Applied Geography 46 (2014) 45–52

Contents lists available at ScienceDirect

Applied Geography

journal homepage: www.elsevier.com/locate/apgeog

The fear factor: Examining the spatial variability of recorded crime on the fear of crime

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Keywords:
Fear of crime
Crime
Spatial regression
Multilevel modeling
New Zealand

A B S T R A C T

Reported crime can significantly influence the fear of crime yet no studies have investigated whether recorded crime in surrounding neighborhoods or within the broader spatial region of the city may affect an individual's feelings of vulnerability in their own neighborhood. In this study we attempt to fill this gap by using multi-level hierarchical models to gage the effect that recorded crime at three different spatial scales (own neighborhood, surrounding neighborhoods, and broader region) has on fear of crime among adult New Zealanders. In the analysis we found that crime within an individual's own neighborhood influenced their fear of crime but crime occurring within neighboring communities had little or no effect on their feelings of safety and security. Crime occurring in the broader region of the individual's immediate neighborhood had a significant, negative relationship with fear. Possible explanations for the varying spatial effects of recorded crime on fear are identified and discussed.

Introduction

Research in a number of countries has firmly established the relationship between crime and the fear of crime and violence (Brunton-Smith & Sturgis, 2011; Skogan, 1987; Skogan & Maxfield, 1981; Weinrath & Gartrell, 1996). This body of literature has largely demonstrated that communities with higher levels of crime tend to experience higher fear of crime than people residing in areas with comparatively lower levels of crime. For example, in the United States Taylor (2001) identified a weak but significant relationship between fear of crime and burglary rates within neighborhoods in Baltimore after controlling for visual signs of disorder and for various structural characteristics of the neighborhood. In the United Kingdom Brunton-Smith and Sturgis (2011) found recorded crime to have a direct and independent effect on individual-level fear of crime. Drawing on data from the British Crime Survey the researchers also found that individual differences in fear of crime were strongly moderated by neighborhood socio-economic characteristics such as ethnic heterogeneity. Other research providing similar support for a link between crime and survey measures of individual fear include Skogan and Maxfield (1981), Liska, Lawrence, and Sanchirico (1982), Markowitz, Bellair, Liska, and Liu (2001), Rountree and Land (1996), and Wyant (2008). Although considerable attention has been paid to exploring the linkage between crime and the fear of crime, understanding how recorded crime across multiple spatial scales impacts individual-level fear of crime remains less clear. This is important to determine since understanding the ways in which space (or neighborhoods) shape the perception of crime is one of the central aims in the burgeoning geography of crime literature. Indeed, a plethora of theories and theses have been developed over the past 70 years attempting to explain the spatial concentration of crime in certain neighborhoods (see inter alia social disorganization theory (Shaw & McKay, 1942), routine activities theory (Cohen & Felson, 1979), *'collective efficacy'* (Sampson, Raudenbush, & Earls, 1997). A common thread among these theories is attempting to ascertain the exact effect that the neighborhood plays in influencing criminal behavior as well as the perception of crime. One of the key difficulties in identifying the importance of neighborhood effects in crime revolves around the definition of neighborhoods themselves. Neighborhoods are fluid and flexible. Individuals experience neighborhoods differently and define neighborhoods differently. Importantly, and with relevance to this study, it has been found (at least among of cohort of youth in Peterborough) that individuals do not spend all, or even most of their waking hours even in their own neighborhood (see Wikström, 2002). One way in which these shortcomings could be partly addressed would be to take spatial autocorrelation into account in empirical analysis. Spatial

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http://dx.doi.org/10.1016/j.apgeog.2013.10.009

autocorrelation in this instance would be used as an indication of processes occurring 'outside' immediate neighborhood boundaries. In doing so, researchers would acknowledge the important role that broader social and spatial contexts play in shaping criminal behavior and perceptions.

In this study we aim to make a contribution to the expanding body of 'geography of crime' research by taking the contingent nature of neighborhood boundaries into account in analysis. More specifically, we use a multilevel approach in an attempt to gage the effect that recorded crime at three different spatial scales (own neighborhood, surrounding neighborhoods, and broader region) has on fear of crime among adult New Zealanders. Most prior research has examined the effect that recorded crime within the individual's own neighborhood affects their perceived risk of criminal victimization and not sought to identify whether recorded crime in surrounding neighborhoods or within the broader spatial region of the city may affect their feelings of vulnerability. Moreover, the ways in which individuals 'experience' not only their own neighborhoods but their surrounding neighborhoods has been largely absent from empirical assessments of neighborhood effects (Brunton-Smith, Sutherland, & Jackson, 2013). It is within this space that this study aims to make a contribution. The rest of the paper proceeds as follows. The next section identifies a number of factors that have previously been shown to affect the fear of crime at both the individual- and neighborhood level. We then provide details of the data and methods employed in the study before we present and discuss the results.

Factors affecting the fear of crime

There are a number of factors that can significantly influence fear of crime. Previous research suggests that these factors generally operate at two levels: the individual and the neighborhood level.

Individual level

Past studies have identified individual-level characteristics such as age, race, and gender (see for example, Garofalo, 1981; LaGrange & Ferraro, 1989; Ollenburger, 1981; Ortega & Myles, 1987; Warr, 1984; Warr & Stafford, 1983) as being important in relation to the fear of crime. The elderly (Evans & Fletcher, 2000), women (Clemente & Kleiman, 1977), and racial and ethnic minorities (Skogan & Maxfield, 1981) have all been identified as being particularly fearful, despite being often less likely to be victimized. This discrepancy between fear and actual risk has generally become known as the 'paradox of fear' in research of this nature (Hollway & Jefferson, 1997; Warr, 1984). The paradoxical relationship between fear of crime and these individual-level factors are oftentimes referred to as the vulnerability perspective (Yin, 1980). The vulnerability perspective emphasizes individual demographics to explain fear and is based on the assumption that fear is greatest when individuals perceive themselves to be at a physical disadvantage against potential attacks or when individuals believe that they are particularly vulnerable to being victims of crime (Wyant, 2008). A recent study by Cossman and Rader (2011) even found that people who perceive themselves as having poor mental and/or physical health exhibit a greater fear of crime. Again, these individuals that perceive themselves as being more vulnerable have greater fear. The researchers conclude that self-reported health may operate as an antecedent to fear of crime because it contributes to a perception of vulnerability.

Other individual-level predictors of fear of crime include prior victimization, and the extent to which people engage with crime coverage in the print media and on television. In terms of the former, researchers have generally found that individuals who have had a direct experience of crime exhibit more fear (Baumer, 1978; Skogan & Maxfield, 1981). For example, Weinrath and Gartrell (1996) found that being a previous victim of crime heightened victims' perception of vulnerability and increased their fear of crime, although this experience differed by gender and age. Their study found that elderly females were more resilient in dealing with personal victimization such as assault than younger females. In contrast, elderly men were found to be more fearful when victimized than younger men. This was attributed to the fact that elderly men feel no longer capable of defending themselves against their attackers. Other research has however found very little correlation between increases in fear of crime through prior criminal victimization (see for example, DuBow, McCabe, & Kaplan, 1979; Rifai, 1982). A study by Mayhew (1984) for example found that over half of the respondents questioned in the 1983 British Crime Survey expressed that they suffered no practical problems and two thirds had no emotional upset after being victims of crime. Sparks, Genn, and Dodd (1977) have even speculated that criminal victimization (by assault and burglary) may even reduce fear. The researchers hypothesized that this correlation could be explained by people 'fearing the worst' before they have any direct experience with crime. According to Wyant (2008) the link between prior victimization and fear is mediated by the individual's response to the criminal incident. Previous victims of crime may lead some to believe that they are at a heightened risk of victimization and increase fear; others may take steps to avoid certain areas or dangerous situations and/or people thereby reducing their perceived vulnerability and fear.

Regarding the media and fear of crime, the notion is that the more individuals engage with or become aware of crime in their community via secondary informational sources such as informal social networks and the media, the greater their perceived vulnerability and fear. The results of research in this area is mixed with some studies indicating that exposure to crime media increases fear of crime (Smolej & Kivivuori, 2006) and others finding very little evidence to suggest that such a relationship exists (see Ditton, Chadee, Farrall, Gilchrist, & Bannister, 2004). Of course, these and other individual-factors such as marital status, educational attainment, socio-economic status, and income do not operate in isolation and it is often their interaction with other, particularly neighborhood level, variables are key in understanding what makes certain individuals feel more vulnerable than others.

Neighborhood level

At the neighborhood level, researchers have attempted to identify how the social and structural composition of neighborhoods could increase the fear of crime among residents. A large number of neighborhood constructs have been constructed and tested on individual level fear. Chief among these is the incivilities model which investigates how neighborhood incivilities – loosely defined as indicators of disorder or a declining quality of life within urban neighborhoods (Herbert, 1993) – affect fear. Research in this area has found that both social (e.g., drunk in public, noise) and physical incivilities (e.g., trash and litter, graffiti) increase fear of crime although their causal effect has been found to be mediated through perceptions of risk to crime (see LaGrange, Ferraro, & Supancic, 1992). A multilevel study by Wyant (2008) extended the work of LaGrange et al. and also showed that incivilities were predictive of fear at the individual-level but also that this link was mediated through the intervening influence of perceptions of crime risk as well as neighborhood context. Regarding other neighborhood level conditions, previous work has found greater levels of fear among people living in neighborhoods with greater ethnic