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Crime rates and collective efficacy: The role of family friendly planning

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ABSTRACT

A longstanding debate in the criminal justice field is whether the effect of community disorder on crime can be reduced by collective efficacy. Our study explores how cities can build collective efficacy, by engaging in facilitative planning to address the needs of families and children, and assesses its impact on crime. Using data from a nationwide survey of city and regional planners, we look at the relationships between family friendly planning efforts and property and violent crime rates in negative binomial regression models. We develop four factors for collective efficacy: technical planning and design, child care and housing, youth/family participation and access, and impact fees. Of these, impact fees to fund youth and children's services has a negative impact on both property and violent crime rates. These findings suggest government-led planning efforts that integrate private sector funding for community services through impact fees may have positive benefits not just for children and families but also for the city as a whole through reduced crime rates.

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Introduction

Presented as a rebuttal to Wilson and Kelling's (1982) broken windows hypothesis, Sampson and Raudenbush's (1999) collective efficacy theory challenges the notion that removing "disorderly" elements from neighborhoods is the most effective way to deal with crime. Using data from Chicago neighborhoods, the researchers found the effect of neighborhood disorder on criminal activity, except in cases of robbery, was mediated when collective efficacy, described as "cohesion among neighborhood residents combined with shared expectations for informal social control of public space" (Sampson & Raudenbush, 2001, p. 1), was taken into account. On this basis, they suggest that police led extraction-based schemes may not be the most effective way to fight crime and that strategies rooted in neighborhood development efforts may be more successful (Sampson & Raudenbush, 1999, 2001).

While showing a strong negative link between collective efficacy and crime, Sampson and Raudenbush (1999, 2001) never articulated strategies to bring it about. Subsequent collective efficacy researchers have remained similarly mum on the issue. According to Korbin (2001, p. 80), "Understanding precisely how neighborhood development shapes development behavior has been a challenge." Based on his discussion of collective efficacy's impacts, Sampson, Raudenbush and Earls (1997) appear to view community cohesion as an organic, grass-roots process that emanates from a neighborhood's citizens.

When looking at community organizing models, Sampson's visioning is probably most congruent with the philosophy of Saul Alinsky (1971). Alinsky's model is built on the premise that the most effective way to create social cohesion is for residents to unite together and create a force powerful enough to enact their agenda. There is, however, an alternate model of community organizing which views government as playing a more facilitative role. Whereas the Alinsky model can be characterized as storming City Hall, the facilitative model has government reaching out to citizens and neighborhoods to promote collaborative approaches to social capital and community building (Nalbandian, 1999; Potapchuck, Crocker, & Schechter, 1998; Potapchuck, Crocker, Schechter, & Boogaard, 1997; Warner, 1999). It advocates for citizens to partner with government for the purpose of outlining a shared vision and creating a roadmap for achieving that vision. This notion of community development through participatory processes is one which has been noticeably absent from the collective efficacy discourse.

The American Planning Association and the Annie Casey Foundation have both spearheaded efforts to promote attention to families and children in community governance and planning (Crocker, Potapchuck, & Schechter, 1998; Israel & Warner, 2008). This family friendly community development effort, spearheaded by local government leaders and city and regional planners, seeks to engage local governments and citizens in a planning process that ultimately yields improvements to a city's infrastructure for serving families. Family friendly initiatives typically endorsed consist of better urban design to promote walkability, improved parks and recreation services, housing options that accommodate the entire spectrum of income levels, and increased access to quality

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child care and youth services. These initiatives create an ideal platform to test whether Sampson's collective efficacy – crime nexus can occur when collective efficacy is brought about through a force beyond neighborhood and law enforcement, i.e. city government and planning departments.

In this paper, we examine relationships between crime rates and municipally-led efforts to promote family friendly planning initiatives based on data from a study of family friendly planning practices of US cities. We begin with a discussion of Sampson's collective efficacy theory followed by a theoretical examination of the facilitative governance and family friendly planning movement. We then present our analysis. First, we create a set of factors that operationalize collective efficacy with respect to planning. We include measures that address family and youth participation in the planning process as well as outcomes in terms of zoning rules that affect physical design of the city, service delivery and funding. We argue that these planning elements are evidence of collective efficacy in the context of a facilitative government planning paradigm. We also develop a measure of community disorder based on American Community Survey (2005–2009) data. Finally we include controls based on demographic and economic conditions of cities.

Our models test the relative importance of community disorder and collective efficacy on property crime and on violent crime using crime data from the FBI's (2009) Uniform Crime Reports. We hypothesize that, following Wilson and Kelling (1982), community disorder will lead to higher crime rates. But following Sampson and Raudenbush (1999, 2001), we hypothesize that collective efficacy – as captured in family friendly planning, will lead to lower crime rates (see Fig. 1). Our analysis operationalizes Sampson et al.'s (1997) definition of collective efficacy as “mutual trust among neighbors combined with willingness to intervene on behalf of the common good” (p. 918) and looks at specific planning and funding actions communities can take to create more supportive environments for families with children. We believe such actions may have a negative impact on crime rates.

Sampson and Raudenbush's collective efficacy model

In the early 1990s, New York City Mayor Rudi Giuliani aggressively implemented Wilson and Kellings's (1982) broken windows philosophy. Dramatically changing police protocols, the New York Police Department began arresting New Yorkers for minor violations that previously might have been overlooked. Giuliani's belief was that removing individuals deemed undesirable from neighborhoods

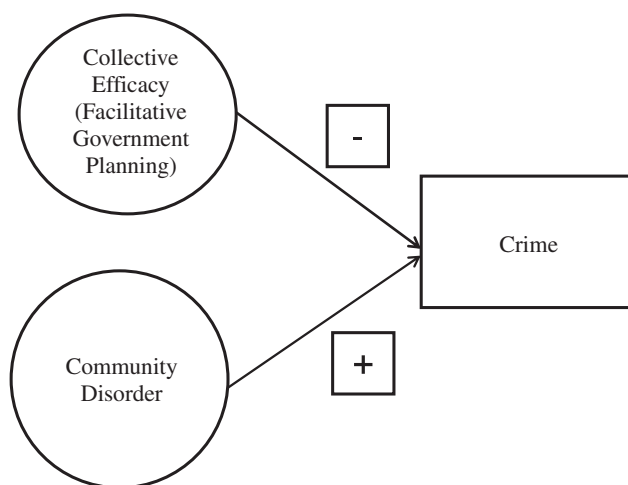


Fig. 1. Visual logic model.

would eliminate disruptive elements that destabilized communities and ultimately lower crime rates. Subsequently, many other major cities adopted parts of the strategy (Harcourt & Ludwig, 2006). Reaction has been mixed. The popular media has, by and large, applauded the strategy (Bernstein, 1998; Nifong, 1997; Witkin, 1998). In addition, an evaluation written by Kelling and Sousa (2001) based on a regression analysis of New York City police records found broken windows policing prevented over 60,000 violent crimes between 1989 and 1998. Opponents, however, have questioned whether broken windows can survive empirical scrutiny (Harcourt & Ludwig, 2006; Taqi-Eddin & Macallair, 1999). In the words of Harcourt (2001, p. 7), “I find there is no good evidence to support the broken windows theory.”

Sampson and Raudenbush (1999) are some of the policy's leading critics, but their approach to the issue is unique. While others question whether Wilson and Kelling's (1982) link between community disorder and crime rates actually exists (Harcourt, 2001; Harcourt & Ludwig, 2006, 2007), Sampson and Raudenbush (1999) acknowledge the correlation. However, they contend such an analysis is incomplete. Using data from observational studies in Chicago, they note that the link between community disorder and crime rates disappears when collective efficacy variables are introduced into the model. Based on these findings, they conclude the forces that generate crime are the same as those generating disorder (Sampson & Raudenbush, 1999). Hence, eliminating disorder without changing the underlying forces causing disorder will not impact crime rates. Instead, the real drivers of crime are factors associated with collective efficacy, which include the structural characteristics of neighborhoods, neighborhood cohesion, and informal social control (Sampson & Raudenbush, 2001). A recent study of low income parents in Denver, Colorado found lack of collective efficacy to be the primary neighborhood mechanism negatively affecting their children (Galster & Santiago, 2006).

Subsequent criminological research has validated Sampson and Raudenbush's (1999) results (Armstrong, Katz, & Schnellby, 2010; Browning, Feinberg, & Dietz, 2004; Silver & Miller, 2004). In addition, studies have discovered collective efficacy can have a protective effect on communities by discouraging troublesome activities; specifically suicides (Maimon, Browning, & Brooks-Gunn, 2010), teenage high-risk sexual behavior (Browning, Buntington, Leventhal, & Brooks-Gunn, 2008), unstructured adolescent socializing (Maimon & Browning, 2010), and antisocial preschool behavior (Odgers et al., 2009). It should be noted these findings have not been universal and some studies have challenged the role played by collective efficacy. Kingston et al.'s (2009) research of Denver Youth Study data determined social cohesion was correlated with youth perceiving less opportunity and Xu, Fielder, and Flemming (2005, p. 147) argue, based on a structural equation model of a Colorado Springs Police Department citizens' survey, “collective efficacy plays a far less significant role in controlling disorder, crime, and fear than community policing.”

Facilitative governance

Even though collective efficacy is heavily rooted in criminological theory, little has been written in the criminology literature on ways to bring about collective efficacy. This should not be surprising as criminology, by its very nature, is rarely involved with the logistics of community organization. And when it is, the outcomes are frequently different from intended. For example, community policing was built on the premise that police departments working with community groups could build more effective crime prevention strategies than departments working solo (Cordner, 2010). However, many believe community policing has failed to live up to its promise. Critics charge a major reason for this lack of success is the inability of law enforcement agents to effectively interact

with community members as equals so that both groups have input on how a given community is policed (Grinic, 1994; Kersley & Benson, 2000). Wacquant (1998) has argued that inner city public institutions often operate as negative social capital – serving as instruments of surveillance rather than participation.

Perhaps, one explanation for this disconnect between city institutions and residents is the way in which community organizing is portrayed in criminology. Social cohesion is framed as a construct arising organically from within a community, exogenous of government. Consequently, efforts to mobilize collective efficacy must also be an internal process. Quoting Sampson and Raudenbush (1999, p. 610), “Residents face...the challenge to organize themselves to achieve shared public ends.” In this paradigm, organizing is something done in isolation and, thus, difficult to accomplish.

City and regional planners and public administration scholars would disagree. Beginning with Arnstein's (1969) model of citizen participation and continuing with more attention to the facilitative role of government (Nalbandian, 1999; Potapchuck et al., 1997, 1998), planners and city managers believe Sampson and Raudenbush's (1999) community cohesion can also be brought about through a cooperative process that brings citizens together with government and private sector stakeholders to achieve common objectives (Reardon, 1999). Crucial to this undertaking is the involvement of city planners who serve as mediators of community processes (Forester, 1987; Healey, 1997). Arnstein (1969) recognizes the most effective strategies are those where planners help communities find their voice and then encourage them to express it. This is followed by local government supporting community aspirations with planning initiatives designed to meet their needs (Potapchuck et al., 1998). The ultimate outcome of this collaborative governance model is twofold. The first is bringing together citizens in a partnership with government to work cooperatively to reach mutually agreed upon goals. The second is the implementation of planning initiatives to meet community needs. Together, these comprise collective efficacy, and it is this model of facilitative governance that will be examined in the current study.

Family friendly planning

There is wide agreement the family unit plays an important role in the creation of social capital and collective efficacy (Bandura, 2000; Coleman, 1988; Sampson, 2001). Therefore, using a framework which combines elements of both Sampson and Raudenbush (1999) and the facilitative governance models, we argue municipally-led family friendly planning practices should reflect higher levels of collective efficacy and, by making cities more responsive to family needs, should lead to lower crime rates.

The family friendly city initiative creates an ideal platform for testing whether the facilitative governance model can lead to the kind of collective efficacy that Sampson and Raudenbush (1999) claim can lead to lower crime. Family friendly planning is built on the premise that policies, which make communities more family-focused, not only benefit families but also the city as a whole. Believing the best way for municipalities to meet the needs of families is to make them part of the process, planners work with neighborhoods and local governments to create policies that facilitate family participation, such as holding meetings affecting the community in the evening after work, and having child care available at those meetings, so parents can participate. They also advocate for planning initiatives that better align city services to meet family needs (Israel & Warner, 2008; Warner & Rukus, in press). Initiatives include zoning and urban design, which promote adequate housing, and more community engagement through community services (parks, recreation, child care) and physical design that promotes density, walkability and mixed use to ensure a vibrant street

life (Bartlett, 2002; Riggio, 2002; Woolcock & Steele, 2008). These features promote the healthy development of children (UNICEF, 2004) and provide eyes on the street (Jacobs, 1961 [1991]) through regular daily behavior that can have a crime reducing impact (Cohen & Felson, 1979; Felson, 1995).

Many criminologists would challenge the impact of some of these initiatives on crime. While propositions like those associated with pedestrian friendly streetscapes are in line with widely accepted criminological theories such as routine activities (Cohen & Felson, 1979), other family friendly initiatives are more controversial. Parks and recreational spaces increase opportunities for people to interact but can also have the unintended consequence of providing venues for unsavory enterprises such as drug markets (Harocopos & Hough, 2005; Schick, Dorus, & Hughes, 1978; Troy & Grove, 2008). Additionally, researchers have argued that affordable housing (Davies, 2006; Dunwoth & Saiger, 1993) and mixed-use development (Sampson, 1999, 2001) have the potential to become magnets for criminal activity (Dunwoth & Saiger, 1993; Sampson, 1999, 2001). This later element, mixed-used development, is particularly interesting because of the wide chasm that exists between planners and criminologists in their vision of the construct. Whereas planners envision mixed-use development as a means to create a vibrant streetscape with apartments and condominiums atop retail strips (Congress on New Urbanism, 2011), criminological researchers (Sampson & Raudenbush, 1999, 2001) envision mixed use as the outcome of community decline with sub-par housing above liquor stores. Interestingly, little criminological research has been done on public transportation's direct impact on neighborhood crime, while planners typically herald transit-oriented development as promoting higher quality of life (Utter, 2005).

In our analysis we place special focus on services for children and youth such as recreation services and child care. We do this for two reasons. First, there is an increasing body of research which argues money spent on high quality child care programming may pay substantial dividends in terms of lower crime rates (Barnett & Ackerman, 2006; Scheinhart et al., 2005). Second, a recent examination of child care centers found they can play a vital role in linking parents to available resources suggesting they may serve a dual role of socializing children and facilitating collective efficacy among adults (Small, Jacobs, & Massengill, 2008). This has fueled, in part, the Fight Crime: Invest in Kids movement led by local police chiefs who see a clear link between adequate child care, after-school care and youth recreation programs and lower crime rates (Fightcrime.org, 2012).

Data

Data sources

Our work contributes to a little explored arena between criminology and city planning. We use the city as our unit of analysis and test whether our operationalization of collective efficacy as family friendly planning may play a role in reducing crime. We have chosen the city for two reasons. First, although community development is implemented at the neighborhood level, it results from leadership and visioning at the city level. Individual projects rarely occur in isolation and, instead, are normally part of broader initiatives consisting of various projects throughout an entire city (Forester, 1999; Krumholtz & Forester, 1990). Second, crime is seldom a neighborhood-restricted phenomenon with a crime problem in one neighborhood frequently impacting crime in other neighborhoods (Morenhoff, Sampson, & Raudenbush, 2001; Wilson, 1996). We draw data from three national data sources for our analysis.

American Community Survey and 2000 Decennial Census. These sources provide data for our community disorder variables

and control variables regarding demographic and economic characteristics of cities. We use both the 2000 and 2010 Decennial Census and the 2005–2009 rolling averages from the American Community Survey.

FBI Uniform Crime Report (UCR). Our crime measurements are derived from violent and property crime statistics published in the Federal Bureau of Investigation (FBI)'s Uniform Crime Reports (UCRs) for 2009. UCR data represent criminal activity brought to the attention of law enforcement and are based on annual surveys sent by the FBI to policing agencies across the country (FBI, 2012). UCR crime figures are the most frequently cited by both researchers and government agencies (James & Rischard, 2008).

American Planning Association Survey. Data for planning-related variables were obtained from a March, 2008 survey of practicing planners by the American Planning Association (APA) on the subject of planners' role in creating more family friendly communities (Israel & Warner, 2008). It was distributed to planners through a variety of channels: APA Interact (an automated newsletter sent to all APA members), the APA web site, and local APA chapter newsletters and planning-related listserves. The survey was designed to capture information on a variety of dimensions related to family friendly planning including family participation, housing, child care, density and walkability, and parks and community facilities. Questions included in this analysis were those that gave attention to family needs in planning, zoning and design, family services and funding, and impact fees and the role of family and youth participation in the planning process.

Sample

To build our sample we combined data from these three sources. While the FBI and Census data cover almost all cities, the APA survey on planning practices was of planners so adjustments had to be made so that the city, as opposed to the individual planner, could be the unit of analysis. Responses from planners who did not provide information on their locale were eliminated. When multiple planners responded from the same city, survey responses were averaged together, so that each individual city represented one unique case. For the FBI crime data, some cities used crime classification schemes that differed from the UCR. For example, many cities in Illinois and Minnesota used a definition of forcible rape that differed from the FBI. In these instances, the UCR did not publish a violent or property crime rate (as applicable) for these cities. The final sample was 337 cities for the violent crime analysis and 348 for the property crime analysis.

To ascertain the representativeness of our sample, we compared those in the sample to national statistics on a number of dimensions. The mean violent crime rate for our sample was 465 per 100,000 and the mean property crime was 3604 per 100,000. This compared to a national average of 429 per 100,000 and 3036 per 100,000 for violent and property crime respectively from the full UCR data base. Our sample also compared well on demographic variables from the full ACS data base. On race, our sample was 76% Caucasian compared to 72% nationally. In regards to economics, per capita income for our sample was \$28,305 and the unemployment rate was 7.2%. This compared to national rates of \$27,041 and 7.2% respectively. Overall, for all dimensions except unemployment, our sample is slightly above the above national averages.

Model

Using the city as the unit of analysis, we explore the relationship between community disorder, family friendly planning practices, and crime rates. Our goal is to test if the relationships

Sampson and Raudenbush (1999) posited regarding collective efficacy efforts can be operationalized in terms of facilitative government planning processes. We make the following generalized hypotheses:

1. Higher levels of social disorder will be correlated with higher property and violent crime rates.
2. Local government actions which facilitate family friendly zoning and design, family participation and accessibility, child care and housing, and funding for youth services will be correlated with lower property and violent crime rates.

Dependent variables

As the goal of our study is to explore the link between collective efficacy and crime, the dependent variable is crime rates. We elected to use crime rate data on property crime and violent crime from the Federal Bureau of Investigation (FBI)'s Uniform Crime Reports (UCRs) for 2009, the first year following the APA survey. UCR data have been criticized for their inability to capture crime not brought to the attention of law enforcement (Siegel, 2008), but we believe it is the best data available to measure the impact of collective efficacy. While victimization surveys capture more delinquent activity, it is highly probable one of the major reasons these offenses do not come to the attention of law enforcement is that they are dealt with informally through social control networks, i.e. collective efficacy. Thus, offenses reported in UCR data represent occurrences where collective efficacy has failed. While the APA survey asked if crime was a barrier to promoting family friendly cities and 14% of respondents said yes (Israel & Warner, 2008), the survey did not specifically request information on municipal crime rates.

Independent variables

Independent variables were developed for our community disorder and collective efficacy/planning constructs as well as several controls. We developed our constructs based on theoretical expectations of what constitutes community disorder and collective efficacy/planning. Then we ran a confirmatory factor analysis to see how the elements loaded. We constrained the number of factors to five. Elements loaded onto one factor representing community disorder, and four measures of collective efficacy/planning. These four we labeled technical zoning and design, family/youth participation and access, child care and housing, and impact fees. Factor loadings are provided in Table 1 and the elements are described below.

Community disorder

Similar to Sampson, Raudenbush, and Earls's (1997) early collective efficacy work, we used measurements of community disadvantage as a proxy for community disorder as communities with more economic challenges have more difficulties maintain their physical and social environments. There is a strong body of research supporting the linkage between these forces including Skogan's (1990) analysis of neighborhood decline and Wilson (1996) and Venkatesh's (2006) ethnographic research into the dynamics of Chicago neighborhoods. Specifically, we constructed our community disorder variable using 2005–2009 rolling average American Community Survey Data on high school dropout rates, unemployment, poverty, per capita income and percent on public assistance. Also similar to Sampson et al. (1997), we found these elements loaded strongly onto one factor. We expect cities with increased levels of community disorder to have higher crime rates.

Table 1

Factor analysis: community disorder and collective efficacy factors. Bold italics represents factor loadings.

	Community disorder	Zoning and design	Family/youth participation and access	Child care and affordable housing	Impact fees
<i>Participation</i>					
Meetings at convenient times for families	0.12	0.12	0.49	−0.07	−0.11
Meetings in facilities convenient for families	0.10	0.15	0.58	0.10	−0.05
Encourage youth participation in planning	−0.07	0.14	0.40	0.01	0.02
<i>Child care planning</i>					
Child care at public meetings	−0.02	0.08	0.19	0.29	0.03
Financial support for child care facilities	−0.02	−0.03	0.03	0.71	0.16
Database of child care information	0.02	0.03	−0.01	0.67	−0.09
Local child care plan	−0.03	0.03	−0.04	0.63	0.16
Child care and pre-k impact fees	0.00	0.02	0.05	0.11	0.52
<i>Housing</i>					
Zoning advances affordable housing	−0.09	0.43	0.07	0.31	−0.01
Zoning advances multi-family housing	0.03	0.56	0.14	0.05	−0.14
Promotes variety of housing types and prices	0.11	0.46	0.23	0.24	−0.11
Special services for homeless families	0.10	0.10	0.24	0.36	−0.23
Uses government money for affordable housing	0.13	0.18	0.34	0.39	−0.07
<i>Parks and community facilities</i>					
Zoning advances open space and parks	0.04	0.52	0.03	−0.10	0.21
Zoning requires parks or playgrounds	−0.03	0.41	−0.01	−0.03	0.31
Impact fees for parks and recreation facilities	−0.16	0.22	0.02	−0.10	0.65
Impact fees for community centers	−0.02	0.06	0.04	−0.05	0.75
Uses government money for neighborhood parks	−0.09	−0.10	0.64	0.17	0.27
Uses government money for community facilities	0.05	−0.19	0.64	0.17	0.19
<i>Density and walkability</i>					
Zoning provides for density bonuses	−0.14	0.53	−0.06	0.15	0.15
Site plan reviews consider pedestrian needs	−0.15	0.60	0.23	−0.01	0.01
Design guidelines facilitate neighbor interaction	0.04	0.60	0.26	−0.13	0.13
Lighting design guidelines address safety	−0.05	0.39	0.21	−0.10	0.13
Street furniture to facilitate “eyes on the street”	0.04	0.39	0.29	0.02	0.19
Community has sidewalks	0.03	0.19	0.26	0.03	0.10
Community has pedestrian pathways	−0.14	0.16	0.45	−0.06	0.01
Community has walk to school program	0.05	0.18	0.48	0.10	−0.11
Zoning advances transportation choices	0.01	0.62	0.03	0.16	−0.03
Promotes transit oriented development	−0.06	0.50	0.03	0.33	0.04
Transit impact fees	0.03	0.15	0.00	0.34	0.54
<i>Community disorder</i>					
Drop out rate ^a	0.50	0.02	0.00	−0.10	0.02
Unemployment rate ^a	0.83	0.01	−0.07	0.08	−0.03
Public assistance rate ^a	0.72	−0.05	0.04	0.14	−0.04
Poverty rate ^a	0.76	−0.08	0.03	−0.02	0.01
Per capita income ^a	− 0.72	0.05	−0.06	0.03	0.13

n = 349.

Factor loadings after Varimax rotation.

Data sources: APA Family Friendly Survey (2008) (except as noted).

^a 2005–2009 American Community Survey Rolling Average.

Collective efficacy/planning

As noted, these planning elements loaded onto four distinct factors. The first we have labeled *Zoning and Design* and it includes zoning to promote affordable and multi-family housing, open space and parks, density and site plan design to encourage pedestrian and transit use. These policies are recommended by the American Planning Association as friendly to families with young children (Israel & Warner, 2008). Physical characteristics of cities are also considered important predictors of crime and cities with more family housing, parks and playgrounds and pedestrian options would be expected to have lower crime, although some criminologists have challenged this view (Cozens, 2008; Harocopos & Hough, 2005; Schick et al., 1978; Troy & Grove, 2008). Research suggests that more citizen engagement on the street will reduce

criminal activity (Cohen & Felson, 1979). Because our focus is on youth and families, we look at transportation choices, walkability and transit-oriented development. The criminology literature on transportation, which normally focuses on linkages between transit and employment, rarely addresses its direct effect on crime (Wang & Minor, 2001; Wilson, 1996). Physical design should have a long-term impact in reducing crime rates. But these zoning and design guidelines may not have an immediate short-term impact on crime rates. So while we hypothesize a negative relationship, it is possible that in the short time frame measured in our data, no effect will show up.

The second factor we labeled *Family/Youth Participation and Access* and it included family participation in the planning process, funding for neighborhood parks and community facilities and

actions to promote walkability (sidewalks, pedestrian pathways and safe routes to schools). Family participation should increase collective efficacy and reduce crime. The complete streets and safe routes to schools movements both promote greater and safer pedestrian use of streets (Laplante & McCann, 2008). In part because of these national initiatives, many local communities have implemented these programs. This factor also includes funding for parks and community facilities. There is a difference of perspective between planners and criminologists as planners recognize the importance of parks to keep youth engaged in productive activity and reduce crime (Loukaitou-Sideris & Sideris, 2010; University of Illinois, 2003), while criminologists caution that parks can serve as places for illicit activity (Harocopos & Hough, 2005; Schick et al., 1978; Troy & Grove, 2008). Although we hypothesize a negative relationship with crime, the two effects posited by planners and criminologists could cancel each other out leading to no overall effect in our model.

The third factor we named *Child Care and Affordable Housing* and it included providing child care at public meetings, conducting a range of child care planning, and providing funding for homeless programs and affordable housing. Past research on child care has shown a negative effect on crime rates over the long term as children become young adults (Scheinart et al., 2005). However, child care also has an important immediate effect on crime by reducing truancy and occupying children in the afterschool hours (Fightcrime.org). Affordable housing is a critical need for families with children (Kohe & Watson, 2007). A major planning emphasis over the last 15 years has been to de-concentrate poverty by promoting mixed income housing development in order to promote social integration across income groups (Wilson, 1987). Criminologists, by contrast, raise concerns that affordable housing can concentrate poverty and increase crime (Davies, 2006; Dunwoth & Saiger, 1993). Planning for child care and providing funding for homelessness and affordable housing show collective efficacy in addressing city problems. These services could lead to less crime but the need for these services could be associated with cities with more disorder and thus more crime so this factor may capture two opposing impacts on our dependent variable that wash out an overall effect.

The fourth factor we labeled *Impact Fees* as it included impact fees for child care, parks, recreation services, community facilities and transit. Impact fees are most common in cities experiencing development pressure (Mathur, Shankar, & Sittikariya, 2009) and have been associated with increased multi-family housing development (Burge & Ihlanfeldt, 2006). Funding for services for children and youth is typically constrained and impact fees provide a new source from developers to supplement government funds, especially in cities experiencing rapid growth where new housing development outstrips the supply of city services. We hypothesize that cities which augment traditional funding sources with impact fees for these youth oriented services will have lower crime.

We also included a variable measuring if a city allows mixed commercial/residential use in its zoning code. While planners view mixed use as promoting street life and eyes on the street to enhance safety (Jacobs, 1961 [1991]), criminological researchers (Cozens, 2008; Sampson & Raudenbush, 1999, 2001) are not in accord regarding whether mixed-use development creates or detracts from the order in a city. Thirty-one percent of our sample reports zoning policies that support mixed use. Due to the controversy between planners and criminologists cited above, we do not posit a clear hypothesized direction for the effect of mixed use on crime.

Control variables

We include population, population growth, percent youth population (15–21) and percent white as demographic controls. We expect crime to be higher in larger cities and in cities with more poverty as this has been well documented in prior literature

(Mauer, 2006; Mayhew & Levinger, 1976). We also expect higher crime rates in cities with more young people. Crime data show a curve that is highest for the 15–21 year old age group (Farrington, 1986). Cities suffering population decline would be expected to have higher crime (due to lack of opportunity) and cities facing growth would have less crime, so we hypothesize a negative relationship between population growth and crime. We see the average growth rate for our sample is 11%. Percent white is a measure of homogeneity and cities with more homogeneity are expected to have less crime (Bursik & Grasmick, 1993; Hipp, 2011; Sampson & Groves, 1989; Shaw & McKay, 1942; Warner & Wilcox Rountree, 1997).

Descriptive statistics for all model variables are provided in Table 2. We see that cities in our data base range in population from under 1000 to over 8 million. Our sample includes the largest cities – New York City, Los Angeles, Chicago, Houston, Phoenix, Philadelphia, San Antonio, San Diego, Dallas, San Jose, Detroit, San Francisco, Columbus, Charlotte, Denver and Washington, DC. The average population of 178,150 shows our sample also captures the mid-sized cities that predominate across the US. The percentage of youth population also varies widely from a low of 4% in retirement communities such as Naples, FL and Peterborough, NH to a high of 54% in college towns such as Boone, NC, Lansing, MI, and Morgantown, WV. Unemployment, poverty, per capita income and crime rates are similar to the full American Community Survey as described in the representativeness discussion above.

Results

Due to the nature of the distribution of crime rates, negative-binomial regression was used for the analysis (Osgood, 2000). Two regressions were performed, one on violent crime and one on property crime (see Table 3). As expected, community disorder was positively associated with crime in both models. This was true even when we account for our demographic controls. As expected, cities with higher populations had higher crime. Cities with higher percentages of youth ages 15–21 (the prime age group for both property and violent crime) did not show higher rates of crime. Cities that are more homogeneous (measured by our percent white variable) had lower crime rates, as expected. Cities experiencing more growth also had lower crime rates, also as expected. These structural variables account for the majority of variance in our models. These findings were expected as there is a substantial body of literature documenting the associations between these variables (Mauer, 2006; Mayhew & Levinger, 1976). Their inclusion in the model was not to retest something most criminologists accept as a given but was instead, in the tradition of Blau and Blau (1982), to serve as controls for our variables of interest – community disorder and collective efficacy.

Of special interest for our analysis is the role of our collective efficacy/planning factors. Our zoning and design factor was not significant and this may be because changes to the physical environment are more likely to have a long-term impact than an immediate impact on crime. Our family/youth participation and access factor also was not significant. This suggests that participation alone is not sufficient to reduce crime rates. Our child care and affordable housing factor was not significant. Provision of these family supportive services is not related to increased crime as some criminological researchers have claimed (Griffiths & Tita, 2009; McCord & Ratcliffe, 2007; Rengert, Ratcliffe, & Chakravoty, 2005), even though cities that plan for child care and provide affordable housing and homeless services also may face more need (substandard conditions and concentration of poverty) which would be related to higher crime. These results show that technical planning and design and participation are not enough. Collective efficacy/planning also needs to affect service delivery.

Table 2
Descriptive statistics.

	Mean	Std. Dev.	Min	Max.
Community disorder factor ^a	0.00	1.00	–2.58	3.73
Zoning and design factor ^b	0.00	1.00	–2.37	1.97
Family/youth participation and access factor ^b	0.00	1.00	–2.90	1.93
Child care and housing factor ^b	0.00	1.00	–1.62	4.76
Impact fees factor ^b	0.00	1.00	–1.75	3.78
Allows mixed-use ^b	0.31	0.46	0.00	1.00
Percent aged 15–21 ^a	0.12	0.07	0.04	0.54
Percent white ^a	0.76	0.18	0.15	0.99
Population growth rate 2000–2010 ^c	0.13	0.46	–0.25	7.83
Population 2010 ^d	178,150	557,923	668	8,302,659
Log of population 2010 ^d	10.81	1.60	6.50	15.93
Property crime rate per 100,000 ^e	3605	1916	59	15,170
Violent crime rate per 100,000 ^e	465	411	0	2932

n = 349.

^a 2005–2009 American Community Survey Rolling Average.

^b APA Family Friendly Survey (2008).

^c 2000 and 2010 Decennial Census.

^d 2010 Decennial Census.

^e 2009 FBI UCR.

Table 3
Negative binomial regression results: violent and property crime.

	Violent crime		Property crime	
	Beta	Standard error	Beta	Standard error
Intercept	5.80**	0.43	8.07**	0.26
Community disorder factor ^a	0.39**	0.04	0.23**	0.03
Zoning and design factor ^b	–0.02	0.04	–0.02	0.03
Family/youth participation and access factor ^b	0.00	0.04	0.02	0.02
Child care and housing factor ^b	0.05	0.04	–0.03	0.03
Impact fees factor ^b	–0.14**	0.04	–0.07**	0.02
Allows mixed-use ^b	–0.06	0.09	0.07	0.06
Percent aged 15–21 ^a	–0.88	0.52	–0.30	0.36
Percent white ^a	–1.16**	0.28	–0.45**	0.17
Population growth rate ^c	–0.15*	0.07	–0.20**	0.05
Log of population 2010 ^d	0.11**	0.03	0.04*	0.02
Likelihood ratio Chi square	203.41		126.01	
	<i>n</i> = 334	<i>df</i> = 322	<i>n</i> = 348	<i>df</i> = 336

^a 2005–2009 American Community Survey Rolling Average.

^b APA Family Friendly Survey (2008).

^c 2000 and 2010 Decennial Census.

^d 2010 Decennial Census.

* *p* < .05.

** *p* < .01.

The collective efficacy/planning factor that was significant and had a negative impact on crime rates as expected is impact fees. What differentiates cities with impact fees? In these cities, services such as parks, recreation, community facilities, transit and child care, receive supplemental funds from private developers in the form of impact fees. Impact fees augment traditional sources of government funding for these child and youth oriented services. This is especially important in poor cities where paid market demand may not be strong enough to signal a for profit supply response. This problem has been well documented with respect to child care (Covington, 2007; Warner & Gradus, 2011). Impact fees are also critically important in cities facing rapid growth where new housing development occurs without the necessary municipal service complements. For many California cities, impact fees have been especially important to ensure adequate child care services as entire neighborhoods have been built without providing any new child care facilities (Anderson, 2006). Impact fees are most common in the West and Southwest where property taxes are lower and development pressure has been high (Duncan Associates, 2010). Although high growth cities generally face lower crime, those that use impact fees face lower crime rates because they

ensure that the necessary child and youth services have more adequate funding and that they are built quickly. In our data set impact fees are most commonly applied to parks and recreation (47%) and community centers (17%) – services that serve children and youth across a broad range of ages. Children are only young for a few years and cities that delay service development can miss the intervention window for an entire cohort.

Discussion

Sampson and Raudenbush (1999) posited that increased collective efficacy lowers crime rates. Our study explores several dimensions of collective efficacy – zoning and design, family participation and access, child care and housing services and new models of service funding which require private sector developer participation. While technical planning, participation and service delivery are all important aspects of a facilitative government paradigm, what stands out in our model is the role of impact fees on crime rates. This suggests that the government role in promoting collective efficacy should not just be focused on the technical and participatory

aspects of planning, it should also invoke a role for the private sector in contributing, financially, to the cost of municipal services.

Community development is a holistic process. Developers cannot build housing and wait for cities to provide the needed family services; the costs of these services should be incorporated into development projects to ensure the services are provided in a timely manner to meet the needs of the current cohort of resident children. Many developers complain impact fees raise the cost of housing and stifle development. But our analysis shows that impact fees enable the investment in critical services that benefit not just the children and families involved, but the city as a whole through lower crime rates. In Australia where such impact fees have been common for more than two decades, residents appreciate having parks, recreation centers, child care and libraries when they move into a new development. Developers there now recognize that such impact fees enhance the marketability of housing (Gurran, Ruming, & Randolph, 2009). Our analysis shows US cities that employ impact fees also show a broader benefit on a feature of critical importance to most city residents – reduction in crime.

Our analysis extends Sampson and Raudenbush's (1999) emphasis on collective efficacy to explore the importance of a facilitative governance role. It is not residents or neighbors alone that achieve these effects. It is the collaborative role of planners and local government in reaching out to address family needs. Our results suggest that neither family participation nor planning initiatives alone are sufficient to break the city size/crime nexus. Private sector investment in the form of financing these critical services is key. Governments hoping to realize a crime reduction dividend from family friendly practices need to incorporate private sector responsibility for public finance into their planning strategies.

Criminology's social control theory holds that childhood experiences have a profound impact on future adult behavior (Gottfredson & Hirschi, 1990) and Small et al. (2008) have observed child care centers play a vital intermediary role in linking parents with available resources. Funding for parks, recreation and community facilities is not a luxury to be secured later in the development cycle. These are critical services that need to be built up front – just as roads, water and sewer systems are built when a neighborhood is first laid out. This social infrastructure complements physical infrastructure and ensures safe cities that are healthy places to grow up and grow old (Warner & Prentice, in press). Planning is needed to ensure supply meets demand by neighborhood. Barriers to family and youth services can be addressed in zoning and building codes. But private sector investment is needed to ensure a timely and adequate supply of services. These are efforts within the purview of planners, and our results suggest would have a positive effect on child development, quality of life, and crime reduction.

Future research may want to explore this linkage between funding for city services and crime further. As this study represents only a point in time survey, longitudinal data is needed to examine the impact of increased attention to planning initiatives and the resulting impacts on crime. Disconcertingly, the current political landscape may provide a number of natural experiments. As states and cities face budget crises, support for child and youth services is under attack. Rather than increase impact fees, the use of tax exemptions for business has increased as cities attempt to promote economic development during the recession (Warner & Zheng, 2011). Budget stress at the city level requires the private sector to play its part in ensuring adequate social infrastructure for city residents.

One limitation of our study is that we do not have a random sample of cities. It is possible that respondents to the APA survey were those more interested in family friendly planning. However, even among this group of cities we see a crime reducing effect of their investments in child and youth services. This study clearly

demonstrates the need for more collaboration between criminology, planning and urban studies. We need to understand the multi-faceted nature of collective efficacy and how it relates to planning, community development and crime.

In conclusion, our study has demonstrated that a facilitative government planning role can build collective efficacy leading to lower crime rates. In particular, strategies focused on private sector investment in child and youth services are correlated with significant decreases in both property and violent crime. This finding has significant implications for policy makers particularly in an era when government funding for such services is threatened. Policy makers may want to think twice about tax cuts and exemptions for developers as some of those cuts may be “penny wise and pound foolish.”

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