that social disorganization variables (concentrated disadvantage, immigrant concentration and residential stability) significantly predict both partner violence and criminal partner violence rates. For partner violence and criminal partner violence, concentrated disadvantage predicted a large proportion of the variance. Immigrant concentration, residential stability, and community violence together predicted about 12-13 percent of the variance.

### **Summing Up Analysis II**

Mapping of the police reported DIR data with ecological variables indicate that there is a consistent pattern between disadvantage (all social disorganization variables) and IPV in police precincts. Additionally, Moran's-I tests for spatial autocorrelation indicate significant spatial clusters of IPV (both Partner and Criminal) in police precincts answering the third research question: is there any spatial clustering (concentration) of IPV?

All T-tests comparing IPV (both partner and criminal) in disadvantaged quartiles with the rest of the precincts for social disorganization and community violence variables show significant mean differences in IPV prevalence. Further, OLS regression models with IPV (both definitions) as outcome, and social disorganization and community violence as predictors, exhibit significant coefficients

for the predictor variables and answer research questions 4c and 4d that social disorganization and community violence are strong predictors of IPV prevalence rates in police precincts.

## CHAPTER 8: DISCUSSION

The current study expands research related to ecological correlates of partner violence by using both survey data and DIR police precinct data. This chapter discusses the findings, limitations and challenges in conducting this research using survey data and DIR data. It compares the results of the survey and DIR data and discusses the contrasting findings. This chapter also describes how this research connects to theory and existing literature related to IPV and ecological factors. It also proposes directions for future research.

### **Anaysis-I Results, Limitations and Challenges**

*Sample selectivity* - The results in analysis-I indicate that there is no neighborhood variance in partner violence in zip codes. The lack of variance reduced the viability of the HLM results. Moreover as the variables were added into the model, the variance did not move in any theoretically plausible direction. These results could be because of the selectivity of the sample. Though the sample represented most zip codes in NYC and mirrored NYC on a number of demographic characteristic, 95 percent were between 18 and 22 years old – all respondents were attending college and about 91 percent were dating. Also, only about 5.5 percent of the participants lived with their partners. This makes the

sample quite selective. Like most research using student samples, the generalizability of findings to a community population is limited. Even if we were to generalize this research to the 18-22 year old population, the absence of variability in education and relationship status precludes such a possibility in this case. Nevertheless, it is important to know that education has a protective effect above and beyond neighborhood factors.

*Survey Methodology* – Another potential problem related to the findings are issues related to survey research methodology. *Survey fatigue* and *not taking the survey seriously* may have biased the findings as the survey was long and comprehensive, and the items of interest to this study were just a small sampling of all instruments participants completed for the full survey. Also, considering that most of the survey participants coming to this college come in with a manifest interest in criminal justice and/or justice-related issues, it is likely that they may not have divulged all information accurately out of fear that the records might affect their job prospects.

*Conflict Tactics Scale (CTS)* - Items from the CTS were used as the dependent variable in this study to measure partner violence. In recent years, the findings from the CTS have been challenged as telling only part of the story,

specifically resulting in underreporting and ignorance of the contexts, meanings, and motives of abuse. Critics argue that CTS restricts the context of abuse to dispute or conflict settlement thereby limiting measurement of abuse related to control and power (for a complete discussion of CTS see DeKeseredy, W. & Schwartz, M., 1988). Moreover, the CTS is a blunt instrument which measures something potentially quite different from the incident level data available in the community level data. This concern is mitigated, however, because for purposes of this study, the broader brush measurement tool should have provided more of a chance to identify IPV incidents. In addition, the other items in the data did not show neighborhood clustering either, suggesting it is not related to the CTS.

*Sample Size*—The sample size in level-1 and level-2 units is important in multi-level models (Raudenbush & Bryk, 2002). While the overall sample size for survey participants was relatively large (N=1066), the sample size within each zip code ranged from 1-26. To see if sample size was affecting the analyses a couple of approaches were tried. (1) In one approach, only zip codes that had a sample size greater than or equal to four were used for the HLM multi-level analyses. In another, only zip codes with a sample size greater than or equal to nine were used. The results of these analyses did not improve the models in any way. Moreover, removing chunks of data reduced the external validity of the results. (2) In another approach

contiguous zip codes were aggregated to neighborhoods based on the community districts of NYC using GIS technology. This did not alter the HLM results either. Recent literature on multi-level models (Moinuddin, R., Matheson, F.I., & Glazier, R.H., 2007; Maas, C.J.M. & Hox, J.J., 2005) indicates that level-I sample size within zip codes should not affect the results.

*Immigrant Status* - This research finds that immigrant status has a protective factor on IPV rates. This is dissimilar to research related to immigrants and IPV in general (Dutton, Orloff and Hass, 2000; Raj and Silverman, 2002; Rodriguez and Brindis, 1995; Song, 1996; Tjaden, 2000) but is in the direction of emerging propositions about general crime that the large Latino immigrant population notwithstanding their economic disadvantage, experience much lower rates of violence compared to second and third generation Americans (Sampson & Bean, 2005). As far as findings related to IPV are concerned, this may be possible because of a couple of reasons. One reason could be that this research does not present a gendered analysis. Previous research that reported higher rates of IPV have used only a female sample, whereas this research is particularly interested in neighborhood effects irrespective of the gender of the victim. Gendered research in the context of IPV is very important, more so for immigrants, but this was beyond the purview of this research. One other reason for the protective factor could be operationalization

of the dependent variable. It should be noted that immigrant status was a protective factor for only Any IPV and the same significance was not seen for Severe IPV. This implies that immigrant status has implications for more general forms of IPV but this association disappears when the definition is restricted to only Severe IPV items. Future research needs to examine these associations using item-by-item analysis of the dependent variable by immigrant status to see if any patterns emerge. Or, the findings reflect recent changes in American society (Sampson & Bean, 2005) and even IPV has moved in the same direction as all other forms of crime irrespective of gender.

*Race:* This research adds to the body of literature investigating race effects in the context of IPV. This research did not find any race effects for this sample of 18-22 old college going students. This indicates that education may have a significant moderating effect for IPV outcomes above and beyond race effects. Also, race by itself might not be a significant predictor of IPV (Cunradi, Caetano, Clark & Schafer, 2007; Wooldredge & Thistlewhite, 2003). The intersections of gender, race, economic status, education may account for variation in IPV rates. (Collins, 1991; Crenshaw, 1997; Benson, Fox, DeMaris, and Van Wyk, 2000; Van Wyk, Benson, Fox and DeMaris, 2003) Again, the purview of this research is ecological effects per se, precluding other important but related analyses.

## **Anaysis-2 Results, Limitations and Challenges**

*Strengths and Limitations of DIR Police Data* – Many discussions in the criminological literature center on problems related to use of police data to inform research (Robinson, 1936; Sutherland, 1947). Most of this research focuses on issues regarding and variation in citizen reporting and police recording practices. Moreover, the numbers account for only reported incidents, totally ignoring the unreported incidents. These issues are further complicated for a private crime such as intimate partner violence. For this particular research, there is no published source of DIR data for partner violence. Therefore, obtaining this data for research was a long and difficult process. Even though detailed information is collected in the Domestic Incident Report (DIR) and much of that information was requested, only counts per precinct were finally provided by the Domestic Violence Research Unit of the Bureau of Justice Research and Innovation – New York State Division of Criminal Justice Services. Counts per precinct are useful in providing the much needed understanding of partner violence in NYC, yet they do not provide the ability to make fine grained analyses or to control for individual factors to understand unique ecological effects.

*Census Data* – Census data 2000 provide the variables for social

disorganization factors in this research. Census population figures are also used as denominators to calculate IPV rates. Though this study is cross-sectional in nature and the DIR2004 reports were used for analyses, the population denominator and other variables were from Census 2000. This problem is common to most research using census data.

*Infoshare for Census Data* – A particular problem in this research related to the use of census data is using the services of [www.infoshare.org](http://www.infoshare.org) to acquire data. The American Census does not provide data at the police precinct level, whereas Infoshare provides the same information at the police precinct level for NYC. Infoshare converts the census data to police precincts by using overlap factors based on residential housing. They maintain three significant figure accuracy (e.g., 12.3 percent) and caution that data with greater precision should be used with caution. In addition, they warn that data for other geographic areas will only be as accurate as the overlap factors. They expect this to be accurate within the range of 1-3 percent.

*Geographic Features of New York City* - One thing to consider while evaluating these results is that New York City has a few islands and therefore spatial proximity might not mean the same thing as it would otherwise. Maybe this is the reason that Lower East side consistently shows up as a High-Low outlier. Another

point to note is that the population denominator for the rates across all three years is derived from the 2000 Census. This might result in slightly inaccurate findings in terms of reality.

### **Comparing Results of Analysis 1 and 2**

This research presents conflicting results about neighborhood effects in analysis-1 and analysis-2. While analysis-1 provides details and significant results for the individual level factors, it provides null effects for ecological factors. In contrast, police data demonstrate spatial clusters and support for ecological factors. Why do these two sets of results differ?

*Population vs. sample effect* - The police data represent the population of New York City that has either directly or indirectly reported IPV incidents to the police, whereas the survey data is only a sample. This problem is further exacerbated by the selectivity of the sample. The sample is specific to a certain institution with unique characteristics, and draws students who may not be representative or exemplars of others in their neighborhood. Besides, most of the sample lives at home which is not typical for the 18 to 22 age group. Also, there is a restricted range in the socioeconomic status, education level, and other variables as well making this sample quite different from what might usually show up in police reports.

Reporting Patterns - Another factor could be reporting patterns in densely populated neighborhoods. An escalation of domestic noise levels may result in disturbance/nuisance to neighbors who may call the police. These conditions would result in higher reported numbers in densely populated neighborhoods compared to other neighborhoods. By the same argument, reporting patterns can vary by the age of the individual as well. Younger people (in the 18-22) age group may be less likely to trust the police and therefore might not report incidents to the police as often as older people.

*Policing Practices* - The other factor that may account for different result is varied policing practices across precincts. It is common to have more police officers and/or more stringent policing in densely populated or problem neighborhoods, with the results that crimes attract greater police attention . Community policing networks are also more strongly developed in some neighborhoods.

### **Connection to Theory**

Analysis-2 of this research provides mixed support for the social disorganization frame-work. Particularly, according to the summarization of forty neighborhood studies by Sampson and Morenoff (2002) concentrated disadvantage is a robust phenomenon in this research as well. In contrast, immigrant concentration

is seen as having a protective effect on IPV rates. The community violence variable has a strong positive relationship with IPV rates in police precincts. This has implication for the community violence perspective as indicated by Raghavan et al. (2006); it may well be that 'banalization' of violence in daily life carries over to the home front resulting in IPV. This argument is also linked to the subculture of violence perspective because it appears that certain neighborhoods may harbor their own subcultures where violence is a 'way of life'. By the same token, concentration of immigrants in certain neighborhoods in an urban center such as New York City provides support for the subculture of urbanism perspective, but in the case of this research, there appears to be a protective factor for IPV. While all of these are strong findings, the mechanism by which these variables influence IPV can best be explained by Strain theory. It appears that disadvantage increases stress in individuals resulting in IPV at the home front. Also, in neighborhoods where the concentration of immigrants is high, the ability to mirror a life similar to the home country because of availability of a variety of resources (for example traditional food, or music, or friends) can result in lesser strain for individual in these neighborhoods and therefore the protective effect. Given the absence of neighborhood effect results for Analysis-I we are unable to clearly understand the linkages and mechanism by which the neighborhood variables impact IPV beyond making an educated guess. Yet, the

findings so far, do provide a strong support that IPV does vary by neighborhoods.

### **Connection to Existing Literature**

The findings for this research are contrasting for the survey sample and the DIR data. This is important to know because no other research so far has investigated IPV comparing two different dimensions of IPV (Survey data and Police data). While this research is unable to provide conclusive answers explaining the difference, it is a worthwhile avenue for future research. Also, this research compares two levels of the outcome (AnyIPV and Severe IPV in the survey data and Partner Incidents and Criminal Partner Incidents in the DIR data). Most research related to neighborhood effect of IPV so far (except Wright 2008) looks at IPV unidimensionally. Comparing the various levels indicated that the models are practically the same for both the levels of IPV. This is an important finding for both research and practice.

The findings from analysis-2 provide support for the first study of IPV and ecological factors (Miles Doan, 1997). Concentrated disadvantage police precincts in New York City have about 2.5 times higher IPV rates compared to other tracts, this finding is also in line with all other research which has examined the connection between concentrated poverty and IPV (Bartollo, 2001; Benson, Fox, Demaris and

Van Wyk, 2003; Cunradi, 2000; Van Wyk, Benson, Fox and DeMaris, 2003; VanWyk, 2000; Wooldredge, 2001). The results from analysis-I are not consistent with other research about neighborhood effects while controlling for individual factors (Browning, 2002; Wright 2008). This may be because both these studies used the PHDCN data based on Chicago neighborhoods and there are differences in the nature of heterogeneity of Chicago and New York City neighborhoods. This is an area which needs further replication in other cities to see if the findings from PHDCN hold good for other urban (or rural) centers as well.

### **Future Directions**

Future research in this area should consider using a sample from the general population to better understand if sample selectivity, in fact, affected the outcomes of these analyses. Rigorous sampling procedures such as cluster sampling or stratified random sampling need to be used to enable generalization of the findings.

Other research that utilizes HLM analyses to disentangle individual and ecological variables (Browning, 2002 & Wright, 2008) has used the Project of Human Development of Chicago Neighborhoods (PHDCN) data. While this research has supported some of these findings using the police reported data in analysis-2, it has been unable to find similar results using the survey data. It is

therefore important to replicate such PHDCN data collection efforts in other neighborhoods as well to see if the findings from PHDCN are similar across other urban centers as well.

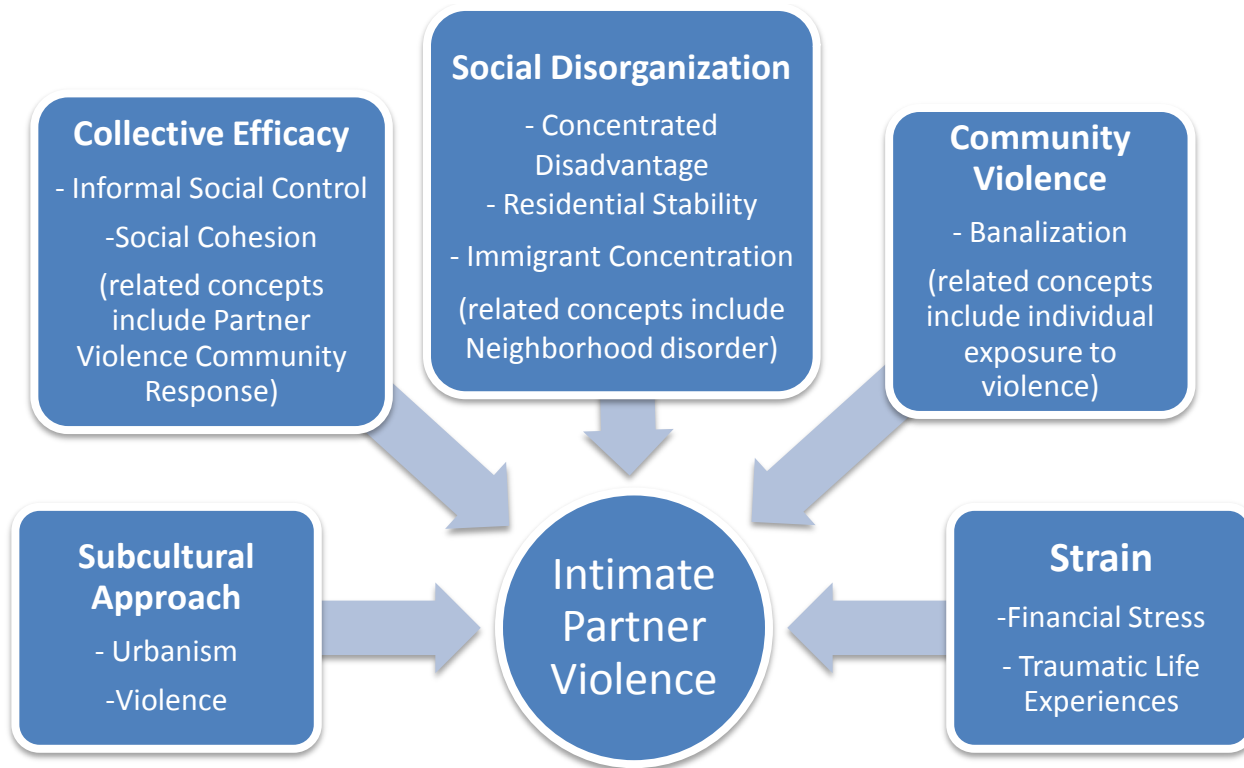
The complete DIR report data which includes a number of variables about the victim and the perpetrator and the first report of the incident needs to be made available to researchers. These data will provide a wealth of information about ecological factors related to partner violence enabling a thorough analysis. Such analyses will enable community specific prevention and intervention strategies.

Future research needs to include geographically coded data from service agencies to enable better policy recommendations. For example call centers can collect information about the caller location. This will provide numbers of those calls that get directly reported to the hotline and may have missed the police records.

The same data can be subject to further examination to compare if IPV varies by neighborhood factors when the sample is divided based on variables such as race, gender or immigrant status. Much prior research employs a gendered examination. Also, the individual scales in the data can be further fine tuned using Item Response Theory. The solid results obtained from the DIR data needs to be further examined based on neighborhood immigrant status variables. It may be that homogenous

neighborhoods have a protective effect for IPV. Also, comparing these results to other crime outcomes might indicate whether this protective effect is only in relation to partner violence to other types of violent crime as well.

APPENDIX-I: VISUAL REPRESENTATION OF THE THEORETICAL MODEL



APPENDIX-2: VISUAL REPRESENTATION OF INDIVIDUAL AND SOCIAL FACTORS



## APPENDIX-3: TIMELINE OF IPV &amp; ECOLOGICAL FACTORS RESEARCH

1997	Miles-Doan & Kelly, 1997
1998	Miles-Doan 1998
1999	Van Wyk, 1999
2000	Cunradi, Caetano, Clark, & Schafer, 2000
2001	Bartolo 2001
2001	Bartolo & Carpenter 2001
2002	Benson & Fox 2002
2002	Browning, 2002
2002	Fox, Benson, DeMaris, & Wyk, 2002
2003	Benson, Fox, DeMaris & Van Wyk, 2003
2003	DeKeseredy, Schwartz, Alvi, & Tomaszewski, 2003
2003	DeMaris, Benson, Fox, Hill, & Van Wyk, 2003
2003	McQuestion, 2003
2003	Pearlman, Zierler, Gjelsvik, & Verhoek-Oftedahl, 2003
2003	Van Wyk, Benson, & Fox, 2003
2003	Wooldredge & Thistlethwaite, 2003
2004	Benson, Wooldredge, Thistlethwaite, & Fox, 2004
2004	Lauritsen & Schaum, 2004
2005	Bogat, Leahy, Von Eye, Maxwell, Levendosky & Davidson, 2005
2006	Fox & Benson, 2006
2006	Raghavan, Mennerich, Sexton & James, 2006
2007	Cunradi, 2007
2008	Wright, 2008

#### APPENDIX-4: DATA SOURCES AND FINDINGS OF ECOLOGICAL IPV RESEARCH

IPV Ecological Research: Studies Using Police Data		
Data Source/ Sample Size	Citation	Main Findings
Duval County, Florida 33	Miles-Doan, 1997 & 1998	Concentrated disadvantaged tracts (Poverty, unemployed males and female heads of Household with children) have median rates of IPV than 9 times higher than other tracts.
Rhode Island	Pearlman, D. N., Zierler, S., Gjelsvik, A., & Verhoek-Oftedahl, W. (2003)	Across all levels of neighborhood poverty (<5% to 100% of residents living below the federal poverty level), the risk of police-reported domestic violence was higher for Hispanic and black women than for white women.
Hamilton County, Cincinnati (OH)	Wooldredge, J., & Thistlethwaite, A. (2003)	Support for Miles-Doan study. Support for racial invariance thesis.
Brisbane, Australia	Bartolo, L. D. (2001)	Support for Miles-Doan study.
IPV Ecological Research: Studies Using Surveys		
NCVS	Lauritsen, J. L., & Schaum, R. (2004)	Support for Miles-Doan study. Area family and age composition have more stronger direct relationships with IPV for women than poverty or racial composition. Similarities between stranger, non-stranger and IPV.
PHDCN	Browning, C. R. (2002)	Collective Efficacy(CE) is negatively associated with IPV (homicide & non-lethal IPV). CE exerts more powerful regulatory effect on non-lethal violence in neighborhoods where tolerance of IPV is low. CE increase likelihood that women will disclose IPV to sources of support.
DHSIII	McQuestion, M. J. (2003)	The odds of ever being beaten are 64% higher for a woman living in a cluster where the proportion of other women reporting beatings exceeded the sample mean.

1995 Alcohol Survey	Cunradi, C. B., Caetano, R., Clark, C., & Schafer, J. (2000)	Poor neighborhoods increases risk for both MFPV and FMPV. The association between residence in poor neighborhood and MFPV was statistically significant for black couples The association between residence in a poor neighborhood and FMPV was statistically significant for black couples and white couples.
Quality of Neighborhood Life	DeKeseredy, W. S., Schwartz, M. D., Alvi, S., & Tomaszewski, A. (2003)	Weak but significant relationship between collective efficacy and IPV.
National Survey of Families & Households	Fox, G. L., & Benson, M. L. (2006)	Vulnerable economic risk profile couples live in economic disadvantaged neighborhoods. Rates of IPV significantly higher in disadvantaged neighborhoods.
	Benson, M. L., & Fox, G. L. (2002)	Women in couples that are located in socio-economically disadvantaged neighborhoods are at a higher risk of experiencing violence at the hands of their male partners than women located in advantaged neighborhoods. The relationship between community context and intimate violence is not the result of compositional differences in neighborhood populations but rather represents a contextual effect. Different forms of economic distress are related to the likelihood of violence against women in intimate relationships. The correlation of race and ethnicity with intimate violence is confounded with differences in community context.
	Benson, M. L., Fox, G. L., DeMaris, A., & Van Wyk, J. (2003)	Controlling for violence at time 1 neighborhood economic disadvantage, neighborhood residential instability, male employment instability, and subjective financial strain influence the likelihood of violence at time 2.
	Benson, M. L., Wooldredge, J., Thistlethwaite, A., & Fox, G. L. (2004)	Rates across race vary by type of community. Correlation between race and IPV is disappears across race in similar ecological contexts. Individual level

		IPV risk factors operate similarly across race.
	DeMaris, A., Benson, M. L., Fox, G. L., Hill, T., & Van Wyk, J. (2003)	Couples were at higher risk of IPV if they lived in an economically disadvantaged neighborhood.
	Fox, G. L., Benson, M. L., DeMaris, A. A., & Wyk, J. (2002)	Employment status of either partner not directly linked to odds of violence.
	Van Wyk, J. A. (1999)	Social disorganization significantly influences male to female partner violence.
	Van Wyk, J. A., Benson, M. L., & Fox, G. L. (2003)	IPV twice as likely in disadvantaged neighborhoods.
<b>IPV Ecological Research: Studies Using Community Sample</b>		
n=50	Raghavan, C., Mennerich, A., Sexton, E., & James, S. E. (2006)	Living in high social disorder neighborhoods and substance abuse increases exposure to community violence which in turn associated with increased IPV.
n=94	Bogat, G. A., Leahy, K., von Eye, A., Maxwell, C., Levensky, A. A., & Davidson, W. S., 2nd. (2005)	Women's experience of IPV not related to community violence.

## APPENDIX-5: SURVEY INSTRUMENT

*Demographic Information  
Spring 2005 (Phase III)*

Participant number: \_\_\_\_\_

*I am going to ask you many questions about your life right now, your views on different things, and experiences that have happened to you. There is no right or wrong answer and everything that you say will be kept absolutely confidential.*

Today's date is \_\_\_\_\_

1. How old are you? \_\_\_\_\_
2. What is your sex?     Male     Female
3. Do you consider yourself to be Latino/a?     Yes     No
4. Do you consider yourself to be of Caribbean background/descent?     Yes     No
5. Which racial/ethnic group best describes you?
  - Black/African-American/African/Afro-Caribbean
  - White/European American/European or Caucasian
  - Asian/Pacific Islander
  - South Asian (Indian, Pakistani, etc)
  - Native American/Alaskan Native
  - Arab/Arab-American
  - Other
- 5a. If marked Other please describe \_\_\_\_\_
- 5b. If Latino/a, please describe ethnicity: (e.g., Dominican, Mexican-American) \_\_\_\_\_
6. Were you born either in the mainland U.S. or Hawaii?     Yes     No
- 6a. If **NO**, where were you born?
  - Puerto Rico     Virgin Islands     Guam     Other: \_\_\_\_\_ (Please specify the country.)
7. How long have you lived in mainland U.S. or Hawaii (do not include Puerto Rico and the US territories)? \_\_\_\_\_ yrs.  **Not applicable as I was born in mainland US and have lived there all my life**
8. What language do you usually speak at **home**?
  - Mostly English     English and another language     Mostly another language
9. Were your parents born in the U.S.?



- 4 = Three to five months  
 5 = Six months to eleven months  
 6 = About a year  
 7 = More than a year, but less than 2 years  
 8 = Two or more years

17. How long ago did this relationship end?

- \_\_\_\_\_ It has not ended                      \_\_\_\_\_ 0-6 months  
 \_\_\_\_\_ 6 months to a year                      \_\_\_\_\_ More than a year

17a. Is (was) sex a part of your relationship?       Yes       No

18. What gender is your partner?      **Male**      **Female**

19. How old is she/he? \_\_\_\_\_

20. Does your partner consider himself/herself to be Latino/a?       Yes                       No

21. Does your partner consider himself/herself to be of Caribbean background/descent?  
 Yes       No

22. Which racial/ethnic group best describes your partner?

- Black/African-American/African/Afro-Caribbean  
 White/European American/European or Caucasian  
 Asian/Pacific Islander  
 South Asian (Indian, Pakistani, etc)  
 Native American/Alaskan Native  
 Arab/Arab-American  
 Other

22a. If marked Other please describe \_\_\_\_\_

23. What is the highest level of schooling your partner has completed?

- \_\_\_\_\_ Less than high school  
 \_\_\_\_\_ High school/ Vocational school  
 \_\_\_\_\_ Some college and currently in college  
 \_\_\_\_\_ Some college and but not currently in college  
 \_\_\_\_\_ Finished college  
 \_\_\_\_\_ Post-graduate

24. Is your partner a student (or was a student when you were dating)?       Yes       No

25. Is your partner working now?

- \_\_\_\_\_ No, unemployed  
 \_\_\_\_\_ Yes, part-time  
 \_\_\_\_\_ Yes, full-time  
 \_\_\_\_\_ On state assistance

\_\_\_ No, you financially support your partner

26. Have you had trouble-making ends meet (pay bills, rent, school fees) in the last 12 months?

\_\_\_ No                      \_\_\_ Some of the time  
\_\_\_ Most of the time    \_\_\_ All of the time

27. Do you receive financial aid to attend John Jay College of Criminal Justice?  Yes     No

### Neighborhood Life

\*\*\*\*\*

**In this section, we will ask you about the neighborhood and community in which you live. If you live in more than one neighborhood, pick the one that is most important to you.**

\*\*\*\*\*

\*\*\*\*\*

Many people are very concerned about drug use, drug dealing, and other problems in their neighborhoods. Please tell us if you think that the following things are more of a problem, less of a problem, about the same or not a problem since you first moved here.<sup>6</sup>

1=**more** of a problem since you first moved here

2=**less** of a problem since you first moved here

3=**about the same** since you first moved here

4=**not a problem** since you first moved here

*(Please circle one.)*

- |  |   |   |   |   |
|--|---|---|---|---|
| a. Vandalism   | 1 | 2 | 3 | 4 |
| b. People drinking alcohol and using drugs<br>(e.g., marijuana, cocaine, crack, heroin) in public places | 1 | 2 | 3 | 4 |
| c. Groups of teenagers hanging around public places  | 1 | 2 | 3 | 4 |
| d. Youth gangs   | 1 | 2 | 3 | 4 |
| e. Graffiti (people writing on walls)  | 1 | 2 | 3 | 4 |
| f. Garbage on the streets and sidewalks  | 1 | 2 | 3 | 4 |
| g. Noise   | 1 | 2 | 3 | 4 |
|  |   |   |   |   |
| h. Drug dealing  | 1 | 2 | 3 | 4 |
| i. People using drugs<br>(e.g., marijuana, cocaine, crack, heroin) and alcohol                           | 1 | 2 | 3 | 4 |
| j. Armed robbery   | 1 | 2 | 3 | 4 |
| k. Burglary  | 1 | 2 | 3 | 4 |
| l. Violent assault   | 1 | 2 | 3 | 4 |
| m. Sexual assault  | 1 | 2 | 3 | 4 |
| n. Family violence (e.g., wife beating and child abuse)  | 1 | 2 | 3 | 4 |
| o. Theft   | 1 | 2 | 3 | 4 |

---

<sup>6</sup> SD

For each of the following statements, check the most appropriate response.<sup>7</sup>  
 Could you count on your neighbors to help if:

**Children were skipping school and hanging out on a street corner?**

Very likely    Likely    Unlikely    Very unlikely    Don't know

**Children were spray-painting graffiti on a local building?**

Very likely    Likely    Unlikely    Very unlikely    Don't know

**Children were showing disrespect to an adult?**

Very likely    Likely    Unlikely    Very unlikely    Don't know

**A fight broke out in front of your house?**

Very likely    Likely    Unlikely    Very unlikely    Don't know

**The fire station closest to your home was threatened with budget cuts?**

Very likely    Likely    Unlikely    Very unlikely    Don't know

For each of the following statements, circle either 'strongly agree', 'agree', 'disagree', 'strongly disagree' or don't know.

**1. People in this neighborhood can be trusted**

Strongly Agree    Agree    Disagree    Strongly Disagree    Don't know

**2. This is a close-knit neighborhood**

Strongly Agree    Agree    Disagree    Strongly Disagree    Don't know

**3. People around here are willing to help their neighbors**

Strongly Agree    Agree    Disagree    Strongly Disagree    Don't know

**4. People in this neighborhood do not share the same values**

Strongly Agree    Agree    Disagree    Strongly Disagree    Don't know

**5. People in this neighborhood generally do not get along with each other**

Strongly Agree    Agree    Disagree    Strongly Disagree    Don't know

---

<sup>7</sup> SC

Could you **count on members of your community** to do the following if they witness a couple physically fighting and it looks like its getting out of hand in the neighborhood? Please circle the appropriate response using the scale provided. Please remember that we want to know what your community would do and not what you would personally do.<sup>8</sup>

**1 = Definitely**

**2 = Very likely**

**3 = Likely**

**4 = Very unlikely**

**5 = Definitely not**

Call the police	1	2	3	4	5
Don't call the police but stop the fight personally	1	2	3	4	5
Mind their own business	1	2	3	4	5
Generally avoid them	1	2	3	4	5
Criticize <b>him</b> to his face	1	2	3	4	5
Criticize <b>her</b> to her face	1	2	3	4	5
Try talking to a third party (church/family) to intervene	1	2	3	4	5
Don't bring up the violence as far as possible	1	2	3	4	5
Badmouth <b>him</b> within the community	1	2	3	4	5
Badmouth <b>her</b> within the community	1	2	3	4	5
Call a domestic hotline	1	2	3	4	5
Ignore <b>him</b> at community gatherings or local hangouts (bar, deli etc)	1	2	3	4	5
Ignore <b>her</b> at community gatherings or local hangouts	1	2	3	4	5
Ignore that a fight is going on	1	2	3	4	5
Call out or shout for the fight to stop	1	2	3	4	5
Avoid dealing with the violence as far as possible	1	2	3	4	5
Offer help or advice to <b>him</b>	1	2	3	4	5
Offer help or advice to <b>her</b>	1	2	3	4	5
Pretend it didn't happen the next time they see the couple	1	2	3	4	5
Drop hints that this kind of behavior is not "cool"	1	2	3	4	5
Avoid inviting both of them to parties, festivals and other community gatherings	1	2	3	4	5

---

<sup>8</sup> DVE

*These questions are only about things that you have seen in the past 12 months from today in **your neighborhood**: Remember NOT to include in your answers things that you may have seen or heard about only on TV, radio, the news, or in the movies.*

**In the LAST 12 MONTHS, have you SEEN someone:**

1. Get chased when you thought they could really get hurt?  Yes  No
2. Get hit, slapped, punched beaten up? (This *does not* include when they were playing or fooling around.  Yes  No
3. Get attacked with a weapon?  Yes  No
4. Get shot?  Yes  No
- 5 Get shot AT?  Yes  No

**OTHER THEN WHAT YOU HAVE ALREADY TOLD ME, in the PAST 12 MONTHS:**

6. Have you HEARD gunfire nearby? (This *does not* include hearing gunfire while hunting or at a shooting range.)  Yes  No
7. Have you SEEN a serious accident where someone else was hurt very badly or died?  Yes  No
8. Have you SEEN someone get killed as a result of violence, like being shot, stabbed, or beaten to death?  Yes  No
9. OTHER THAN WHAT YOU HAVE ALREADY TOLD ME, in the PAST 12 MONTHS, have you SEEN someone threaten to seriously hurt another person? (This includes being threatened with a weapon.)  Yes  No
10. In the PAST 12 MONTHS, have you FOUND a dead body?  Yes  No

**Please Answer The Following Questions.** (Check the best response)

1. Have you ever had a drink of beer, wine, liquor, or any alcoholic beverage?  Yes  No (skip to question 2)
- 1a. In the past twelve months, have you ever had a drink of beer, wine, liquor, or any alcoholic beverages?



Some people nowadays use other drugs that are not prescribed by a doctor. Please circle the number that indicates the amount of times that you have used the following substances and the age of first use:

0 = Never

1 = 1-3 times

2 = 4-10 times

3 = More than 10 times

3. Marijuana (i.e. pot or grass) 0 1 2 3

Age first used marijuana \_\_\_\_\_ years old

Have you used in the past 12 months?  Yes  No

3a. Cocaine or crack 0 1 2 3

Age first used cocaine or crack \_\_\_\_\_ years old

Have you used in the past 12 months?  Yes  No

3b. Angel dust or PCP 0 1 2 3

Age first used Angel dust or PCP \_\_\_\_\_ years old

Have you used in the past 12 months?  Yes  No

3c. LSD or other hallucinogenic, like peyote, psilocybin, or mushrooms 0 1 2 3

Age first used hallucinogenic \_\_\_\_\_ years old

Have you used in the past 12 months?  Yes  No

3d. Heroin or methadone 0 1 2 3

Age first used heroin or methadone \_\_\_\_\_ years old

Have you used in the past 12 months?  Yes  No

3e. Inhalants, like glue, nitrous oxide, amyl nitrate, paint, or gasoline 0 1 2 3

Age first used inhalants \_\_\_\_\_ years old

Have you used in the past 12 months?  Yes  No

4. Has your use of alcohol or drugs ever caused you major problems with your family, your friends, school, or on the job?

4a. Which substance(s) caused that problem? \_\_\_\_\_

4b. How old were you when that happened (for the first time)? \_\_\_\_\_ AGE

4c. Has this happened in the past 12 months?  Yes  No

4d. Have you ever been high from drugs or alcohol in a situation where it increased your chances of getting hurt – like driving a car or boat, swimming, or crossing the street in heavy traffic?

4e. In that situation, what substance(s) made you high? \_\_\_\_\_

4g. Has this happened in the past 12 months?  Yes  No

4h. Have you ever been arrested or had problems with the police because you were taking alcohol or drugs – like for driving while intoxicated, for being drunk and disorderly, or for stealing to get drugs?

4i. What substances got you in trouble with the police? \_\_\_\_\_

4j. How old were you when that happened (for the first time)? \_\_\_\_\_ AGE

4k. Has this happened in the past 12 months?  Yes  No

4l. Have you ever continued to use alcohol or drugs in spite of having a lot of problems with your family about using them – problems like fights, arguments, or other relationship problems?

4m. What substances were you using that caused these problems with family or friends?

4n. How old were you when that happened (for the first time)? \_\_\_\_\_ AGE

4o. Has this happened in the past 12 months?  Yes  No

**RELATIONSHIP BEHAVIORS<sup>9</sup>**

*No matter how well a couple gets along, there are times when they disagree, get annoyed with the other person, want different things from each other, or just have spats or fights because they are in a bad mood, are tired or for some other reason. Couples also have many different ways of trying to settle their differences. This is a list of things that might happen when you have differences. Please circle how many times you did each to these things in the past year, and how many times your partner (or your ex in the last 12 months) did them in the past year. If you or your partner did not do one of these things in the past year, but it happened before that, circle "7" on your answer sheet for that question. If it never happened, circle "8" on your answer sheet.*

*How often did this happen?**1 = Once in the past year**2 = Twice in the past year**3 = 3-5 times in the past year**4 = 6-10 times in the past year**5 = 11-20 times in the past year**6 = More than 20 times in the past year**7 = Not in the past year, but it did happen before**8 = This has never happened*

I threw something at my partner that could hurt	1	2	3	4	5	6	7	8
My partner did this to me	1	2	3	4	5	6	7	8
I twisted my partner's arm or hair	1	2	3	4	5	6	7	8
My partner did this to me	1	2	3	4	5	6	7	8
I pushed or shoved my partner	1	2	3	4	5	6	7	8
My partner did this to me	1	2	3	4	5	6	7	8
I grabbed my partner	1	2	3	4	5	6	7	8
My partner did this to me	1	2	3	4	5	6	7	8
I slapped my partner	1	2	3	4	5	6	7	8
My partner did this to me	1	2	3	4	5	6	7	8
I kicked my partner	1	2	3	4	5	6	7	8
My partner did this to me	1	2	3	4	5	6	7	8
I punched or hit my partner with something that could hurt	1	2	3	4	5	6	7	8
My partner did this to me	1	2	3	4	5	6	7	8
I choked my partner	1	2	3	4	5	6	7	8

---

<sup>9</sup> CTS

My partner did this to me	1 2 3 4 5 6 7 8
I slammed my partner against a wall	1 2 3 4 5 6 7 8
My partner did this to me	1 2 3 4 5 6 7 8
I beat up my partner	1 2 3 4 5 6 7 8
My partner did this to me	1 2 3 4 5 6 7 8
I burned or scalded my partner on purpose	1 2 3 4 5 6 7 8
My partner did this to me	1 2 3 4 5 6 7 8
I used a knife or gun on my partner	1 2 3 4 5 6 7 8
My partner did this to me	1 2 3 4 5 6 7 8
On the items above, what percentage of these times overall do you estimate that in doing these actions you were primarily motivated by acting in self-defense, that is protecting yourself from immediate physical harm (whether or not you or your partner acted first)	_____
On the items above, what percentage of these times overall do you estimate that in doing these actions you were trying to fight back in a situation where you were not the first to use these or similar tactics?	_____
On the items above, what percentage of these times overall do you estimate that you used these actions on your dating partners before they actually attacked you or threatened to attack you?	_____
I insisted on sex when my partner did not want to (but did not use force)	1 2 3 4 5 6 7 8
My partner did this to me	1 2 3 4 5 6 7 8
I made my partner have sex without a condom	1 2 3 4 5 6 7 8
My partner did this to me	1 2 3 4 5 6 7 8
I insisted my partner have oral or anal sex (but did not use physical force)	1 2 3 4 5 6 7 8
My partner did this to me	1 2 3 4 5 6 7 8
I used threats to make my partner have sex	1 2 3 4 5 6 7 8
My partner did this to me	1 2 3 4 5 6 7 8
I used threats to make my partner have oral or anal sex	1 2 3 4 5 6 7 8
My partner did this to me	1 2 3 4 5 6 7 8
I used force (like hitting, holding down, or using a weapon) to make my partner have sex with me	1 2 3 4 5 6 7 8
My partner did this to me	1 2 3 4 5 6 7 8

I used force (like hitting, holding down, or using a weapon) to make my partner have oral or anal sex	1 2 3 4 5 6 7 8
My partner did this to me	1 2 3 4 5 6 7 8
I had a sprain, bruise, or small cut because of a fight with my partner	1 2 3 4 5 6 7 8
My partner had a sprain, bruise, or small cut because of a fight with me	1 2 3 4 5 6 7 8
I felt physical pain that still hurt the next day because of a fight with my partner	1 2 3 4 5 6 7 8
My partner still felt physical pain the next day after a fight we had	1 2 3 4 5 6 7 8
I passed out from being hit on the head by my partner during a fight	1 2 3 4 5 6 7 8
My partner passed out from a hit on the head in a fight with me	1 2 3 4 5 6 7 8
I went to a doctor (M.D.) because of a fight with my partner	1 2 3 4 5 6 7 8
My partner went to a doctor (M.D.) because of a fight with me	1 2 3 4 5 6 7 8
I needed to see a doctor (M.D.) because of a fight with my partner but didn't	1 2 3 4 5 6 7 8
My partner needed to see a doctor (M.D.) because of a fight with me but didn't	1 2 3 4 5 6 7 8
I had a broken bone from a fight with my partner	1 2 3 4 5 6 7 8
My partner had a broken bone from a fight with me	1 2 3 4 5 6 7 8
*****	*****

**Blank Page**

**IF YOU HAVEN'T HAD AN INTIMATE PARTNER, PLEASE SKIP TO PAGE 18**

**Above, you answered questions about conflicts that you have had with a current or former intimate partner. We would like to learn more detail about these events from your point of view.**

**WE WOULD LIKE TO GET A CLEAR PICTURE OF WHAT HAPPENED DURING THE WORST CONFLICT THAT YOU HAVE EVER HAD WITH YOUR PARTNER. (If you've only had one conflict, please describe it.)**

About when did this event occur? \_\_\_\_\_ (date)

**1) Please describe what happened from start to finish:**

---

---

---

---

---

---

---

---

---

---

**2) Why do you say this conflict is the worst?**

---

---

---

---

**3) In general, what is the main reason that you and this partner have/had conflicts?**

---

---

---

**WE WOULD LIKE YOUR GENERAL OPINIONS ABOUT RELATIONSHIP CONFLICTS**

**1) Do you think men and women start conflicts in relationships for different reasons? How so?**

---

---

---

---

---

**2) In your opinion, why do conflicts between intimate partners turn physical?**

---

---

---

---

---

**3) What impact do physical conflicts have on intimate relationships?**

---

---

---

---

---

**4) Have you ever had a “play fight” with your partner that got out of hand? What happened?**

---

---

---

---

---

---

---

**If you are Male, complete this section. If you are Female skip to Page 19**

**Proximal Alcohol Measure- MALE SECTION**

*You just finished telling us about arguments you may have had with your partner in the last 12 months. Now we would like to know if there was any drinking going on during incidents where there were behaviors such as **slapping, pushing, shoving, kicking** and other similar acts. Please check the best response.*

PS1. Did **YOU** drink alcohol right before or during any fight where you pushed/slapped/hit or did anything similar to your partner?

- Never drank before or during a fight     2-3 times  
 Only once     I was drinking before or during most fights

PS2. How many drinks did you have?

- None     3-5 drinks  
 1-3 drinks     More than 6 drinks

PS3. Did **YOU** use drugs right before or during any fight where you pushed/slapped/hit or did anything similar to your partner?

- Never used drugs before or during a fight     2-3 times  
 Only once     I was using drugs before or during most fights

PS4. What type of drugs did you use?

- None  
 Please fill in the most appropriate answer: \_\_\_\_\_

PS5. Did **YOU** drink alcohol AFTER a fight ENDED where **YOU** pushed/slapped/hit or did anything similar to your partner?

- Never drank AFTER a fight     2-3 times  
 Only once     I was drinking AFTER most fights

PS6. How many drinks did you have AFTER A FIGHT?

- None     3-5 drinks  
 1-3 drinks     More than 6 drinks

PS7. How long after a fight did you drink?

- Not Applicable     Not right away but the same day  
 I was drinking before the fight and I continued     The next day  
 Right away between 1-3 hours after the fight

PS8. Did **YOU** use drugs AFTER a fight ENDED where **YOU** pushed/slapped/hit or did anything similar to your partner?

- Never used drugs after     2-3 times  
 Only once     I was using drugs before or during most fights

PS9. What type of drugs did you use AFTER A FIGHT?

- None  
 Please fill in the most appropriate answer: \_\_\_\_\_

If you are Female, continue with the survey. If you are Male skip to PAGE 20

**Proximal Alcohol Measure- FEMALE SECTION**

*You just finished telling us about arguments you may have had with your partner in the last 12 months. Now we would like to know if there was any drinking around the time of the incident(s) where there were behaviors such as **slapping, pushing, shoving, kicking** and other similar acts. Please check the best response.*

PS10. Did **YOU** drink alcohol right before or during a fight where s/he pushed/slapped/hit or did anything similar to you?

- Never drank before or during a fight     2-3 times  
 Only once     I was drinking before or during most fights

PS11. How many drinks did you have?

- None     3-5 drinks  
 1-3 drinks     More than 6 drinks

PS12. Did **YOU** use drugs right before or during a fight where s/he pushed/slapped/hit or did anything similar to you?

- Never used drugs before or during a fight     2-3 times  
 Only once     I was using drugs before or during most fights

PS13. What type of drugs did you use?

- None  
 Please fill in the most appropriate answer: \_\_\_\_\_

PS14. Did **YOU** drink alcohol AFTER a fight ENDED where he pushed/slapped/hit or did anything similar to you?

- Never drank AFTER a fight     2-3 times  
 Only once     I was drinking AFTER most fights

PS15. How many drinks did you have AFTER A FIGHT?

- None     3-5 drinks  
 1-3 drinks     More than 6 drinks

PS16. Did **YOU** use drugs AFTER a fight ENDED where s/he pushed/slapped/hit or did anything similar to you?

- Never used drugs after a fight     2-3 times  
 Only once     I was using drugs after most fights

PS17. What type of drugs did you use AFTER a FIGHT?

- None  
 Please fill in the most appropriate answer: \_\_\_\_\_

PS18. How long after a fight did you drink?

- Never drank after a fight
- I was drinking before the fight and I continued
- Right away between 1-3 hours after the fight
- Not right away but the same day
- The next day

PS19. How long after a fight did you use drugs?

- Never used drugs after a fight
- I was drinking before the fight and I continued
- Right away between 1-3 hours after the fight
- Not right away but the same day
- The next day

### Social Support - Part I

Everybody needs help and support from time to time. These are some questions about your friends, family, neighbors, or anyone else you know who can help you. For these questions please do NOT answer about anyone you've been in an intimate or romantic relationship with.<sup>10</sup>

Please check the *appropriate answer*:

1. Someone I am close to makes me feel confident in myself	<input type="checkbox"/> Agree	<input type="checkbox"/> Disagree
2. There is someone I can talk to openly about anything	<input type="checkbox"/> Agree	<input type="checkbox"/> Disagree
3. There is someone I can talk to about any problems in my relationship	<input type="checkbox"/> Agree	<input type="checkbox"/> Disagree
4. Someone I care about stands by me through good and bad times	<input type="checkbox"/> Agree	<input type="checkbox"/> Disagree
5. I have someone to stay with in an emergency	<input type="checkbox"/> Agree	<input type="checkbox"/> Disagree
6. Someone I know supports my decisions no matter what they are	<input type="checkbox"/> Agree	<input type="checkbox"/> Disagree
7. Someone I know will help me if I am in danger	<input type="checkbox"/> Agree	<input type="checkbox"/> Disagree
8. I have someone who will be there for me in times of trouble	<input type="checkbox"/> Agree	<input type="checkbox"/> Disagree
9. I have someone to borrow money from in an emergency	<input type="checkbox"/> Agree	<input type="checkbox"/> Disagree

---

<sup>10</sup> SS

## Social Support - Part II

*You just told us about acceptance and support that close friends and family members might give you. Now I would like to know about their relationships. Please note that everyone should complete this section.*

***First, think of the women in your support group when answering the following questions.***

Have any of your female support members experienced the following from their partner/husband or boyfriend **in the last 12 months** that you know of?

1. He pushed/slapped/hit/kicked/punched or did anything similar to her  
 Never     1-2 times     3 or more times     Not in the past year but it did happen before
2. He yelled at her using words like bitch/fat/stupid  
 Never     1-2 times     3 or more times     Not in the past year but it did happen before
3. He forced her to have sex  
 Never     1-2 times     3 or more times     Not in the past year but it did happen before
4. He controlled her behaviors (e.g., told her what to wear or who she could see)  
 Never     1-2 times     3 or more times     Not in the past year but it did happen before
5. What is the female support member's relationship to you? Check ALL that apply.  
 Friend/Classmate/Co-worker     Sister     Mother     Cousin/Grandmother/Aunt  
 Other \_\_\_\_\_

***Second, think about the men in your support group when answering the following questions.***

Have any of your male support members done the following to their partner/wife or girlfriend **in the last 12 months** that you know of?

1. He pushed/slapped/hit/kicked/punched or did anything similar to her  
 Never     1-2 times     3 or more times     Not in the past year but it did happen before
2. He yelled at her using words like bitch/fat/stupid  
 Never     1-2 times     3 or more times     Not in the past year but it did happen before
3. He forced her to have sex  
 Never     1-2 times     3 or more times     Not in the past year but it did happen before
- He controlled her behaviors (e.g., told her what to wear or who she could see)  
 Never     1-2 times     3 or more times     Not in the past year but it did happen before
- What is the Male support member's relationship to you? Check ALL that apply.  
 Friend/Classmate/Co-worker  
 Brother  
 Father  
 Cousin/Grandfather/Uncle  
 Other \_\_\_\_\_

*This survey asks about your concerns of a possible dating partner's activities outside of a relationship that you might be in. Even if you are not currently in a relationship, think about how you would feel in these situations if they were to happen. Read each of the following statements and indicate how true/false it is for you using the following scales. Please make sure your responses on the answer sheet correspond to the rating scale.*

Absolutely False	Definitely False	False	Slightly False	Neither True nor False	Slightly True	True	Definitely True	Absolutely True
1	2	3	4	5	6	7	8	9

1. If a dating partner were to see and old friend of the opposite sex and respond with a great deal of happiness, I would be annoyed. 1 2 3 4 5 6 7 8 9
2. If a dating partner admired someone of the opposite sex, I would feel Irritated 1 2 3 4 5 6 7 8 9
3. If a dating partner were to help someone of the opposite sex with his/her homework, I would feel suspicious. 1 2 3 4 5 6 7 8 9
4. If a dating partner were to become very close to someone of the opposite Sex I would feel very unhappy/angry. 1 2 3 4 5 6 7 8 9
5. If someone of the opposite sex were to pay attention to a dating partner, I would become possessive of him/her. 1 2 3 4 5 6 7 8 9
6. The thought of a dating partner kissing someone else drives me up the wall 1 2 3 4 5 6 7 8 9
7. If someone of the opposite sex lit up at the sight of a dating partner, I would become uneasy. 1 2 3 4 5 6 7 8 9
8. I feel possessive towards a dating partner. 1 2 3 4 5 6 7 8 9
9. If I saw a picture of a dating partner and an old date, I would feel unhappy 1 2 3 4 5 6 7 8 9
10. If a dating partner were to accidentally call me by the wrong name, I would become furious. 1 2 3 4 5 6 7 8 9<sup>6</sup>

---

<sup>6</sup> IJS

**CHILDHOOD AND ADOLESCENT HISTORY**

*This section deals with your own behavior. I would like to remind you that all your answers are Confidential.*

*How many times in the past 12 months have you done one or more of the following? Check the appropriate box.*

	Never	Once a month	Every 2 to 3 weeks	Once a week	2 to 3 Times a week	Once a Day
Stolen or tried to steal something worth more than \$50?						
Stolen or tried to steal a motor vehicle such as a car or a motorcycle?						
Broken or tried to break into a building or vehicle to steal something or just to look around?						
Been involved in gang fights						
Used force or strong arm methods to get money or things from people?						
Had or tried to have sexual relations with someone against their will?						
Attacked someone with the idea of seriously hurting or killing that person?						
Hit or threatened to hit a teacher or other adult at school						
Hit or threatened to hit one of your parents						
Hit or threatened to hit an acquaintance or friend						



someone you didn't know very well?							
<b>10.</b> Have you seen a stranger (or someone you didn't know very well) attack or beat up someone and seriously injure or kill them?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>11.</b> Has anyone threatened to kill you or cause you serious physical harm?	<b>Never</b>	<b>Once</b>	<b>Twice</b>	<b>3 Times</b>	<b>4 Times</b>	<b>5 Times</b>	<b>More than 5 times</b>
11a). stranger? <b>Yes/NO</b> 11b). friend or acquaintance? <b>Yes/No</b> 11c). relative? <b>Yes/No</b> 11d). intimate partner? <b>Yes/No</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>12.</b> While growing up: Were you physically punished in a way that resulted in bruises, burns, cuts, or broken bones?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>13.</b> While growing up: Did you see or hear family violence? (such as your father hitting your mother, or any family member beating up or inflicting bruises, bumps or cuts on another family member)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>14.</b> Have you ever been slapped, punched, kicked, beaten up, or otherwise physically hurt by your spouse (or former spouse), a boyfriend/girlfriend, or some other intimate partner?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14c).Has more than one intimate partner physically hurt you? 14d).If yes, how many hurt you?	<b>Yes</b> <input type="checkbox"/>	<b>No</b> <input type="checkbox"/>					
<b>15.</b> <u>Before</u> your 13th birthday: Did anyone-who was <u>at least 5 years older than you</u> touch or fondle your body in a sexual way or make you touch or fondle their body in a sexual way?	<b>Never</b>	<b>Once</b>	<b>Twice</b>	<b>3 Times</b>	<b>4 Times</b>	<b>5 Times</b>	<b>More than 5 times</b>
<b>if this happened:</b> 15a).Was the person a stranger? <b>Yes/No</b> 15b). friend or acquaintance? <b>Yes/No</b> 15c).parent or caregiver? <b>Yes/No</b> 15d).other relative? <b>Yes/No</b> 15e). Was threat or force used? <b>Yes/No</b> 15f). Were you seriously injured? <b>Yes/No</b> 15g).Was there oral, anal, or vaginal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



20a).stranger? <b>Yes/No</b> 20b). friend or acquaintance? <b>Yes/No</b> 20c). relative? <b>Yes/No</b> 20d). intimate partner? <b>Yes/No</b>	
<b>21.</b> Have you or a romantic partner ever had a miscarriage?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<b>22.</b> Have you or a romantic partner ever had an abortion?	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<b>23.</b> Have you experienced (or seen) any other events that were life threatening, caused serious injury, or were highly disturbing or distressing? (examples: lost in the wilderness; a serious animal bite; violent death of a pet; being kidnapped or held hostage; seeing a mutilated body or body parts)	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Please Describe: _____ _____	

The events listed below correspond to items #1 to #23 on this questionnaire. If any of these events happened to you, CIRCLE the number of the *ONE* event (only 1) that **CAUSES YOU THE MOST DISTRESS.**

a). Natural disaster	i). Assaulted by acquaintance/stranger	q). As a teen: unwanted sexual contact
b). Motor vehicle accident	j). Witnessed severe assault to acquaintance/stranger	r). As an adult: unwanted sexual contact
c). "Other" kind of accident	k). Threatened with death/serious harm	s). Sexual harassment
d). Combat or warfare	l). Growing up: witnessed family	t). Stalked violence
e). Sudden death friend/loved one	m). Growing up: physically punched	u). Miscarriage
f). Life-threatening/disabling event to a loved one	n). Physically hurt by intimate partner	v). Abortion
g). Life threatening illness	o). Before 13: sexual contact-someone five years older	w). Some "other" traumatic event
h). Robbery/weapon used	p). Before 13: unwanted sexual contact	x).None of these events happened to me

24a).When did this event (first) occur? (your age or date): \_\_\_\_\_

24b). When did this event last occur? (try to be precise e.g., year, month, day): \_\_\_\_\_

24c).How much distress (anxiety, worry, sadness, frustration, or grief) does this event cause you?  
(Circle the best answer)

None happened to me	No Distress	Slight Distress	Moderate Distress	Considerable Distress	Extreme Distress
---------------------	-------------	-----------------	-------------------	-----------------------	------------------

**Part 1**

The purpose of this questionnaire is to evaluate your response to the event (or series of events) experienced by you and noted on the previous page as causing you the most distress (item 23). (If you did not experience any of the events listed on the last questionnaire (or are not distressed about any of them now), the purpose of this questionnaire is to evaluate your response to the worst or most distressing event you ever did experience.) Briefly describe what happened:

---



---



---

1. Were you extremely afraid at any time during the event(s)? **Yes/NO**
2. Did you feel helpless or powerless during the event(s)? **Yes/No**
3. Did you experience horror at any time during the event(s)? **Yes/NO**

**Part 2**

Items 1 to 20 ask about the degree to which you experienced 20 symptoms in the PAST MONTH (the LAST 30 DAYS, COUNTING TODAY).

0 = Absent or Did Not Occur

1 = Present to a Slight Degree

2 = Present to a Moderate Degree

3 = Present to a Considerable Degree

4 = Present to an Extreme or Severe Degree

1. Unwanted thoughts or mental pictures of the event(s) when nothing was happening to remind you? \_\_\_\_\_
2. Bad dreams or nightmares about the event(s)? \_\_\_\_\_
3. Suddenly reliving the event(s), flashbacks of the event(s), or acting or feeling as if it was actually happening again? \_\_\_\_\_
4. Distress or emotional upset when reminded of the event(s)? \_\_\_\_\_
5. Physical reactions when reminded of the event(s)? (such as sweaty palms, rapid breathing, pounding heart, dry mouth, nervous stomach, tense muscles) \_\_\_\_\_
6. Efforts to avoid thoughts, conversations, or feelings that would remind you of the event(s)? \_\_\_\_\_
7. Efforts to avoid activities, people, or places that would remind you of the event(s)? \_\_\_\_\_
8. Unable to remember any important parts of what happened? \_\_\_\_\_

Items 9 to 20 ask about how you thought and felt in the last month--COMPARED TO BEFORE THE EVENT(S)

9. Loss of interest in activities that had been important--such as loss of interest in your job, hobbies, sports, or social activities? \_\_\_\_\_
10. Feeling detached or cut off from others around you? \_\_\_\_\_
11. Feeling emotionally "numb?" (for example, unable to feel tenderness, loving feelings, joyful feelings, or unable to cry) \_\_\_\_\_
12. Thinking your future would be cut short in some way? (for example, no expectation of a career, marriage or children; expecting a shortened life or premature death) \_\_\_\_\_
13. Trouble falling or staying asleep? \_\_\_\_\_
14. Irritability or outbursts of anger? \_\_\_\_\_
15. Difficulty concentrating? \_\_\_\_\_
16. Being alert, watchful, or "on guard?" (for example, looking around you, checking out noises, checking to see if windows and doors were locked) \_\_\_\_\_
17. Jumpy or startled by sudden sounds or movements? \_\_\_\_\_

**Part 3**

1. Have you had symptoms like the ones described above for longer than 30 days? **Yes/No**
2. Have you had symptoms like the ones described above for more than 3 months? **Yes/No**
3. How long have you had symptoms like the ones described above? (weeks, months, or years): \_\_\_\_\_  
When did you first have symptoms like the ones described above? (your age or date): \_\_\_\_\_





**Directions:** Indicate how characteristic or descriptive each of the following statements is of you by using the code given to the right of each statement.

- +3 very characteristic of me, extremely descriptive
- +2 rather characteristic of me, quite descriptive
- +1 somewhat characteristic of me, slightly descriptive
- 1 somewhat uncharacteristic of me, slightly undescriptive
- 2 rather uncharacteristic of me, quite undescriptive
- 3 very uncharacteristic of me, extremely nondescriptive

- |   |    |    |    |    |    |    |
|---|----|----|----|----|----|----|
| 1. When I do a boring job, I think about the less boring parts of the job and the reward that I will receive when I am finished.    | -3 | -2 | -1 | +1 | +2 | +3 |
| 2. When I have to do something that is anxiety arousing for me, I try to visualize how I will overcome my anxieties while doing it. | -3 | -2 | -1 | +1 | +2 | +3 |
| 3. Often by changing my way thinking I am able to change my feelings about almost everything.                                       | -3 | -2 | -1 | +1 | +2 | +3 |
| 4. I often find it difficult to overcome my feelings of nervousness and tension without any outside help.                           | -3 | -2 | -1 | +1 | +2 | +3 |
| 5. When I am feeling depressed I try to think about pleasant events.  | -3 | -2 | -1 | +1 | +2 | +3 |
| 6. I cannot avoid thinking about mistakes I have made in the past.  | -3 | -2 | -1 | +1 | +2 | +3 |
| 7. When I am faced with a difficult problem, I try to approach its solution in a systematic way.                                    | -3 | -2 | -1 | +1 | +2 | +3 |
| 8. I usually do my duties quicker when somebody is pressuring me.   | -3 | -2 | -1 | +1 | +2 | +3 |
| 9. When I am faced with a difficult decision, I prefer to postpone making a decision even if all the facts are at my disposal.      | -3 | -2 | -1 | +1 | +2 | +3 |
| 10. When I find that I have difficulties in concentrating on my reading, I look for ways to increase my concentration.              | -3 | -2 | -1 | +1 | +2 | +3 |
| 12. When I try to get rid of a bad habit, I first try to find out all the factors that maintain this habit.                         | -3 | -2 | -1 | +1 | +2 | +3 |
| 13. When an unpleasant fact is bothering me, I try to think of something pleasant.  | -3 | -2 | -1 | +1 | +2 | +3 |
| 14. If I would smoke two packages of cigarettes a day, I probably would need outside help to stop smoking.                          | -3 | -2 | -1 | +1 | +2 | +3 |
| 15. When I am in a low mood, I try to act cheerful so my mood will change.  | -3 | -2 | -1 | +1 | +2 | +3 |
| 16. If I had the pills with me, I would take a tranquilizer whenever I felt tense and nervous.                                      | -3 | -2 | -1 | +1 | +2 | +3 |
| 17. When I am depressed, I try to keep myself busy with things I like.  | -3 | -2 | -1 | +1 | +2 | +3 |
| 18. I tend to postpone unpleasant duties even if I could  | -3 | -2 | -1 | +1 | +2 | +3 |

perform them immediately.	-3	-2	-1	+1	+2	+3
19. I need outside help to get rid of some of my bad habits.	-3	-2	-1	+1	+2	+3
20. When I find it difficult to settle down and do a certain job, I look for ways to help settle me down.	-3	-2	-1	+1	+2	+3
21. Although it makes me feel bad, I cannot avoid thinking about all kinds of possible catastrophes in the future.	-3	-2	-1	+1	+2	+3
22. First of all I prefer to finish a job that I have to do and then start doing things I really like.	-3	-2	-1	+1	+2	+3
23. When I feel pain in a certain part of my body, I try not to think about it.	-3	-2	-1	+1	+2	+3
24. My self-esteem increases once I am able to overcome a bad habit.	-3	-2	-1	+1	+2	+3
25. In order to overcome bad feelings that accompany failure, I often tell myself that it is not so catastrophic and that I can do something about it.	-3	-2	-1	+1	+2	+3
26. When I feel that I am too impulsive, I tell myself "stop and think before you do anything".	-3	-2	-1	+1	+2	+3
27. Even when I am terribly angry at somebody, I consider my actions very carefully.	-3	-2	-1	+1	+2	+3
28. Facing the need to make a decision, I usually find out all the possible alternatives instead of deciding quickly and spontaneously.	-3	-2	-1	+1	+2	+3
29. Usually I do first the things I really like to do even if there are more urgent things to do.	-3	-2	-1	+1	+2	+3
30. When I realize that I cannot help but be late for an important meeting, I tell myself to keep calm.	-3	-2	-1	+1	+2	+3
31. When I feel pain in my body, I try to divert my thoughts from it.	-3	-2	-1	+1	+2	+3
32. I usually plan my work when faced with a number of things to do.	-3	-2	-1	+1	+2	+3
33. When I am short of money, I decide to record all my expenses in order to plan more carefully for the future.	-3	-2	-1	+1	+2	+3
34. If I find it difficult to concentrate on a certain job, I divide the job into smaller segments.	-3	-2	-1	+1	+2	+3
35. Quite often I cannot overcome unpleasant thoughts that bother me.	-3	-2	-1	+1	+2	+3
36. Once I am hungry and unable to eat, I try to divert my thoughts away from my stomach or try to imagine that I am satisfied. <sup>11</sup>	-3	-2	-1	+1	+2	+3

---

<sup>11</sup> SCS

**LPS**

Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly
1	2	3	4

1. Success is based on survival of the fittest; I am not concerned about the losers.  
1 2 3 4
2. For me, what's right is whatever I can get away with.  
1 2 3 4
3. In today's world, I feel justified in doing anything I can get away with to succeed.  
1 2 3 4
4. My main purpose in life is getting as many goodies as I can.  
1 2 3 4
5. Making a lot of money is my most important goal.  
1 2 3 4
6. I let others worry about higher values; my main concern is with the bottom line.  
1 2 3 4
7. People who are stupid enough to get ripped off usually deserve it.  
1 2 3 4
8. Looking out for myself is my top priority.  
1 2 3 4
9. I tell other people what they want to hear so that they will do what I want them to do.  
1 2 3 4
10. I would be upset if my success came at someone else's expense.  
1 2 3 4
11. I often admire a really clever scam.  
1 2 3 4
12. I make a point of trying not to hurt others in pursuit of my goals.  
1 2 3 4
13. I feel bad if my words or actions cause someone else to feel emotional pain.  
1 2 3 4
14. Even if I were trying very hard to sell something, I wouldn't lie about it.  
1 2 3 4
15. Cheating is not justified because it is unfair to others.  
1 2 3 4
16. I enjoy manipulating other people's feelings  
1 2 3 4
17. I find myself in the same kinds of trouble, time after time.  
1 2 3 4

18. I am often bored.

1 2 3 4

19. I find that I am able to pursue one goal for a long time.

1 2 3 4

20. I don't plan anything very far in advance.

1 2 3 4

21. I quickly lose interest in tasks I start.

1 2 3 4

Most of my problems are due to the fact that other people just don't understand me

1 2 3 4

Before I do anything, I carefully consider the possible consequences.

1 2 3 4

24. I have been in a lot of shouting matches with other people.

1 2 3 4

25. When I get frustrated, I often "let off steam" by blowing my top.

1 2 3 4

26. Love is overrated.

1 2 3 4

## REFERENCES

- Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology*, 30(1), 47-87.
- Agnew, R. (1999). A general strain theory of community differences in crime rates. *Journal Of Research In Crime & Delinquency*, 36(2), 123-156.
- Anderson Elijah. (1998). The social ecology of youth violence. In Michael Tonry and Mark H. Moore (Ed.), *Youth violence* (pp. 65-104). Chicago, IL: University of Chicago Press.
- Anderson Elijah. (1999). *Code Of The Street: Decency, Violence, And The Moral Life Of The Inner City*. Norton, N.Y.
- Anselin, L., Cohen, J., Cook, D., Gorr, W., & Tita, G. (2000). Spatial analyses of crime. *Criminal Justice*, 4, 213-262.
- Archer, J. (2000). Sex differences in aggression between heterosexual partners: A meta-analytic review. *Psychological bulletin*, 126(5), 651.
- Archer, J., & Webb, I. (2006). The relation between scores on the buss-perry aggression questionnaire and aggressive acts, impulsiveness, competitiveness, dominance, and sexual jealousy. *Aggressive Behavior*, 32, 464-473.
- Babcock, J. C., Green, C. E., & Robie, C. (2004). Does batterers' treatment work? A meta-analytic review of domestic violence treatment. *Clinical Psychology Review*, 23(8), 1023-1053.
- Babcock, J. C., Waltz, J., Jacobson, N. S., & Gottman, J. M. (1993). Power and violence: The relation between communication patterns, power discrepancies, and domestic violence. *Journal of Consulting And Clinical Psychology*, 61(1), 40-50.
- Bartolo, L. D. (2001). The geography of reported domestic violence in Brisbane: A social justice perspective. *Australian Geographer*, 32(3), 321-341.
- Bartolo, L. D., & Carpenter, B. (2001). Domestic violence in the urban fringe. *Urban Policy And Research*, 19(3), 347-366.

- Bellair, P. E. (1997). Social interaction and community crime: Examining the importance of neighbor networks. *Criminology*, 35(4), 677-703.
- Bellair, P. E., & Roscigno, V. J. (2000). Local labor-market opportunity and adolescent delinquency. *Social Forces*, 78(4), 1509-1538.
- Benson, M. L., & Fox, G. L. (2002). Economic distress, community context, and intimate violence: An application and extension of social disorganization theory, final report. Washington, DC: U.S. Department Of Justice.
- Benson, M. L., Fox, G. L., DeMaris, A., & Van Wyk, J. (2000). Violence in families: The intersection of race, poverty, and community context. *Contemporary Perspectives in Family Research*, 2, 91-109.
- Benson, M. L., Fox, G. L., Demaris, A., & Van Wyk, J. (2003). Neighborhood disadvantage, individual economic distress and violence against women in intimate relationships. *Journal Of Quantitative Criminology*, 19(3), 207-235.
- Benson, M. L., Wooldredge, J., Thistlethwaite, A., & Fox, G. L. (2004). The correlation between race and domestic violence is confounded with community context. *Social Problems*, 51(3), 326-342.
- Block, C. R., & Skogan, W. G. (2001). *Do collective efficacy and community capacity make a difference behind "behind closed doors"?* Chicago: Illinois Criminal Justice Information Authority.
- Block, C. R. (2000). "The Chicago Women's Health Risk Study: Risk of Serious Injury or Death in Intimate Violence: A Collaborative Research Project." *New Report*. NCJ 184511, Washington, DC: United States Department of Justice, National Institute of Justice.
- Bogat, G. A., Leahy, K., Von Eye, A., Maxwell, C., Levendosky, A. A., & Davidson, W. S., 2nd. (2005). The influence of community violence on the functioning of women experiencing domestic violence. *American Journal Of Community Psychology*, 36(1-2), 123-132.
- Bogat, G. A., Levendosky, A. A., & Von Eye, A. (2005). The future of research on intimate partner violence: person-oriented and variable-oriented perspectives.

*American Journal Of Community Psychology*, 36(1-2), 49-70.

- Brezina, T. (1996). Adapting to strain: An examination of delinquent coping responses. *Criminology*, 34(1), 39-60.
- Bronfenbrenner, K. (2005). Organizing women: The nature and process of union-organizing efforts among US women workers since the mid-1990s. *Work and Occupations*, 32(4), 441.
- Browning, C. R. (2002). The span of collective efficacy: Extending social disorganization theory to partner violence. *Journal Of Marriage And Family*, 64(4), 833-850.
- Burke, J. G., O'Campo, P., & Peak, G. L. (2006). Neighborhood Influences And Intimate Partner Violence: Does Geographic Setting Matter? *Journal Of Urban Health : Bulletin Of The New York Academy Of Medicine*, 83(2), 182-194.
- Bursik, R. J. Jr. (1988). Social disorganization and theories of crime and delinquency: Problems and prospects. *Criminology*, 26(4), 519-551.
- Button, D. M. (2008). Social disadvantage and family violence: Neighborhood effects on attitudes about intimate partner violence and corporal punishment. *American Journal of Criminal Justice*, 33(1), 130-147.
- Cazenave N & Straus, M (1979). Race, class, network embeddedness and family violence: A search for potent support systems. *J Comparative Family Studies*, 10, 3, 282-300.
- Chahine, Z., Van Straaten, J., & Williams-Isom, A. (2005). The New York City neighborhood-based services strategy. *Child welfare*, 84(2), 141-152.
- Chaix, B., Merlo, J., & Chauvin, P. (2006). Comparison of a spatial approach with the multilevel approach for investigating place effects on health: the example of healthcare utilisation in France. *Journal of Epidemiology and Community Health*, 59, 517-526.
- Cicchetti, D. & Lynch, M. (1993). Toward an ecological/transactional model of community violence and child maltreatment: consequences for

children's development. *Psychiatry*, 56(1), 96-118.

- Clarke, M. J., & Maantay, J. A. (2006). Optimizing recycling in all of new york city's neighborhoods: Using GIS to develop the REAP index for improved recycling education, awareness, and participation. *Resources, Conservation & Recycling*, 46(2), 128-148.
- Cohen, A. K. (1955). *Delinquent boys*. Glencoe, Ill: Free Press.
- Coker, A. L., Smith, P. H., McKeown, R. E., & King, M. J. (2000). Frequency and correlates of intimate partner violence by type: Physical, sexual, and psychological battering. *American Journal of Public Health*, 90(4), 553-559.
- Coleman, D. H., & Straus, M. A. (1986). Marital power, conflict, and violence in a nationally representative sample of american couples. *Violence And Victims*, 1(2), 141-157.
- Collins, P. H. (1991). *Black feminist thought : knowledge, Consciousness, and the politics of empowerment*. New York: Routledge.
- Crenshaw, K. (1997). In Maschke K. J. (Ed.), *The legal response to violence against women*. New York, NY: Garland.
- Cunradi, C. B. (2007). Drinking level, neighborhood social disorder, and mutual intimate partner violence. *Alcoholism: Clinical & Experimental Research*, 31(6), 1012-1019.
- Cunradi, C. B., Caetano, R., & Schafer, J. (2002). Alcohol-related problems, drug use, and male intimate partner violence severity among US couples. *Alcoholism: Clinical and Experimental Research*, 26(4), 493-500.
- Cunradi, C. B., Caetano, R., & Schafer, J. (2002). Socioeconomic predictors of intimate partner violence among white, black, and Hispanic couples in the United States. *Journal of Family Violence*, 17(4), 377-389.
- Cunradi, C. B., Caetano, R., Clark, C., & Schafer, J. (2000). Neighborhood poverty as a predictor of intimate partner violence among white, black, and Hispanic couples in the united states: A multilevel analysis. *Annals Of Epidemiology*, 10(5), 297-308.

- Cunradi, C. B. (2007). Drinking level, neighborhood social disorder, and mutual intimate partner violence. *Alcoholism: Clinical and Experimental Research*, *31*(6), 1012-1019.
- Dekeseredy, W. S. (2000). Current Controversies Of Defining Nonlental violence against women in intimate heterosexual relationships: empirical implications. *Violence against Women*, *6*(7), 728.
- Dekeseredy, W. S., Schwartz, M. D., Alvi, S., & Tomaszewski, A. (2003). Perceived collective efficacy and women's victimization in public housing. *Criminology And Criminal Justice*, *3*(1), 5.
- DeKeseredy, W. S. & Schwartz, M. (1998). *Measuring the Extent of Woman Abuse in Intimate Heterosexual Relationships: A Critique of the Conflict Tactics Scales*. Harrisburg, PA: VAWnet, a project of the National Resource Center on Domestic Violence/Pennsylvania Coalition Against Domestic Violence. Retrieved 04/15/09r, from: <http://www.vawnet.org>.
- Della-Giustina, J. A. (2005). Gender, race, and class as predictors of femicide rates: A path analysis. Doctoral Dissertation, City University of New York.
- Demaris, 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 Family*, *65*(3), 652-667.
- DeSteno, D., Valdesolo, P., & Bartlett, M. Y. (2006). Jealousy and the threatened self: Getting to the heart of the green-eyed monster. *Journal of Personality and Social Psychology*, *91*(4), 626-641.
- Dietz, M. L. (1968). Violence and control: A study of some relationships of the violent subculture to the control of interpersonal violence. Doctoral Dissertation. Wayne State University, Dept. of Sociology.
- Dugan, L., Nagin, D. S., & Rosenfeld, M. (1999). Explaining the decline in intimate partner homicide: The effects of changing domesticity, women's status, and domestic violence resources. *Homicide Studies*, *3*(3), 187.
- Dutton, M., Orloff, L. E., & Hass, G. A. (2000). Characteristics of help-seeking behaviors, resources, and service needs of battered immigrant Latinas: Legal

- and policy implications. *Georgetown Journal on Poverty Law and Policy*, 7(2), 245-305.
- Elliott, D. S., Wilson, W. J., Huizinga, D., Sampson, R. J., Elliott, A., & Rankin, B. (1996). The effects of neighborhood disadvantage on adolescent development. *Journal of Research in Crime and Delinquency*, 33(4), 389-426.
- Felson Richard B. (1997). Routine activities and involvement in violence as actor, witness, or target. *Violence and Victims*, 12(3), 209-221.
- Figueredo, A. J., Corral-Verdugo, V., Frías-Armenta, M., Bachar, K. J., White, J., McNeill, P. L., et al. (2001). Blood, solidarity, status, and honor: The sexual balance of power and spousal abuse in Sonora, Mexico. *Evolution and Human Behavior*, 22(5), 295-328.
- Finkelhor, D. (1983). *The dark side of families: Current family violence*. Sage Publications. Beverly Hills, CA.
- Firestone, J. M., Lambert, L. C., & Vega, W. A. (1999). Intimate violence among women of Mexican origin: Correlates of abuse. *Journal of Gender, Culture, and Health*, 4(2), 119-134.
- Fischer, C. S. (1975). Toward a subcultural theory of urbanism. *The American Journal of Sociology*, 80(6), 1319-1341.
- Fischer, C. S. (1995). The subcultural theory of urbanism: a twentieth-year assessment. *The American Journal of Sociology*. 101(3), 543-577.
- Follingstad, D. R., Bradley, R. G., Laughlin, J. E., & Burke, L. (1999). Risk factors and correlates of dating violence: The relevance of examining frequency and severity levels in a college sample. *Violence and victims*, 14(4), 365-380.
- Fox, G. L., & Benson, M. L. (2006). Household and neighborhood contexts of intimate partner violence. *Public Health Reports*, 121(4), 419-427.
- Fox, G. L., Benson, M. L., Demaris, A. A., & Wyk, J. (2002). Economic distress and intimate violence: testing family stress and resources theories. *Journal Of Marriage And Family*, 64(3), 793-807.

- Frye, V. (2007). The informal social control of intimate partner violence against women: Exploring personal attitudes and perceived neighborhood social cohesion. *Journal of Community Psychology, 35*(8)
- Gracia, E., Herrero, J., Fuente, A., & Lila, M. (2008). Neighborhood social disorder and attitudes toward partner violence against women: Evidence from latin-american immigrants in spain. *The Open Sociology Journal, 1*(1), 1-8.
- Gartner, R., & Macmillan, R. (1995). The effect of victim-offender relationship on reporting crimes of violence against women. *Canadian Journal of Criminology, 37*(3)
- Gelles, R. J., & Straus, M. A. (1979). Violence in the American family. *Journal of Social Issues, 35*(2), 15-39.
- Gil-González, D., Vives-Cases, C., Álvarez-Dardet, C., & Latour-Pérez, J. (2006). Alcohol and intimate partner violence: Do we have enough information to act? *European journal of public health, 16*(3), 279-285.
- Golding, J. M. (1999). Intimate partner violence as a risk factor for mental disorders: A meta-analysis. *Journal of Family Violence, 14*(2), 99-132.
- Graham-Bermann, S. A., & Edleson, J. L. (Eds.). (2001). *Domestic violence in the lives of children: The future of research, intervention, and social policy*. (1st ed.) American Psychological Association.
- Haj-Yahia, M. M. (1998). A patriarchal perspective of beliefs about wife beating among Palestinian men from the west bank and the Gaza strip. *Journal of Family Issues, 19*(5), 595-621.
- Halliday-Boykins, C. A., & Graham, S. (2001). At both ends of the gun: Testing the relationship between community violence exposure and youth violent behavior. *Journal of abnormal child psychology, 29*(5), 383-402.
- Hiselman, J. (1999). Intimate partner violence in Illinois. *Trends & Issues, 1*(8).
- Holtzworth-Munroe, A., Smutzler, N., & Sandin, E. (1997). A brief review of the research on husband violence part II: The psychological effects of husband violence on battered women and their children. *Aggression and Violent*

*Behavior*, 2(2), 179-213.

- Hornung, C. A., McCullough, B. C., & Sugimoto, T. (1981). Status relationships in marriage: Risk factors in spouse abuse. *Journal of Marriage and the Family*, 43(3), 675-692.
- Jurkovich, G. J., Rivara, F. P., Johansen, J. M., & Maier, R. V. (2004). Centers for disease control and prevention injury research agenda: Identification of acute care research topics of interest to the centers for disease control and prevention--national center for injury prevention and control. *The Journal of Trauma*, 56(5), 1166-1170.
- Kalmuss, D. S., & Straus, M. A. (1982). Wife's marital dependency and wife abuse. *Journal of marriage & the family*, 44(2), 277-286.
- Keenan-Miller, D., Hammen, C., & Brennan, P. (2007). Adolescent psychosocial risk factors for severe intimate partner violence in young adulthood. *Journal of Consulting & Clinical Psychology*, 75(3), 456-463.
- Kenney, C. T., & McLanahan, S. S. (2006). Why are cohabitating relationships more violent than marriages? *Demography*, 43(1), 127-140.
- Kim, J. Y., & Emery, C. (2003). Marital power, conflict, norm consensus, and marital violence in a nationally representative sample of Korean couples. *Journal of Interpersonal Violence*, 18(2), 197-219.
- Kornhauser, R. R. (1978). *Social sources of delinquency: an appraisal of analytic models*. University Of Chicago Press. Chicago.
- Kruttschnitt, C., McLaughlin, B.L., & Petrie, C.V. (Eds.). (2004). *Advancing the federal research agenda on violence against women*. Washington, DC: The National Academies Press. Retrieved March 15, 2006 from <http://darwin.nap.edu/books/0309091098/html/RI.html>.
- Kyriacou, D. N., Anglin, D., Taliaferro, E., Stone, S., Tubb, T., Linden, J. A., et al. (1999). Risk factors for injury to women from domestic violence. *New England Journal of Medicine*, 341(25), 1892.
- Lambert, L. C., & Firestone, J. M. (2000). Economic context and multiple abuse

- techniques. *Violence Against Women*, 6(1), 49.
- Lauritsen, J. L., & Schaum, R. (2004). The social ecology of violence against women. *Criminology*, 42(2), 323-357.
- Lenton, R. L. (1995). Feminist versus interpersonal power theories of wife abuse revisited. *Canadian Journal Of Criminology*, 37(4)
- Lipsky, S., Caetano, R., Field, C. A., & Bazargan, S. (2005). The role of alcohol use and depression in intimate partner violence among black and hispanic patients in an urban emergency department. *The American Journal of Drug and Alcohol Abuse*, 31(2), 225-242.
- Maas, C.J.M. & Hox, J.J. (2005). Sufficient sample sizes for multilevel modeling. *Methodology*, 1, 86-92.
- Markowitz, F. E., Bellair, P. E., Liska, A. E., & Jianhong Liu. (2001). Extending social disorganization theory: Modeling the relationships between cohesion, disorder, and fear. *Criminology*, 39(2), 293-320.
- Marzuk, P. M., Tardiff, K., Leon, A. C., Hirsch, C. S., Stajic, M., Portera, L., et al. (1997). Poverty and fatal accidental drug overdoses of cocaine and opiates in New York City: An ecological study. *The American Journal of Drug and Alcohol Abuse*, 23(2), 221-228.
- Mccloskey, L. A. (1996). Socioeconomic and coercive power within the family. *Gender And Society*, 10(4), 449-463.
- Mccloskey, L. A., Treviso, M., Scionti, T., & Dal Pozzo, G. (2002). A comparative study of battered women and their children in Italy and the United States. *Journal Of Family Violence*, 17(1), 53-74.
- Mcquestion, M. J. (2003). Endogenous Social Effects on Intimate Partner Violence In Colombia. *Social Science Research*, 32(2), 335-345.
- Messerschmidt, J. W. (1993). *Masculinities and crime: Critique and reconceptualization of theory*. Rowman and Littlefield, Lanham, MD.
- Miles-Doan, R. (1998). Violence between spouses and intimates: does

neighborhood context matter? *Social Forces*, 77(2), 623-645.

Miles-Doan, R., & Kelly, S. (1997). Geographic concentration of violence between intimate partners. *Public Health Reports (Washington, D.C.: 1974)*, 112(2), 135-141.

Mobley, L.R. Finklestein, E.A., Khavjou, O.A., & Will, J.C. (2004). Spatial analysis of body mass index and smoking behavior among WISEWOMAN participants. *Journal of Women's Health*, 13(5), 519-528.

Moineddin, R., Matheson, F.I., & Glazier, R.H. (2007). A simulation study of sample size for multilevel logistic regression models. *BMC Medical Research Methodology*, 7:34.

National Center For Injury Prevention And Control. (2003). *Costs of intimate partner violence against women in the United States*. Atlanta (GA): Center for Disease Control.

New York City Department Of City Planning. *Geographic Files*. Retrieved April 15, 2006, From <http://www.nyc.gov/html/dcp/html/bytes/applbyte.shtml>

New York Police Department. Crime Statistics. Retrieved April 15, 2006, From [http://www.nyc.gov/html/nypd/html/crime\\_prevention/crime\\_statistics.shtml](http://www.nyc.gov/html/nypd/html/crime_prevention/crime_statistics.shtml).

O'Campo, P., Burke, J., Peak, G. L., McDonnell, K. A., & Gielen, A. C. (2005). Uncovering neighbourhood influences on intimate partner violence using concept mapping. *British Medical Journal*, 59(7), 603.

Office of Justice Programs. Intimate partner violence. Retrieved April 15, 2006 from <http://www.ojp.usdoj.gov/nij/topics/crime/intimate-partner-violence>.

Peterson, R. D., Krivo, L. J., & Hagan, J. (2006). *The many colors of crime: Inequalities of race, ethnicity, and crime in America*. New York University Press.

Pearlman, D. N., Zierler, S., Gjelsvik, A., & Verhoek-Oftedahl, W. (2003). Neighborhood environment, racial position, and risk of police-reported

- domestic violence: a contextual analysis. *Public Health Reports*, 118(1), 44-59.
- Raghavan, C., Mennerich, A., Sexton, E., & James, S. E. (2006). Community violence and its direct, indirect, and mediating effects on intimate partner violence. *Violence against Women*, 12(12), 1132-1149.
- Raj, A., & Silverman, J. (2002). Violence against immigrant women: The roles of culture, context, and legal immigrant status on intimate partner violence. *Violence against Women*, 8(3), 367.
- 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), 1-41.
- Raudenbush, S., & Bryk, A. (1988). Methodological advances in analyzing the effects of schools and classrooms on student learning. *Review of Research in Education*, 15, 423-476.
- Rodriguez, M. A., & Brindis, C. D. (1995). Violence and latino youth: Prevention and methodological issues. *Public health reports*, 110(3), 260-267.
- Saltzman, L. E., Fanslow, F. E., McMahon, P. M., Shelley, G. A. (2002). Intimate partner violence surveillance: Uniform definitions and recommended data elements. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Atlanta, Georgia.
- Sampson, R. J., & Groves, W. B. (1989). Community structure and crime: Testing social-disorganization theory. *The American Journal of Sociology*, 94(4), 774-802.
- Sampson, R. J., & Raudenbush, S. W. (1999). Systematic social observation of public spaces: A new look at disorder in urban neighborhoods. *AJS*, 105(3), 603-651.
- Sampson, R. J., Morenoff, J. D., & Gannon-Rowley, T. (2002). Assessing "neighborhood effects": Social processes and new directions in research. *Annual Review of Sociology*, 28(1), 443-478.

- Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science*, *277*(5328), 918.
- Schafer, J., Caetano, R., & Clark C.L. (1998). Rates of intimate partner violence in the United States. *American Journal of Public Health*, *88*(11), 1702-1704.
- Schafer, J., Caetano, R., & Cunradi, C. B. (2004). A path model of risk factors for intimate partner violence among couples in the United States. *Journal Of Interpersonal Violence*, *19*(2), 127.
- Schwartz, M. D., & DeKeseredy, W. S. (2000). Aggregation bias and woman abuse: Variations by male peer support, region, language, and school type. *Journal of Interpersonal Violence*, *15*(6), 555.
- Schwartz, M. D., DeKeseredy, W. S., Tait, D., & Alvi, S. (2001). Male peer support and a feminist routine activities theory: Understanding sexual assault on the college campus. *JQ: Justice Quarterly*, *18*(3), 623.
- Shaw, C. R., & Mckay, H. D. (1969). Juvenile delinquency and urban areas. University of Chicago Press. Chicago, I.L.
- Silverman, J. G., & Williamson, G. M. (1997). Social ecology and entitlements involved in battering by heterosexual college males: contributions of family and peers. *Violence And Victims*, *12*(2), 147-165.
- Song, Y. I. (1996). Battered women in Korean immigrant families: The silent scream. New York: Garland.
- Straus, M. A. & Gelles, R. J. (1990). Physical violence in American families: risk factors and adaptations to violence in 8,145 families. New Brunswick, NJ: Transaction Publishers.
- Straus, M. A. (1973). A general systems theory approach to a theory of violence between family members. *Social Science Information/sur les sciences sociales*, *12*(3), 105-125.
- Straus, M. A. (1979). Measuring intrafamily conflict and violence: the conflict tactics (ct) scales. *Journal of Marriage & The Family*, *41*(1), 75-88.

- Straus, M. A. (1991). New theory and old canards about family violence research. *Social problems, 38*(2), 180-197.
- Straus, M. A. (2004). Cross-cultural reliability and validity of the revised conflict tactics scales: a study of university student dating couples in 17 nations. *Cross-Cultural Research: The Journal Of Comparative Social Science, 38*(4), 407-432.
- Straus, M. A. (2006). Future research on gender symmetry in physical assaults on partners. *Violence against Women, 12*(11), 1086-1097.
- Straus, M. A., & Douglas, E. M. (2004). A short form of the revised conflict tactics scales, and typologies for severity and mutuality. *Violence and Victims, 19*(5), 507-520.
- Straus, M. A., & Gelles, R. J. (1986). Societal change and change in family violence from 1975 to 1985 as revealed by two national surveys. *Journal of Marriage & the Family, 48*(3), 465-479.
- Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1996). The revised conflict tactics scales (CTS2): Development and preliminary psychometric data. *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*(1), 13-40.
- Sutherland, E. (1939). Principles of criminology. 3rd ed. Philadelphia: J.B. Lippincott.
- Tittle Charles R. (1989). Urbanness and unconventional behavior: A partial test of Claude Fischer's subcultural theory. *Criminology, 27*(2), 273-306.
- Tjaden, P. G., & Thoennes, N. (2000). Full report of the prevalence, incidence, and consequences of violence against women: Findings from the national violence against women survey. U.S. Dept. Of Justice, Office of Justice Programs, National Institute of Justice.
- U.S. Census Bureau. *New York City Census Factfinder*. Retrieved May 25, 2006 from <http://Gis.Nyc.Gov/Dcp/Pa/Address.Jsp>

- Van Wyk, J. A. (1999). Does it matter where you live?: social disorganization, gender-role attitudes, financial satisfaction, and male-to-female partner violence. Doctoral Dissertation. University Of Tennessee, Knoxville.
- Van Wyk, J. A., Benson, M. L., & Fox, G. L. (2003). Detangling individual-, partner-, and community-level correlates of partner violence. *Crime & Delinquency*, 49(3), 412-438.
- Vest, J. R., Catlin, T. K., Chen, J. J., & Brownson, R. C. (2002). Multistate analysis of factors associated with intimate partner violence. *American Journal of Preventive Medicine*, 22(3), 156.
- Veysey, B. M., & Messner, S. F. (1999). Further testing of social disorganization theory: An elaboration of sampson and groves's "community structure and crime". *Journal of Research in Crime and Delinquency*, 36(2), 156.
- Walby, S. and Mayhill, A. (2001). Comparing the methodology of new national surveys of violence against women, *British Journal of Criminology*, 41(3), 502-522.
- Walton-Moss, B. J., Manganello, J., Frye, V., & Campbell, J. C. (2005). Risk factors for intimate partner violence and associated injury among urban women. *Journal Of Community Health*, 30(5), 377-389.
- Weiss, L., Ompad, D., Galea, S., & Vlahov, D. (2007). Defining neighborhood boundaries for urban health research. *American Journal of Preventive Medicine*, 32(6 Suppl), S154-9.
- Whitfield, C. L., Anda, R. F., Dube, S. R., & Felitti, V. J. (2003). Violent childhood experiences and the risk of intimate partner violence in adults: Assessment in a large health maintenance organization. *Journal of Interpersonal Violence*, 18(2), 166.
- Widom, C. S. (2000). Motivation and mechanisms in the "cycle of violence". *Nebraska Symposium on Motivation*, 46, 1-37.
- Wilson, M. I., & Daly, M. (1996). Male sexual proprietariness and violence against wives. *Current Directions in Psychological Science*, 5(1), 2-7.

- Wilson, W. J. (1996). *When work disappears: The world of the new urban poor*. Knopf. New York. N.Y.
- Wolfgang Marvin E, & Ferracuti Franco. (1966). *The subculture of violence*. London, UK: Tavistock.
- Wooldredge, J., & Thistlethwaite, A. (2003). Neighborhood Structure And Race-Specific Rates Of Intimate Assault. *Criminology*, 41(2), 393-42
- Wright, E. M., Theses, O. E., & Center, D. (2008). *Neighborhood context and intimate partner violence* University of Cincinnati.
- Yllo, K. (1984). The status of women, marital equality, and violence against wives: A contextual analysis. *Journal of Family Issues*. Vol. 5 (3), 307-320
- Yllo, K. A., & Straus, M. A. (1990). Patriarchy and violence against wives: The impact of structural and normative factors. *Physical violence in American families: Risk factors and adaptations to violence in*, 8, 383-399.
- Yannis, G., Papadimitriou, E., Antoniou, C. (2007). Multilevel modelling for the regional effect of enforcement on road accidents. *Accident Analysis & Prevention*, 39(4), 818-825.