

UC Irvine

UC Irvine Previously Published Works

Title

Collective Efficacy as a Task Specific Process: Examining the Relationship Between Social Ties, Neighborhood Cohesion and the Capacity to Respond to Violence, Delinquency and Civic Problems

Permalink

<https://escholarship.org/uc/item/5sf1m1x8>

Journal

American Journal of Community Psychology, 52(1-2)

ISSN

0091-0562

Authors

Wickes, Rebecca
Hipp, John R
Sargeant, Elise
et al.

Publication Date

2013-09-01

DOI

10.1007/s10464-013-9582-6

Peer reviewed

Collective efficacy as a task specific process: Examining the relationship between social ties, neighborhood cohesion and the capacity to respond to violence, delinquency and civic problems

Rebecca Wickes

John R. Hipp

Elise Sargeant

Ross Homel

Post-print. Published in American Journal of Community Psychology. 2013. 52(1-2): 115-127.

Abstract

In the neighborhood effects literature, collective efficacy is viewed as the key explanatory process associated with the spatial distribution of a range of social problems. While many studies usefully focus on the consequences of collective efficacy, in this paper we examine the task specificity of collective efficacy and consider the individual and neighborhood factors that influence residents' perceptions of neighborhood collective efficacy for specific tasks. Utilizing survey and administrative data from 4,093 residents nested in 148 communities in Australia, we distinguish collective efficacy for particular threats to social order and assess the relative importance of social cohesion and neighborhood social ties to the development of collective efficacy for violence, delinquency and civic/political issues. Our results indicate that a model separating collective efficacy for specific problems from social ties and the more generalized notions of social cohesion is necessary when understanding the regulation potential of neighborhoods.

Key words: collective efficacy, social ties, social cohesion, community

Introduction

Over the last decade, scholars working within the neighborhood effects paradigm have shifted their focus from the role of neighborhood structural features and social ties to the collective processes that protect against a range of neighborhood problems. Central to this shift is the uptake of collective efficacy theory, a theory initially established in psychology to explain group performance (Bandura 1997). Similar to its original conceptualization in psychology, in the broader neighborhood effects literature collective efficacy is viewed as a task specific group level process associated with a given outcome, such as crime. Yet it differs from earlier psychological approaches in that it represents both the conjoint capacity to achieve a particular task *and* the level of neighborhood social cohesion (Sampson et al. 1997).

Research consistently demonstrates that collectively efficacious communities do better than non-efficacious communities on a range of social issues (Browning 2002; Browning and Cagney 2002; Franzini et al. 2005; Lindblad et al., 2013; Morenoff et al. 2001; O'Brien and Kauffman, 2013; Odgers et al. 2009). Moreover, the association between collective efficacy and social problems is found in both developed (Maimon, Browning, and Brooks-Gunn, 2010; Authors, 2010; Sampson and Wikstrom, 2008), and developing countries (Zhang, Messner, and Liu, 2007). Studies in the U.S. (Sampson et al. 1999; Morenoff et al. 2001) and Australia (Authors 2010) also find that intra-community networks and connections to local organizations are less important in explaining the spatial variation of crime and victimization than collective efficacy.

In this paper we propose an advance in the understanding of collective efficacy. Collective efficacy, as it was originally conceptualized in psychology and as it is theorized in the neighborhood effects literature, represents a *task specific* process. In practice, however, it is

measured as a *global or invariant* property of the neighborhood or as a *generalized perception* of a neighborhood's cohesion and readiness to respond to social problems, whatever their form. Yet, we argue that the factors that lead to collective efficacy for political/civic issues may not be the same factors that lead to collective efficacy for violence or delinquency. Additionally, the factors that lead to neighborhood social cohesion may be different than those associated with collective efficacy for specific problems.

To better understand how collective efficacy can impact neighborhood social problems, like crime, it is important to step back and examine what generates residents' perceptions of collective efficacy for the different tasks associated with the maintenance of social order. Further, since recent studies show that social cohesion and the collective-action orientation of neighborhoods can have differential impacts on a given outcome (for example see Foster-Fishman et al. 2013), we support the assertion of Sampson et al. (1999, p. 635) that there is a need to clearly differentiate "the process of activating/converting social ties to achieve the desired outcomes from the ties themselves". By decoupling perceived cohesion and social ties from collective efficacy, we are better able to assess the conditions under which cohesion is or is not linked to collective efficacy (Horne 2004).

Our paper therefore extends collective efficacy scholarship in two important ways. Drawing on data from a survey of 4,093 residents living in 148 communities in Brisbane, Australia, we assess if collective efficacy is better understood by community residents as a higher-order norm related to the general maintenance of public order or, in line with its original conceptualization, if the perceived capacity to deal with problems of violence is distinct from the capacity to respond to other social problems. Here we consider whether individual and neighborhood factors differentially predict residents' reports of collective efficacy for these

neighborhood problems. Second, we examine the relative importance of both social ties and perceived social cohesion for the development of collective efficacy norms for violence, low-level delinquency and problems of a civic or political nature. Because social ties represent actual connections among residents while social cohesion reflects a ‘sense of community’ (Lindblad et al., 2013; McMillan and Chavis, 1986), in this paper we treat them as distinct constructs.

In what follows, we provide an overview of collective efficacy’s initial conceptualization in psychology, followed by a summary of its uptake in the broader neighborhood effects literature. We argue for the need to distinguish between collective efficacy regarding various tasks, and what might bring about such efficacy. Next, we describe our method and outline our analytic approach. We then detail our results, focusing on the determinants of collective efficacy for different types of tasks associated with community regulation and conclude with the implications of these findings for collective efficacy theory and research in community psychology and criminology.

Collective Efficacy: Its Psychological Beginnings

The concept of collective efficacy was first employed in psychology to understand group performance. Building on the theory of self-efficacy, Albert Bandura (1986/1997) argued that as modern society requires the interdependence of human functioning and collective agency, theory and research must also consider the shared beliefs associated with group attainment. Thus he defined collective efficacy as “*a group’s shared belief in its conjoint capabilities to organize and execute the courses of action required to produce given levels of attainments*” (Bandura 1997, p. 477 emphasis in original). While self-efficacy represents the “judgments of how well one can execute courses of action required to deal with prospective situations” (Bandura 1982, p. 122), collective efficacy refers to the “interactive, coordinative, and synergistic dynamics” of a group’s

transactions (Bandura 2000, p. 75-6). Bandura (1982/1997) argues that collective efficacy varies across situational circumstances and represents beliefs pertaining to specific tasks.

In psychology, collective efficacy provides a strong theoretical foundation for understanding group goal attainment. For example, Feltz and Lirgg (1998) find team efficacy predicts team performance among ice hockey teams. Similar results are found in educational settings (Lent et al. 2006), workplaces (de Jong et al. 2006) and simulated experiments (Katz-Navon and Erez 2005). Further meta-analytic research finds evidence for the relationship between collective efficacy and performance across contexts (Gully et al. 2002; Stajkovic et al. 2009).

Three features distinguish collective efficacy research in psychology from its recent uptake in the wider neighborhood effects literature. First, in earlier studies of collective efficacy in psychology, there was a sharp focus on task specificity and its link to goal attainment¹. This is clearly articulated in Myers et al.'s (2004) research which examined the relationship between collective efficacy and the performance of college football teams. Here collective efficacy represents the tasks associated with the game. For example, respondents were asked to rate their confidence in the team's ability to outplay their opponent in terms of yardage gained, to bounce back from performing poorly, and to win the game against the opposing team (Myers et al. 2004).

Another distinguishing feature of collective efficacy in psychological research is the separation of social or group cohesion from collective efficacy. While there is no agreed upon definition of social cohesion, it is often referred to as a 'sense of community' or as a 'feeling' of belonging, shared faith and commitment (Lindblad et al., 2013; McMillan and Chavis, 1986). Thus social cohesion is distinct from other group attributes or processes, like collective efficacy. Paskevich et al. (1999) argue that although the concepts are related they are not identical as only

¹ We note, however, recent community psychological studies of collective efficacy employ the more generalized measure of collective efficacy used in sociology and criminology (Foster-Fishman et al., 2013; Lindblad et al., 2013; O'Brien and Kauffman, 2013; Odgers et al., 2009).

specific aspects of cohesion are associated with collective efficacy. They suggest that as cohesion is not a global group trait, but a multidimensional construct, only some dimensions of cohesion will be linked to collective efficacy.

Finally, psychological studies of collective efficacy give greater emphasis to the role of task interdependence, where the magnitude of the relationship between collective efficacy and a given outcome is a function of the interdependence needed to complete the task (Stajkovic et al. 2009). Performance on some tasks will require frequent interaction among the team members. As Stajkovic and colleagues (2009, p. 815) state, “at a low interdependence task, the group’s level of performance is the sum of outcomes produced, largely, independently” and as such “group members are likely to develop their own individual judgment and knowledge structure about the given tasks”. Thus, under some conditions, collective efficacy is a reflection of the sum of the group members’ self-efficacy.

From Groups to Neighborhoods: The Transfer of Collective Efficacy to Criminology

In the late 1990s, Robert Sampson and his colleagues demonstrated the relevance of collective efficacy for explaining the differential ability of neighborhoods to prevent crime and disorder (Sampson et al. 1997). As collective efficacy was a concept tied to normative task specific beliefs rather than social ties, it was positioned as an advance on the systemic model of community regulation, which focused more on the breakdown of ties and the subsequent inability to exercise informal social control. In contemporary cities, as neighbors are acquaintances, at best, Sampson (1999) argued that the village model of kith and kinship ties that underpinned the systemic model needed further elaboration as an explanation of social order.

Within the criminological literature, collective efficacy is defined as capturing “the link between cohesion – especially working trust – and shared expectations for action” (Sampson 2004, p. 108). This articulation of collective efficacy suggests that when a community is perceived to be cohesive and when residents share a perception that neighbors will intervene in community problems, crime will be lower. Thus collective efficacy builds upon the systemic model by addressing the *process* of activating or converting social ties into the desired outcomes of the collective (Sampson et al. 1999). Although Sampson (2001) acknowledges the strength of social ties, and the significance of formal and voluntary organizations to a community’s wellbeing, he argues that such ties are not sufficient, as the “collective *capacity* for social action, even if rooted in weak personal ties, may constitute the more proximate social mechanism for understanding between neighborhood variation in crime rates” (Sampson 2001, p. 521).

We concur but suggest there needs to be a greater emphasis on the *task specific* nature of collective efficacy and the generators of collective efficacy. The psychological literature demonstrates that a group’s collective efficacy will vary across tasks that collective efficacy is conceptually distinct from group cohesion and intra group relationships and that collective efficacy is influenced by task interdependency. To date these associations have not been considered in criminological research or indeed the broader (and rapidly growing) neighborhood effects literature. To fully leverage collective efficacy theoretically as a neighborhood process linked to the prevention of social problems it is necessary to do two things: to conceptualize collective efficacy as a capacity to respond to particular tasks associated with the maintenance of social order; and to examine if the generators of collective efficacy regarding these particular tasks differ.

Considering the generators of collective efficacy brings to the fore the challenge of clarifying the role of social relationships as they may explain variation in collective efficacy.

While some scholars are beginning to disentangle the community processes associated with maintaining social order (see for example Bellair and Browning 2010; Browning et al. 2004; Rhineberger-Dunn and Carlson 2009; Swaroop and Morenoff, 2006), we suggest further clarity is needed to better understand the relationship between community ties, perceived cohesion and the norms that guide action.

The Present Research

In this paper we draw on advances in psychology where studies distinguish between group characteristics (like cohesion) and collective efficacy (Lent et al. 2006; Paskevich et al. 1999; Sargent and Sue-Chan 2001). We argue that the current articulation of collective efficacy in the neighborhood literature is not sufficiently clear as to whether it represents a task specific expectation or if it signifies a global belief that members of the community can respond to any social problem, including obesity (see for example Cohen et al. 2006). Further we examine the factors that generate individuals' perceptions of collective efficacy for specific tasks associated with maintaining social order. We consider if individuals distinguish their community's perceived capacity to deal with problems of violence from its ability to respond to other social problems; and examine the relative importance of community relationships, either actual or perceived, for the development of norms around specific community problems.

Method

This paper draws on survey data from the second wave of the Australian Community Capacity Study (ACCS). This is a longitudinal study of place that is supported by funding from the

Australian Research Council (Authors 2007; Authors 2011). The overarching goal of the ACCS is to explore and analyze the temporal and spatial distribution of crime across Australian communities with a view to better understanding the community context of crime.

Research Sites and Participants

The ACCS survey was carried out in the Brisbane Statistical Division (BSD) located in Queensland, Australia. Brisbane is the state capital, the largest metropolitan area in Queensland, and the third largest city in Australia with a population of approximately 1.9 million people. The BSD comprises the more established inner city areas in addition to peri-urban areas that are experiencing large increases in population growth. The survey sample comprises 148 randomly drawn state neighborhoods² with a mean population of 5,268 and a standard deviation of 4,731. The total number of participants randomly selected from within these neighborhoods ranged from 12 to 54 people with a total sample size of 4,093 participants. Of these, 1077 participants were from Wave 1 (from a total of 2,859 participants) and 3016 were ‘top up’ participants. Using Random Digit Dialing (RDD), the in-scope ‘top up’ survey population comprised all people aged 18 years or over who usually resided in private dwellings with telephones in the selected neighborhoods. Demographics of the participants are compared with the population demographics provided by the Australian Bureau of Statistics 2006 census (see Table 1). As is often the case with telephone interviews, participants in the Wave 2 survey were slightly older, married and owned

² In Australia, the term “suburb” is used to refer to a feature that in the U.S. would be referred to as a “neighborhood”. Suburbs are similar to census tracts in the U.S. context, though in some cases Brisbane suburbs may be larger than census tracts as they are not determined by population. Throughout, we use the more familiar term “neighborhood” to refer to these. The suburbs in Brisbane include those that are immediately adjacent to the central business district and those located in peri-urban areas which have experienced large increases in population growth.

their own home. There were also fewer people who reported working full time. Trained interviewers conducted the survey with a survey administration time of approximately 20 minutes. The consent rate for the longitudinal sample was 92.05 percent and the consent rate for the top-up sample 46.58 percent.

<<<Table 1 here>>>

Variable Information

Collective Efficacy

In Wave 2 of the ACCS, the collective efficacy items were expanded to examine efficacy for specific types of problems. The inclusion of these additional items allowed us to empirically test if collective efficacy, as it is understood in criminology, is representative of a more generalized perception of the neighborhood's capacity to maintain public order, or if we could consider collective efficacy for specific types of crime and disorder. In particular we wanted to assess if we could distinguish between collective efficacy for 1) the ability to socially control children; 2) the ability to control violence; 3) the ability to make political demands (see Appendix 1 for the items of all scales).

Social Cohesion and Neighborhood Social Ties

We also examined the extent to which collective efficacy is dependent upon intra neighborhood connections (either real or perceived) using two measures. First, we included a summative measure of three items that capture the number of reported intra community relationships. In line with the research from the Project on Human Development in Chicago Neighborhoods (PHDCN) (Sampson, 2012), and McMillian and Chavis' (1986) 'sense of

community' we also included a scale measuring *perceived social cohesion and trust*, which assesses perceived neighborhood interdependency, or a sense of . This scale is reliable at $\alpha=.75$.

Socio-demographic Control Variables

In line with other collective efficacy research, we included a number of individual and neighborhood level control variables. At the individual level these include: *approximate gross household income* (1=less than AUD 20,000, 2=AUD 20,000 to less than AUD 40,000, 3=AUD 40,000 to less than AUD 60,000, 4=AUD 60,000 to less than AUD 80,000, 5= AUD 80,000 or more), *highest level of education* (1=post graduate qualifications, 2=a university or college degree, 3=a trade, technical certificate or diploma, 4=completed senior high school, 5=completed junior high school, 6=primary school, 7=no schooling), the *length of residence in the home* (1=less than 6 months, 2=6 months to less than 12 months, 3=12 months to less than 2 years, 4=2 years to less than 5 years, 5=5 years to less than 10 years, 6=10 years to less than 20 years, 7=20 years or more), *home ownership* (1=own, 0=rent), whether the respondent *speaks only English at home* (1=English only, 0=other), and the *age and gender* (1=female, 0=male) of the respondent. We also included three dummy variables to capture marital status, these were widow (1=widow, 0=other), divorced (1=divorced, 0=other) and single (1=single or never married, 0=other), and whether the participant has children (1=have children; 0=other).

Several other neighborhood level measures of substantive interest were obtained from the 2006 Australian Bureau of Statistics (ABS) census data and the Queensland Police Service (QPS) annual crime rate data. We constructed measures of *residential stability* (combining measures of percent owners and percent new households in the last five years), *median household income*, the percent of households that *only speak English* at home, and the *violent crime rate* in the neighborhood. Considering the variability in neighborhood size, we controlled for *population*

density in our models. The summary statistics for the variables included in the analyses are presented in Appendix 2. There was no evidence of multicollinearity in our models, as all variance inflation factor values were below 4.

Analytic Strategy

To assess the possible dimensions of collective efficacy, we estimated confirmatory factor analysis (CFA) models. This allowed us to statistically test our hypothesized structure of task specific collective efficacy dimensions. We then estimated full structural equation models that allowed us to test the *determinants* of these collective efficacy dimensions. Given that we have households nested within neighborhoods, we estimated multilevel models with latent variables using the Mplus 5.21 software. The item (1) and individual (2) level equations are:

$$(1) \quad y_{kij} = \eta_{ij} + \varepsilon_{ij}$$

$$(2) \quad \eta_{ij} = X_{ij}\Gamma + \delta_{ij}$$

where y_{kij} is the particular dimension of collective efficacy regarding a specific task (k) reported by the i -th of I respondents in the j -th neighborhood, η_{ij} is the latent variable of collective efficacy regarding the task for the respondent, X_{ij} is a matrix of exogenous predictors with values for each individual i in neighborhood j to account for compositional effects, Γ is a vector of the effects of these predictors on the subjective assessment, ε_{ij} is a disturbance term for each item, and δ_{ij} is a disturbance term for the individual. The individual level covariates capture systematic bias on the part of residents reporting about these community level constructs (Sampson et al. 1997). There are separate equations for each type of collective efficacy, as well as one for cohesion. In the equation for social ties we do not include the individual level covariates given that it is asking

respondents to report on their own intra community relationships rather than reporting about the neighborhood in general (and therefore there is no need to adjust for compositional effects).

The neighborhood level equation incorporates the neighborhood characteristics described above, and is represented as:

$$(3) \quad \eta_j = \kappa_j + \eta_{2j}B_1 + Z_jB_2 + \varepsilon_j$$

where η_j represents collective efficacy in neighborhood j , κ_j is an intercept, η_{2j} represents the neighborhood j latent variables of social ties and cohesion, B_1 is a vector of their effects, Z represents a matrix of observed neighborhood variables measured at the level of neighborhood j , B_2 is a vector of their effects, and ε_j is a disturbance for neighborhood j . We accounted for missing data with a full information maximum likelihood (FIML) approach implemented in Mplus. The level of missing data was relatively modest, as nearly all variables had less than two percent missing observations (only household income had more with 12 percent missing observations). Nevertheless, FIML is based on more modest assumptions than a listwise deletion approach (Rubin 1987; Schafer 1997).

Results

We begin by viewing the CFA results at the individual level and testing a default baseline model, which treats these measures as indicators of collective efficacy as if it were a unitary dimension. This single latent variable model assumes that these measures all capture a single dimension of collective efficacy, and showed a relatively poor fit ($\chi^2 = 963.9$, $df = 54$, $p < .01$, Comparative Fit Index (CFI) = .88, Tucker-Lewis Index (TLI) = .85, Root Mean Squared Error of Approximation (RMSEA) = .064). We then estimated our hypothesized model, which tests whether these capture collective efficacy regarding three separate tasks. This model showed a

satisfactory fit, as all measures showed an improvement in fit ($\chi^2 = 473.4$, $df = 50$, $p < .01$), with a CFI of .95, a TLI of .93 and a RMSEA of .045.³ The chi square was reduced almost in half on just four degrees of freedom, suggesting a very large improvement in fit over the baseline model. The correlations between these three types of collective efficacy were well below 1, with collective efficacy regarding controlling violence correlated at .66 with collective efficacy regarding socially controlling children and .62 with collective efficacy regarding political demands. These are distinct constructs. The correlation between collective efficacy regarding children and that regarding political demands was .81, suggesting a higher degree of concordance between these two measures, at least in this sample.

Given that nearly all prior collective efficacy studies in sociology and criminology compute a scale that combines questions regarding collective efficacy with questions regarding cohesion and trust in the neighborhood, we next tested a model that added a latent variable for cohesion. This model allowed the three latent collective efficacy constructs to correlate with the latent cohesion/trust construct to assess the degree to which they are related. This model also showed a very satisfactory fit ($\chi^2 = 1962.9$, $df = 236$, $p < .01$, CFI=.94, TLI=.93, RMSEA=.042). Importantly, the correlations between cohesion and these measures of collective efficacy all ranged between .52 and .62, suggesting that they were distinct constructs. This also emphasizes the importance of

³ It is well known that the chi square has very high statistical power to detect small imperfections in the model in samples as very large as ours here and reject the null hypothesis that the CFA model exactly captures the process of interest (Bollen 1989: 263-81). Thus, the use of approximate fit indices is appropriate. These measures reflect the degree to which the model fits well, rather than any strict criterion. These fit index values suggest an acceptable fit, based on the simulation results of Hu and Bentler (1999), who suggested that RMSEA values below .08 and CFI values above .95 represent acceptable fit. ▼

Deleted: We also point out that in addition to chi square values, we report approximate fit indices given that the large sample size provides very high statistical power to reject the null hypothesis of the chi square test that our CFA model exactly captures the process of interest

distinguishing between the specific tasks of collective efficacy, and the more general constructs of cohesion or trust.

We next turn to the full multilevel structural equation models that examine the individual and community level characteristics associated with the collective efficacy dimensions and cohesion (see Table 2). The first four columns in Table 2 present the results for the first model that does not include cohesion as a covariate of these collective efficacy outcomes. The last three columns present the results of the second model that includes cohesion as a predictor of collective efficacy. We begin by focusing on the household level measures, as these capture the extent to which certain individuals are systematically biased towards perceiving more cohesion or task specific collective efficacy. The first two columns of Table 2 present the results predicting collective efficacy about (1) the social control of children and (2) about political demands, which are of interest given that they were so highly correlated in the CFA analysis. Nonetheless, we see some sharp differences in what predicts residents' perceptions of collective efficacy regarding these two specific tasks: whereas speaking only English at home has no effect on perceptions of collective efficacy about children, it has a significant negative effect on perceptions of collective efficacy about political demands. In contrast, household income has a strong positive effect on perceptions of collective efficacy about controlling children, but no effect on political demand efficacy. These results were significantly different across outcomes⁴. Widowed persons differ from

⁴ To assess these differences, we estimated an additional model that constrained these coefficients to be equal over outcome measures. A chi square difference test then assessed if adding this constraint significantly worsened the fit of the model. For example, when constraining the coefficients for the speak only English at home variable to be equal across outcomes in model 1, the chi square difference test results in $\chi^2 = 51.2$ on 3 df, for a highly significant effect ($p < .01$). This demonstrates significant differences for the coefficients for this variable across outcomes. When

married residents and perceive less collective efficacy regarding political demands. Moreover while older residents perceive less collective efficacy regarding socially controlling violence than younger residents, they perceive *more* efficacy regarding political demands. Despite the moderate correlation between these two collective efficacy dimensions, residents' perceptions of neighborhood efficacy regarding these two tasks differ markedly based on certain socio-demographic characteristics.

<<<Table 2 about here>>>

In comparing the results predicting collective efficacy regarding violence (equation 3 in Table 2) with the other two types of collective efficacy, there are some differences across measures. Whereas females perceive much higher collective efficacy regarding the social control of children or political demands than do men, they do not perceive more collective efficacy regarding controlling violence. Older residents perceive less collective efficacy than younger residents regarding controlling violence. They do not differ from younger residents for collective efficacy regarding controlling children and actually perceive more collective efficacy regarding political demands. We also see that the pattern of relationships between our household level covariates and social cohesion differ from the pattern for the various types of collective efficacy. Although income, speaking only English at home and age matter for perceiving collective efficacy regarding various specific tasks, they do not significantly affect perceptions of general cohesion. And while homeownership showed no effect on perceptions of collective efficacy, it has a strong

estimating a model that did not include the cohesion measure (thus was just comparing the three collective efficacy variables), the chi square difference test resulted in $\chi^2 = 116.0$ on 2 df, for a highly significant effect ($p < .01$). Furthermore, an omnibus test of all these coefficients simultaneously also showed very strong differences: $\chi^2 = 611.5$ on 51 df, for a highly significant effect ($p < .01$).

positive effect on perceived cohesion, as does the length of residence⁵. Again, the theme is that residents systematically differ in their perceptions of these types of collective efficacy and of general cohesion.

We are particularly interested in whether the community context affects residents' reports of collective efficacy and cohesion, and we turn to those measures now. First, we see that community social ties have a strong positive effect on all three types of collective efficacy, as well as cohesion, and appear to be an important precursor to the formation of cohesion and collective efficacy regarding various tasks. These are large effects, suggesting approximately a .8 standard deviation increase in these types of collective efficacy for a one standard deviation increase in community social ties. Community social ties have the weakest effect for collective efficacy about violence. Furthermore, there is an extra boost at the individual level from one's own personal social ties: residents who report more social ties in the community also report higher levels of collective efficacy and cohesion in the community. The presence of social ties has a particularly strong effect on one's perception of the level of cohesion in the community.

Turning to the other community measures, the effect of neighborhood residential stability differs considerably for these various outcomes. Although neighborhood stability has no effect on cohesion or collective efficacy regarding political demands, the general sense of familiarity that comes from longer co-existence in the neighborhood appears more important for fostering

⁵ This was computed by multiplying the coefficient from the equation by the observed standard deviation of social ties at level 2 (.26) and divided by the standard deviation of the outcome measure at level 2 (.3, .22 and .3 for children, violence, and political collective efficacy respectively). This is not entirely precise, as Mplus is estimating the model with these as latent variables at level 2, whereas these standard deviations are based on the observed variables. Nonetheless, they provide an approximate sense of the metric.

collective efficacy regarding violence. Additionally, communities with a higher proportion of households that speak languages other than English in the home have higher levels of collective efficacy regarding children, but not the other tasks. Neighborhood median income has a robust positive effect on all three types of collective efficacy, as well as cohesion, although these coefficients do not differ significantly. The level of violent crime does not significantly affect any of these types of collective efficacy.

In Model 2, we follow the psychology literature and include community level cohesion as a *predictor* of these three collective efficacy tasks, and also allow an individual's perception of the level of cohesion to affect their perception of the level of collective efficacy regarding these tasks⁶. These results are displayed in columns 5 through 7 of Table 2. On the one hand, we see consistent effects in which residents who perceive higher levels of cohesion in the community also report higher levels of collective efficacy regarding each of these tasks ($\beta=.284$ for collective efficacy about children, $\beta=.252$ for political demands, and $\beta=.273$ for violence). Yet, whereas neighborhood cohesion has a very strong positive effect on neighborhood collective efficacy regarding controlling children, it is not significantly associated with collective efficacy regarding violence or political demands. Thus, the perceived capacity of residents to address violence has different determinants: not only is neighborhood cohesion not important for fostering collective efficacy regarding this task, but as noted in Model 1, neighborhood social ties are less important for fostering this type of collective efficacy compared to the other tasks. Instead, it is residential

⁶ We also estimated an additional model that omitted the effect of individual level perceived cohesion on perceptions of these types of collective efficacy, and the results for the model were extremely similar to those presented in the table.

stability—independent of its effect on social ties or cohesion—that appears important for fostering collective efficacy regarding the ability to address violence.

Discussion and Conclusion

The incorporation of collective efficacy into the neighborhood effects literature has reinvigorated the study of neighborhood context and demonstrated the significance of social processes in understanding the spatial distribution of social problems. In this paper we sought to further distinguish the contribution of collective efficacy through a more explicit focus on collective efficacy as a task specific process, as it is articulated in the psychological literature. Moreover, we attempted to specify the relationship between social ties, social cohesion and collective efficacy for different tasks.

The first goal of our research was to conceptually refine the measurement of collective efficacy. Informed by the psychological literature and following the lead of others who suggest that social cohesion may not always lead to the development of norms pertaining to informal social control (Horne, 2004), we sought to assess whether residents distinguished between collective efficacy for different problems. There are many possible tasks that could be viewed, and one would expect a degree of correlation in the level of collective efficacy in a neighborhood for certain tasks. That is, certain tasks are similar enough that residents in a neighborhood that felt efficacious about one would likely feel efficacious about the other. Articulating all the possible tasks that might be enumerated is outside the scope of our analyses, but it is notable that we found that collective efficacy for violence, child centered control and political/civic matters are distinct constructs. They were certainly correlated, which is not surprising given that these tasks have in common a goal of community regulation. One possibility is that, as just mentioned, the similarity in tasks implies that residents' level of efficacy regarding one will be similar for another. Thus, a

neighborhood with many affluent, educated and professional residents will have access to key organizations, and thus a cumulative capacity to harness whatever resources are needed to resolve a range of particular threats to the community. This is evidenced in a case study of a collectively efficacious community in Brisbane, Australia. Authors (2010) found that any shared belief in the neighborhood's conjoint capability for action was primarily based upon residents' own skills, resources and extra-local connections. Another possibility is that there is a 'generalizing' effect of collective efficacy, that is, if a neighborhood is high in one type of collective efficacy, say the control of children/youth, this may encourage the development of collective efficacy around other types of tasks, like improving access to better educational resources or promoting healthier lifestyles for young people. Simply put, collective efficacy might be 'catching'.

We also find the socio-demographic predictors associated with the original conceptualization of collective efficacy (Sampson et al. 1997) have different impacts on residents' sense of the collective ability to respond to specific acts of crime and disorder. Of interest here is the role of age, household income and home ownership at the individual level and median household income, residential stability and immigrant concentration at the neighborhood level. In earlier collective efficacy research, all the aforementioned indicators significantly predicted collective efficacy (Sampson et al. 1997). In our analyses, the relationship between these variables and the different types of collective efficacy is not uniform. For example, whereas older residents reported *more* collective efficacy regarding political/civic issues (which may require skills more commonly possessed by older persons with more experience working within the political system), they did not differ significantly regarding the direct-action collective oriented task of addressing misbehaving children, and they reported *less* collective efficacy regarding addressing violence (a task which may require more physical strength and risk taking proclivities). Mirroring previous

research, we found that high income households reported more collective efficacy for confronting misbehaving children; however, they were no more likely to express collective efficacy regarding addressing political/civic matters. At the level of the neighborhood, we again see differences as residential stability only showed a positive effect on collective efficacy for violence. Immigrant concentration only significantly decreases collective efficacy for the social control of children. Where there is similarity with the PHDCN study it is in the positive and significant impact of median household income on all collective efficacy types.

The second goal of this paper was to decouple neighborhood networks and cohesion and assess their independent impacts on residents' perceptions of the different types of collective efficacy. We found important differences among the predictors for collective efficacy and those for perceptions of cohesion: for example, whereas home owners report more cohesion, this does not translate into a greater sense of collective efficacy for any of these tasks. Conversely, although higher income households reported more collective efficacy regarding controlling children, they did not report more cohesion. It is notable that neighborhood level cohesion only increased collective efficacy regarding controlling children. At the same time, the level of social ties in the neighborhood was significantly and positively related to cohesion as well as to all types of collective efficacy. This was an extremely robust finding – what matters more for individual accounts of the community's perceived capacity to respond to problems is the actual relationships among residents as opposed to the shared perception of group cohesion.

Our research provides an important advance on collective efficacy research. While our findings may be reflective of the Australian context, as Sampson claims 'nothing in the logic of collective efficacy is necessarily limited to specific cities, the United States or any country for that matter' (2006, p.161). Nonetheless there are limitations to consider. First, our data does not allow

for us to test whether it is the strength or the quality of social ties that might matter most for collective efficacy. As Bellair and Browning (2010) note, there is no consensus on what constitutes strong or weak ties in the collective efficacy literature. Though Granovetter (1973) suggested a weak tie was one characterized by infrequent interaction of a less intimate nature, an alternative conceptualization might focus primarily on the functional aspect of the relationship rather than the frequency of exchange: a weak tie could reflect a kith or kin or neighborly relationship that provides little support, or conversely, a strong tie could represent a less intimate relationship that provides a necessary and important function. The present definitions of intra-community relationships require substantial clarification if we are to comprehensively understand their impact on community organization and the differential distribution of crime and disorder. We suggest that this is a critical area for future research and agree with Kubrin and Weitzer (2003, p. 396) that the concept of social ties needs to “be disaggregated into various types of ties and types of effects”.

Additionally, the current research is cross-sectional in nature. Although collective efficacy is a process that unfolds over time, to date it has largely been studied cross-sectionally. At the time of writing, we are not aware of any general population, longitudinal study of collective efficacy. Thus while we find that there may be important factors that differentially predict specific collective efficacies associated with the maintenance of social order, whether these explanations hold over time remains to be seen. Future research that examines the interplay between neighborhood structural characteristics and neighborhood social processes, such as collective efficacy, is necessary. We hope that the longitudinal nature of the Australian Community Capacity Study will eventually allow for a comprehensive test of these relationships over space and time.

These limitations notwithstanding, drawing on the results of this research, we suggest a theoretical framework of neighborhood processes must proceed with a model that separates

specific action-based perceptions from networks of association, and the more generalized notions of social cohesion and trust. We contend that the current understanding of collective efficacy does not position the varying importance of these characteristics for informal social control as central, even though they may be of critical importance for the subsequent reduction or prevention of crime. To progress collective efficacy theory in the neighborhood effects literature, the belief in the community's capacity for action needs to be viewed separately from, but related to, the interdependence of community residents. This would allow for future research to closely consider whether communities characterized by weak ties can be effective units of social organization, as suggested in the literature (Sampson et al. 1999).

As a final note, we also believe our emphasis on the importance of considering the task specific nature of collective efficacy – an often overlooked feature of most empirical studies of the concept– serves a more important purpose than simply refining measurement. Scholarship focusing on collective efficacy needs to now consider the task at hand, the degree to which the task requires collective versus individual action, and the extent to which certain residents—and certain neighborhoods—may differ in their sense of a collective ability to engage in different tasks. We believe moving the collective efficacy literature forward in this way is not only important for theory, but is critical for the development of targeted policies or programs associated with increasing the capacity of neighborhoods, a perennial goal of government and other community interventions (Chaskin et al., 2001). Social problems do tend to cluster in particular types of neighborhoods and neighborhoods with multiple and complex problems will require a comprehensive set of resources (Australian Social Inclusion Board, 2011). However, other neighborhoods may have emerging issues that require specifically targeted approaches to enhance citizen involvement in maintaining social order. Identifying the practices that may lead residents to

proactively engage in behaviors associated with community regulation and capacity building must be the next frontier for collective efficacy research in the neighborhood effects paradigm.

References

- Australian Social Inclusion Board. (2011). *Breaking cycles of disadvantage*, Commonwealth of Australia: Canberra.
- Authors. (2011).
- Authors. (2010).
- Authors (2010).
- Authors. (2007).
- Bandura, A. (1982). Self-efficacy mechanism in human agency. *American Psychologist*, 37 (2), 122-147.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs: Prentice-Hall.
- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: W.H. Freeman and Company.
- Bandura, A. (2000). Exercise of human agency through collective efficacy. *Current Directions in Psychological Science*, 9(3), 75-78.
- Bellair, P. E., & Browning, C. R. (2010). Contemporary disorganization research: An assessment and further test of the systemic model of neighborhood crime. *Journal of Research in Crime and Delinquency*, 47(4), 496-521.

Bollen, K. A. 1989. *Structural Equations with Latent Variables*. New York: John Wiley & Sons.

Formatted: Font: (Default) Times New Roman, 12 pt

Formatted: Line spacing: Double

Formatted: Font: (Default) Times New Roman, 12 pt

- 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.
- Browning, C. R., & Cagney, K. A. (2002). Neighborhood structural disadvantage, collective efficacy, and self-rated physical health in an urban setting. *Journal of Health and Social Behavior*, 43(4), 383-99.
- Browning, C. R., Feinberg, S. L., & Dietz, R. D. (2004). The paradox of social disorganization: Networks, collective efficacy, and violent crime in urban neighborhoods. *Social Forces*, 83(2), 503-534.
- Chaskin, R.J., Brown, P., Venkatesh, S.A. & Vidal, A. (2001). Building community capacity. New York: Aldine.
- Cohen, D. A., Finch, B. K., Bower, A., & Sastry, N. (2006). Collective efficacy and obesity: The potential influence of social factors on health. *Social Science Medicine*, 62(3), 769-778.
- de Jong, A., de Ruyter, K. , & Wetzels, M. (2006). Linking employee confidence to performance: A study of self-managing service teams. *Journal of the Academy of Marketing Science*, 34(4), 576-587.
- Feltz, D. L., & Lirgg, C. D. (1998). Perceived team and player efficacy in hockey. *Journal of Applied Psychology* 83(4), 557-64.
- Foster-Fishman, P.G., Collins, C., & Pierce, S.J. (2013). An investigation of the dynamic processes Promoting Citizen Participation. *American Journal of Community Psychology*, 51(3-4): 492-509.

- Franzini, L., Caughy, M., Spears, W., & Esquer, M. E. F. (2005). Neighborhood economic conditions, social processes, and self-rated health in low-income neighborhoods in Texas: A multilevel latent variables model. *Social Science and Medicine*, 61, 1135-1150.
- Granovetter, M. S. (1973). The strength of weak ties. *American Journal of Sociology*, 78, 360-380.
- Gully, S. M., Incalcaterra, K. A., Joshi, A., & Beaubien, J. M. (2002). A meta-analysis of team-efficacy, potency, and performance: Interdependence and level of analysis as moderators of observed relationships. *Journal of Applied Psychology*, 87(5), 819-832.
- Horne, C. (2004). Collective benefits, exchange interests and norm enforcement, *Social Forces*, 82(3), 1037-1062.
- Hu, Li-tze and Peter M. Bentler. 1999. "Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives." *Structural Equation Modeling* 6:1-55.
- Katz-Navon, T. Y., & Erez, M. (2005). When collective- and self-efficacy affect team performance. *Small Group Research*, 36(4), 437-465.
- Kubrin, C. .E., & Weitzer, R. (2003). New directions in social disorganization theory. *Journal of Research in Crime and Delinquency*, 40, 374-402.
- Lent, R., Schmidt, J., & Schmidt, L. (2006). Collective efficacy beliefs in student work teams: Relation to self-efficacy, cohesion, and performance. *Journal of Vocational Behavior*, 68, 73-84.
- Lindblad, M.R., Manturuk, K.R., & Quercia, R.G. (2013). Sense of Community and Informal Social Control Among Lower Income Households: The Role of Homeownership and

Collective Efficacy in Reducing Subjective Neighborhood Crime and Disorder. *American Journal for Community Psychology*, 51 (1-2), 123-139.

Maimon, D., Browning, C.R., & Brooks-Gunn, J. (2010). Collective efficacy, family attachment, and urban adolescent suicide attempts. *Journal of Health and Social Behavior*, 51(3), 307-324.

McMillan, D. W., & Chavis, D. M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology*, 14(1), 6-23.

Morenoff, J. D., Sampson, R. J., & Raudenbush, S. W. (2001). Neighborhood inequality, collective efficacy, and the spatial dynamics of urban violence. *Criminology*, 39(3), 517-558.

Myers, N. D., Feltz, D. L., & Short S. E. (2004). Collective efficacy and team performance: A longitudinal study of collegiate football teams. *Group Dynamics: Theory, Research and Practice*, 8(2), 126-138.

O'Brien, D.T. and Kauffman, R.A. (2013). Broken Windows and Low Adolescent Prosociality: Not Cause and Consequence, but Co-symptoms of Low Collective Efficacy. *American Journal of Community Psychology*, 51(3-4), 359-369.

Oggers, C. L., Moffitt, T. E., Tach, L. M., Sampson, R. J., Taylor, A., Matthews, C. L., & Capsi, A. (2009). The protective effects of neighborhood collective efficacy on British children growing up in deprivation: A developmental analysis. *Developmental Psychology*, 45(4), 942-957.

Paskevich, D. M., Brawley, L. R., Dorsch, K. D., & Widmeyer, W. N. (1999). Relationship between collective efficacy and team cohesion: Conceptual and measurement issues. *Group Dynamics: Theory, Research and Practice*, 3(3), 210-222.

- Rhineberger-Dunn, G. M., & Carlson, S. M. (2009). Confirmatory factor analyses of collective efficacy and police satisfaction. *Journal of Crime and Justice*, 32(1), 125-154.
- Rubin, D. B. (1987). *Multiple Imputation for Nonresponse in Surveys*. New York: Wiley.
- Sampson, R. J. (1999). What "community" supplies. In R. F. Ferguson & W. T. Dickens (Eds.), *Urban Problems and Community Development* (pp. 241-292). Washington: The Brookings Institute.
- Sampson, R. J. (2001). Crime and Public Safety: Insights from Community-Level Perspectives on Social Capital. In S. Saegert, J. P. Thompson & M. R. Warren (Eds.), *Social Capital and Poor Communities* (pp. 89-114). New York: The Russell Sage Foundation.
- Sampson, R. J. (2004). Neighborhood and community: Collective efficacy and community safety. *New Economy*, 11(2), 106-113.
- Sampson, R.J. (2006). Collective efficacy theory: Lessons learned and directions for future inquiry. In Cullen, F.T., J.P. Wright, and K. Blevins (eds.) *Taking Stock: The Status of Criminological Theory (Advances in Criminological Theory)*, Vol. 15, 149-167.
- Sampson, R. J. (2012). [Great American City: Chicago and the Enduring Neighborhood Effect](#). Chicago: University of Chicago Press.
- Sampson, R. J., Morenoff, J. D., & Earls, F. (1999). Beyond social capital: Spatial dynamics of collective efficacy for children. *American Sociological Review* 64(5), 633-660.
- Sampson, R. J., Raudenbush, S. W., & Earls, F. (1997). Neighborhoods and violent crime: A multilevel study of collective efficacy. *Science*, 277, 918-924.
- Sargent, L., & Sue-Chan, C. (2001). Does diversity affect group efficacy? The intervening role of cohesion and task interdependence. *Small Group Research*, 32(4), 426-450.

- Schafer, J. L. (1997). Analysis of incomplete multivariate data. *Monographs on Statistics and Applied Probability*, 72. New York: Chapman and Hall.
- Stajkovic, A. D., Lee, D., & Nyberg, A. J. (2009). Collective efficacy, group potency, and group performance: Meta-analyses of their relationships, and test of a mediation model. *Journal of Applied Psychology*, 94(3), 814-828.
- Swaroop, S. and Morenoff, J.D. (2006). Building Community: The Neighborhood Context of Social Organization. *Social Forces*, 84 (3), 1665-1695.
- Zhang, L., Messner, S.F., & Liu, J. (2007). A multilevel analysis of the risk of household burglary in the city of Tianjin, China. *British Journal of Criminology*, 47, 918-937.

Table 1 Comparison of ACCS Wave 2 Survey and Australian Bureau of Statistics (ABS, 2006) Census Demographic Characteristics

| Item | ACCS Wave 2 Survey | 2006 ABS Census BSD |
|---------------------------------------|---------------------------|----------------------------|
| Age | Median age 50 years | Median age 35 years |
| Gender | 40% Males | 49% Males |
| Aboriginal and Torres Strait Islander | 1.4% | 1.7% |
| Overseas Born | 24.3% | 21.7% |
| Language Spoken at Home | 93.2% English | 83.9% English |
| Marital Status | 63.8% Married | 48.1% Married |
| Employment | 42.2% Employed Full-Time | 62.7% Employed Full-Time |
| Median Annual Household Income | \$60,000 to \$79,999 | \$57,772 |
| Own Residence | 85.1% | 63.0% |

Table 2. Multilevel Models Predicting Collective Efficacy Regarding Three Specific Tasks, and Perceived Cohesion, Wave 2

| | Model 1 | | | | Model 2 | | | |
|---------------------------------|-------------------|--------------------|--------------------|--------------------|-------------------|--------------------|--------------------|--|
| | CE-children | CE-political | CE-violence | Cohesion | CE-children | CE-political | CE-violence | |
| <i>Household-level measures</i> | | | | | | | | |
| Speak only English at home | 0.029 | -0.105 * | -0.019 | 0.005 | 0.027 | -0.106 ** | -0.020 | |
| T Value | (-0.50) | (-2.48) | (-0.33) | (0.09) | (0.52) | (-2.64) | (-0.37) | |
| Confidence Interval | (-0.083 0.141) | (-0.187 -0.023) | (-0.133 0.095) | (-0.111 0.121) | (-0.075 0.129) | (-0.184 -0.028) | (-0.128 0.088) | |
| Household income | 0.031 * | 0.008 | 0.021 | 0.014 | 0.027 * | 0.004 | 0.017 | |
| T Value | (2.48) | (0.62) | (1.50) | (1.16) | (2.31) | (0.34) | (1.24) | |
| Confidence Interval | (0.006 0.056) | (-0.016 0.032) | (-0.006 0.048) | (-0.010 0.038) | (0.003 0.051) | (-0.020 0.028) | (-0.008 0.042) | |
| Education | -0.005 | -0.016 | 0.019 † | 0.014 | -0.008 | -0.019 * | 0.015 | |
| T Value | (-0.46) | (-1.62) | (1.73) | (1.48) | (-0.93) | (-2.01) | (1.45) | |
| Confidence Interval | (-0.025 0.015) | (-0.036 0.004) | (-0.003 0.041) | (-0.004 0.032) | (-0.026 0.010) | (-0.039 0.001) | (-0.005 0.035) | |
| Length of residence | -0.002 | -0.016 † | 0.007 | -0.039 ** | 0.009 | -0.006 | 0.017 | |
| T Value | (-0.21) | (-1.84) | (0.56) | (-3.53) | (0.80) | (-0.74) | (1.49) | |
| Confidence Interval | (-0.024 0.020) | (-0.034 0.002) | (-0.017 0.031) | (-0.061 -0.017) | (-0.013 0.031) | (-0.024 0.012) | (-0.007 0.041) | |
| Owner | -0.001 | 0.004 | 0.000 | 0.187 ** | -0.054 | -0.043 | -0.051 | |
| T Value | (-0.02) | (0.09) | (0.00) | (3.84) | (-1.37) | (-1.12) | (-1.25) | |
| Confidence Interval | (-0.083 0.081) | (-0.074 0.082) | (-0.084 0.084) | (0.091 0.283) | (-0.130 0.022) | (-0.119 0.033) | (-0.131 0.029) | |
| Widow | -0.046 | -0.11 * | 0.013 | 0.026 | -0.054 | -0.117 * | 0.005 | |
| T Value | (-0.77) | (-2.01) | (0.18) | (0.44) | (-0.95) | (-2.20) | (0.08) | |
| Confidence Interval | (-0.164 0.072) | (-0.218 -0.002) | (-0.128 0.154) | (-0.092 0.144) | (-0.164 0.056) | (-0.221 -0.013) | (-0.128 0.138) | |
| Divorced | -0.014 | -0.052 | 0.026 | 0.075 † | -0.035 | -0.071 * | 0.005 | |
| T Value | (-0.33) | (-1.41) | (0.49) | (1.79) | (-0.86) | (-2.07) | (0.10) | |
| Confidence Interval | (-0.094 0.066) | (-0.125 0.021) | (-0.076 0.128) | (-0.007 0.157) | (-0.115 0.045) | (-0.138 -0.004) | (-0.091 0.101) | |
| Single | -0.081 † | -0.063 | -0.057 | -0.042 | -0.069 | -0.052 | -0.046 | |
| T Value | (-1.72) | (-1.38) | (-1.12) | (-0.730) | (-1.65) | (-1.22) | (-0.99) | |
| Confidence Interval | (-0.173 0.011) | (-0.151 0.025) | (-0.157 0.043) | (-0.156 0.072) | (-0.151 0.013) | (-0.136 0.032) | (-0.138 0.046) | |
| Female | 0.139 ** | 0.221 ** | 0.036 | 0.129 ** | 0.102 ** | 0.188 ** | 0.001 | |
| T Value | (4.89) | (9.95) | (1.19) | (4.64) | (3.82) | (8.92) | (0.04) | |
| Confidence Interval | (0.084 0.194) | (0.178 0.264) | (-0.025 0.097) | (0.074 0.184) | (0.049 0.155) | (0.147 0.229) | (-0.056 0.058) | |
| Age | 0.002 | 0.005 ** | -0.007 ** | -0.001 | 0.002 | 0.005 ** | -0.007 ** | |
| T Value | (1.19) | (4.48) | (-5.05) | (-0.99) | (1.55) | (5.07) | (-4.99) | |
| Confidence Interval | (0.000 0.004) | (0.003 0.007) | (-0.009 -0.005) | (-0.003 0.001) | (0.000 0.004) | (0.003 0.007) | (-0.009 -0.005) | |
| Have children | 0.017 | 0.004 | 0.009 | 0.007 | 0.015 | 0.002 | 0.007 | |
| T Value | (1.38) | (0.28) | (0.67) | (0.50) | (1.37) | (0.15) | (0.56) | |
| Confidence Interval | (-0.008 0.042) | (-0.021 0.029) | (-0.016 0.034) | (-0.022 0.036) | (-0.007 0.037) | (-0.020 0.024) | (-0.017 0.031) | |
| Perceive cohesion | | | | | 0.284 ** | 0.252 ** | 0.273 ** | |
| T Value | | | | | 16.13 | 14.73 | 13.62 | |
| Confidence Interval | | | | | (0.249 0.319) | (0.219 0.285) | (0.234 0.312) | |

| | | | | | | | |
|------------------------------------|--------------------|--------------------|-------------------|--------------------|--------------------|--------------------|-------------------|
| Number of neighbors known | 0.192 ** | 0.137 ** | 0.204 ** | 0.451 ** | 0.064 ** | 0.023 | 0.081 ** |
| T Value | (10.81) | (8.27) | 10.15 | 22.56 | 3.45 | 1.27 | 3.82 |
| Confidence Interval | (0.157 0.227) | (0.104 0.170) | (0.165 0.243) | (0.412 0.490) | (0.027 0.101) | -(0.012 0.058) | (0.040 0.122) |
| <i>Neighborhood-level measures</i> | | | | | | | |
| Residential stability | -0.013 | 0.003 | 0.057 * | 0.04 | -0.029 | -0.008 | 0.053 * |
| T Value | -(0.53) | (0.11) | (2.44) | (1.21) | -(1.30) | -(0.29) | (2.38) |
| Confidence Interval | -(0.060 0.034) | -(0.050 0.056) | (0.012 0.102) | -(0.025 0.105) | -(0.072 0.014) | -(0.061 0.045) | (0.010 0.096) |
| Median income (1,000's) | 0.389 ** | 0.327 ** | 0.259 ** | 0.478 ** | 0.193 * | 0.201 * | 0.216 ** |
| T Value | (7.38) | (6.18) | (5.82) | (7.02) | (2.42) | (2.48) | (3.18) |
| Confidence Interval | (0.285 0.493) | (0.223 0.431) | (0.173 0.345) | (0.345 0.611) | (0.036 0.350) | (0.042 0.360) | (0.083 0.349) |
| Population density (1,000's) | -0.042 † | -0.066 ** | -0.031 † | -0.069 ** | -0.014 | -0.048 * | -0.025 |
| T Value | -(1.83) | -(3.32) | -(1.66) | -(2.62) | -(0.63) | -(2.21) | -(1.280) |
| Confidence Interval | -(0.087 0.003) | -(0.105 -0.027) | -(0.068 0.006) | -(0.120 -0.018) | -(0.057 0.029) | -(0.089 -0.007) | -(0.062 0.012) |
| Cohesion | | | | | 0.41 ** | 0.264 † | 0.09 |
| T Value | | | | | (3.28) | (1.77) | (0.73) |
| Confidence Interval | | | | | (0.165 0.655) | -(0.028 0.556) | -(0.151 0.331) |
| Number of neighbors known | 0.947 ** | 0.853 ** | 0.573 ** | 0.986 ** | 0.543 ** | 0.593 ** | 0.484 ** |
| T Value | (9.10) | (7.54) | (7.11) | (8.19) | (3.57) | (2.80) | (3.17) |
| Confidence Interval | (0.743 1.151) | (0.632 1.074) | (0.414 0.732) | (0.751 1.221) | (0.245 0.841) | (0.177 1.009) | (0.184 0.784) |
| Percent speak only English at home | -0.575 * | -0.377 | 0.008 | -0.266 | -0.466 * | -0.306 | 0.032 |
| T Value | -(2.02) | -(1.46) | (0.04) | -(0.85) | -(2.03) | -(1.21) | (0.14) |
| Confidence Interval | -(1.134 -0.016) | -(0.881 0.127) | -(0.431 0.447) | -(0.883 0.351) | -(0.915 -0.017) | -(0.804 0.192) | -(0.421 0.485) |
| Violent crime rate | 0.293 | -0.955 | -1.072 | -0.021 | 0.301 | -0.95 | -1.07 |
| T Value | (0.23) | -(0.50) | -(1.26) | -(0.01) | (0.41) | -(0.66) | -(1.21) |
| Confidence Interval | -(2.249 2.835) | -(4.701 2.791) | -(2.738 0.594) | -(4.268 4.226) | -(1.130 1.732) | -(3.765 1.865) | -(2.805 0.665) |
| Intercept | 0.124 | 0.027 | -0.258 | -0.25 | 0.227 | 0.093 | -0.235 |
| | (0.46) | (0.11) | -(1.11) | -(0.79) | (0.96) | (0.39) | -(1.05) |

Note: † $p < 0.10$ (2-tailed), * $p < 0.05$ level (2-tailed); ** $p < 0.01$ level (2-tailed)

Appendix 1. Items Comprising Key Variables

| Variable | Items |
|--|---|
| <i>Collective efficacy about children</i> | How likely is it that people in your community would do something about children skipping school and hanging around on a street corner; children spray painting graffiti on a local building; and children showing disrespect to an adult. |
| <i>Collective efficacy about violence</i> | How likely is it that people in your community would do something about a fight in front of your house and someone was being beaten or threatened; if somebody was getting mugged; and if a violent argument broke out between a woman and a man in their private residence? |
| <i>Collective efficacy about political/civic demands</i> | How likely is it that people in your community would do something about a fire station closest to your home closing down; speeding in cars along the streets in your community; people cutting down trees without council approval; a legal brothel being planned; someone publicly dealing drugs in your community; and public drinking? |
| <i>Perceived cohesion</i> | People in this community are willing to help their neighbours; this is a close-knit community; people in this community can be trusted; people in this community generally don't get along with each other; and people in this community do not share the same values. |
| <i>Social Ties</i> | Apart from the people that you live with, how many relatives and friends live in your community?; would you say that you know...none of the people in your community, a few of them, many of them or most of them?; and how many of your neighbors would you know by name? |

Appendix 2. Univariate Statistics

| Variables | N | Min | Max | Mean | SD |
|--|------|--------|---------|---------|--------|
| Individual level | | | | | |
| Collective efficacy about children | 4093 | -2 | 2 | .48 | .88 |
| Collective efficacy about violence | 4093 | -2 | 2 | .68 | .81 |
| Collective efficacy about political demands | 4093 | -2 | 2 | .79 | .77 |
| Collective efficacy about drug and alcohol abuse | 4093 | -2 | 2 | .50 | .94 |
| Perceived cohesion | 4092 | -2 | 2 | .79 | .65 |
| Social ties | 4078 | 2 | 14 | 8.80 | 3.09 |
| Approximate gross household income | 3584 | 1 | 5 | 3.57 | 1.41 |
| Highest level of education | 4078 | 1 | 7 | 3.31 | 1.35 |
| Length of residence in the home | 4079 | 1 | 7 | 5.23 | 1.43 |
| Home ownership | 4063 | 0 | 1 | .85 | .35 |
| Speaks only English at home | 4087 | 0 | 1 | .93 | .25 |
| Age | 4071 | 18 | 94 | 49.92 | 15.11 |
| Female | 4093 | 0 | 1 | .60 | .49 |
| Widow | 4077 | 0 | 1 | .07 | .25 |
| Divorced | 4077 | 0 | 1 | .09 | .28 |
| Single | 4077 | 0 | 1 | .12 | .33 |
| Have children | 4079 | 0 | 1 | .41 | .49 |
| Neighborhood level | | | | | |
| Perceived cohesion | 148 | .11 | 1.30 | .80 | .26 |
| Social ties | 148 | 6.63 | 11.89 | 8.82 | 1.01 |
| Population Density | 147 | .10 | 33.82 | 8.93 | 8.25 |
| Residential stability | 148 | 8.00 | 87.61 | 45.61 | 12.70 |
| Median household income | 148 | 613.00 | 2323.00 | 1222.89 | 333.19 |
| Only speak English at home | 148 | .70 | 1.00 | .94 | .06 |
| Violent crime rate | 147 | .00 | 2636.63 | 374.52 | 394.39 |