

Neighborhood Context, Street Efficacy, and Fear of Violent Victimization

Youth Violence and Juvenile Justice
2017, Vol. 15(2) 119-137
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sagepub.com/journalsPermissions.nav
DOI: 10.1177/1541204015620283
journals.sagepub.com/home/yvj



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Abstract

Drawing on Bandura's self-efficacy theory, the current study investigates the relationship between individuals' perceived self-efficacy of avoiding unsafe situations and fear of violence in a neighborhood context. Specifically, it is hypothesized that adolescents who report higher levels of street efficacy are less likely to exhibit fear of violence than adolescents who report lower levels of street efficacy. Using panel data from the Project on Human Development in Chicago Neighborhoods, the authors estimate a series of multilevel ordinal logistic regression models to explain the relationship between street efficacy and fear of violence controlling for both individual-level and neighborhood-level covariates. The results confirm the hypothesis that adolescents' prior street efficacy is negatively associated with subsequent fear of violence. The current study suggests that a social cognitive perspective should be incorporated into the fear of crime literature. Policy implications of the findings are discussed, along with suggestions for future research.

Keywords

fear of crime, victimization, self-efficacy, violence

Introduction

Research indicates that individuals who report heightened fear of crime are more likely to engage in defensive and avoidance behaviors than individuals who exhibit little fear (DuBow, McCabe, & Kaplan, 1979; Ferraro, 1995; Garofalo, 1981; Hindelang, Gottfredson, & Garofalo, 1978; Liska, Sanchirico, & Reed, 1988; Skogan & Maxfield, 1981), and these actions lead to lower levels of involvement in violent incidents (Melde, Berg, & Esbensen, 2014). Fear, in this way, plays an important role in promoting self-protection (Jackson & Gray, 2010). The benefits of fear of crime, however, must be weighed against the potential consequences incurred by those prone to heightened states of fear, including reduced quality of life and the potential for associated mental health issues

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(e.g., anxiety disorders; Stafford, Chandola, & Marmot, 2007). This dynamic, therefore, suggests that research should seek to identify ways in which fear of crime can be reduced without an associated increase in the probability of experiencing victimization.

A leading explanation of the factors associated with fear of crime is the vulnerability thesis, which suggests that fear is mainly determined by the subjective determination of victimization potential, which is the product of one's physical characteristics (e.g., size and strength), local conditions (e.g., community disorder), and social environment (e.g., peers and lifestyle). We draw on self-efficacy theory in the current investigation to further explicate the mechanisms through which the vulnerability thesis influences fear of crime. In particular, we elaborate on the theoretical connections between street efficacy, as described by Sharkey (2006), and Bandura's (1977) notion of self-efficacy, and how these constructs impact fear of violence. Specifically, Bandura (1977, p. 209) theorized about the relation between constrained behaviors and fear from a social learning perspective. Bandura (1977) suggested that fear and avoidance behaviors are consequences of "aversive experiences," and there is no fixed relationship between the two theoretical constructs. Rather, threatening situations will lead to increased levels of fear and corresponding behavioral changes unless individuals feel capable of carrying out "effective coping behaviors." According to Bandura, individuals have to develop effective coping strategies in order to remain relatively "fearless" in what some may view as potentially dangerous circumstances. Only when people understand how to effectively protect themselves in ways that do not impair their quality of life, whether through behavioral modifications or the use of community resources, can we reduce fear *and* the likelihood of victimization.

To date, empirical studies have not tested whether individuals who believe they can successfully avoid violence, even in otherwise dangerous neighborhoods, are less prone to fear of crime than individuals with less confidence in their ability to avoid danger. To address this gap in the literature, we use a sample from the Project on Human Development in Chicago Neighborhoods (PHDCN) to examine whether adolescents' perceived self-efficacy, what Sharkey (2006) conceptualized as street efficacy, reduces subsequent fear of neighborhood violence. Understanding the degree to which street efficacy can reduce fear of violence will provide researchers and practitioners with much needed information on how evidence-based victimization reduction programs can produce enduring positive effects beyond those directly related to victimization reduction, by increasing quality of life and reducing longer term mental and physical health consequences associated with persistent fear (Stafford et al., 2007). In the following sections, we apply a social cognitive perspective, which emphasizes the interrelationships between cognition, emotion, and behavior to understand adolescents' fear of violence in the neighborhood context.

Self-Efficacy and Fear

Bandura (1977) outlined a theoretical framework, in which the concept of self-efficacy plays a central role in determining the direction and magnitude of the effect of avoidance behaviors on fear of victimization. Importantly, according to this framework, it is one's perceived capability to control one's fate in particular situations that impact emotional well-being and behavior. As Ozer and Bandura (1990, p. 472) stated, "perceived self-efficacy is concerned with people's beliefs in their capabilities to mobilize the motivation, cognitive resources, and courses of action needed to exercise control over given events". Accordingly, threat is not an objective reality but rather is subjectively determined such that individuals naturally evaluate "the match between perceived coping capabilities and potentially hurtful aspects of the environment" (p. 473). People experience elevated levels of fear and tend to avoid particular behaviors (e.g., use of public transit and exercising) when they believe that they are incapable of managing associated threatening situations (e.g., being robbed and

raped), whereas they involve themselves in activities when they judge themselves as capable of exercising control over potential threats.

Bandura (1977) further emphasized that emotional arousal is one of the major sources of information for perceived self-efficacy, and self-efficacy also affects emotional arousal in a reciprocal manner. Stressful situations elicit emotional arousal that has informative value concerning personal competency, and over time people prone to fear tend to feel less confident in their ability to control situations, leading to avoidance behaviors (Lerner & Keltner, 2001). On the contrary, if individuals are self-confident and willing to engage in coping behaviors when facing threatening situations, their self-efficacy gets reinforced and fear is dampened (Bandura, Adams, & Beyer, 1977). Additionally, Williams (1995) argued that the reciprocal relationship between emotion and self-efficacy is asymmetrical, “with self-efficacy exercising greater influence on emotion than emotion on self-efficacy” (p. 91), as persons with higher self-efficacy are less likely to be fearful of new and uncertain situations. Because of this proposed asymmetrical relationship between self-efficacy and emotional arousal, we focus on the effects of self-efficacy on fear of violence in this study.

Bandura and others (Averill, 1973; Bandura, 1977, 1986; Ozer & Bandura, 1990) specified two major mechanisms, whereby enhanced self-efficacy attenuates or eliminates fear arousal in threatening situations. First, perceived *coping* efficacy operates as a mediator of anxiety or fear arousal. Perceived coping ability influences individual judgment of one’s own vulnerability and surrounding risk, whereby a lack of confidence in one’s coping ability increases emotional arousal. For instance, a potentially threatening situation is conceived as relatively safe by people who believe in their coping efficacy but as dangerous by individuals who generally believe situations are beyond their control. Second, self-efficacy helps to regulate individual cognitive processes (Bandura, 1989). People who believe in their own ability to control situations will find it easier to dismiss negative thoughts and thus continue to mobilize resources and efforts in threatening situations. The reverse is also true, as Kent and colleagues (Kent, 1987; Kent & Gibbons, 1987) suggested that the strength of perceived self-inefficacy, or the inability to control one’s surroundings, is associated with an escalation of negative cognitions and could be a more important source of anxiety or fear arousal than the sheer frequency of negative cognitions. In brief, as Bandura (1977, p. 200) stated, “potential threats activate fear largely through cognitive self-arousal. Perceived self-competence can therefore affect susceptibility to self-arousal.” Within the social cognitive framework, fear arousal in dangerous situations (e.g., violent victimization) is affected by both perceived coping efficacy and perceived self-efficacy in controlling negative thoughts.

Although Bandura’s original arguments on self-efficacy were derived from psychological, experimental settings, his theoretical framework has been extended to other disciplines, helping explain a wide variety of outcomes such as health behaviors and individual performance and development (Bandura, 1997). In particular, to address previous criticism that heterogeneity in human agency is often ignored in sociological research, Sharkey (2006) expanded upon Bandura’s project and proposed a new concept—*street efficacy*, or “the perceived ability to avoid violent confrontations and find ways to be safe in one’s neighborhood” (p. 827)—to explain how individuals differentially respond to the threat of violence in neighborhoods with varying levels of concentrated disadvantage and social disorganization. Consistent with earlier arguments, Sharkey contended that the effects of life situations on individual behavior are at least partially mediated by internal cognitive processes. Individual’s confidence in their capability of violence avoidance is likely to “affect the creativity and effort they expend in selecting environments and peer groups that minimize the potential for violent confrontations” (Sharkey, 2006, p. 827).

Results from previous studies have largely confirmed the empirical validity of Sharkey’s arguments. For instance, through a series of multilevel models, Sharkey (2006) found that adolescents with relatively high levels of street efficacy are less likely to resort to violence and associate with delinquent peers than those with low levels of street efficacy. Sharkey and Sampson (2010) also

found that street efficacy is negatively associated with violent offending and victimization. Further, Gibson, Fagan, and Antle (2014) observed that street efficacy exhibits a statistically significant and negative association with violent victimization for youths residing in neighborhoods characterized by moderate and high levels of concentrated disadvantage.

However, despite the extant empirical support for Sharkey's arguments on the relationship between street efficacy and violent offending and victimization, an important research gap exists: How does street efficacy affect fear when facing the threat of violence? Even within the most disadvantaged and potentially dangerous neighborhoods (e.g., neighborhoods with high levels of gang activities), there are adolescents who exhibit relatively little fear of violence (Melde, Taylor, & Esbensen, 2009). Through exploring how street-efficacy affects individual's fear of violence, we can obtain a better understanding of the linkage between one's self-efficacy and fear of crime in the surrounding environment.

Fear of Crime: An Overview of Prior Research

Vulnerability and Fear

Research has indicated that individual vulnerability (Killias, 1990; Lewis & Salem, 1986), prior victimization (Box, Hale, & Andrews, 1988; Garofalo, 1979; Hindelang et al., 1978), incivilities, and social integration and collective efficacy (Hartnagel, 1979; Rountree & Land, 1996) are important factors in predicting individual's fear of crime. One of the leading theoretical perspectives in the fear of crime literature is the vulnerability thesis, which focuses on the relationship between individual's physical and social characteristics and fear of crime (Killias, 1990; Skogan & Maxfield, 1981). Hale (1996) emphasized this point by suggesting that "any model trying to explain fear will include some notion of vulnerability" (p. 95). Current research shows that individuals with high levels of perceived physical and social vulnerability are more likely to experience fear of crime compared to those with low levels of vulnerability. According to Skogan and Maxfield (1981), physical vulnerability refers to individuals with poor physical strength and the inability to resist violence. Zhang, Messner, Liu, and Zhuo (2009) investigated the relationship between perceptions of physical strength, self-defense capability, and fear of crime in Tianjin, China. Their findings suggested that individuals who perceived they had lower levels of physical strength and self-defense capabilities were more fearful of crime. Scholars have also found that women and the elderly tend to report higher levels of fear because they are more physically vulnerable compared with young males (e.g., Hindelang et al., 1978; Skogan & Maxfield, 1981), although the sources of variability within these demographic groups is understudied.

Social vulnerability refers to external factors that tend to place people at elevated risk of victimization (Skogan & Maxfield, 1981). For instance, individuals who live in impoverished communities not only lack educational, medical, and material resources, but they are also often exposed to an elevated risk of victimization (Franklin, Franklin, & Fearn, 2008; Skogan & Maxfield, 1981; Taylor & Hale, 1986). Taylor and Hale (1986) reported that social vulnerability measures, such as poverty and minority race/ethnicity, are positively associated with fear of crime. Taken together, prior studies have investigated both social and physical vulnerability among adults, indicating that vulnerability is an important influence on fear of crime. However, individual-level differences in one's ability to cope with such social and physical vulnerability (i.e., perceived self-efficacy) has not been taken into account in previous studies.

Avoidance Behavior and Fear

Unlike the clear relationship between individual vulnerability and fear of crime, research suggests an ambiguous connection between avoidance behavior and fear (e.g., Garofalo, 1981; Liska et al.,

1988; Rader, 2004; Rader & Haynes, 2014; Yuan & McNeeley, 2015). While Garofalo (1981) argued that avoidance behaviors influence individual assessments of potential risk, which may dampen fear of crime, Liska, Sanchirico, and Reed (1988) found a reciprocal relationship between avoidance behaviors and fear of crime and argued that individuals who take avoidance behaviors are likely to “accentuate” their fear. Rader and colleagues (Rader & Haynes, 2014; Rader, May, & Goodrum, 2007) also observed a positive association between avoidance behaviors and fear of crime and suggested that individuals who adopt avoidance behaviors tend to report higher levels of fear. Moreover, Rader (2004) proposed a “threat of victimization” model, in which she argued that reactions to crime in the form of fear, perceived risk, and constrained behaviors are inherently interrelated and that research should delve further into the reciprocal relationships among these three dimensions.

Findings from across these primarily cross-sectional studies, however, have important limitations. Previous studies, for instance, have not captured whether or not individuals are able to persistently and successfully carry out avoidance behaviors over time, and the effect this might have on fear. Fear may be lessened once people become adept at finding safe places and avoiding dangerous situations in the neighborhood. We thus argue that research using cross-sectional data on the relationship between avoidance behavior and fear is not able to fully capture how individual perceptions of their ability to avoiding dangerous situations impacts fear of crime and whether individuals will persevere in these coping behaviors in the future. To the extent that individuals realize their own potential for violence mitigation through avoidance and coping behaviors, it is expected that such “corrective experiences [will] further reinforce their sense of efficacy and thereby eventually eliminate their fears” (Bandura et al., 1977, p. 126). Again, this manifests the importance of adopting a social cognitive approach to study the etiology of fear of crime.

Neighborhood Collective Efficacy and Fear

The concept of “collective efficacy” was developed with recent advancements in the social disorganization and social capital literatures (Bourdieu, 1986; Putnam, 1995; Sampson, Morenoff, & Earls, 1999; Sampson, Raudenbush, & Earls, 1997). According to Sampson, Raudenbush, and Earls (1997), collective efficacy refers to “social cohesion among neighbors combined with their willingness to intervene on behalf of the common good” (Sampson et al., 1997, p. 918). Sampson and colleagues (1997) argued that communities with high levels of collective efficacy are more capable of exhibiting social control and combating crimes than communities with low levels of collective efficacy. More importantly, this type of capacity enables community members to draw upon the resources of community agencies, to motivate rule-abiding behavior, and to achieve collective goals.

Extant studies examining collective efficacy suggests that individuals from neighborhoods with relatively high levels of collective efficacy are likely to exhibit less fear of crime than those residing in more disorganized locations (Brunton-Smith, Jackson, & Sutherland, 2014; Gibson, Zhao, Lovrich, & Gaffney, 2002). For example, Brunton-Smith, Jackson, and Sutherland (2014) investigated the relationship between neighborhood collective efficacy, incivility, and fear of crime. They reported independent effects of neighborhood collective efficacy on fear of crime. Yet, no prior research has investigated the extent to which self-efficacy and neighborhood collective efficacy simultaneously affect adolescents’ fear of violence in the neighborhood. This is an important step considering the robust body of research suggesting the importance of subjective interpretations of vulnerability in the etiology of fear (Ferraro, 1995; Melde, 2009; Warr, 2000).

The Current Study

There has been a great deal of research on the etiology of fear. As Warr (2000) suggested, however, “the study of fear seems to have stalled at a rudimentary phase of development, a situation that is in

danger of turning into outright stagnation” (p. 453). That is, research on the etiology of fear has tended to focused on the relative distribution of this phenomenon among adults, including across race/ethnicity, sex, and age. Little research has focused on the reasons for within-group heterogeneity in fear and the implications of these differences. The current study extends previous research by focusing on adolescents’ fear within a neighborhood context using longitudinal panel data. In addition, by integrating Bandura’s self-efficacy theory with the vulnerability thesis, the current study introduces a social cognitive perspective into the fear of crime literature. Rather than examining the association between the frequency of engaging in avoidance behaviors and fear of crime, we argue that studying self-perceived capabilities associated with avoiding dangerous situations and violent confrontations can provide a better understanding of adolescents’ fear of crime in the neighborhood, especially as it relates to within-group (i.e., sex, race/ethnicity, age, and community) heterogeneity in fear. In sum, we hypothesize that adolescents perceptions of street efficacy (i.e., the perceived capability of finding safe places and avoiding dangerous situations and violent confrontations) will be negatively associated with subsequent fear of violence in the neighborhood. In addition, we hypothesize that neighborhood collective efficacy will be negatively associated with adolescents’ fear of violence in the neighborhood.

Method

Data and Sample

The current study employs data from the PHDCN, an interdisciplinary study aimed at understanding how family, school, and neighborhood contexts affect the development of children and adolescents (Earls & Visher, 1997). Two main components of the PHDCN include a community survey with extensive information on Chicago neighborhoods and a longitudinal cohort study, which collected three waves of data from children, adolescents, and their primary caregivers between 1994 and 2001.

The community survey was conducted in 1994–1995, and 8,782 Chicago residents were interviewed to assess the social, economic, political, and cultural conditions in their local neighborhoods. Specifically, 343 neighborhood clusters were created out of the traditional 865 census tracts within Chicago’s 77 commonly recognized community areas based on geographical boundaries and internal homogeneity with respect to socioeconomic conditions, family structure, and race/ethnicity (Sampson et al., 1997). Given “the surprising stability of neighborhood inequality across a diverse array of phenomena and across multiple decades” (Sampson, 2012, p. 26) in Chicago neighborhoods, we use the community survey to capture neighborhood collective efficacy and incivilities. A total of 7,729 Chicago residents were used to construct measures of neighborhood collective efficacy and social disorder. Between 7 and 60 residents were sampled within each neighborhood, with an average of 23.

For the longitudinal cohort study, a stratified probability sample of 80 neighborhood clusters was further selected from the original 343 neighborhoods. Block groups were randomly selected from each of the 80 neighborhoods. Adolescents and their primary caregivers were interviewed at three time points. The first wave was conducted in 1995–1997 with a response rate of 75%. The second wave was conducted in 1997–1999 with a response rate of 86%. The third wave was conducted in 1999–2002 with a response rate of 78%. We use the longitudinal cohorts 9 and 12 (at Wave 2 and Wave 3) to answer the main research question. Multiple imputation techniques (number of imputations = 20) are used to address potential bias resulting from missing data¹ (Allison, 2001).

Measures

Dependent variable

Fear of violence: It is measured by asking adolescents “how afraid are you that you might be hurt by violence in your neighborhood?” The responses range from “very afraid” to “not afraid.”

Individuals who answered “very afraid” were coded as “3.” Individuals who answered “a little afraid” were coded as “2,” and individuals who answered “not afraid” were coded as “1.” The same question and coding scheme was applied to adolescents’ fear of violence at both Wave 2 and Wave 3. Previous studies using the same data set have shown the acceptable validity and reliability of this measure (e.g., Dupere, Leventhal, & Vitaro, 2012).

Independent variable

Street efficacy: The operationalization of perceived self-efficacy in avoiding unsafe situations is consistent with prior research on street efficacy (e.g., Gibson, Fagan, & Antle, 2014; Sharkey 2006). Specifically, 6 items were used to capture individuals’ perceived capabilities in avoiding dangerous/threatening situations at Wave 2 (See Appendix for survey questions). Similar to Sharkey (2006), individuals were asked to indicate how true each statement was in describing that they could do things safely with friends and avoid different threatening situations. Responses range from 1 to 4 with 1 being “very untrue” and 4 being “very true.”

Individual-level control variables. We also include a number of theoretically relevant control variables found to be associated with fear of crime. Prior victimization experience has been found to be related to fear of crime (Garofalo, 1979; Hindelang et al., 1978; Rountree, 1998), although this association is inconsistent in the literature (see, e.g., Schreck & Miller, 2003; Wallace & May, 2005, vs. May & Dunaway, 2000; May, Vartanian, & Virgo, 2002; Melde, 2009; Melde & Esbensen, 2009). Following prior PHDCN studies (e.g., Gibson, 2012), *violent victimization* is measured by asking respondents about their victimization experiences at Wave 2. Survey questions asked respondents if they have been chased, hit, attacked with/without weapon, shot, shot at, and threatened. Due to the low victimization rate among participants at Wave 2, a dichotomous variable is constructed with “1” indicating that a violent victimization occurred in the past year.

Extant research suggests that secondary exposure to violence can lead to fear of crime (Gibson, Morris, & Beaver, 2009). In the current study, *exposure to violence* was captured by asking respondents if they saw someone chased, hit, attacked, shot, shot at, killed, and threatened or heard gunfire nearby in the past year. The 9 binary items were summed ($\alpha = .71$) with higher scores indicating higher levels of violence exposure.

Associating with delinquent peers has been found to increase exposure to violence and victimization and lead to reduced fear of crime in adolescent samples (Melde, 2009; Melde & Esbensen, 2009; Tillyer, Fisher, & Wilcox, 2011). In our study, *peer delinquency* was measured by asking respondents about the proportion of their friends who engaged in particular delinquent activities, including getting in trouble at school, damaged property, theft, attacking someone with a weapon, alcohol use, and marijuana use. Responses range from “none” to “all.” An additive scale was created by summing these 6 items ($\alpha = .76$), with higher scores indicating respondents having a higher proportion of peers involved in a variety of delinquent behaviors.

Violent offending behavior, which has been found to be negatively associated with fear (Melde et al., 2014), was measured by asking adolescents if they committed any of the 12 violent behaviors included in the survey, such as gang fight and assault in the past year (see Appendix). These 12 items were summed ($\alpha = .68$) to create a scale with higher scores indicating more violent offending in the past year.

Finally, we control for several social demographic characteristics that are well established in the fear of crime literature. Race/ethnicity is indicated by a categorical variable. *Whites* are coded as “1,” *Blacks* are coded as “2,” *Hispanics* are coded as “3,” and *Others* are coded as “4,” and Whites serve as the reference group. Sex is coded “1” for *female* and “0” for *male*. Age in years is a continuous variable ranging from 9 to 17 at Wave 2. Income is coded from 1 (under US\$5,000) to 11 (over US\$90,000).

Neighborhood-level variables. Following research using the PHDCN community and longitudinal surveys (e.g., Maimon & Browning, 2010; Sampson et al., 1997), neighborhood collective efficacy was captured by aggregating individuals' perceptions of social cohesion, trust in their neighbors, and willingness to engage in social control actions in their communities. Consistent with research on collective efficacy (e.g., Sampson et al., 1997), the items of social cohesion, trust, and social control were combined into one scale (Cronbach's $\alpha = .88$). Together, these items are theorized to capture the differential capacity of communities to work together to solve problems via informal and formal social control² (see Appendix for survey questions). Neighborhood incivility has been considered an important indicator of neighborhood social processes, as incivilities are early signs of a breakdown in community norms and values (Farrall, Jackson, & Gray, 2009; LaGrange, Ferraro, & Supancic, 1992). In the current study, *neighborhood incivility* was measured through survey responses concerning perceptions of problems including litter, graffiti, abandoned buildings, drinking and drug abuse in public, and unsupervised teenagers. Responses range from 1 (*not a problem*) to 3 (*a big problem*).

Analytical Strategy

A multilevel ordinal logistic regression model is used for statistical estimation because subjects nested in the same neighborhood tend to be more similar to each other than to subjects living in other areas, which violates the assumption of uncorrelated errors in single-level regression models. Multilevel modeling techniques are specifically designed to deal with nested data structures (Raudenbush & Bryk, 2002). First, multilevel modeling techniques recognize the partial interdependence of individuals within the same neighborhood by modeling both individual- and neighborhood-level residuals. Second, multilevel modeling techniques allow for the investigation of both higher level and lower level unit variance in the outcome variable while maintaining the appropriate level of analysis for the independent variables. The current investigation includes 1,067 subjects nested within all 80 neighborhood clusters in the longitudinal cohort study. Following the suggestions of previous research, neighborhood-level variables were grand-mean centered and individual-level variables were group-mean centered to facilitate statistical estimation and interpretation (Enders & Tofighi, 2007; Hofmann & Gavin, 1998).

The analyses proceed in three stages.³ First, an unconditional model was estimated to examine the distribution of fear of violence across neighborhood clusters. Significant variation in fear of violence across neighborhood clusters would provide evidence for further testing for neighborhood influences on the outcome. Second, an intercepts-as-outcome model was analyzed to examine the relationship between street efficacy and fear of violence, accounting for other individual-level covariates. Finally, the two neighborhood-level variables were added to the model to assess their main effects on fear of violence.

Results

Descriptive statistics for the sample (Table 1) show that 44.70% of the adolescents reported that they were "a little" afraid and 18.09% of the adolescents were "very" afraid of violent victimization in the neighborhood at Wave 2. Approximately 42.36% of the adolescents reported that they were "a little" afraid and 6.09% of the adolescents were "very" afraid of violent victimization at Wave 3. The correlation between fear of violence at Wave 2 and Wave 3 is .292. Thus, fear appears to diminish as youth age, and while positively correlated, fear is not constant within individuals across time.

We first run an unconditional, random effects maximum likelihood model to assess whether statistically significant variation is present across neighborhoods for adolescents' fear of violence. The results from Model 1 of Table 2 confirm that (variance component = .195, $p < .01$) there is

Table 1. Descriptive Statistics.

	Mean, %	SD	Minimum	Maximum
Individual-level variables				
Fear of violence (Wave3)	1.546	0.609	1.000	3.000
Not afraid	51.55			
A little afraid	42.36			
Very afraid	6.09			
Fear of violence (Wave2)	1.809	0.733	1.000	3.000
Not afraid	37.21			
A little afraid	44.70			
Very afraid	18.09			
Street efficacy (Wave 2)	3.150	0.582	1.000	4.000
Age (Wave 2)	12.615	1.595	9.109	17.073
Sex (<i>female</i> = 1)	0.500	0.500	0.000	1.000
Race				
White	14.45			
Black	30.06			
Hispanic	43.06			
Others	12.43			
Household income (Wave 2)	4.837	2.536	1.000	11.000
Delinquent peer (Wave 2)	8.904	2.604	6.000	22.000
Violence exposure (Wave 2)	2.032	1.886	0.000	9.000
Victimization (Wave 2)	0.240	0.427	0.000	1.000
Offending (Wave 2)	0.474	1.020	0.000	7.000
Neighborhood-level variables				
Neighborhood collective efficacy	3.604	0.301	3.045	4.443
Neighborhood incivility	1.857	0.322	1.210	2.391

Note. Neighborhoods ($n = 80$); individuals ($n = 1,067$).

significant variation across neighborhoods in fear of violence, and about 6% of the total variance in this construct can be explained by neighborhood-level characteristics.⁴ Based on that, individual- and neighborhood-level predictors were added to investigate our main research questions within a hierarchical ordinal logistic modeling framework.

According to the theoretical framework that was presented earlier, we expect to see a negative relationship between street efficacy and fear of violence. The results of Model 2 of Table 2 show that street efficacy is significantly and negatively associated with fear of violence ($b = -.294$, $p < .01$). After controlling for other individual-level covariates, the expected odds of “very afraid” versus “a little afraid” and “not afraid” decrease by $(1 - \exp\{-0.294\} = .26)$ 26% for every unit increase in street efficacy. In other words, adolescents who are confident about their capability of finding safe places and avoiding threatening situations are less likely to exhibit fear of violent victimization than others in their neighborhood. Results also show that prior fear of violence, Hispanic, Black, and being female are positively related to fear of violence. Not surprisingly, being female increases the odds of fear of violence by $(\exp\{0.226\} - 1 = .25)$ 25%.

Model 3 shows regression results of fear of violence when neighborhood-level covariates are also included in the model. Street efficacy, prior fear of violence, and being female remain statistically significant and substantively associated with fear of violence at Wave 3. Consistent with prior research (e.g., Nicholson, 2010), neighborhood incivility is positively associated with fear of violence. For every unit increase of incivility in the local environment, the expected odds of “very afraid” versus “a little afraid” and “not afraid” increased by $(\exp\{1.195\} - 1) = 230\%$. Unlike prior research (e.g., Brunton-Smith et al., 2014), neighborhood collective efficacy did not exhibit

Table 2. Hierarchical Ordinal Logistic Regression of Fear of Violence.

Fixed effects	Model 1	Model 2		Model 3	
		Coefficient	SE	Coefficient	SE
Individual-level variables					
Fear of violence (WWave2)					
A little afraid		0.778***	.153	0.694***	.154
Very afraid		1.459***	.210	1.274***	.212
Street efficacy (WWave 2)		-0.294*	.131	-0.345**	.132
Age		0.002	.051	-0.007	.051
Sex (female)		0.226 [†]	.134	0.247 [†]	.133
Race (White as reference)					
Black		0.542*	.243	0.222	.245
Hispanic		0.742**	.228	0.383	.241
Others		0.358	.273	0.073	.279
Household income		0.006	.033	-0.003	.034
Delinquent peer (WWave 2)		-0.030	.038	-0.027	.037
Violence exposure (WWave 2)		-0.024	.049	-0.025	.049
Victimization (WWave 2)		-0.002	.111	0.001	.111
Offending (WWave 2)		0.138	.089	0.126	.090
Neighborhood-level variables					
Neighborhood collective efficacy				0.173	.338
Neighborhood incivility				1.195***	.319
Random effects					
	Variance component	Variance component	Variance component	Variance component	
	0.195	0.052	7.89E-33		

Note. Results are based on 1,067 individuals within 80 neighborhood clusters.

[†] $p < .1$. * $p < .05$. ** $p < .01$. *** $p < .001$.

statistically significant effects on fear of violence when neighborhood disorder was included in the regression model.

Discussion and Conclusion

While little dispute exists about the social and physical vulnerability thesis in the fear of crime literature, previous studies have not fully incorporated the social cognitive dimensions that account for the underlying mechanisms linking perceived vulnerability to fear of crime among adolescents. It is not yet clear how individual perceptions of one's own capability of engaging in effective coping behaviors in dangerous situations impacts fear of crime. The current study extends prior research on vulnerability and fear by testing the applicability of Bandura's self-efficacy theory in the fear of crime literature. Instead of examining the relationship between the frequency of taking avoidance behavior and fear of crime, we theorize and test the idea that one's perceived capabilities for finding safe areas and avoiding threatening situations is associated with lower fear of neighborhood-based violence among adolescents.

The findings indicate several important theoretical and practical implications. First, a social cognitive perspective is helpful in uncovering the linkage between self-efficacy and fear of crime. This framework reinforces research that links self-efficacy theory to the vulnerability thesis often used in the fear of crime literature. Given that experimental research in psychology has shown that self-efficacy indeed dampens fear, it was hypothesized that as one's perceptions of their capabilities

of finding safe places and avoiding dangerous situations increases, fear of violent victimization would diminish. As expected, perception of self-efficacy is a robust predictor of subsequent fear of crime before and after neighborhood-level variables are included in the model. Since few studies (e.g., Melde, 2009; Melde & Esbensen, 2009; Norris & Kaniasty, 1992; Wilcox, May, & Roberts, 2006) have utilized panel data to examine the etiology of fear of crime, the current study makes further contributions to the fear of crime literature by unraveling the temporal order of theoretically informed variables and fear of crime.

A second and related point is that the current study moves beyond a behavioral approach to understand the etiology of fear of crime. The extant literature on fear of crime has paid little attention to how perceived self-efficacy (a social cognitive construct) rather than individual constrained behaviors would affect people's fear of crime. Prior research has suggested that vulnerable individuals tend to exhibit high levels of fear and thus frequently take actions to avoid threatening situations. In the current investigation, we go beyond that and emphasize the role of social cognition in the relationship between individual's perceived capabilities of navigating danger in the neighborhood and fear of crime. Results confirm that one's perceived capability of navigating danger on the street attenuates subsequent fear of violence in the neighborhood.

Third, the current study provides hints on how social characteristics of a place shape adolescents' fear of crime. Consistent with prior work (Franklin et al., 2008; Skogan, 1990), the current analyses find a contextual effect of neighborhood social disorder on fear of violent victimization, suggesting that neighborhood disorder serves as a signal that demonstrates potential dangerousness of a neighborhood. Since neighborhood disorder and collective efficacy are highly correlated, the supplementary analyses show that neighborhood collective efficacy is negatively associated with fear of crime before neighborhood incivility is included in the model. Beyond cognition, neighborhood social processes and physical conditions appear associated with adolescent fear of crime.

Based on our research findings and conceptual implications for the relationship between perceived self-efficacy and fear of crime, several policy issues merit consideration. First and foremost, current findings suggest that interventions that impact the social cognitive dimension of victimization risk are likely to lead to reductions in fear of crime to the extent that individuals recognize and appreciate their ability to avoid victimization. Because research suggests there can be deleterious consequences associated with fear of crime (e.g., Stafford et al., 2007), efforts to reduce the threat of actual victimization in a way that leads to feelings of self-efficacy are likely to have the added benefit of reducing the likelihood of fear-related consequences on physical and mental well-being. Such interventions could also help individuals differentiate between effective self-protective behaviors, and those that may do little to reduce victimization or create negative externalities. Researchers have identified a wide variety of behavioral precautions associated with fear of crime, ranging from relatively trivial and nearly universal behaviors (e.g., leaving lights on when temporally leaving home) to more socially consequential actions (e.g., not leaving the house or going out alone at night). Warr (2000), for instance, stated that the single most common reaction to fear of crime in the United States is spatial avoidance or "staying away from places that are perceived to be dangerous" (p. 481). Such habits of avoidance behavior inevitably affect individual daily activities and normative social interactions (e.g., citizens are afraid of greeting or talking to one another) and can become a disintegrative force in society if it undermines civility and mutual trust. Additionally, there is a danger of an escalating loop if such avoidance behaviors tend to further elevate individual fear of crime. On the contrary, a social cognitive approach that enhances one's coping ability in a way individuals both recognize and appreciate may attenuate individual fear of crime without corresponding negative consequences.

The next question is, of course, how to enhance one's street efficacy when facing potential threatening situations in the neighborhood. Drawing on Bandura's (1977, 1986) theoretical framework on self-efficacy, Sharkey (2006) conceptualized street efficacy as "developing primarily from the

interaction of individuals and their imposed environments” (p. 829). That is, individual, family, and neighborhood characteristics all affect individuals’ perceived capability of engaging in public life while avoiding violence. Following this logic, public policies must aim to provide consistent and comprehensive social support to adolescents and their surrounding environment (Colvin, Cullen, & Vander Ven, 2002; Cullen, 1994). Efforts in this area are numerous but demonstrated effectiveness in terms of established best practices for victimization prevention are unclear. For instance, numerous communities throughout the United States have implemented “safe passage” programs for youth walking to and from school (e.g., Chicago Public Schools, 2015), which is meant to reduce the threat of victimization for students by providing a level of confidence among students that particular routes are closely monitored. Similarly, the city of Los Angeles’s Summer Night Lights program, developed in conjunction with the Gang Reduction and Youth Development Foundation (2015), also aims to offer community residents and families with a safe time to enjoy public parks and activities in areas once deemed too dangerous for such recreation. Inherent in these programs is the belief that community support and involvement can reduce the threat of victimization for youth and young adults, allowing youth and adolescents the freedom to navigate their community with little fear of violence.

Social support to families may also be a key element in enhancing individual street efficacy. Assistance programs such as parenting skills training are likely to increase adolescents’ social skills and reduce their tendency toward impulsive behavior. Parental supervision and monitoring also help raise adolescents’ confidence in avoiding threatening situations by making them feel safe and by reducing the actual chance that they will find themselves in vulnerable situations. This is consistent with Sharkey’s (2006) recommendations, who suggested that “adolescents who have been unable to avoid violence in the past and those who have witnessed frequent violence will have doubts about their ability to avoid violence and be safe in their neighborhoods” (p. 830). In such instances, direct intervention and training in best practices for violence mitigation may prove fruitful in reducing fear and victimization.

Despite best efforts to address important theoretical- and policy-relevant questions regarding self-efficacy and fear of violence, the current study is not without limitations. First, while it was argued that the PHDCN data are among the best available to address the main research question, it is limited to a single metropolitan city in the Midwest. It is not yet clear to what extent the findings reported here are replicable in other cities. Second, the findings are based on adolescents only. Steinberg (2005), for instance, has argued that adolescents’ cognitive and emotive development differs from that of adults. The current study finds that neither direct nor indirect victimization is statistically associated with adolescents’ fear of violence in the neighborhood, suggesting that traditional victimization models may not be the best approach to understand adolescents’ emotive reactions to violence and crime. In addition, given the length of time between measures of neighborhood disorder in the community survey and our outcome, there is the potential that community conditions changed appreciably across time. While this length of time was not ideal (1994–1995 to 1999–2002), we found the neighborhood collective efficacy from the community survey and longitudinal studies were highly correlated ($r = .70$). Further, Sampson (2012) has discussed at great length the issue of stability in relative neighborhood conditions across Chicago, which appears to be robust across a number of dimensions of inequality. This evidence suggests substantial change in neighborhood conditions, although possible, is unlikely. Third, we were unable to control several time-invariant unobserved variables. For example, adolescents’ attachment to primary caregivers was not captured at Wave 2. Thus, our results may be subject to omitted variables bias. Finally, although the results confirmed our hypothesis, Bandura’s self-efficacy theory was developed in experimental settings. Thus, we acknowledge the survey design of PHDCN may limit the operationalization of several theoretical constructs. The 2-year gap between Waves 2 and 3 of data collection may have also introduced uncertainties in our theory testing. According to the theory, the process linking self-efficacy to

fear of violent victimization may occur within a relatively short time span. Unfortunately, we cannot adequately capture that process with available data collected from a nonexperimental setting.

Despite these limitations, we believe that the current study has addressed an important gap in the fear of crime literature by highlighting the important role of self-efficacy in the etiology of fear of crime. Future research may explore theoretical mechanisms within the social cognitive framework that we cannot operationalize in the current study with more detailed data. Specifically, research should focus on the complex relationships between adolescents' emotive, cognitive, and behavioral reactions to crime. Future research may also investigate the potential reciprocal relationship between self-efficacy and fear. While more studies on the relationship between self-efficacy and fear of crime are needed in different social contexts, researchers should consider the development of self-efficacy from a life-course perspective. In other words, the variation of individuals' self-efficacy in childhood and adulthood may provide new insights for theory development in victimization research.

Appendix

Table A1. Survey Questions

Street efficacy (Wave 2)	<p>Responses range from 1 to 4 with 1 being <i>very untrue</i> and 4 being <i>very true</i>. Items 4, 5, and 6 are reversely coded.</p> <ol style="list-style-type: none"> 1) Some kids feel they cannot avoid gangs in their neighborhood even if they try, and other kids feel, even if it may not be easy, they can avoid gangs if they try 2) Some kids feel there are certain things they can do to keep from getting scared on the way to school, and other kids feel there are certain things they can do to keep from getting scared on the way to school 3) Some kids feel they have trouble avoiding fights in their neighborhood even when they try, and other kids feel they can figure out ways to avoid getting into fights in their neighborhood 4) Some kids feel if they work at it, they can go places within a few blocks of their home safely, and other kids feel they cannot be sure about getting places within a few blocks of their home safely 5) Some kids feel no matter what they do, they aren't safe when they are alone in their neighborhood, other kids feel safe when they are alone in their neighborhood because they know how to take care of themselves 6) Some kids feel they can figure out ways to be in their neighborhood safely, and other kids feel no matter what they do, they cannot be in the neighborhood safely
Violent exposure (Wave 2)	<p>Responses coded as 0 = <i>no</i>, 1 = <i>yes</i></p> <ol style="list-style-type: none"> 1) Saw someone chased to hurt past year 2) Saw someone hit past year 3) Saw someone attacked with weapon past year 4) Saw someone shot past year 5) Saw someone shot at past year? 6) Heard gunfire nearby past year? 7) Saw serious accident/hurt past year? 8) Saw someone killed past year? 9) Saw someone threatened/hurt past year?

(continued)

Table A1. (continued)

Peer delinquency (Wave 2)	<p>Responses range from 1 to 4 with 1 being <i>none</i> and 4 being <i>all</i>:</p> <ol style="list-style-type: none"> 1) Gotten in trouble at school 2) Purposefully damaged or destroyed property that did not belong to them 3) Stolen something worth more than US\$5 4) Attacked someone with a weapon 5) Used marijuana 6) Used alcohol
Self-reported offending (Wave 2)	<p>Responses coded as 0 = <i>no</i>, 1 = <i>yes</i></p> <ol style="list-style-type: none"> 1) Hit someone live with, past year? 2) Hit someone not live with, past year? 3) Attack with weapon, past year? 4) Used force to rob, past year? 5) Thrown objects at people, past year? 6) Chased someone to scare, past year? 7) Shot at someone, past year? 8) Been in gang fight, past year? 9) Threatened to hurt, past year? 10) Forced sex, past year? 11) Carried hidden weapon, past year? 12) (Set fire, past year?
School delinquency (Wave 2)	<p>Responses range from 1 to 4 with 1 being <i>almost none</i> and 4 being <i>also all</i></p> <ol style="list-style-type: none"> 1) Number of students who drink alcohol 2) Number of students who use drugs 3) Number of students who smoke cigarettes 4) Number of students who get into fights 5) Number of students who cut classes 6) Number of students who drop out
Violent victimization (Wave 2)	<p>Responses coded as 0 = <i>no</i>, 1 = <i>yes</i></p> <ol style="list-style-type: none"> 1) Chased to hurt past year 2) Hit past year 3) Attacked with weapon past year 4) Shot past year 5) Shot at past year 6) Threatened/seriously hurt past year
Level-2 independent variables Neighborhood disorder	<p>Responses were coded as 1, 2, and 3 with 1 being <i>not a problem</i>, 2 being <i>somewhat of a problem</i>, and 3 being <i>not a problem</i></p> <ol style="list-style-type: none"> 1) How much of a problem is litter, broken glass, or trash on sidewalks and streets 2) How much of a problem is graffiti on buildings and walls 3) How much of a problem are vacant or deserted houses or storefronts 4) How much of a problem is drinking in public 5) How much of a problem is people selling or using drugs 6) How much of a problem is groups of teenagers or adults hanging out in neighborhood and causing trouble

(continued)

Table A1. (continued)

Collective efficacy (see also Sampson, Raudenbush, & Earls, 1997)	<p data-bbox="519 247 743 280">Informal social control</p> <p data-bbox="546 280 1196 338">Responses were recoded to 1, 2, 3, 4, 5 with 1 being <i>very unlikely</i> and 5 being <i>very likely</i>.</p> <ol data-bbox="572 338 1196 647" style="list-style-type: none"> 1) Neighbors would do something if a group of neighborhood children skip school and hang out on street corner 2) Neighbors would do something if some children spray-paint graffiti on a local building 3) People in neighborhood would scold child if child shows disrespect to an adult 4) Neighbors would break up a fight in front of your house where someone was being beaten or threatened 5) Neighborhood residents would organize to keep closest fire station open if it were to be closed down by city because of budget cuts <p data-bbox="519 647 677 680">Social cohesion</p> <p data-bbox="546 680 1196 763">Responses were recoded to 1, 2, 3, 4, 5 with 1 being <i>strongly agree</i>, 3 being <i>neither agree nor disagree</i>, and 5 being <i>strongly disagree</i>. Items 1, 2, and 5 were reverse coded.</p> <ol data-bbox="572 763 1196 938" style="list-style-type: none"> 1) This is a close-knit neighborhood 2) People around here are willing to help their neighbors 3) People in neighborhood generally do not get along with each other 4) People in neighborhood do not share same values 5) People in neighborhood can be trusted
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Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Notes

1. The analysis was repeated using listwise deletion of missing data, and the same substantive findings were observed, with one exception. While still substantively small, the variance component estimate in Model 3 (.01, *standard error* = .06) in a model using listwise deletion was slightly different from the reported estimate using multiple imputation.
2. We also used the caregivers' perceptions of collective efficacy at Wave 3 in the longitudinal survey to create a measure of neighborhood collective efficacy. The correlation between these two collective efficacy measures is 0.70, and thus the regression results using the collective efficacy from the longitudinal survey are consistent with current analyses.
3. We tested the proportional odds assumption using a Brant test, and results showed that the relationship between each category of fear of violence was the same. We checked for multicollinearity among independent variables, and diagnostic results showed that multicollinearity was not a concern. The lowest value of tolerance was 0.42 and the highest variance inflation factor was 2.38 (see Allison, 1999).
4. Intraclass correlations were calculated using: $\rho = \frac{\sigma_u^2}{\sigma_u^2 + \pi^2/3}$, where σ_u^2 represents the variance component (Snijders & Bosker, 2012).

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