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The effects of neighborhood conditions on perceptions of safety

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Abstract

This research investigated the relationship between neighborhood conditions and residents' expressed perceptions of safety. Previous studies had indicated that neighborhood conditions helped shape attitudes concerning neighborhood crime, but had relied on subjective measures of those conditions. The present study analyzed the relative contribution of subjective and objective indicators of local conditions to the overall assessment of safety in a sample of 305. Housing conditions were assessed using a standardized rating system. The investigation found that housing and neighborhood quality had an impact on satisfaction with the local physical environment and perceptions of safety. Victimization also had an impact on these two variables, but contrary to expectations had no significant impact on satisfaction with people in the local environment when controlling for housing quality.

Introduction

The human-built topography of dwellings and neighborhoods is an important contributor to individuals' social and psychological well-being. The constructed landscape of places could add to, or subtract from, individuals' sense of security and safety (Nasar & Jones, 1997). Neighborhood residents, for example, could interpret the physical cues of low quality neighborhoods as the absence of social controls (Ross & Mirowsky, 1999), which could compromise residents' feelings of order, stability, and social connectedness. Thus, run-down and deteriorating structures in neighborhoods might be associated with concerns over safety.

This article reports on research that sought to determine the relationship between dwelling and neighborhood quality and residents' perceptions of safety. In studying the effects of neighborhood conditions on social and psychological outcomes, previous researchers had typically relied upon residents' perceptions of the physical conditions of their houses and neighborhoods as a measurement of neighborhood quality. The present study, however, used a standardized scheme for evaluating the conditions of neighborhoods in order to study their effects on residents' perceptions of safety.

Literature review

As was common knowledge, compared to other industrialized countries, the United States had an alarmingly high crime rate. Despite recent declines in crime, concerns about crime were still important for many people (DeFrances & Smith, 1998), and fear of becoming a victim of criminal misconduct seemed to remain core to the American psyche. Worries over safety were further reinforced by the numerous enter-

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prises that sold protection services and products, the prominence of crime stories in the media, and the routine campaign pledges of politicians to get tough on crime. Consequently perception of safety and fear of crime had been the object of considerable research effort of late. The bulk of this work had attempted to determine the characteristics of those who were most concerned with their safety and under what conditions fear was most likely to occur. Individuals' compromised sense of safety had been associated with limits on personal freedom, social isolation, and lack of trust (Keane, 1998; Ross, 1993; Ross & Jang, 2000).

Research in the past had identified a number of factors that influenced fear of crime and perceptions of safety. These factors could be divided into three general areas of focus: (1) demographic effects, (2) victimization experiences, and (3) neighborhood and urban conditions.

Demographic factors

Three demographic variables—sex, age, and socioeconomic status—had been shown to influence attitudes on crime and safety. Research had generally indicated that women experienced higher levels of fear of crime than men (Perkins & Taylor, 1996; Skogan & Maxfield, 1981; Toseland, 1982), especially at night (Taylor & Covington, 1993), although men experienced higher victimization rates (Donnelly, 1989). A portion of expressed fear of crime was altruistic in both genders, but the focus of concern might be different as men reported worrying about women and women reported worrying about children (Gilchrist, Bannister, Ditton, & Farrall, 1998). Socialization, physical stature, victimization to rape (Gomme, 1986), different sensitivities to risk (Warr, 1984), and discounting of fear and risk by men (Smith & Torstensson, 1997) were factors that might explain the higher levels of fear experienced by women. Heightened fear of crime had been shown to cause women to limit their personal and social activities more than men (Keane, 1998).

Age was a second demographic characteristic associated with fear of crime and perception of safety. Although the actual rates of victimization among the elderly were lower than those of younger age groups (Janson & Ryder, 1983), older individuals had expressed higher levels of fear of crime (Skogan & Maxfield, 1981) and lower levels of perceived safety (Baba & Austin, 1989). The higher levels of fear experienced by the elderly might be partially due to social isolation (Sundeen & Matthieu, 1976). There were some inconsistencies in this area of research, however. LaGrange and Ferraro (1987) offered evidence that the level of fear of crime among the elderly was not significantly higher than other age groups, while Rountree and Land (1996) found that older residents were actually less likely to express feelings of being unsafe.

Third, socioeconomic status had been associated with perceptions of safety. Austin, Woolever, and Baba (1994) found a significant positive relationship between education and increased feeling of perceived safety, and Lee (1981), Skogan and Maxfield (1981), and Toseland (1982) found that higher status was associated with lower levels of fear. These results, however, were not universal. Baba and Austin's (1989) constructed measure of socioeconomic status (utilizing family income, education of respondent, and occupation of head of household) had no significant impact on perceived levels of neighborhood safety in a multivariate analysis.

Victimization

In addition to demographic characteristics, criminal victimization could affect individuals' attitudes on fear of crime and perception of safety. Garofalo (1979) discovered a relationship between fear and the potential for victimization and reported that victims were more fearful than nonvictims. Additional research had suggested that being the victim of a crime contributed significantly to perceptions of risk in the neighborhood (Taub, Taylor, & Dunham, 1981). Both direct victimization and contact with past victims (vicarious victimization) had a negative impact on attitudes concerning crime and safety related issues (Greenburg & Rohe, 1984; Skogan & Maxfield, 1981; Toseland, 1982), however, this conclusion might be more applicable to Whites than other racial and ethnic groups (Houts & Kassab, 1997).

Although these studies had supported the idea that victimization increased fear of crime and concern over safety, some researchers suggested that the effect was unexpectedly small given the dramatic impact that victimization might be expected to play. Despite high levels of crime in a neighborhood, residents might continue to walk alone in their neighborhood and feel safe (Forde, 1993). Taylor (1996, p. 64) found that when controlling for stability and education, neighborhoods with higher crime had more attached, involved residents. Actual crime rates and victimization were only a part of the web of personal and neighborhood context variables influencing behavior and attitudes about crime (Garofalo, 1979; Myers & Chung, 1998; Skogan & Maxfield, 1981).

Neighborhood and urban conditions

Social and physical conditions of neighborhood and urban settings had been linked to both emotional

and behavioral outcomes of neighborhood residents. Housing and neighborhood quality, for example, had been identified as a predictor of psychological well-being (Lawton, 1997). Even after controlling for individual characteristics, Crane (1991) found that adolescents who lived in the so-called worst neighborhoods in large cities were exposed to sharp increases in personal problems such as dropping out of school and having a child.

Social dynamics in neighborhoods appeared to affect residents' perception of the conditions of their neighborhood and their attitudes about crime. For example, Rountree and Land (1996) contended that the relationship between neighborhood conditions and perception of safety were particularly pronounced in heterogeneous neighborhoods. Residents of neighborhoods that had experienced dramatic changes in racial, youth, and elderly composition expressed higher levels of fear than those from areas with less change. Fear was higher in these locales because social and physical problems had arisen not in response to the change itself, but in response to the past change in racial composition of the neighborhood (Taylor & Covington, 1993, p. 391). Lane and Meeker (2000) similarly argued that a portion of the fear of crime that residents of a neighborhood exhibited was attributable to concern over diversity and the perceived increasing heterogeneity of the neighborhood.

Neighborhood "incivilities" (such as deteriorating buildings, trash, the presence of unsupervised youth) had been used routinely in researchers' models of perception of safety. Such conditions had been shown to affect fear, interpretations of the seriousness of crime, and level of perceived risk (Boorah & Carcach, 1997; LaGrange, Ferraro, & Supancic, 1992; Rountree & Land, 1996; Skogan & Maxfield, 1981). Nasar and Jones (1997) found that fear heightened among women when they were exposed to places in which an attack could be launched. Dark spots and places in which they could be trapped or attackers could conceal themselves brought about fear responses. More recent research had found that high school students who lived in neighborhoods with incivilities reported feeling less safe at school (May & Dunaway, 2000). Related investigations had reported that the deterioration of nonresidential property played a stronger role in fear of crime than residential deterioration (Perkins & Taylor, 1996), and that incivilities had a stronger effect among homeowners' perception of safety compared to renters (Taub et al., 1981).

Research had also indicated that, while controlling for victimization experiences, higher levels of satisfaction with the neighborhood environment led to higher levels of perceived safety (Baba & Austin, 1989), and that a relationship existed between fear, neighborhood satisfaction, and quality of life (Marshall, 1991). The existence of neighborhood incivilities and other signs of deterioration might lead residents to believe that the level of social control in the area was deteriorating and sparked concern and fear among residents (Skogan, 1990, p. 3).

Assessment of community environmental attributes was dependent on how the resident perceived the attribute and the standard against which the attribute was judged (Marans & Rodgers, 1975, p. 305). Individual differences played a role in the subjective impact of local conditions. Deteriorated housing, neighborhood quality, and high crime rates could lead to increased social and psychological problems for residents, but the impact could differ significantly among individual residents.

Researchers traditionally had preferred to rely on residents' assessments or descriptions of neighborhood incivilities as predictors of their perceptions of personal safety. Covington and Taylor (1991) made it clear, however, that residents might perceive higher levels of incivilities in their neighborhoods than an objective indicator of neighborhood conditions would suggest. Parenthetically this inconsistency might contribute, to some degree, to the noted gap between perceived risk and actual levels of risk of victimization (Myers & Chung, 1998). To date, there has been little research that simultaneously examines perceptions of safety in neighborhoods and indicators of actual housing and neighborhood conditions based on visual assessments. In one important exception, Perkins and Taylor (1996) demonstrated that the impact of three indicators of disorder in the community (survey data, newspaper articles concerning crime and disorder, and observations by trained observers on site) had relatively similar impacts on fear of crime. Adding to this literature, the research presented here examined the impact of the quality of local housing and neighborhoods on residents' satisfaction with the local neighborhood environment and perceptions of safety.

The specific interest of this study was to determine if a standardized measure of housing and neighborhood conditions held the same explanatory power as residents' subjective judgments of their neighborhoods in models of perception of safety. It was assumed that housing quality would have a positive effect on feeling safe. Additionally, experience with victimization should have an impact on satisfaction with the physical environment of the local neighborhood and on satisfaction with people in the neighborhood. Demographic variables were expected to play a role in these relationships and were included in the analysis.

Methods

In this study, the hypothesis that housing and neighborhood quality would have a positive and direct impact on perceptions of safety was examined. Further, it was predicted that housing and neighborhood quality would have a positive and indirect effect through the intervening variable of satisfaction with the physical environment of the neighborhood. That is, housing quality should affect satisfaction with the environment, which should influence perceptions of safety. Also, it was hypothesized that victimization would have a direct and negative impact on perceptions of safety and an indirect negative effect through satisfaction with the people in the local environment.

Variables

The dependent variable in this study was perception of safety in one's neighborhood. A Likert scale was constructed using four items with response categories ranging from strongly agree to strongly disagree. Respondents were asked to reply to the following statements: (1) "in this neighborhood, people really do not need to lock their doors when they leave their homes for a short period of time"; (2) "people who live in this neighborhood have to worry about someone breaking into their home to steal things"; (3) "people in this neighborhood can walk around at night without fear of being attacked or bothered by strangers"; and (4) "people in this neighborhood can leave their personal property outside and unattended without fearing that it will be damaged or stolen." Items were coded so that a higher score on the scale represented higher levels of perceived safety. These items had been used in past research (Baba & Austin, 1989; Keil & Vito, 1991) and loaded on one factor in a factor analysis.

Eight independent and/or intervening variables were used in the research models. The first four variables indicated relevant social and demographic characteristics of the respondents—income, sex, age, and homeownership. Income was measured as a categorical variable with seven classes (high score equaled higher income). Respondents' sex was indicated with a dummy variable coded one for females, and age was a continuous variable measured in years. Homeownership was a dummy variable coded one for those respondents who owned their homes. Although African Americans tended to express higher levels of fear of crime than Whites and experienced higher levels of victimization (Skogan & Maxfield, 1981), race was not included in the present analysis. Approximately 15 percent of the present sample was non-White, an insufficient amount for adequate comparative study.

Indicators of an additional three independent variables were constructed. Victimization was measured from responses to two items: (1) "have you or anyone you know in this neighborhood ever had their home broken into and/or had something stolen?" and (2) "have you or anyone you know ever been attacked, mugged, or robbed while out walking in the neighborhood?" The constructed indicator (Victimization) combined these two items into a single item coded one for victims and zero for nonvictims. Interpretation of the results of this study should take into account that this variable included victimization and vicarious victimization; however, since both had been shown to influence attitudes concerning crime (Toseland, 1982), combining them posed no theoretical or statistical concerns for the present research.

Focusing on issues such as litter, appearance, noise, and trust, the measurement of satisfaction with the neighborhood centered on residents' perceptions of incivilities in their neighborhoods. Six items were used to measure satisfaction with the local environment. These items, which had been used in past research as one composite scale (Baba & Austin, 1989), were divided into two scales to distinguish between satisfaction with the physical environment and satisfaction with people in the local environment. The first scale (labeled Physical ENVSAT) was designed to measure satisfaction with the physical environment. Respondents were asked to use a four-point Likert scale ranging from very satisfied to very dissatisfied to indicate how satisfied they were with: (1) "the amount of pride people who live in your neighborhood take in their neighborhood's appearance"; (2) "the way people in your neighborhood keep litter picked up"; (3) "the amount of open space between the houses or apartments in your neighborhood"; and (4) "the amount of peace and quiet in your neighborhood." The reliability of this scale (α=.76) was within Bohrnstedt and Knoke's (1982) range of acceptability.

The remaining two items were used to construct an indicator of the level of satisfaction with people in the local neighborhood environment (People ENVSAT). Respondents also used a four-point scale and were asked how satisfied they were with: (1) "the way people in your neighborhood watch out for homes and personal property of others" and (2) "the extent to which other people who live in your neighborhood can be trusted." The two items in People ENVSAT were significantly correlated with each other (r=.434, P<.01). For both scales, satisfaction with the physical environment and satisfaction with people in the local neighborhood environment, high scores represented higher levels of satisfaction. The methodology of measuring housing quality, the last independent variable, was

closely linked to the methods of data collection and will be discussed in the following section.

Data collection and housing quality

Data were collected in two waves using two different techniques. The first source of data was a survey of a sample of adult residents of Louisville, Kentucky. The sample was drawn from the local telephone directory and respondents were interviewed by telephone. Although there were a number of potential sources of sampling bias associated with sampling from a telephone directory (Frey, 1989), random-digit dialing would not have been practical under these conditions because respondents' home addresses were required in order to assess housing quality. Random-digit dialing and the interviews derived from this technique did not necessarily yield home addresses. Since housing quality was a critical independent variable for this study, an interview that failed to produce an accurate home address (e.g., the respondent refused to give their address), would end in costly, unusable data.

A preliminary examination indicated that the telephone directory was more accurate than the city directory that was also available. The response rate was 58 percent with 305 total interviews recorded. For the multivariate analysis, the listwise method for deleting missing values reduced the final sample size for the SEM model to 232.

The second source of data was an assessment of the housing and neighborhood quality of each respondent in the survey. These data were collected with the use of a pictorial catalog of housing that was developed by the Texas Department of Community Affairs (1973). The address of each respondent was visited by a researcher and evaluated on a ten-item scale designed to assess the quality of housing and the neighborhood. Two items on the scale, the existence of plumbing and electricity in the dwelling, were excluded from the analysis because they added no variance to the scale. The remaining eight items involved a rating using a scale with scores ranging from 1 to 7. Photographs provided visual cues for the researcher to rate each of these eight physical characteristics individually. The eight items were combined into a scale designed to assess various physical characteristics such as the condition of the exterior walls, the doors, windows, and roof of the dwelling. Additionally the measure contained items related to the physical context of the neighborhood, such as the conditions of the property boundaries, presence of "incivilities," and general appearance of the neighborhood. A factor analysis indicated that these eight items clearly loaded on one factor. The implementation of the scale was patterned after its earlier use in a study conducted in Oklahoma City, Oklahoma, and its findings were consistent with census-based indicators of neighborhood quality (St. John, 1987). While this technique allowed for some subjectivity on the part of the researcher, some level of objectivity should be present in the scale. Although two people observing a neighborhood might describe it somewhat differently, judgments of any two individuals would be positively correlated because they were describing the same place (Perkins & Taylor, 1996; Ross & Mirowsky, 1999, p. 414).

Results

Table 1 contains the correlation coefficients for all the variables used in this analysis. Of the four demographic variables, only income and sex correlated with perceptions of safety. Higher income was associated with feelings of safety, and women stated lower levels of perceived safety. Age and home-ownership did not correlate with the dependent variable. The bivariate analysis indicated support for the hypotheses that housing quality affected both neighborhood satisfaction and perception of safety. Housing quality had significant and positive relationships with both neigh-

Table 1
Correlations of variables used in the analysis

	Sex	Age	Homeowner	Housing quality	Victimization	Physical ENVSAT	People ENVSAT	Safety perception
Income	−.028	−.185*	.275*	.236*	−.137*	.133*	.211*	.162*
Sex		.072	.056	−.010	.135*	−.005	−.006	−.127*
Age			.195*	−.053	.138*	.119*	.071	−.100
Homeowner				−.068	.237*	.077	.087	−.094
Housing quality					−.174*	.294*	.219*	.191*
Victimization						−.210*	−.126*	−.369*
Physical ENVSAT							.603*	.387*
People ENVSAT								.345*

* $P \leq .05$.

Table 2
Regression of intervening variables on independent variables

Independent variables	Dependent variables							
	Housing quality		Victimization		Physical ENVSAT		People ENVSAT	
	B	β	*B*	β	*B*	β	*B*	β
Age	0.013	0.025	0.002	0.073	0.026	0.152*	0.005	0.085
Sex	− 0.360	− 0.022	0.123	0.124*	− 0.081	− 0.015	− 0.061	− 0.030
Homeowner	− 2.797	− 0.145*	0.367	0.300***	− 0.054	− 0.008	0.041	0.016
Income	1.33	0.288***	− 0.057	− 0.195***	0.260	0.171***	0.139	0.228***
R^2	.078		.133		.041		.054	

* $P \leq .05$.
** $P \leq .01$.
*** $P \leq .001$.

borhood satisfaction measures and perceptions of safety. Additionally, as expected, the relationship between housing quality and victimization was negative. Victimization had significant negative relationships with both satisfaction scales and perceptions of safety. That is, respondents with experiences of victimization were less satisfied with the physical and social environment of their neighborhoods and had lower levels of perceived safety.

Turning now to findings of the multivariate analysis, Table 2 shows the results of regressing the intervening variables in the model on the demographic indicators. The first equation revealed that higher income residents lived in higher quality housing. Also, somewhat surprisingly, those who did not own their home lived in higher quality housing. This might be due to the low percentage of renters in the sample (20 percent), and to the fact that many renters lived in apartment complexes that had professional building and grounds maintenance workers whose work increased the level of housing quality as indicated by the assessment tool.

The second equation presented in Table 2 shows that homeowners and women were more likely to report victimization or vicarious victimization. Also, lower income respondents were more likely to have experienced victimization. The next equation indicated that older residents and higher income residents expressed higher levels of satisfaction with the physical environment of their neighborhood. A final equation in this table demonstrated that income was the only demographic variable to have a significant impact on satisfaction with the people in the local environment.

Table 3 contains the results of regression equations examining the impact of housing quality and victimization on satisfaction with the physical environment and people in the local environment, while controlling for demographic effects. These data confirmed the expected positive relationship between housing quality and satisfaction with the physical environment. In addition, victimization experiences lowered the level of satisfaction with the physical environment.

Similarly, quality of housing had a positive effect on satisfaction with people in the environment. The hypothesized direct effect of victimization on satisfaction with people in the physical environment, however, was not supported.

Results of the regression of perceptions of safety on the other variables in the model are presented in Table 4. Three of the four demographic variables had a direct effect on perceptions of safety (first equation): women and homeowners expressed lower levels of perceived safety and higher income residents expressed higher levels.

Regressing perceptions of safety on housing quality and victimization resulted in both having a significant influence as victims expressed lower levels of

Table 3
Regression of environmental satisfaction variables on housing quality and victimization

Independent variables	Dependent variables			
	Physical ENVSAT		People ENVSAT	
Victimization	− 0.909	− 0.179***	− 0.174	− 0.085
Housing quality	0.087	0.271***	0.027	0.208***
R^2	.123		.056	

* $P < .05$.
** $P < .01$.
*** $P < .001$.

Table 4
Regression of perceptions of safety on independent variables

Independent variables	Dependent variable: perceptions of safety							
	B	β	*B*	β	*B*	β	*B*	β
Age	– 0.008	– 0.056					– 0.010	– 0.070
Sex	– 0.707	– 0.152**					– 0.522	– 0.113*
Homeowner	– 1.089	– 0.190**					– 0.600	– 0.105
Income	0.257	0.187**					0.050	0.037
Housing quality			0.039	0.133**			0.015	0.050
Victimization			– 1.582	– 0.344***			– 1.332	– 0.287***
Physical ENVSAT					0.244	0.265***	0.158	0.175**
People ENVSAT					0.431	0.191**	0.450	0.200**
R^2	.085		.152		.168		.311	

* $P \leq .05$.
** $P \leq .01$.
*** $P \leq .001$.

perceived safety and those residents in higher quality housing exhibited higher levels of perceived safety. An equation with both indicators of environmental satisfaction revealed that higher levels of satisfaction with both the physical environment and local people were associated with higher levels of perceived safety.

Lastly, Table 4 shows the results of regressing perceptions of safety on all variables included in the analysis in one equation. When all variables were controlled, women and victims (direct and vicarious) perceived lower levels of safety in their neighborhoods. Residents who were more satisfied with the physical environment in their neighborhoods and the people in their neighborhoods were more likely to express higher levels of perceived safety.

Fig. 1 shows the complete model regressing the intervening variables on the demographic variables and the environmental satisfaction variables on the housing quality and victimization variables. The figure includes the significant relationships identified in Tables 2–4. The indicator of perceptions of safety was also regressed on each group of independent variables in the model.

Structural equation modeling was used to estimate the effects of the variables and relationships in the model simultaneously. The parsimonious model presented in Fig. 1 was evaluated for goodness of fit. Multiple measures of fit were derived and are summarized here. The goodness-of-fit index (GFI) statistic, which is analogous to an R^2 in multiple

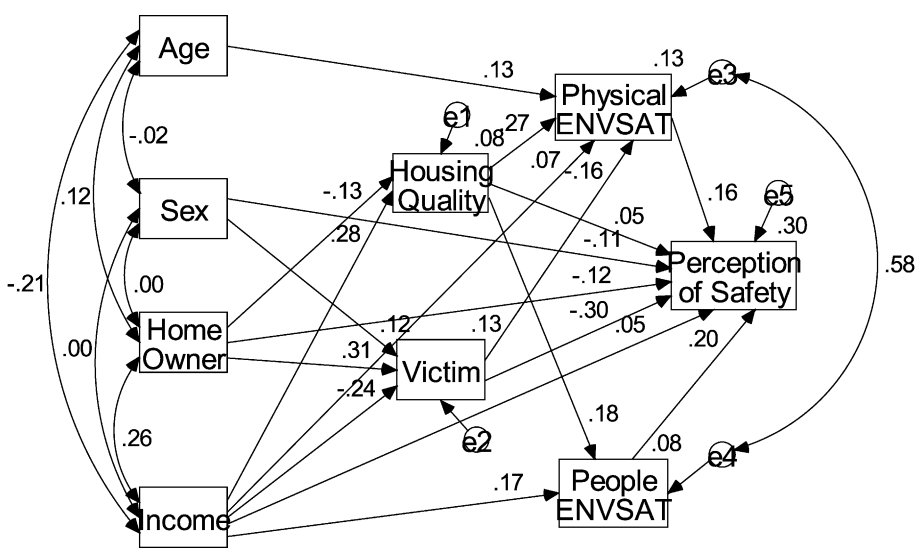

Fig. 1. Path model predicting perceptions of safety. GFI = 0.989, AGFI = 0.956, RMSEA = 0.014, Hoelter = 496, $P < .01$.

regressions, indexes the relative amount of the observed variances and covariances accounted for by a model (Tanaka & Huba, 1989). Whereas a value of one indicates a perfect fit, statisticians generally consider 0.90 a reasonable cutoff value for determining adequate fit (Bentler & Bonett, 1980; Hoyle & Panter, 1995). The GFI value for the present model, which was an acceptable 0.989, allowed the conclusion that the data fit the conceptual model sufficiently well. The adjusted GFI, which considered the degrees of freedom available for testing the model, also approached one at 0.956. The root mean square error of approximation (RMSEA) further indicated a good fit between the model and the data (RMSEA = 0.014, pclose = 0.795). Finally, Hoelter's critical *N* statistic of model fit was also acceptable at the .01 level (Hoelter = 395).

The hypotheses that housing quality might have a direct effect on perceptions of safety and indirect effects through satisfaction with people in the neighborhood and the physical environment were supported (see Fig. 1). Housing quality's direct effect on perception of safety amounted to 40.2 percent of its total effect (see Table 5). Roughly one-third of housing quality's total effect was via satisfaction with the physical environment of the neighborhood and the remaining 27 percent of the total effect was via satisfaction with people in the neighborhood. The hypothesis that victimization might have a direct effect on perception of safety was also supported; however, it did not have an indirect effect through satisfaction with people in the local environment. The expectation that victimization would have an impact on satisfaction with people in the local environment was not supported, although victimization did have a direct effect on satisfaction with the physical environment, which affected levels of perceived safety. About 8 percent of victimization's total effect was via neighborhood satisfaction. This indirect effect was not predicted.

As shown in Fig. 1 and Table 5, three of the four demographic variables had a direct effect on perception of safety. For two of the variables, sex and home ownership, the shares of the total effects attributed to the direct effects were quite large, 75.3 percent and 85.6 percent, respectively. Income, on the other hand, had somewhat large effects on a number of other variables in the model. Almost 43 percent of income's total effect on perception of safety was direct, and about 24 percent was via satisfaction with

Table 5
Decomposition of effects

Variable	Total effect	Direct effects	Indirect effects
Age	0.016	– (0.%)	0.016 (100%) via physical satisfaction
Sex	– 0.158	– 119 (75.3%)	– 0.036 (22.8%) via victim – 0.003 (1.9%) via victim, physical satisfaction
Homeowner	– 0.135	– 0.116 (85.6%)	– 0.008 (5.9%) via victim, physical satisfaction – 0.006 (4.4%) via housing quality, physical satisfaction – 0.005 (3.7%) via housing quality, people satisfaction
Income	0.142	0.055 (38.7%)	0.034 (23.9%) via people satisfaction 0.012 (8.5%) via housing quality, physical satisfaction 0.010 (7.0%) via housing quality, people satisfaction 0.011 (7.8%) via physical satisfaction 0.006 (4.2%) via victim, physical satisfaction 0.014 (9.9%) via housing quality
Housing quality	0.132	0.053 (40.2%)	0.043 (32.6%) via physical satisfaction 0.036 (27.3%) via people satisfaction
Victim	– 0.325	– 0.299 (92.0%)	– 0.026 (8.0%) via physical satisfaction
Satisfaction with physical neighborhood	0.161	0.161 (100%)	– (0%)
Satisfaction with neighborhood people	0.202	0.202 (100%)	– (0%)

people in the neighborhood. Approximately 25 percent of income's effect was due to income's strong positive relationship with housing quality and the latter variable's direct and indirect effect on perception of safety.

Discussion

This research investigated the impact of housing quality and victimization on satisfaction with the local environment and perceptions of safety. These data yielded support for the hypothesis that housing quality had a positive effect on satisfaction with the local physical environment, which had an impact on perceptions of safety. Housing quality also had a direct impact on perceptions of safety as hypothesized. Contrary to the researchers' expectations, victimization experiences did not share a significant relationship with satisfaction with people in the local environment except in a bivariate relationship. Victimization, however, did have a direct impact on perceptions of safety.

This study confirmed past research that had found that deteriorating neighborhood conditions had a negative influence on perceptions of safety (Skogan & Maxfield, 1981). More importantly, this research demonstrated that housing quality had an impact on satisfaction with the physical environment, which was in turn related to perceptions of safety. Past research had consistently demonstrated that deteriorating housing and neighborhood conditions increased concern about neighborhood safety. The present study extended the literature by showing an indirect effect operating through the intervening variable of satisfaction with the physical environment of the local neighborhood. Deteriorated neighborhood conditions increased concerns of safety, but they also decreased levels of satisfaction with the neighborhood physical environment, which raised concerns about safety issues. This follows logically from past research that had shown that both objective and subjective assessments of neighborhood conditions were important (Marans & Rodgers, 1975).

Attitudes about crime had been measured with a variety of indicators such as fear of crime and perception of safety. These variables, according to Walker (1994), correlated with one another. The present data supported this conclusion by showing that social factors such as neighborhood incivilities affected perception of safety similarly to the impact they had on fear of crime. Although fear of crime, which was frequently used in this line of research, and perception of safety were separate concepts, they had significant theoretical and empirical commonalities.

Victimization had no significant relationship with subjective attitudes toward people in the local area, which suggested that negative experiences of victimization were not necessarily generalized to negative attitudes toward fellow residents of the neighborhood. Additionally, the model that was developed demonstrated the influence residential conditions might have on emotions and attitudes concerning the environment and perceptions of safety. The effects of incivilities appeared to play such a central role in safety related issues that they not only influenced attitudes about the physical environment, but impacted satisfaction with people in the local environment as well. Furthermore, the present study confirmed past research that had found a negative relationship between victimization and attitudes concerning safety related issues (Greenburg & Rohe, 1984; Taub et al., 1981).

These data suggested that the perception of deteriorating social control in a local area was influenced by both general neighborhood conditions and conditions of individual residences. This was consistent with Covington and Taylor's (1991) investigation that found that both neighborhood level incivilities and perceived incivilities at the individual level had an impact on fear of crime. They concluded that both subjective assessments (satisfaction with the local physical environment and people in the local environment) and objective conditions (housing and neighborhood quality) influenced attitudes concerning safety. Objective environmental conditions, therefore, should be included in research on perception of safety, not only to determine the effects of the conditions, but also to account for the discrepancies between the actual conditions of the neighborhood and residents' perceptions of those conditions. Failing to account for these differences, as St. John (1987) argued, drew attention to the weakness inherent in relying on subjective measures of neighborhood satisfaction as proxies of neighborhood quality. Subjective interpretations of neighborhoods might conceal the actual effects the physical characteristics of a neighborhood might have and the social dynamics involved in shaping those perceptions.

Attitudes concerning crime were the outcome of a combination of factors such as demographic characteristics, subjective environmental satisfaction, victimization experiences, satisfaction with other residents, and objective housing quality. As Donnelly (1989) pointed out, a common factor that played a role in various influences on fear of crime was the sense of loss of control. The physical and social environments of neighborhoods, which interacted with each other, had substantial influence on feelings of control.

One question pertaining to objective measures of neighborhood quality concerned the degree to which two aspects of place, its layout (design) and its condition, contributed to residents' subjective loss of control and perception of safety. It was widely known that many large-scale housing developments erected during the urban renewal movement of the 1960s failed in part because design problems such as secluded entrances, poor lighting, and insufficient services had injurious consequences for residents' psychosocial quality of life, including heightened anxiety about their personal safety. These design problems also contributed to increases in neighborhood incivilities.

The neighborhoods studied in the present research, on the other hand, represented a cross section of housing and neighborhoods in the Louisville housing market. The housing and neighborhood quality factors that were associated with perception of safety centered on maintenance and upkeep rather than design: the worse the neighborhood conditions, the lower perceived level of safety.

Logan and Molotch (1987) argued that the value of property rested on two factors: as a commodity bought and sold in the marketplace, and as something with utility value, i.e., value for how it was used. When the perception of a property's value lies in how it is used, particularly when used for residential property, land and housing might take on symbolic value and become psychologically rooted in individuals' identity as objects of emotional attachment. These places then become defined as hometowns and communities. Neighborhoods, as sources of identity and social support, were undermined if the neighborhood was in disrepair. Not only might the uncivil neighborhood lose its preciousness (Logan and Molotch's term, p. 17), but also it might threaten residents' feelings of security and control, especially if the quality and use value of the neighborhood begin to affect the commodity value. As a neighborhood declines, its ability to provide psychological comfort lessens, resulting in greater emotional insecurity.

This study provided evidence that urban policymakers should increase their efforts to maintain and rehabilitate neighborhoods. Stronger social programs are needed to assist neighborhoods to minimize future incivilities. Such programs should help residents to feel safer. Additionally, improving local conditions should increase the level of satisfaction with the neighborhood, which, as this study found, had a positive effect on perceived safety. Lower levels of incivilities might also serve to keep actual crime rates down. Future research should investigate, perhaps qualitatively, how residents assign meanings to neighborhood incivilities and how neighborhood conditions impact feelings of control and social identity.

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