

Contents lists available at SciVerse ScienceDirect

Journal of Criminal Justice



Fear of crime, incivilities, and collective efficacy in four Miami neighborhoods

Marc L. Swatt ^{a,*}, Sean P. Varano ^b, Craig D. Uchida ^c, Shellie E. Solomon ^d

- ^a Justice & Security Strategies, Inc., 14842 Ruggles Street, Omaha, NE 68116, USA
- ^b School of Justice Studies, Roger Williams University, CAS 145–School of Justice Studies, One Old Ferry Rd., Bristol, RI 02809, USA

ABSTRACT

- ^c Justice & Security Strategies, Inc., PO Box 6188, Silver Spring, Maryland 20916, USA
- ^d Justice & Security Strategies, Inc., 1835 East Hallandale Beach Blvd. # 387, Hallandale Beach, FL 33009, USA

ARTICLE INFO

Available online 7 November 2012

Purpose: Extant literature indicates that individual perceptions of collective efficacy and incivilities are important in explaining fear of crime. These studies, however, often implicitly assume that the relationships between key variables do not differ between neighborhoods. The purpose of this research is to examine the relationship between perceptions of collective efficacy, perceptions of incivilities, and fear of crime and determine whether these relationships are constant between neighborhoods.

Methods: Surveys were conducted using a sample of residents from four neighborhoods within Miami-Dade County. Structural equation models were used to examine the relationships between perceptions of collective efficacy, perceptions of incivilities, and fear of crime for each neighborhood separately. Tests for invariance were conducted to determine whether the coefficients from these models differed across

Results: Results from these analyses suggest that the relationship between perceptions of collective efficacy and fear of crime exhibit significant heterogeneity between neighborhoods, as do a number of other relationships. The relationships between perceptions of collective efficacy and perceptions of incivilities, and perceptions of incivilities and fear of crime do not exhibit heterogeneity.

Conclusions: These results illustrate the importance of examining perceptions of collective efficacy within the neighborhood context. Implications for policy and future research are discussed.

© 2012 Elsevier Ltd. All rights reserved.

Introduction

There is a well-established connection between neighborhood conditions and well known deleterious conditions including serious violent crime (Bursik & Grasmick, 1993; Messner & Tardiff, 1986; Sampson & Groves, 1989), gang membership (Hill, Howell, Hawkins, & Battin-Pearson, 1999), school problems (Kirk, 2009; McCluskey, Patchin, & Bynum, 2004), and fear of crime (Wyant, 2008). Neighborhoods play important roles in the lives of those that live, work, and socialize in their boundaries. They are one of several "zones" of influence that shape individuals' sense the world beyond their immediate selves and family units. Neighborhoods create the physical and social context for interactions among neighborhood residents that help shape notions of "community" and individuals' perceptions of their wider social space.

In order to identify the mechanisms that both inhibit the development of negative neighborhood conditions and promote healthier communities, considerable attention has been given to the concept of collective efficacy. For decades scholars have noted that communities differ in their capacity to create and enforce normative levels of pro-social behavior (see Kornhauser, 1978; Bursik, 1988; Warner, 2007). Networks of informal social control are central to establishing value systems that are reflective of prevailing social norms. Collective efficacy eventually emerged as the central process whereby community members create a sense of agency (see Sampson, Raudenbush, & Earls, 1997) and assume ownership for the state of their local community. It is one of several forms of formal and informal social control that predicts the overall functioning of a community (Warner, 2007). The purpose of this research is to understand the relationships among the perceptions of physical disorder (incivilities), collective efficacy, and fear of crime.

Collective efficacy, incivilities, and fear of crime

The concept of collective efficacy emerged out of the social disorganization literature. It represents the capacity of residents, organizations, and other groups to exert social control and thereby reduce crime and violence. Sampson argues that collective efficacy includes working trust among residents and the willingness to intervene to achieve social control. According to Sampson (2004: 108), neighborhood collective efficacy "captures the link between cohesion, especially working trust, and shared expectations for action..." The promise of collective efficacy

Corresponding author, Tel.: +14024909604. E-mail address: marc.swatt@gmail.com (M.L. Swatt).

theory is "that it reaffirms the importance of thinking about social ways to approach social problems." Although collective efficacy has traditionally been used to explain neighborhood-level variations in crime and disorder, recent research also provides evidence that it predicts individual-level victimization outcomes (Maimon & Browning, 2012).

Collective efficacy has important implications for how neighborhoods are informally managed by residents. Research shows that neighborhoods with higher levels of collective efficacy generally experience lower levels of violence (Sampson et al., 1997). Within this model, social control is produced through modalities of intervention into problems by neighborhood occupants. In the most explicit sense, collective efficacy is expected to result in "direct" intervention to ameliorate problems. Warner (2007), for example, argues direct informal social control is when individuals take personal action to address an issue, and indirect informal social control is when third parties (e.g., governmental authorities) are mobilized by residents. More recent research suggests that collective efficacy works through other pathways, such as informal parenting styles, to create prosocial norms, Simons, Simons, Burt, Brody, and Cutrona (2005) suggest that increasing levels of collective efficacy in a neighborhood produces increases in authoritative parenting (see Baumrind, 1967). Both collective efficacy and authoritative parenting together in turn serve a deterrent function to discourage delinquent behavior in young people. Maimon and Browning (2012) provide additional evidence of important interaction effects between neighborhood characteristics, collective efficacy, social processes, and individual behavior. They authors report that while prosocial interactions with normative peers for young people function as protective factors, unstructured peer socialization exposes them to "situations conducive to deviance" (825). Thus, the research suggests that features of neighborhoods, collective efficacy in particular, have important influences on neighborhood crime and disorder levels.

The role of collective efficacy in promoting safe, healthy community conditions is worth considering for several reasons. As Morenoff, Sampson, and Raudenbush (2001: 519) noted, "Neighborhoods bereft of social capital (e.g., interlocking social networks) are less able to realize common values and maintain the informal social control that foster safety." Collective efficacy is an important neighborhood-level process that functions as an intermediary between neighborhood conditions and disorder. For decades, scholars have attempted to understand the processes whereby some neighborhoods with high levels of economic disenfranchised were able to somehow promote pro-social values and control disorderly behavior. That is, not all poor and impoverished communities suffered the same levels of crime and disorder. Wilson (1996) posited that many residents of poor communities were involved in tightly interconnected social networks that functioned as protective factors against crime and disorder. These social networks were argued to be critical in not only promoting pro-social values, but preventing serious violence. Research lends support for the conclusion that collective efficacy is a key social process in the production of violence. Neighborhoods with low collective efficacy, for example, experience significantly higher levels of crime, particularly serious violent crime such as homicide (Morenoff et al., 2001; Rader, Cossman, & Porter, 2012). These protective features exist at both the neighborhood and individual levels (Maimon & Browning, 2012; Rader et al., 2012). Thus, it is important to understand the sources of collective efficacy and the protective role it plays, particularly in at-risk communities.

One way that collective efficacy is linked to crime is through incivilities. Incivilities represent the presence of physical and/or social disorder that have a noxious effect on the condition of neighborhood environments. Incivilities such as unattended physical environments and the regular presence of groups of unruly and disruptive youth can escalate the deterioration of neighborhoods and lead to crime (see Kelling & Coles, 1996; Maimon & Browning, 2012). The presence of incivilities has been shown to reduce individuals' sense of satisfaction

with their neighborhoods and also increase fear of crime, Robinson, Lawton, Taylor, and Perkins (2003), for example, reported a lagged effect to perceived incivilities whereby perceived incivilities result in an increase in vulnerability, fear of crime, and decrease in overall levels of neighborhood satisfaction. Yet as Robinson et al. (2003) suggest, this relationship may very well be recursive, where fear of crime also changes perceptions of incivilities. Regardless, this relationship appears consistently strong in urban areas (see Scarborough, Like-Haislip, Novak, Lucas, & Alarid, 2010). Reisig and Cancino (2004) also confirm the relationship exists in areas other than highly urbanized communities. Their research shows that even in relatively rural, nonmetropolitan areas, there is a significant negative relationship between perceived incivilities and collective efficacy. That is, net of other structural control variables, collective efficacy and incivilities were negatively associated. These relationships have been largely replicated by Wyant (2008) who found perceived incivilities to be a consistently significant and positive predictor of fear of crime. Wyant (2008) also found that while actual incivilities, measured through systematic social observations of social spaces, was also a significant predictor of fear; its impact all but disappeared when crime measures were included in the model. Thus, it is likely that perceptions of incivilities are a stronger predictor of fear of crime than actual incivilities.

There is a growing body of evidence that neighborhood conditions such as the perception of incivilities have both a direct and indirect effect on negative outcomes such as fear of crime. Using structural equation modeling, Gibson, Zhao, Lovrich, and Gaffney (2002) reported that perceived incivilities had both a direct, positive effect on fear of crime, but that the relationship was also mitigated to some degree through collective efficacy. Thus, the effects of perceptions of incivilities can be reduced in communities with higher levels of informal social control. Gibson, Zhao, and Lovrich (2002) and Gibson, Zhao, Lovrich, et al. (2002) findings were consistent across three different cities (see also Taylor, 2002; Gibson, Zhao, & Lovrich, 2002; Scarborough et al., 2010).

While the Gibson, Zhao, and Lovrich (2002) and Gibson, Zhao, Lovrich, et al. (2002) study demonstrates the linkages between perceptions of collective efficacy, perceptions of incivilities, and fear of crime, the study did not consider whether these relationships vary within communities. Although city-level investigations similar to Gibson, Zhao, and Lovrich (2002) and Gibson, Zhao, Lovrich, et al. (2002) are informative, extant research and theory on collective efficacy, incivilities, and fear of crime underscores the importance of the neighborhood-level of analysis. If the neighborhood context is important for understanding these relationships, city-level investigations could potentially disguise neighborhood-level heterogeneity. While some differences between neighborhoods are expected, the extent that the magnitudes of these relationships vary between neighborhoods is largely unknown.

The purpose of the current research is to add to the existing body of literature that considers the relationships between perceptions of incivilities, perceptions of collective efficacy, and fear of crime. Using surveys collected from four different racially and ethnically diverse neighborhoods in Miami-Dade County, this research examines the relationships between perceptions of collective efficacy, perceptions of incivilities, and fear of crime. Structural equation models are used to model these relationships within neighborhoods and these estimates are examined for between neighborhood heterogeneity. If substantial between-neighborhood heterogeneity exists in these relationships, then it is problematic to examine these relationships without respecting the neighborhood context.

Methods

Study location

The data used in this research comes from a larger study that examines the relationship between collective efficacy and crime in Miami-Dade County. This study is funded by the Children's Trust of Miami-Dade County in order to better understand the neighborhood dynamics, such as collective efficacy, that are associated with the development of crime. While "officially-designated" neighborhood boundaries were used as a guide for the boundaries of these neighborhoods; researchers supplemented this information through the use of Census data, crime data, areal orthophotography, Google Earth street-view visualizations, and site visits to modify these boundaries to reflect natural patterns of urban land use. 1 Although this strategy led to differences between neighborhoods in the size of the population encompassed by each neighborhood, the neighborhoods themselves should more accurately reflect the perceptive boundaries that delineate neighborhoods among residents. The current research uses resident survey data from the Brownsville, Bunche Park, Seminole Wayside Park, and East Little Havana neighborhoods that were of particular interest to the funding agency.

Brownsville is an unincorporated historic neighborhood of mixed residential and commercial properties partly located in the core urban area of the City of Miami and partly within the north central corner of Miami-Dade County. While approximately 39,000 people live in the Brownsville/Liberty City area, this study encompasses a smaller section of approximately 10,731 people that reside in an approximately 40 block area within a hotspot of violent crime and homicide. The Brownsville/Liberty City area accounted for 120 homicides or approximately 11 percent of all homicides in Miami Dade County from 2004 to 2008 (Uchida, Solomon, Varano, Swatt, Putt, Connor, & Mash, 2011). According to ESRI reports from the 2010 Census, the racial distribution of this area was 96.1 percent Black/African American, 1.9 percent White, and 2.0 percent other race. Only 3.4 percent of the population reported Hispanic ancestry (ESRI, 2012). Additional information from the 2010 Census for all neighborhoods is provided in Table 1.

Bunche Park is a neighborhood located within the political boundaries of Miami Gardens, a relatively newly (May 2003) incorporated city within Miami-Dade County. With a population of 105,457 and an area of approximately 20 square miles, Miami Gardens is the County's third largest city and is the largest predominately African American municipality in Florida. Located in the north end of Miami-Dade County, Miami Gardens is bordered by unincorporated Miami-Dade County to

Table 1Neighborhood profiles from 2010 census

	Brownsville	Bunche Park	East Little Havana	Seminole Wayside Park
Population				
Total 2010 Population	10,731	1,155	9,149	4,293
% Change 2000	-7.7%	-4.9%	20.8%	-5.1%
Median Age	26.0	36.5	37.3	28.7
% Age<18	38.4%	27.6%	21.5%	31.2%
% Age 65+	10.1%	14.5%	15.6%	7.7%
# Households	3,401	391	3,386	1,199
Racial/Ethnic				
% White (no other race)	1.9%	1.6%	80.2%	69.2%
% Black (no other race)	96.1%	94.2%	3.4%	12.9%
% Other Race	2.0%	4.2%	16.4%	17.8%
% Hispanic Origin (any race)	3.4%	4.4%	95.7%	76.4%
Education (Age $25+$)				
% No High School Degree	33.8%	28.4%	55.3%	40.4%
% High School Degree	41.9%	47.8%	27.8%	38.4%
% At Least Some College	24.4%	23.7%	16.9%	21.2%
Economic Characteristics				
Median Household Income	\$15,416	\$22,568	\$18,047	\$34,452
Median Home Value	\$72,991	\$79,286	\$92,069	\$109,880
% Owner Occupied	21.7%	66.4%	8.3%	49.1%
% Civilian Age 16+	31.5%	24.1%	26.3%	21.1%
Unemployed				
Marital Status (Age 15+)				
% Never Married	56.7%	34.2%	37.1%	36.3%
% Married	24.1%	34.0%	43.2%	51.2%
% Divorced	11.9%	14.9%	13.4%	9.7%

the west (an area known as Carol City) and the east (known as Ives Estates), Broward County to the north, and the city of Opa-locka to the south. Medical Examiner data show that 72 homicides occurred in Miami Gardens from 2004 to 2008. This accounted for 6.4 percent of all homicides during the period within the county (Uchida et al., 2011). The Bunche Park neighborhood lies within the city of Miami Gardens near the border with the city of Opa-Locka and consists of the residential area bordering a city park and encompasses approximately 1,155 residents. To ensure a sample of sufficient size, additional residential areas lying on the periphery of Bunche Park were also included in this neighborhood. Based on ESRI reports from the 2010 Census, the racial distribution of this area was 94.2 percent African American, 1.6 percent White, and 4.2 percent other race. Only 4.4 percent of residents reported Hispanic ancestry (ESRI, 2012).

Seminole Wayside Park is located within the politically boundaries of Leisure City in the southern part of Miami-Dade County. The study neighborhood lies in the southern part of Leisure City and includes a small part of the northern boundary of the city of Homestead and receives policing services from the Miami-Dade County Police Department. Approximately 4,293 residents reside within Seminole Wayside Park. This neighborhood is ethnically and racially heterogeneous as approximately 69.2 percent of residents are White, 12.9 percent are Black, and 17.8 percent report some other race. Additionally, 76.4 percent of residents report some Hispanic ancestry in the 2010 Census (ESRI, 2012). From January 1, 2009 to June 30, 2011, Seminole Wayside Park experienced 141 burglaries, 80 larcenies, 76 vehicle burglaries, 44 aggravated assaults, 19 robberies and 2 homicides. Instances of robberies, narcotics crimes, and larcenies increased from 2009-2010, but instances of vehicle burglaries and motor vehicle thefts decreased (Uchida et al., 2011).

East Little Havana is a neighborhood within the larger ethnic enclave of Little Havana, a larger neighborhood in the City of Miami. It is famous as a cultural and political capital of Cuban Americans. Little Havana is one of the most diverse neighborhoods in Miami-Dade County with a population estimated at 49,000 residents. The neighborhood predominately consists of immigrants from the Caribbean, Central America, and South America, and the predominant language is Spanish. Recently, Nicaraguan and Puerto Rican immigrants have also moved into the neighborhood. The study area consists of the northeastern corner of Little Havana and is a predominately Hispanic, low socioeconomic status, high crime neighborhood. Of the 9,149 residents of East Little Havana, 80.2 percent identify as White, 3.4 percent as Black, and 16.4 percent as another race. A total of 95.7 percent of residents report Hispanic ancestry (ESRI, 2012). East Little Havana receives policing services from the City of Miami Police Department. From January 1, 2008 to December 31, 2008, East Little Havana experienced 59 calls for burglaries, 64 calls for larcenies, 34 calls for aggravated assaults, 40 calls for robberies, and 84 calls for larcenies to a motor vehicle. According to Miami-Dade Medical Examiner Data, in 2008-2010, four homicides occurred in this neighborhood (Uchida et al., 2011).

Data collection

Researchers selected a random sample of households from these four neighborhoods for participation in community surveys using a database of all active mailing addresses known to the United States Postal Service (USPS) for Miami-Dade County. The sampling frame was address-specific, not person-specific in the target areas. The data were secured from a USPS approved vendor and represents the most complete list of all known addresses to the USPS available. A random sample of households was selected from each neighborhood. A team of interview staff consisted of residents of these neighborhoods and was selected and trained to administer the field surveys, walking from household to household and conducting in-person interviews with a resident of the household aged 18 or older. Multiple attempts at contacting residents in selected households were made

and if unsuccessful, a replacement household was selected from the sampling frame. Surveys were conducted in English and Spanish, based on respondent preference, and took approximately 20 to 30 minutes to complete. Five-hundred and seventy-eight completed surveys were collected from May 2010 through August 2011. The combined sample consisted of the 524 respondents with complete information. 6

Measures

Fear of crime

Fear of crime represents a central concept when examining neighborhood dynamics and as such, it represents the key dependent variable in the current analysis. Fear of crime was measured using five Likert items that asked respondents how much they worry about being the victim of a burglary, having items stolen from outside their home, being the victim of a robbery, being the victim of an assault, or having people involve their family members in selling drugs. Questions used in the construction of scale variables are included in Appendix A. Response categories ranged from 1= "Not worried" to 3= "Very worried." Results indicated that this measure had high internal consistency ($\alpha=.905$) and principal axis factor analysis suggested a single factor solution. The final measure was created using the principal axis factor analysis solution and higher values indicated higher levels of fear.

Perceptions of incivilities

As discussed in the literature review, there have been a number of studies that identified a link between neighborhood disorder/incivilities and fear of crime. Drawing from this research, resident perceptions of incivilities is one of variables of the most substantive interest in these analyses. Importantly, this measure is perceptual and it relied on the validity of respondent perceptions of disorder and incivilities in their neighborhood. Although there is some concern regarding the discriminant validity of measures of perceptions of incivilities (see Armstrong & Katz, 2009; Gau & Pratt, 2008, 2010; Worrall, 2007), research suggests that individual perceptions of incivilities have important impacts on fear of crime, net of neighborhood-level predictors (see Wyant, 2008). This measure was constructed from a series of nine Likert items that asked residents about neighborhood problems spanning a range from minor to serious problems. Response categories ranged from 1 = "Not an issue/No problem" to 3 = "Big problem." Again, results indicated that this measure had a high amount of internal consistency (α = .737) and principal axis factor analysis suggested a single factor solution. The final measure was created using the principal axis factor analysis solution and higher values indicated greater perceptions of incivilities.

Perceptions of collective efficacy

The final main variable used in these analyses is collective efficacy. As discussed in the literature review, collective efficacy has become a central concept in understanding neighborhood processes. The measure of collective efficacy is an extension of the measure used in the Project on Human Development in Chicago Neighborhoods project (Sampson et al., 1997), as is commonly used in neighborhood studies. This extended measure included the original 10 items used by Sampson et al. (1997) as well as additional measures designed to assess the components of collective efficacy. In total, this measure consists of 29 Likert items across three dimensions: willingness to intervene (12 items), social cohesion (11 items), and the capacity of social control (six items). Results indicated that our expanded measure had high internal consistency ($\alpha = .918$). While a principal axis factor analysis suggested a two factor solution, in order to remain consistent with Sampson et al. (1997), a single factor solution was retained. The final measure was created using the principal axis factor analysis solution and higher values indicate greater perceptions of collective efficacy.

Control variables

A number of control variables were included in the analyses. Sex was a dichotomous variable with males as the reference category. As indicated in Table 1, females constitute 59.0 percent of the total sample. Due to the demographic composition of the neighborhoods under investigation, Race/ethnicity was included as two mutually exclusive dichotomous variables: Hispanic and Black with the reference category of Other Race/Ethnicity.7 A total of 55.2 percent of respondents reported Hispanic ancestry and 37.2 percent indicated African-American/Black as their racial/ethnic designation. Employment status was included as a dichotomous indicator with the explicit category of currently employed full or part-time. In this sample, 51.0 percent of respondents reported being employed. Education was incorporated as a system of dichotomous variables with less than high school education being the reference category. In this sample, 36.3 percent reported receiving a high school diploma or GED equivalent as their highest education and 43.5 percent reported some college education or higher.

Additional control variables that are important in neighborhood studies were also included in the analyses. Social disorganization theory suggests that residential instability curtails the development of social networks that are critical to the capacity of neighborhood residents to exercise social control (Bursik & Grasmick, 1993). Residence length was operationalized as the number of months our respondents reported living at their current address. The mean residence length of our sample was 75.0 months. Home ownership was also included in the analysis as prior research suggests more home owners experience greater permanence in residence and a larger financial stake in the well-being of the neighborhood (Felson, 1998). Approximately 46.9 percent of respondents reported being homeowners with the remainder renters or individuals with other living situations. Social disorganization theory also suggests that economic disadvantage is associated with reduced capacity to exercise social control (Bursik & Grasmick, 1993). In the current study, economic disadvantage was operationalized as one or more members of a household participating in Income Assistance programs. This measure was a dichotomous indicator with the reference category of not participating in these programs. In the current sample, 40.5 percent of respondents reported that one or more members of their household participated in an income assistance program.

Satisfaction with the police is an important control variable in the current analyses as it is possible that the level of perceived incivilities by residents may be a function of the level of frustration toward the police to address serious neighborhood problems. For example, Varano, Schafer, Cancino, and Swatt (2009) found that police were less responsive to crime, property crime in particular, that occurred in higher poverty neighborhoods, Lai and Zhao (2010) found that satisfaction with the police work was strongly related to general attitudes about the police and specific trust in the police department.⁸ Police satisfaction was measured using a single Likert item inquiring about the current level of satisfaction with the police. Responses ranged from 1 = "Very dissatisfied" to 5 = "Very satisfied." The level of police satisfaction in both neighborhoods was rather high, as the average of this item was 3.94. The analyses also included a variable that measures the extent that respondents Used Neighborhood Resources such as parks and community centers. While there is little prior research on this measure, it is anticipated that residents who frequent neighborhood establishments and more frequently utilize neighborhood resources will have a larger awareness space (e.g., Brantingham & Brantingham, 1999) and may be more apt to perceive neighborhood incivilities. In contrast, it is also possible that these individuals will also have an increased likelihood of encountering other neighborhood residents, fostering a larger and denser social network. Hence, these individuals may have higher perceptions of collective efficacy. A seven Likert item scale asked respondents how often they use specific facilities in the neighborhood (libraries, churches, parks, community centers, grocery stores, medical services, and public transportation). The response categories ranged from 1 = "Never" to 4 = "Often." These items were averaged to provide a composite measure of the use of neighborhood resources, with an average of 2.35 across neighborhoods.

Plan of analysis

Descriptive statistics were used to provide an initial description of the combined sample and to assess the distribution of key variables within each neighborhood. Bivariate correlations were also examined as a preliminary step to provide information regarding the relationship between key variables and controls. Structural equation models (SEM) were used to assess multivariate relationships between perceptions of incivilities, perceptions of collective efficacy, and fear of crime. While the model used in this application is similar to a path analysis, the use of SEM allows for control of the overall Type I error rate.9 These models were estimated for each neighborhood separately and the group invariance test available in Stata 12 was used to assess the degree that each of the coefficients demonstrated heterogeneity across neighborhoods by testing the constraint that the coefficients were equal for each neighborhood (see StataCorp, 2011). Fig. 1 presents the structural equation model estimated in each neighborhood.

While the pathway from perceptions of collective efficacy to perceptions of incivilities in Fig. 1 is reversed from Gibson, Zhao, Lovrich, et al. (2002), it is important to note that this difference is cosmetic rather than substantive. Specifically, in the absence of additional instrumental variables that affect either perceptions of collective efficacy or perceptions of incivilities exclusively, the model presented in

Fig. 1 and the Gibson, Zhao, Lovrich, et al. (2002) model constitute "equivalent models" and it is not possible to distinguish between them on the basis of fit statistics or other diagnostic measures (see Kline, 2005). In analyses not presented here, tests for possible mediation effects for both variables in the relationship with fear of crime were conducted using the full sample, (i.e., the relationship between perceptions of collective efficacy and fear of crime mediated by perceptions of incivilities and the relationship between perceptions of incivilities and fear of crime mediated by collective efficacy). The results of these tests were inconclusive as there was evidence to suggest mediation in both models. Since the size of the Sobel test was slightly higher for perceptions of collective efficacy mediated by perceptions of incivilities, perceptions of incivilities was regressed on perceptions of collective efficacy rather than vice-versa. However, this distinction is artificial and since the data are cross-sectional this only indicates a correlation rather than a causal effect. Additional longitudinal data or additional covariates/instrumental variables are needed to discern the direction of this effect.

Results

Descriptive statistics

Table 1 presents descriptive statistics for each variable used in the analysis. Kruskall-Wallis and Chi-square tests demonstrated significant differences between the neighborhoods on all variables except sex. Because the neighborhoods were selected in part on the basis of their racial/ethnic composition, it is not surprising that there were significant racial/ethnic differences between the study neighborhoods. Brownsville and Bunche Park included a larger proportion

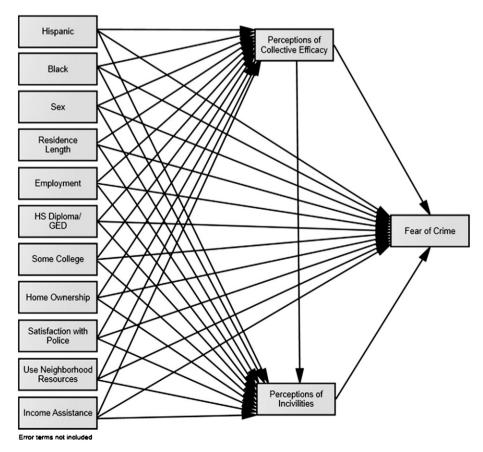


Fig. 1. Structural Equation Model for Each Neighborhood.

of African Americans; East Little Havana and Seminole Wayside Park included a larger proportion of Hispanics. Finally, there were significant differences in residence length as the mean residence length in Brownsville was less than one year and was close to 15 years in Seminole Wayside Park. Residents in Bunche Park were the most likely to be employed (78.4%), but residents in East Little Havana were most likely to have at least some college education (60.0%). Home ownership was lowest in East Little Havana (11.0%) and using income assistance was highest (60.0%). Residents in Bunche Park were most satisfied with police services (4.16) and residents in Brownsville were least satisfied (3.50). Residents of East Little Havana reported the highest usage of neighborhood resources (2.54). Notably, the mean of fear of crime was lowest in Brownsville and highest in East Little Havana. Likewise, the mean of perceptions of incivilities was lowest in Brownsville and highest in East Little Havana. Finally, the mean of perceptions of collective efficacy was highest in Brownsville and lowest in Bunche Park.

Bivariate correlations

The results from the bivariate correlations are presented in Table 2. Consistent with theoretical expectations, we find that perception of incivilities carried a significant positive relationship with fear of crime (r=.320). Similarly, perceptions of collective efficacy demonstrated a statistically significant negative correlation with fear of crime (r = -.169). In addition to these two variables; both race/ethnicity variables, both education variables, home ownership, use of neighborhood resources, and income assistance carried significant (p<.05) relationships with fear of crime. Perceptions of collective efficacy had a statistically significant negative relationship with the perception of incivilities (r = -.349). In addition, Hispanics and residents who used more community resources perceived higher levels of incivilities, while homeowners perceived lower levels of incivilities. In addition to fear of crime and perception of incivilities, the only variables with significant relationships with perceptions of collective efficacy were home ownership, satisfaction with the police, and income assistance (Table 3).

Structural equation models

The results from the neighborhood-specific structural equation models are presented in Tables 4a-4c. Importantly, these results

correspond to a single model, but the tables were separated to improve readability. Unstandardized coefficients with standard errors listed in parentheses are presented for each neighborhood, as well as the results of the invariance test that tests the constraint that the coefficients are identical across groups (see StataCorp, 2011). One observation that emerged from these findings was the differences in some of the parameters across neighborhoods. Nine of the invariance tests carried statistically significant relationships and one other approached statistical significance. Taken as a whole, these results suggest that the magnitude of several key independent variables differed across neighborhoods. ¹⁰

The coefficients of the independent variables for the first endogenous variable, perception of collective efficacy, are presented in Table 4a. Equation level measures of fit (R-squared) suggest that the fit of the model differed substantially across neighborhoods, ranging from an R-squared of .223 in Brownsville to an R-squared of .028 in Seminole Wayside Park. The relationship between perceptions of collective efficacy and employment was positive and approached statistical significance in Bunche Park, suggesting that employed residents had a higher perception of collective efficacy. But this same coefficient was negative and approached statistical significance in East Little Havana, suggesting that employed residents had a lower perception of collective efficacy. Although the coefficient did not reach p<.05 in either neighborhood, the test for invariance indicated that the coefficient differed between neighborhoods. The relationship between home ownership and perceptions of collective efficacy also differed between neighborhoods. Home ownership had a positive relationship that approached statistical significance in Bunche Park, but a significant negative relationship in East Little Havana. The coefficient for satisfaction with police did not appear to vary across neighborhoods, but higher levels of satisfaction with the police was only associated with higher perceptions of collective efficacy in Brownsville and Bunche Park. Finally, residents of East Little Havana receiving income assistance had significantly lower perceptions of collective efficacy.

The coefficients relating the independent variables and perceptions of collective efficacy with the second endogenous variable, perceptions of incivilities, are presented in Table 4b. There appeared to be slightly more consistency in the relationships between variables across the neighborhoods. Again, however, the equation-level *R*-squared varied across neighborhoods and ranged from .386 in Brownsville to .100 in Seminole Wayside Park. Perceptions of collective efficacy had a significant, negative relationship with perceptions of incivilities for every

Table 2Descriptive statistics for dependent and independent variables

Variable	Full Sample (N = 524)		Brownsville $(N=103)$		Bunche Park (N=111)		Seminole Wayside Park (N=155)		East Little Havana (N=155)		Kruskal-Wallis
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation	
Fear of Crime	0.030	1.013	-0.766	0.492	-0.358	0.565	0.082	0.888	0.785	1.096	181.601*
Perception of Incivilities	0.003	0.977	-0.436	0.682	0.125	1.088	-0.098	0.839	0.307	1.068	77.643 [*]
Perceptions of Collective Efficacy	0.042	0.990	0.197	0.950	-0.100	0.950	0.150	0.897	-0.068	1.108	9.376 [*]
Hispanic ¹	0.552	0.498	0.097	0.298	0.099	0.300	0.755	0.432	0.974	0.159	315.709 [*]
Black ¹	0.372	0.484	0.845	0.364	0.838	0.370	0.084	0.278	0.013	0.113	342.193 [*]
Sex ¹	0.590	0.492	0.534	0.501	0.631	0.485	0.535	0.500	0.652	0.478	6.489
Residence Length	74.973	395.316	14.485	14.415	17.180	13.268	177.247	714.815	54.282	60.730	127.176 [*]
Employment ¹	0.510	0.500	0.447	0.500	0.748	0.436	0.452	0.499	0.439	0.498	32.029 [*]
HS Diploma/GED ¹	0.363	0.481	0.621	0.487	0.477	0.501	0.374	0.485	0.097	0.267	83.658 [*]
Some College ¹	0.435	0.496	0.272	0.447	0.414	0.495	0.394	0.490	0.600	0.491	29.599*
Home Ownership ¹	0.469	0.500	0.631	0.485	0.658	0.477	0.587	0.494	0.110	0.314	115.753 [*]
Satisfaction with Police	3.935	0.874	3.495	0.999	4.162	0.987	3.974	0.738	4.026	0.720	42.746 [*]
Use of Neighborhood Resources	2.345	0.560	2.397	0.449	2.040	0.512	2.331	0.552	2.542	0.577	46.956*
Income Assistance ¹	0.405	0.491	0.369	0.485	0.171	0.378	0.400	0.491	0.600	0.491	50.232 [*]

^{*} p<.05

¹ Dichotomous Variable - Pearson Chi-square reported.

Table 3 Bivariate correlations between dependent and independent variables (N = 524)

	Variable	1	2	3	4	5	6	7	8	9	10	11	12	13
1.	Fear of Crime													
2.	Perception of Incivilities	.320*												
3.	Perceptions of Collective Efficacy	169^*	276^*											
4.	Hispanic	.450*	.160*	.005										
5.	Black	432^{*}	131	.015	854^{*}									
6.	Sex	.027	017	015	.012	.008								
7.	Residence Length	.055	.030	000	000	100^{*}	.023							
8.	Employment	003	.010	042	.148*	.131*	050	.014						
9.	HS Diploma/GED	214^*	093^*	002	278^{*}	.273*	.024	050	030					
10.	Some College	.165*	.039	.023	.103*	118^*	004	036	.091*	662^*				
11.	Home Ownership	315^*	135^*	.091*	244^{*}	.249*	063	.014	.097*	.126*	047			
12.	Satisfaction with Police	021	.067	.098*	.091*	110*	.018	.065	025	003	014	057		
13.	Use of Neighborhood Resources	.300*	.126*	041	.113*	098^*	.110*	.091	067	071	.082	153^*	053	
14.	Income Assistance	.157*	.026	090 [*]	.196*	152 [*]	.119*	.040	296 [*]	056	025	324 [*]	099 [*]	.163*

^{*} p<.05.

neighborhood except Bunche Park, Even in Bunch Park, while the relationship was non-significant, it was in the expected direction. The invariance test indicated that this relationship is approximately equal in magnitude across the neighborhoods. The relationship between employment and perceptions of incivilities varied between neighborhoods as employed residents of Brownsville had significantly higher perceptions of incivilities, but this relationship was non-significant for all other neighborhoods. Homeowners in Brownsville had significantly lower perceptions of incivilities; however, the invariance test indicated these differences were not statistically significant. Finally, the relationship between perceptions of incivilities and satisfaction with police appeared to vary across neighborhoods. Higher satisfaction with police was associated with significantly higher perceptions of incivilities in Brownsville and Bunche Park. However, higher satisfaction with the police was associated with lower levels of perceived incivilities in East Little Havana.

Results for the final endogenous variable in the model, fear of crime, are presented in the Table 4c. The equation-level *R*-squared ranged from .455 in Brownsville to .160 in Seminole Wayside Park. Interestingly, the coefficient for perceptions of collective efficacy differs across neighborhoods. Perceptions of collective efficacy had a significant negative relationship with fear of crime in Brownsville, suggesting that residents that report higher perceptions of collective efficacy also reported lower fear of crime. This relationship was also observed for Bunche Park, but the magnitude was less than half the magnitude observed in Brownsville.

Perceptions of collective efficacy had no relationship with fear of crime in Seminole Wayside Park and East Little Havana. Perceptions of incivilities reached statistical significance in East Little Havana, approached statistical significance in Bunche Park and Seminole Wayside Park, and failed to reach statistical significance in Brownsville. The test for invariance, however, suggested that these differences were not sufficient to suggest heterogeneity in the coefficient between neighborhoods.

Hispanic residents of Brownsville appeared to have lower fear of crime, while Hispanic residents in East Little Havana appeared to have higher fear of crime. While these coefficients only approached statistical significance, the invariance test was significant due to the change in the direction of the coefficient. African-American residents of Brownsville had significantly lower fear of crime, but this variable failed to reach statistical significance in other neighborhoods. The coefficient for residence length demonstrated significant heterogeneity across neighborhoods as the relationship between residence length and fear of crime was negative and significant for East Little Havana, negative and approached significance in Brownsville, but nonsignificant for Bunche Park and Seminole Wayside Park. Home ownership also displayed heterogeneity across neighborhoods as homeowners in Bunche Park experienced significantly lower levels of fear of crime. Homeowners in East Little Havana also appeared to have lower levels of fear of crime, but this relationship only approached statistical significance. Homeownership did not appear to have an effect in the other

Table 4aPartial results from structural equation models by neighborhood (perceptions of collective efficacy)

Variable	Brownsville		Bunche Park		Seminole Wayside Park		East Little Havana		Invariance Test
	b	SE	b	SE	b	SE	b	SE	
Percep. Collective Efficacy									
Hispanic	0.390	(0.455)	0.137	(0.478)	0.268	(0.198)	-0.117	(0.717)	0.422
Black	0.212	(0.364)	0.388	(0.371)	0.209	(0.310)	0.200	(1.009)	0.168
Sex	-0.172	(0.180)	-0.078	(0.182)	-0.052	(0.148)	0.274	(0.180)	3.505
Residence Length	-0.000	(0.007)	-0.004	(0.008)	-0.000	(0.000)	0.001	(0.001)	0.778
Employment	-0.244	(0.181)	0.395°	(0.214)	0.023	(0.159)	-0.318°	(0.172)	8.056*
HS Diploma/GED	0.270	(0.290)	0.057	(0.302)	-0.008	(0.190)	-0.014	(0.310)	0.707
Some College	0.556°	(0.304)	0.148	(0.336)	0.092	(0.194)	-0.329°	(0.184)	6.973°
Home Ownership	0.244	(0.246)	0.376°	(0.215)	0.147	(0.153)	-1.039^*	(0.267)	19.912 [*]
Satisfaction with Police	0.234*	(0.095)	0.031	(0.096)	0.027	(0.100)	0.251*	(0.114)	4.433
Use of Neigh. Resources	-0.059	(0.202)	0.192	(0.179)	-0.000	(0.146)	-0.103	(0.151)	1.698
Income Assistance	-0.219	(0.229)	-0.037	(0.236)	-0.088	(0.170)	-0.501^*	(0.181)	3.619
Constant	-0.885	(0.760)	-1.462°	(0.760)	-0.238	(0.548)	-0.180	(1.006)	2.020
R -squared	.223		.096		.028		.188		

[°] p<.1.

^{*} p<.1.

Table 4b Partial results from structural equation models by neighborhood (perceptions of incivilities)

Variable	Brownsville		Bunche Parl	Bunche Park		Seminole Wayside Park		avana	Invariance Test
	b	SE	b	SE	b	SE	b	SE	
Percep. Incivilities									
Percep. Collective Efficacy	-0.294*	(0.063)	-0.095	(0.103)	-0.160^*	(0.072)	-0.285^*	(0.078)	4.172
Hispanic	0.037	(0.292)	-0.068	(0.521)	0.299°	(0.179)	0.196	(0.693)	0.883
Black	-0.084	(0.233)	-0.070	(0.405)	0.083	(0.280)	-0.122	(0.975)	0.236
Sex	-0.011	(0.115)	-0.164	(0.198)	-0.733	(0.133)	-0.182	(0.176)	0.878
Residence Length	0.007	(0.004)	0.003	(0.009)	-0.000	(0.000)	-0.002	(0.001)	4.277
Employment	0.335*	(0.116)	-0.055	(0.237)	0.001	(0.143)	-0.252	(0.168)	9.316 [*]
HS Diploma/GED	-0.109	(0.186)	0.076	(0.330)	-0.273	(0.171)	-0.133	(0.300)	1.030
Some College	-0.324°	(0.197)	-0.218	(0.366)	0.077	(0.174)	0.043	(0.180)	2.922
Home Ownership	-0.312^*	(0.158)	-0.208	(0.237)	0.156	(0.138)	0.076	(0.271)	5.652
Satisfaction with Police	0.173*	(0.062)	0.255*	(0.104)	0.012	(0.090)	-0.270^*	(0.112)	15.335 [*]
Use of Neigh. Resources	0.155	(0.129)	0.255	(0.196)	0.165	(0.131)	0.131	(0.146)	0.272
Income Assistance	0.181	(0.147)	-0.389	(0.257)	-0.031	(0.153)	0.024	(0.179)	3.843
Constant	-1.242^*	(0.488)	-1.054	(0.841)	-0.708	(0.494)	1.137	(0.973)	4.912
R -squared	.386		.183		.100		.184		

p<.1.

two neighborhoods. Residents of Brownsville with higher satisfaction with the police reported significantly less fear of crime. Although this relationship only approached statistical significance in Seminole Wayside Park and was not significant in Bunche Park and East Little Havana, the test for invariance did not indicate significant heterogeneity in this coefficient. Finally, there was significant heterogeneity in the relationship between use of neighborhood resources and fear of crime as use of neighborhood resources increased fear of crime only in Seminole Wayside Park and East Little Havana.

Discussion

The purpose of this study was to investigate the relationships between perceptions of collective efficacy, perceptions of incivilities, and fear of crime. Field surveys from a random sample of Miami-Dade residents in four neighborhoods, Brownsville, Bunche Park, Seminole Wayside Park, and East Little Havana were used to examine the degree of between-neighborhood heterogeneity in these relationships. These analyses examined structural equation models for each of the four separate neighborhoods and tested for heterogeneity in the coefficients for key variables across the models to determine if the magnitude of these relationships varied between neighborhoods. Results indicated that there was substantial heterogeneity in the coefficients between perceptions of collective efficacy and fear of crime. Perceptions of collective efficacy only had a significant relationship with fear of crime in two of the neighborhoods examined. Other important relationships that demonstrate heterogeneity are between satisfaction with police and perceptions of incivilities and use of neighborhood resources and fear of crime. Additional variables demonstrated heterogeneity as well. While it is not surprising that some of these relationships differ between the neighborhoods under consideration, it was surprising to see differences emerge with perceptions of collective efficacy. This variable emerges is theoretically important for understanding the neighborhood social processes and as such, a high degree of consistency in its relationships with neighborhood outcomes is expected.

Perhaps the simplest explanation of the heterogeneity in the relationship between perceptions of collective efficacy and fear of crime is that the neighborhoods differ in their mean levels of these variables. The

Table 4c Partial results from structural equation models by neighborhood (fear of crime)

Variable	Brownsville	Brownsville		Bunche Park		Seminole Wayside Park		East Little Havana	
	b	SE	b	SE	b	SE	b	SE	
Fear of Crime									
Percep. Collective Efficacy	-0.266^*	(0.047)	-0.105^*	(0.052)	-0.012	(0.075)	-0.003	(0.076)	13.740*
Percep. Incivilities	0.079	(0.067)	0.086°	(0.048)	0.160°	(0.082)	0.203*	(0.076)	2.278
Hispanic	-0.378°	(0.198)	0.103	(0.263)	0.187	(0.185)	1.276°	(0.659)	8.583 [*]
Black	-0.343*	(0.158)	0.054	(0.204)	-0.231	(0.286)	-0.655	(0.927)	2.617
Sex	-0.004	(0.078)	-0.037	(0.100)	-0.197	(0.136)	-0.023	(0.168)	1.555
Residence Length	-0.005°	(0.003)	0.004	(0.004)	0.000	(0.000)	-0.003*	(0.001)	10.561*
Employment	0.037	(0.082)	0.048	(0.119)	0.043	(0.146)	0.171	(0.161)	0.572
HS Diploma/GED	0.175	(0.126)	-0.238	(0.166)	0.043	(0.176)	0.269	(0.285)	4.578
Some College	0.142	(0.136)	-0.203	(0.185)	0.183	(0.178)	0.186	(0.171)	3.242
Home Ownership	0.082	(0.109)	-0.388^*	(0.120)	-0.117	(0.142)	-0.494°	(0.258)	10.295 [*]
Satisfaction with Police	-0.100*	(0.044)	-0.011	(0.054)	-0.164°	(0.092)	-0.145	(0.109)	3.028
Use of Neigh. Resources	-0.073	(0.088)	0.055	(0.100)	0.482*	(0.135)	0.684*	(0.139)	27.968 [*]
Income Assistance	-0.032	(0.100)	0.061	(0.131)	-0.080	(0.156)	0.095	(0.171)	0.895
Constant	0.051	(0.342)	-0.140	(0.427)	-0.405	(0.508)	-1.700°	(0.929)	3.330
R -squared	.455		.230		.160		.300		
Overall R -squared	.473		.347		.218		.432		

^{*} p<.05.

p<.05.

implication is that for neighborhoods where the average level of collective efficacy is low, perceptions of collective efficacy do not have a significant relationship with fear of crime. Re-examining the results presented in Table 1 certainly support this interpretation as the Kruskall-Wallis tests find differences between neighborhoods for both perceptions of collective efficacy and fear of crime. However, a more thorough examination of these results complicates this explanation. Fear of crime is highest in Seminole Wayside Park and East Little Havana, the neighborhoods where perceptions of collective efficacy fail to carry a significant relationship with fear of crime. While, mean levels of perceptions of collective efficacy are highest in Brownsville and Seminole Wayside Park, perceptions of collective efficacy carried a significant relationship in the first but not the second neighborhood. Therefore, there is no apparent consistency between the mean levels of perceptions of collective efficacy and fear of crime and the observed relationships. Explaining the differences in the relationships between other variables encounters similar problems.

An alternate explanation for this heterogeneity is that the relationship between perceptions of collective efficacy and fear of crime is that the relationships between these variables at the individual level depend on the aggregate influence of these variables at the neighborhood level. Rather than postulating that the lack of relationship is due to perceptions of collective efficacy being uniformly low in particular neighborhoods, this explanation suggests that the average level of collective efficacy in a neighborhood is an explanatory variable in its own right. In a Hierarchical Linear Model (HLM) framework, this would imply that the neighborhood-level mean for collective efficacy and perceptions of incivilities should be entered as a level 2 explanatory variable (see Wyant, 2008). For example, perceptions of collective efficacy had a significant effect in Brownsville. It is possible that because Brownsville had comparatively high levels of collective efficacy, individual-level variation in the perceptions of collective efficacy become more important to understanding individual differences in fear of crime. Therefore, it seems plausible that some of the differences between neighborhoods in Table 1 might explain these interactions. Unfortunately, the data at hand prevents the use of a full HLM model to examine the extent that aggregate neighborhoodlevel impacts explain the differential relationships at the individual level. Future researchers, however, should consider this possibility as it requires only a simple extension of HLM models that are commonly used.

A more theoretically enticing and equally possible explanation for these results is that there are unmeasured neighborhood-level factors that condition the relationships between social processes, such as perceptions of collective efficacy and fear of crime. With only four neighborhoods under consideration, it is not possible to assess this hypothesis. It may be helpful, however, to speculate about variables that might be worth consideration. One of the first important variables to consider is crime. As discussed previously, these neighborhoods differed substantially in the amount and severity of crime. It is possible, that the mitigating effect of perceptions of collective efficacy on fear of crime is only particularly salient in high crime neighborhoods. A second possible variable that could explain the observed differences is average housing value. It is possible that as average housing value increases, the importance of perceptions of collective efficacy decreases. In wealthy neighborhoods, collective efficacy may be irrelevant as residents are paying for additional measures of social control (i.e., gated entrances, fences to restrict access, private security) or for additional insulation from potentially criminogenic features of the environment (increased distance from urban center, increased distance from crime attractors/ generators) as part of the cost of housing. A third variable worth considering is average length of residence. Increased average stability within a neighborhood implies a greater permanence of network affiliations. While individual perceptions of collective efficacy may vary, this variance may be unimportant in neighborhoods with high average length of residence as stable social networks already function to mitigate fear of crime. These potential variables are not meant to represent an exhaustive list of possible explanations for the between neighborhood differences, but merely represents suggestions for further inquiry.

This study has its limitations. First, the results of this study may not be generalizable to other settings. Miami is one of the most demographically and culturally diverse cities in the country and it may be the case that this diversity complicates comparisons to other cities. Further, this study only examined four neighborhoods within Miami-Dade County, and it is possible that these findings are particular to the neighborhoods under consideration. Another potential criticism of this study is the use of perceptual measures of incivilities as opposed to objective measures of incivilities (e.g., Sampson et al., 1997). As previously discussed, it is likely that perceptual measures of incivilities have more salience when examining fear of crime. However, the use of triangulated measures would offer a substantial addition to this research. A third potential criticism of this study is that the differences observed between neighborhoods is a result of omitted variable bias. While a number of important predictors of perceptions of collective efficacy, perceptions of incivilities, and fear of crime were included in the model, there are still others, such as social integration, that were not available in this study. Future research on this topic will be helpful in determining how the omission of particular variables may have impacted the results of this study. Finally, this analysis did not attempt to disentangle the relationship between perceptions of collective efficacy, perceptions of incivilities, and fear of crime over time. The absence of observations over multiple time periods constrains the ability to make causal statements about the relationships between these variables and protect against spurious relationships. Additional data where neighborhood residents were administered a series of follow-up interviews over time would be necessary for a more thorough understanding of the dynamic social processes at work.

Despite these limitations, this study offers important insights for policy and future research. For policy, the most important observation is that these findings clearly indicate that context is critical when designing interventions to combat fear of crime. Strategies that may be effective in one neighborhood may not be effective in others. For example, a strategy that relies on strengthening collective efficacy will likely be ineffective in East Little Havana and Seminole Wayside Park. For this reason, it is recommended that policy-makers engage in an assessment of the social processes linked with fear of crime within the areas of interest prior to designing an intervention. Further, it is necessary to consider potential unintended consequences of strategies to combat fear of crime. Hinkle and Weisburd (2008) found that while broken windows policing significantly reduced fear of crime, the aggressive policing strategies increased fear of crime thereby offsetting potential gains. Coupled with our findings of contextual differences in the operation of social process variables between neighborhoods, this suggests that identifying a strategy to combat fear of crime is particularly tricky and requires a thorough understanding of the neighborhood context.

In regard to future research, the most pressing need is to replicate these findings in other neighborhoods in other cities to determine whether these results are particular to these neighborhoods in Miami-Dade County. These four neighborhoods consisted of two low socioeconomic status, predominately African-American communities, one low socioeconomic status, predominately Hispanic community, and one working class, predominately Hispanic community. Future research should seek to examine neighborhoods with a greater range of racial/ethnic compositions and economic conditions. When possible, future research should also consider examining a sufficient cross-section of neighborhoods to allow for between-neighborhood comparisons. These comparisons would enable examinations of neighborhood-level variables that may explain the differences observed between neighborhoods.

Acknowledgements

We gratefully acknowledge funding from the Children's Trust of Miami–Dade to Justice & Security Strategies, Inc. for the "Mapping

and Spatial Analysis to Study Youth Violence and Social Disorganization Project" (contract number 864–234) of which this is a part. The Trust is a dedicated source of revenue established by voter referendum to improve the lives of children and families in Miami-Dade County.

The findings, conclusions, and recommendations expressed in this paper are those of the authors and do not necessarily reflect those of the Children's Trust. The authors also thank Christine Connor, Jonathan Mash, Corina Putt, W. Riley Waugh, and Robert Adams for their assistance with this project.

Appendix A. Survey questions used in scale construction

Fear of Crime

Now, I would like to ask you a few questions about things that might worry you in this neighborhood. How worried are you that ...

- 1. Someone will try to break into your home while no one is here
- Someone will try to steal things that you might leave outside your home overnight
- 3. Someone will try to rob you or steal something from you while you are outside in this neighborhood
- 4. Someone will try to attack you or beat you up while you are outside in this neighborhood
- Someone will try to involve your child or family member in selling drugs

Perceptions of Incivilities

Now, think about your street block. I am going to read you a list of issues that might be a problem in your block. After I read each one, please tell me if it is No Problem, Some Problem, or a Big Problem in your block.

- 1. Dirty or unkempt buildings and lots
- 2. Vacant or abandoned lots
- 3. Neighbors who make too much
- 4. Homeless loitering
- 5. Vandalism [this means destroying property such as breaking windows of abandoned homes]
- 6. Public drug or alcohol use
- 7. Graffiti
- 8. Groups of young people hanging out/around
- 9. Truancy, that is kids not being in school when they should be

Perceptions of Collective Efficacy

A. Willingness to Intervene

I am going to read a list of things that might happen in your neighborhood. After I read each one, please tell me how likely it is that one of your neighbors would do something about it.

- 1. If someone was trying to break into a house
- 2. If someone was illegally parking in the street
- 3. If suspicious people were hanging around the neighborhood
- 4. If people were having a loud argument in the street
- 5. If a group of underage kids were drinking
- 6. If some children were spray-painting graffiti on a local-building
- 7. If there was a fight in front of your house and someone was being beaten or threatened
- 8. If a child was showing disrespect to an adult
- 9. If a group of neighborhood children were skipping school and hanging out on a street corner
- 10. If someone on your block was playing loud music
- 11. If someone on your block was firing a gun

- 12. If drugs were being sold on your block
- B. Social Cohesion

Now, I am going to read you some statements about your neighborhood. After I read each one, please tell me whether you Strongly Agree, Agree, Disagree, or Strongly Disagree.

- 1. This neighborhood is a good area to raise children
- 2. People that live in my neighborhood are generally friendly
- 3. I am happy I live in this neighborhood
- 4. People around here take care of each other
- 5. People in this neighborhood can be trusted
- 6. People around here are willing to help their neighbors
- 7. This is a close-knit neighborhood
- 8. People in this neighborhood generally don't get along with each other (reverse coded)
- 9. People in this neighborhood do not share the same values (reverse coded)
- 10. I regularly stop and talk with people in my neighborhood
- 11. I know the names of people in my neighborhood
- C. Capacity for Social Control

I am going to read another list of things that might happen in your neighborhood. After I read each one, please tell me how likely it is that one of your neighbors would do something about it.

- 1. If there was a serious pothole on your street that needed repairs
- 2. People were dumping large trash items in a local park or alleys
- 3. A vacant house in the neighborhood was being used for drug dealing
- 4. The city was planning to cut funding for a local community center
- 5. Prostitutes were soliciting clients in your neighborhood
- 6. The city was planning on closing the fire station closest to your home

Use of Neighborhood Resources

Now, I am going to ask you about how often you or members of your family do certain things in your neighborhood. After I read each statement, please tell me if you do that activity Often, Sometimes, Rarely, or Never?

- 1. The first one is, visit the local neighborhood library
- 2. Attend a church service in your neighborhood
- 3. Visit local neighborhood parks
- 4. Visit other local neighborhood community centers
- 5. Go to local neighborhood grocery stores
- 6. Use medical services located in the neighborhood
- 7. Use public transportation near my neighborhood

Notes

1. Land use features that were particularly important in this process included changes in the type or quality of housing stock, the presence of major roadways or throughways that divided neighborhoods, land use transitions from primarily residential to primary commercial properties, the presence of green space (such as parks or school grounds) that serve as perceptive boundaries for communities, and specific barriers to access or egress (gates, fences, canals and other water boundaries, or strategic vegetation walls).

2. As such, the residential population is actually a little higher than what is reported for the "Bunche Park" area in Table 1.

3. The referenced vendor maintains the most current and accurate listing of all ddresses in the United States at any given point in time. They have a robust process in place for continually "scrubbing" addresses on a weekly basis based on information collected by change of address forms, and also information provided by postal carriers about unaccounted for vacancies. The sampling frame is considered the "master address" list used by the USPS, and is the only list approved for use during the mailing of the decennial census.

4. If the initial attempt to contact a resident of the household was unsuccessful, a flier explaining the study and including contact information was left at the residence to allow residents to schedule interview times that were more convenient. In addition, multiple additional attempts to contact a resident of the household was made at

various times and days of the week. After four attempts or a refusal to participate in the interviews, a household was considered non-responsive and a replacement household was randomly selected. Response rates were high, but varied between neighborhoods with a response rate of 61.7 percent in Brownsville, 67.7 percent in Bunche Park, 82.0 percent in Seminole Wayside Park, and 81.2 percent in East Little Havana.

- 5. Telephone validation of responses was conducted for approximately 10 to 15 percent of interviews per neighborhood to ensure accurate data collection and adherence to the sampling strategy.
- 6. For several respondents, there were missing data for one or several items in a scale variable. In these instances, the missing item values were replaced with the scale mean. As Schafer and Graham (2002) suggest, this method is unlikely to create difficulties in the analysis. Since the remaining missing data represented a small fraction of the overall valid cases (less than 10 percent) these cases were dropped from the analysis. Allison (2001) indicates that listwise deletion of missing data performs well when the fraction of missing data is small even if these data are MAR instead of MCAR.
- 7. The majority of the respondents in the Other Race/ethnicity category indicated a race/ethnicity of non-Hispanic White. The relatively low frequency of this response is due to the demographic profile of the neighborhoods under consideration.
- 8. Unfortunately, Lai and Zhao (2010) include "response to fear of crime" as an indicator for satisfaction with police work and fear of crime as a separate variable making it difficult to parse out the impacts of fear of crime vs. satisfaction with the police on general attitudes towards the police and specific trust in the police.
- 9. It is important to note that since the SEM model estimated is exactly identified (also referred to as "just identified"); there are no free parameters to estimate typical measures of fit (see Bollen, 1989: 256). As such, only equation-level and overall measures of fit (*R*-squared) are presented.
- 10. As one reviewer indicated, these differences could also be the result of omitted variable bias. We discuss this further in the discussion section.

References

- Allison, P. D. (2001). Missing Data. Thousand Oaks, CA: Sage.
- Armstrong, T., & Katz, C. (2009). Further evidence on the discriminant validity of perceptual incivilities measures. *Justice Quarterly*, 27, 280–304.
- Baumrind, D. (1967). Child care practices anteceding three patterns of preschool behavior. Genetic Psychology Monographs, 75, 43–88.
- Bollen, K. A. (1989). Structural Equations with Latent Variables. New York: Wiley.
- Brantingham, P. J., & Brantingham, P. L. (1999). A theoretical model of crime hot spot generation. Studies on Crime and Crime Prevention, 1, 7–26.
- Bursik, R. J. (1988). Social disorganization and theories of crime and delinquency: Problems and prospects. Criminology, 26, 519–551.
- Bursik, R. J., & Grasmick, H. G. (1993). Neighborhoods and Crime: The Dimensions of Effective Community Control. Lanham, MD: Lexington Books.
- ESRI. (2012). 2010 and 2015 Demographic Data. ESRI Business Analyst Online. Retrieved Jan 2012.
- Felson, M. (1998). Crime and Everyday Life, 2nd edition. Beverley Hills, CA: Sage.
- Gau, J. M., & Pratt, T. C. (2008). Broken windows or window dressing? Citizen's (in)ability to tell the difference between disorder and crime. Criminology & Public Policy, 7, 163–194.
- Gau, J. M., & Pratt, T. C. (2010). Revisiting broken windows theory: Examining the sources of discriminant validity of perceived disorder and crime. *Journal of Criminal Justice*, 38, 758–766.
- Gibson, C. L., Zhao, J., & Lovrich, N. P. (2002). Sociological measurement confusion, paradigmatic imperfection, and etiological Nirvana: Striking a pragmatic balance in pursuing science. *Justice Quarterly*, 19, 793–808.
- Gibson, C. L., Zhao, J., Lovrich, N. P., & Gaffney, M. J. (2002). Social integration, individual perceptions of collective efficacy, and fear of crime in three cities. *Justice Quarterly*, 19, 537–564.
- Hill, K. G., Howell, J. C., Hawkins, J. D., & Battin-Pearson, S. R. (1999). Childhood risk factors for adolescent gang membership: Results from the Seattle Social Development Project. *Journal of Research in Crime and Delinquency*, 36, 300–322.
- Hinkle, J. C., & Weisburd, D. (2008). The irony of broken windows policing: A microplace study of the relationship between disorder, focused police crackdowns and fear of crime. *Journal of Criminal Justice*, 36, 503–512.
- Kelling, G. L., & Coles, C. M. (1996). Fixing broken windows: Restoring order and reducing crime in our communities. New York: Martin Kessler Books.
- Kirk, D. S. (2009). Unraveling the contextual effects on student suspension and juvenile arrest: The independent and interdependent influences of school, neighborhood, and family social controls. *Criminology*, 47, 479–520.
- Kline, R. B. (2005). Principals and Practice of Structural Equation Modeling, 2nd edition. New York: Guilford Press.
- Kornhauser, R. (1978). Social sources of delinquency. Chicago: University of Chicago Press.

- Lai, Y. -L., & Zhao, J. S. (2010). The impact of race/ethnicity, neighborhood context, and police/citizen interaction on residents' attitudes towards the police. *Journal of Criminal Justice*, 38, 685–692.
- Maimon, D., & Browning, C. R. (2012). Unstructured socializing, collective efficacy, and violent behavior among urban youth. Criminology, 48, 443–474.
- McCluskey, C. P., Patchin, J. W., & Bynum, T. S. (2004). Reducing chronic absenteeism: An assessment of an early truancy initiative. *Crime & Delinquency*, 50, 214–234.
- Messner, S. F., & Tardiff, K. (1986). Economic inequality and levels of homicide: An analysis of urban neighborhoods. *Criminology*, 24, 297–315.
 Morenoff, J., Sampson, R. J., & Raudenbush, S. (2001). Neighborhood inequality, collective
- Morenoff, J., Sampson, R. J., & Raudenbush, S. (2001). Neighborhood inequality, collective efficacy, and the spatial dynamics of urban violence. Criminology, 39, 517–560.
- Rader, N. E., Cossman, J. S., & Porter, J. R. (2012). Fear of crime and vulnerability: Using a national sample of Americans to examine two competing paradigms. *Journal of Criminal Justice*, 40, 134–141.
- Reisig, M. D., & Cancino, J. M. (2004). Incivilities in nonmetropolitian communities: The effects of structural constraints, social conditions, and crime. *Journal of Criminal Justice*, 32, 15–29.
- Robinson, J. B., Lawton, B. A., Taylor, R. B., & Perkins, D. D. (2003). Multilevel longitudinal impacts of incivilities: Fear of crime, expected safety, and block satisfaction. *Journal* of Quantitative Criminology, 19, 237–274.
- Sampson, R. J. (2004). Neighborhood and community: Collective efficacy and community safety. New Economy, 11, 106–113.
- Sampson, R. J., & Groves, W. B. (1989). Community structure and crime: Testing social-disorganization theory. *The American Journal of Sociology*, 94, 774–802.
- Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. Science, 277, 918–924.
- Scarborough, B. K., Like-Haislip, T. Z., Novak, K. J., Lucas, W. L., & Alarid, L. F. (2010). Assessing the relationship between individual characteristics, neighborhood context, and fear of crime. *Journal of Criminal Justice*, 38, 819–826.
- Schafer, J. L., & Graham, J. W. (2002). Missing data: Our view of the state of the art. Psychological Methods, 7, 147–177.
- Simons, R. L., Simons, L. G., Burt, C. H., Brody, G. H., & Cutrona, C. (2005). Collective efficacy, authoritative parenting and delinquency: A longitudinal test of model integrating community-and family-level processes. Criminology, 43, 989–1030.
- StataCorp (2011). Stata Structural Equation Modeling Reference Manual Release 12. Statistical Software. College Station, TX: StataCorp LP.
- Taylor, R. B. (2002). Fear of crime, social ties, and collective efficacy: Maybe masquerading measurement, maybe déjà vu all over again. *Justice Quarterly*, 19, 773–792.
- Uchida, C. D., Solomon, S. E., Varano, S., Swatt, M., Putt, C., Connor, C., & Mash, J. (2011). Crime, collective efficacy, and Miami-Dade neighborhoods. Report delivered to the Children's Trust of Miami-Dade.
- Varano, S. P., Schafer, J. A., Cancino, J. M., & Swatt, M. L. (2009). Constructing crime: Neighborhood characteristics and police recording behavior. *Journal of Criminal Justice*, 37, 553–563.
- Warner, B. D. (2007). Directly intervene or call the authorities? A study of forms of neighborhood social control within a social disorganization framework. *Criminology*, 45, 99–129.
- Wilson, W. J. (1996). When work disappears. *Political Science Quarterly*, 111, 567–595.Worrall, J. L. (2007). The discriminant validity of perceptual incivilities measures. *Justice Quarterly*, 23, 360–383.
- Wyant, B. R. (2008). Multilevel impacts of perceived incivilities and perceptions of crime risk on fear of crime. *Journal of Research in Crime and Delinquency*, 45, 39–64.
- Marc L. Swatt is a Senior Research Associate and Statistician with Justice & Security Strategies, Inc. His recent publications have appeared in Justice Quarterly, Journal of Quantitative Criminology, Crime and Delinquency, and Journal of Criminal Justice. His current research interests include quantitative methods, criminological theory, neighborhoods and crime, and spatial crime analysis.
- **Sean P. Varano** is an Assistant Professor in the School of Justice Studies at Roger Williams University. His recent publications have appeared in Crime and Delinquency and the Journal of Criminal Justice. His research interests include policing, gangs, and the effectiveness of violence reduction strategies.
- Craig D. Uchida is President of Justice & Security Strategies, Inc., a consulting firm that specializes in criminal justice and public policy issues. He has written numerous monographs and edited two books. His publications have appeared in Crime and Delinquency, Journal of Criminal Law and Criminology, and Journal of Research in Crime and Delinquency. His research interests include predictive policing, gangs, and violence.
- **Shellie E. Solomon** is the Chief Executive Office of Justice & Security Strategies, Inc. She has written numerous monographs, and government publications. Her research interests include children of inmates, gangs, mortgage fraud, and violence prevention.