HHS Public Access

Author manuscript

J Community Psychol. Author manuscript; available in PMC 2019 January 01.

Published in final edited form as:

J Community Psychol. 2018 January ; 46(1): 79–94. doi:10.1002/jcop.21917.

Neighborhood sexual violence moderates women's perceived safety in urban neighborhoods

Erin E. Hoffman[1], **Tanisha T.M. Mair**[1], **Bronwyn A. Hunter**[2], **Dana M. Prince**[3], and **Jacob Kraemer Tebes**[1]

[1]Yale University School of Medicine [2]University of Maryland [3]Case Western Reserve University

Abstract

Perceptions of neighborhood safety are positively associated with perceptions of neighborhood violence. However, research has yet to examine whether this relationship is moderated by specific types of violence, such as sexual violence, that are more salient for women. Using street-intercept interviews with 343 adults in 9 neighborhoods of a U.S. city with high rates of poverty, unemployment, and crime, we examine the relationship of perceived neighborhood violence to perceived safety in the context of gender while controlling for neighborhood assets that moderate perceptions of neighborhood safety and violence. We hypothesized that gender would moderate the relationship between perceived neighborhood violence and safety, and that women's perceptions of neighborhood safety would be significantly influenced by neighborhood sexual violence, but not other types of violence. Although women and men in these high crime, urban neighborhoods did not differ in their perceptions of neighborhood safety or violence, perceived sexual violence did significantly moderate safety by gender; women's perceptions of neighborhood sexual violence predicted perceived safety in their neighborhood. Importantly, gender did not moderate perceived safety for other types of violence. These results illustrate the importance of taking gender and perceived sexual violence into account to understand neighborhood safety in adults, particularly women.

1 INTRODUCTION

Neighborhoods are important influences on human development and behavior (Henry, Gorman-Smith, Schoeny, & Tolan, 2014). For example, studies have shown that neighborhood structural conditions, such as residential segregation, concentrated poverty, physical and social disorder, crime, and exposure to violence, have harmful effects on health and well-being (Brooks-Gunn, Duncan, & Aber, 1997; Coulton, Pandey, & Chow, 1990; Diez Roux, 2016; Sampson, Raudenbush, & Earls, 1997; Silver, Mulvey, & Swanson, 2002). We also know that specific neighborhood assets, such as neighborhood collective efficacy—which represents a combination of social cohesion and trust among neighbors and informal social controls (Sampson et al., 1997)—can mitigate harmful effects on health by moderating the influence of these structural conditions (Henry et al., 2014; Mujahid, Roux,

Correspondence: jacob.tebes@yale.edu.

Morenoff, & Raghunathan, 2007; Sampson et al., 1997). In addition, improvements in the aesthetic quality and walking environment of a neighborhood can moderate the negative health effects of neighborhood conditions, such as physical and social disorder, by creating safer or more appealing spaces for physical activity (Mason, Kearns, & Livingston, 2013; Miles, 2008; Mujahid et al., 2007).

Neighborhood perceptions of safety can serve as a proxy for certain neighborhood conditions such as crime, exposure to violence, and concentrated poverty (Drakulich, 2013; Ross & Mirofsky, 2001; Rassmussen, Aber, & Bhana, 2004; Thomas, Caldwell, Jagers, & Flay, 2016). Neighborhood safety has also been found to be negatively associated with health and well-being (Burdette, Wadden, Wadden, & Whitaker, 2006; Duncan, Johnson, Molnar, & Azrael, 2009; Zhang, Eamon, & Zhan, 2015), and positively associated with favorable perceptions of the neighborhood walking environment (Brown, Perkins, & Brown, 2004; Foster & Giles-Corti, 2008; Mason et al., 2013), aesthetic quality (Austin, Furr, & Spine, 2002; Kuo & Sullivan, 1998; Miles, 2008), and collective efficacy (Allik & Kearns, 2016; Pearson, Breetzke, & Ivory, 2015; Thomas, Caldwell, & Jagers, 2016).

In this study, we examine perceptions of neighborhood safety in the context of one commonly assessed neighborhood condition—perceived violence—while controlling for neighborhood assets that have been found to moderate the relationship between safety and violence. These include social cohesion and trust among neighbors, informal social control, neighborhood aesthetic quality, and the neighborhood walking environment. In addition, we examine the relationship between neighborhood safety and violence in the context of gender and specific types of neighborhood violence that may be salient for women such as sexual violence to determine whether previous approaches for assessing neighborhood safety have neglected to take into account gender-sensitive perceptions essential to understanding safety.

1.1 Gender and perceived neighborhood safety

There is considerable evidence that women report higher threats to personal safety than men, and that this may be due to gender differences between women and men in the fear of crime (Allik & Kearns, 2016; Hale, 1996; Haynie, 1998; Schaefer, Huebner, & Bynum, 2006; Warr, 1984). In urban neighborhoods with high rates of crime, women also report less personal safety (Allik & Kearns, 2016; Brunton-Smith & Sturgis, 2011; Rasmussen, Aber, & Bhana, 2004). Importantly, gender differences in perceptions of neighborhood safety may not be based on victimization or exposure to crime, but simply knowledge of neighborhood crime, particularly violent crime (Drakulich, 2013; Skogan & Maxfield, 1981).

But what accounts for gender differences in perceived safety? The “vulnerability hypothesis” maintains that women feel less physically able to thwart a potential attack and thus are more concerned about personal safety, including sexual assault (Franklin, Franklin, & Fearn, 2008; Haynes & Rader, 2015; Schafer, Huebner, & Bynum, 2006; Yodanis, 2004). There is some evidence to support this view, although findings are inconclusive (Allik & Kearns, 2016; Haynes & Rader, 2015). A variation of this theory is that men minimize their vulnerability because admitting fear for their safety may threaten traditional conceptualizations of masculinity (Sutton & Farrall, 2005); thus, men report feeling less vulnerable to physical attack.

Another theory is that women are generally more afraid of violent crime, such as robbery and assault because these have the potential to lead to sexual assault. Known as the "shadow of sexual assault theory" (Ferraro, 1996), this theory has also garnered some support (Fisher & Sloan, 2003; Hirtenlehner & Farral, 2014; Lane, Gover, & Dahod, 2009), with one study indicating that controlling for fear of sexual assault among college women was associated with reduced fears of other types of crime (Dobbs, Waid, & Shelley, 2009). Finally, feminist theories of safety and fear of crime have argued that in societies or social groups in which women experience status inequities relative to men, women are more likely to be vulnerable to physical attack, subject to sexist masculine norms, and experience sexual assault (Yodanis, 2004), thus accounting for gender differences in perceptions of safety. Each of these theories emphasizes the salience of sexual assault for women relative to men when considering neighborhood safety.

Most assessments of neighborhood safety usually collapse judgments about the threat or knowledge of sexual assault into a broader category of perceptions of violence that includes other types of violent crime (Henry et al., 2014; Mujahid et al., 2007; Sampson et al., 1997). Thus, studies of perceived safety that examine gender differences may "mask" or "wash out" a key factor in women's feelings of personal safety, particularly in higher crime neighborhoods. This may have important implications for understanding neighborhood safety accurately for men and women and for developing gender-sensitive interventions.

1.2 The current study

In this study, we use hierarchical regression to examine the relationship between perceptions of neighborhood safety and violence by gender in a sample of predominantly Black adults residing in high-crime neighborhoods in a northeastern city in the United States. We control for race and key neighborhood factors known to moderate perceptions of safety, including cohesion and trust among neighbors, informal social control in the neighborhood, neighborhood aesthetic quality, and the neighborhood walking environment. In a second set of regression analyses, we then examine the relationship of four types of neighborhood violence—sexual assault, a fight with a weapon, a gang fight, and a robbery/mugging—to perceived neighborhood safety and examine whether gender moderates these relationships.

Our hypotheses are as follows:

H1: Gender will moderate the relationship between perceived violence and safety, with women reporting higher threats to safety.

H2: Gender will moderate the relationship between perceived sexual violence and safety, with women reporting higher threats to safety, but that there will be no differences in perceived safety between men and women for other types of violence assessed.

2 METHOD

2.1 Participants

Participants include 343 individuals residing in one of nine neighborhoods in a large northeastern city in the United States. Data available for the most recent year in which the

study was conducted indicate that study neighborhoods have a median annual household income less than $27,000; 29%–53% of residents in each neighborhood live below the federal poverty level; unemployment ranges from 14% to 22% across neighborhoods; and crimes per 1,000 residents ranges from 66 to 123, which is over one-half higher than the mean rate for the city overall (Tebes, Matlin, Hunter, Thompson, Prince, & Mohatt, 2015; U.S. Census Bureau, 2013; U.S. Department of Justice, 2013a). Additionally, the rate of sexual assault in the city is almost one (.82) in 1,000, which is more than twice the state's rate (U.S. Department of Justice, 2013b, c). Over one-half of participants are men (N = 213; 61.9%), more than three-quarters are Black (N = 328; 86%), just over 10% Hispanic/Latino (N = 35; 10.7%), and the remaining residents self-identify as White (N = 6; 1.7%), Asian American (N = 6; 1.7%), Native American (N = 5; 1.5%), and other (N = 15; 4.4%). Overall, participants report living in their neighborhood for about 20 years (mean [M] = 19.51, standard deviation [SD] = 55.32), with men living there slightly longer than women (men: M = 22.53, SD = 69.27; women: M = 15.98, SD = 14.70). These demographic characteristics are consistent with those of residents living in the neighborhoods where the study took place.

2.2 Procedure

Street-intercept interviews were completed in nine neighborhoods at three predesignated intersections within one-half to one mile of one another. All interviews were conducted across a 2-year period in the afternoon hours on week-days and weekends and were not done during inclement weather. A total of 22 individuals were trained to complete street intercept interviews for this study. Interviewers ranged between 21 and 59 years of age, with most in their 20s. Interviewer race and ethnicity was not directly assessed, but of the 18 interviewers who volunteered this information, four identified as Black, three Hispanic or Bilingual Spanish, three Asian American, and the remainder White. A total of 17 interviewers (77%) were women and five were men.

Interviews were conducted in English or Spanish using a semistructured protocol that required approximately 8–15 minutes to complete. Residents were eligible for an interview if they were older than 18 years of age and lived within a mile of the interview intersection. Participants used a set of laminated response cards to assist participants in responding to each question or statement read by the interviewer. At the conclusion of the interview, participants were compensated with two tokens for the local transportation system. All interviews were conducted in compliance with university and city institutional review board procedures.

Participants were given the option of not responding to individual perceived violence items, and thus in many instances, data on specific items were incomplete. Because this study examines whether responses to specific types of neighborhood violence moderate perceptions of safety for women and men, we decided not to impute scores for those specific items. Instead, we included only those participants for whom all four violence items were complete in our final sample size (n = 343). However, this left the possibility that those who completed all four items were a select group, possibly different in key ways from those who did not respond to all four violence items. Thus, we examined responses from participants

who completed each of the four perceived items (n = 343) to those who completed one to three items (n = 377) using t-tests on perceptions of neighborhood violence and safety. No differences were found between the two groups for these neighborhood perceptions; in addition, no group differences in completion rates were found by gender. As a result, our final sample size for this study was 343 participants.

2.3 Measures

2.3.1 Perceived safety—Three items from the Neighborhood Scales (Mujahid, Diez Roux, Morenoff, & Raghunathan, 2007) assessed perceptions of safety: "I feel safe walking in my neighborhood day or night," "Violence is not a problem in my neighborhood," and "My neighborhood is safe from crime." All 343 participants responded to each item and rated the items on a 5-point Likert-style scale ranging from 1 (*strongly agree*) to 5 (*strongly disagree*), with a high score indicating greater perceptions of safety. Scores for each item were summed and an average of the sum score was taken, resulting in a mean of 4.89 (standard deviation [*SD*] = 2.64, range: 3–15) and reliability was satisfactory (α = .61).

2.3.2 Perceived violence—The perceived violence items measured participants' perceptions of how often a particular crime occurred in their neighborhood in the past 6 months. There were four violence knowledge questions from the Mujahid et al. (2007) Neighborhood Scales: "Was there a fight in this neighborhood in which a weapon was used?"; "Were there gang fights in this neighborhood?"; "Was there a sexual assault or rape in this neighborhood?"; and "Was there a robbery or mugging in this neighborhood?" All 343 participants responded to each item and rated the items on a 4-point Likert-style scale ranging from 1 (*never*) to 4 (*often*), with high scores indicating perceiving the neighborhood as more violent. Scores for each item were summed, and an average of the sum score was taken. The perceived violence subscale had a mean of 5.61 (*SD* = 3.36, range: 4–16) and reliability was good (α = .80).

2.3.3 Neighborhood control variables—Four subscales from the Mujahid et al. (2007) Neighborhood Scales were controlled for in this study: Neighborhood Social Cohesion and Trust, Neighborhood Informal Social Control, Neighborhood Aesthetic Quality, and Neighborhood Walking Environment. For each subscale, respective items were summed and an average of the sum score was taken.

Neighborhood social cohesion and trust was assessed with five items (e.g., "This is a close knit neighborhood" and "People in this neighborhood can be trusted"). Participants rated the items on a 5-point scale ranging from 1 (*strongly agree*) to (*strongly disagree*), with higher scores indicating greater cohesion and trust. The mean for this subscale was 15.79 (*SD* = 3.56, range: 5–25) and reliability was satisfactory, α = .64.

Neighborhood informal social control comprised five items that posed hypothetical neighborhood situations (e.g., "If there was a fight in front of a house in this neighborhood and someone were being beaten or threatened, how likely is it that a neighbor would break it up?"; "Suppose that because of budget cuts the fire station closest to here was going to be closed down by the city. How likely is it that neighborhood residents would organize to try to do something to keep the fire station open?"). Participants indicated their neighbors'

likely response on a 5-point scale ranging from 1 (*very likely*) to 5 (*very unlikely*), with higher scores indicating greater informal social control. This subscale had a mean of 16.81 (*SD* = 5.10, range: 5–25) and reliability was good, α = .79.

The aesthetic quality of the neighborhood was assessed with six items (e.g., "There is a lot of trash and litter on the street in this neighborhood" and "This neighborhood is attractive"). Participants rate the aesthetic quality of their neighborhood on a 5-point scale ranging from 1 (*strongly agree*) to (*strongly disagree*), with higher scores indicating greater aesthetic quality. This subscale had a mean of 18.35 (*SD* = 3.80, range: 6–30) and reliability was good, α = .76.

Finally, neighborhood walking environment was assessed with nine items (e.g. "It is pleasant to walk in this neighborhood" and "I often see other people walking in this neighborhood"). Participants rated the neighborhood walking environment on a 5-point scale ranging from 1 (*strongly agree*) to (*strongly disagree*), with higher scores indicating more positive environment. This subscale had a mean of 27.94 (*SD* = 5.30, range: 9–45) and reliability was good, α = .70.

2.3.4 Demographics—At the conclusion of the interview, interviewers obtained self-ratings of race and gender using categories consistent with the U.S. Census. For this study, race and gender categories were collapsed into two groups, Black and non-Black, and men and women.

2.4 Analytic approach

We used hierarchical regression analyses in three steps to examine whether gender moderated the relationship between perceived violence and perceived safety. We then examined whether gender moderated perceptions of neighborhood safety when perceptions of neighborhood sexual violence were taken into account. In these analyses, we controlled for race as well as key neighborhood assets and characteristics including social cohesion and trust among neighbors, neighborhood informal social control, neighborhood aesthetic quality, and the neighborhood walking environment. Hierarchical regressions were performed in three steps. First, gender was examined as a moderator between perceived safety and perceived violence. Second, gender was examined as a moderator between perceived safety and each perceived violence item. And third, the interaction between gender and perceived sexual violence was examined in relation to perceived safety.

3 RESULTS

Table 1 shows the correlation matrix of study variables, indicating modest but significant correlations in the expected direction for all variables examined in the regression analyses, except gender and race, which were not significantly related to any variables. Additional descriptive analyses were conducted to examine whether there were significant a priori gender differences in perceived safety and violence. Mean scores for each revealed no differences by gender—safety, $t(234) = 1.53$, $p = .12$; violence, $t(226) = -0.34$, $p = 0.74$—although women reported feeling less safe and perceiving more violence in the neighborhood than men.

3.1 Regression analyses

Next, we used hierarchical regression to examine gender as a moderator of the relationship between perceived violence and safety while controlling for race and neighborhood-level variables. The results are shown in Table 2. We entered race, gender, and neighborhood-level controls into step 1, $F(6, 301) = 15.79$, $p < .001$, $R^2 = 0.24$, and then entered perceived violence into step 2, which resulted in a significant model change, $R^2 = 0.34$, $\Delta F(1, 300) = 21.57$, $p < .001$. For every unit increase in perceived violence, there was a 0.35-point decrease in perceived safety, $b = -0.35$, standard error [*SE*] = 0.04, $t(308) = -6.56$, $p < .001$, 95% confidence interval [CI] [−0.35, −0.19]. Consistent with the descriptive analyses, there was no main effect for gender, and the interaction term for gender and perceived violence (entered in step 3) did not result in a significant model change, $R^2 = 0.34$, $\Delta F(1, 299) = 1.99$, $p = 0.160$.

Next, we examined gender as a moderator of the relationship between each type of perceived violence—sexual violence, a fight with a weapon, a gang fight, a robbery/mugging—and perceived safety. Table 3 shows the results of these analyses. Race, gender, and the neighborhood-level variables were entered into step 1 $F(6, 301) = 15.79$, $p < .001$, $R^2 = 0.24$. Perceived sexual violence was entered in step 2, which resulted in a significant model change, $R^2 = 0.26$, $\Delta F(1, 300) = 9.72$, $p < 0.01$. For every unit increase in perceived sexual violence there was a 0.78-point decrease in perceived safety, $b = -0.16$, $SE = 0.14$, $t(308) = -3.12$, $p < .01$, 95% CI [−0.70, −0.16]. Once again, there was no main effect for gender.

An interaction term for gender and perceived sexual violence was then entered in step 3 and resulted in a significant model change, $R^2 = 0.28$, $\Delta F(1, 299) = 6.06$, $p < .05$, indicating that gender moderated the relationship between perceived sexual violence and perceived safety, $b = -0.29$, $SE = 0.27$, $t(308) = -2.46$, $p = .014$, 95% CI [−1.19, −0.13]. Figure 1 shows this relationship: Women who reported higher perceptions of sexual violence reported less perceived safety than men who also reported higher perceptions of sexual violence. Conversely, women who reported low perceptions of sexual violence reported higher perceived safety when compared to men who reported low perceptions of sexual violence; men who reported both low and high perceptions of sexual violence had similar perceptions of safety. Importantly, as shown in Table 3, gender does not moderate the relationship between any of the other types of violence and safety: fighting with a weapon, $R^2 = 0.34$, $\Delta F(1, 299) = 2.95$, $p = .087$; gang fights, $R^2 = 0.27$, $\Delta F(1, 299) = 0.69$, $p = .407$; and robbery or mugging, $R^2 = 0.33$, $\Delta F(1, 299) = 0.35$, $p = .555$.

4 DISCUSSION

We examined perceptions of neighborhood violence and safety among men and women who live in low-income, high-crime urban neighborhoods. We hypothesized that gender would moderate the relationship between perceptions of violence and safety, and that this relationship would be stronger for women. We also hypothesized that gender would moderate the relationship between perceived neighborhood sexual violence and neighborhood safety, whereby women's perceptions of neighborhood safety would be significantly influenced by their perceptions of neighborhood sexual violence, and that none

of the other types of neighborhood violence would be moderated by gender. With the exception of our initial hypothesis, the results supported our expectations.

Overall, men and women in these high-crime urban neighborhoods did not differ in their overall perceptions of neighborhood safety or violence. However, consistent with our second hypothesis, perceptions of sexual violence significantly moderated perceptions of safety by gender, with women's judgment about neighborhood sexual violence significantly predictive of their perceptions of neighborhood safety. Also as expected, gender did not moderate perceptions of safety for other types of neighborhood violence such as a fight with a weapon, a gang fight, or a robbery/mugging. In combination, these results show the importance of taking gender and perceptions of sexual violence into account when attempting to understand perceived neighborhood safety by adults, particularly women.

Previous literature had shown that outside of their home, women generally feel less safe than men, especially in high-crime urban neighborhoods (Allik & Kearns, 2016; Brunton-Smith & Sturgis, 2011; Haynie, 1998; Lane & Meeker, 2003; Lane et al., 2009; Schafer et al., 2006; Warr, 1984). Yet our study did not show this effect. Our sample of women and men reported very similar perceptions of safety and violence in their neighborhoods. The lack of a moderation effect suggests that overall violence in the community did not impact women in ways we initially expected. One explanation for this finding is that—on average—both women and men in our sample reported living in their neighborhood for 15 years or more, and their long-term residence may have mitigated their perceptions of crime, violence, and safety in their neighborhood. Another possibility is that repeated exposure to community violence may have desensitized both women and men to neighborhood crime and its perceived safety, a finding reported in previous research (Fowler, Tompsett, Braciszeweski, Jaques-Tiura, & Baltes, 2009).

Research by Brunton-Smith and Sturgis (2011) has found that women's fear of crime and perceptions of safety are linked to perceptions of neighborhood disorder (e.g., loitering, arguing among adults). Because these neighborhoods were characterized by high rates of crime and violence, it is possible higher perceptions of disorder in these neighborhoods may have reduced the potential for observing gender differences in neighborhood safety. Future research should examine potential mitigating factors directly such as longevity in the neighborhood, desensitization to rates of neighborhood crime, and perceptions of neighborhood disorder.

Relatedly, we also found that as the relationship between perceived violence and safety in the neighborhood increased, perceptions of safety decreased for both women and men. This finding is consistent with research showing that resident perceptions of neighborhoods as violent tend to covary with neighborhood perceptions of safety (Drakulich, 2013). For our sample, perceptions of safety may have reduced residents' engagement in their neighborhoods in meaningful ways such as use of its walking environment. Neighborhoods perceived to be safe by residents have been linked with psychosocial benefits from participation in neighborhood activities (Mason et al., 2013); such benefits may simply not have accrued to residents in our sample because their neighborhood was not perceived as safe.

As expected, we found that gender moderated the relationship between perceived sexual violence and safety; importantly, however, gender did not moderate the relationship between other types of violence and safety. This suggests that although the vulnerability hypothesis (Franklin et al., 2008; Haynes & Rader, 2015) may have some general applicability regarding gender and perceptions of safety, specific concerns about sexual violence among women—consistent with the shadow of sexual assault theory (Ferraro, 1996)—are also relevant. While some research has suggested that fear of physical violence actually drives women's fear of crime (Hirtenlehner & Farrall, 2014), our study shows that multiple types of violent crime (including physical violence) did not result in differential perceptions of safety among women and men. Clearly, sexual violence is a salient concern among women living in these neighbor-hoods, a finding consistent with prior research (Fisher & Sloan, 2003; Hilinski, 2009; MacMillan, Nierobisz, & Welsh, 2000; Watson, Marszalek, Dispensa, & Davids, 2015). This study, however, was the first study to show the importance of taking specific perceptions of sexual violence into account by gender when assessing neighborhood safety.

Our findings illustrate the relationship of sexual assault to women's feelings of safety in their neighborhood—feelings that are related to physical and mental health (Burdette, Wadden, & Whitaker, 2006; Clark et al., 2007; Duncan et al., 2009; Whitley & Prince, 2005). For example, research has shown that, compared to men, women report walking less when they feel less safe (Foster, Hillsdon, & Thorogood, 2004). If women feel threatened by sexual violence in their neighborhoods, they may also be less likely to become involved in their neighborhood or do so at considerable personal cost. Perceptions of neighborhood safety also are likely to diminish opportunities for engagement with neighborhood social supports.

These findings have programmatic implications for the development of community-level interventions. Our study identifies perceptions of sexual violence as an important component of women's perceptions of safety in their neighborhoods. This suggests that reductions in sexual crime may help women feel safer in their communities. Aspects of a neighborhood's built environment—such as aesthetic quality—have been associated with reduced crime (Kuo & Sullivan, 2001) and, in particular, reductions in domestic violence (Sullivan & Kuo, 1996). Community gardening represents one possible approach to reducing crime by improving a neighborhood's aesthetic quality and creating viable opportunities for supportive engagement among neighborhood residents (Okvat & Zautra, 2011). Participatory interventions aimed at community development may also be effective in improving neighborhood assets such as collective efficacy, which have been linked to reduced crime (Sampson et al., 1997). Aligning perceptions of safety with direct changes in neighborhoods may be a promising approach to addressing feelings of safety as well as perceptions of community violence.

Finally, our findings show that, when studying perceptions of safety or fear of crime, it may be important to separately track items pertaining to sexual violence from other types of violence. This departs from previous research in which perceived violence or exposure to violence aggregates responses across different types of violence (Richters & Saltzman, 1990; Selner-O'Hagan, Kindlon, Buka, Raudenbush, & Earls, 1998). By separating out

different types of violence, including sexual violence, when assessing results by gender, researchers and policymakers are more likely to develop a more gender-sensitive understanding of the effects of neighborhood violence on perceived safety. Future research should also examine what this study did not: Whether specific types of sexual violence other than sexual assault such as indecent exposure or sexual harassment yield differences by gender on the perceived safety of a neighborhood.

4.1 Limitations

The current study has a few limitations. First, the research design was cross-sectional and the data were self-report. However, self-report is a common method for collecting data on perceptions of neighborhood safety and violence. Future research should examine these relationships longitudinally and combine them with objective ratings of neighborhood disorder and decay such as systematic social observations (Sampson et al., 1997), to complement resident perceptions of neighborhood safety and violence. This study also did not include data on participants' direct experiences with crime, including the specific types of violence examined. One's direct experience with specific types of crime and violence clearly affect perceptions of violence and safety in communities. Future research may consider incorporating such information to determine how differences in experience, including by gender, influence perceptions of safety and violence. Finally, our measure for assessing perceptions of violence included only four items rather than a wider range of community violence. Despite this limitation, there were clear differences between men and women on how sexual violence moderated perceptions of safety as compared to the three other violence items.

4.2 Conclusion

In summary, the present study offers new knowledge about how assessments of violence should take into account gender differences in perceptions of sexual assault because gender differences are related to perceived neighborhood safety. Our study distinguished between different types of community violence (i.e., sexual violence, fight with weapon, gang fight, and a robbery/mugging) and found gender-moderated perceived safety based on perceptions of sexual violence. That gender moderated perceived neighborhood safety under these conditions, when no differences in safety were observed by gender, illustrates how important it is to take perceptions of sexual violence into account to understand neighborhood safety.

Acknowledgments

This work was funded, in part, by grants from the Robert Wood Johnson Foundation, the Thomas Scattergood Foundation, the City of Philadelphia, and the National Institute of Drug Abuse (T32 DA 019426, Tebes, PI)

References

Allik M, Kearns A. "There goes the fear": Feelings of safety at home and in the neighborhood: The role of personal, social, and service factors. Journal of Community Psychology. 2016; 45(4):543–563. DOI: 10.1002/jcop.21975

Austin DM, Furr LA, Spine M. The effects of neighborhood conditions on perceptions of safety. Journal of Criminal Justice. 2002; 30(5):417–427. DOI: 10.1016/S0047-2352(02)00148-4

Brown BB, Perkins DD, Brown G. Incivilities, place attachment and crime: Block and individual effects. Journal of Environmental Psychology. 2004; 24(3):359–371. DOI: 10.1016/j.jenvp.2004.01.001

Brunton-Smith I, Sturgis P. Do neighborhoods generate fear of crime? An empirical test using the British crime survey. Criminology. 2011; 49(2):331–369. DOI: 10.1111/j.1745

Burdette HL, Wadden TA, Whitaker RC. Neighborhood safety, collective efficacy, and obesity in women with young children. Obesity. 2006; 14(3):518–525. DOI: 10.1038/oby.2006.67 [PubMed: 16648624]

Clark C, Ryan L, Kawachi I, Canner MJ, Berkman L, Wright RJ. Witnessing community violence in residential neighborhoods: A mental health hazard for urban women. Journal of Urban Health. 2007; 85(1):22–38. DOI: 10.1007/s11524-007-9229-8 [PubMed: 17965940]

Diez Roux AV. Neighborhoods and health: What do we know? What should we do? American Journal of Public Health. 2016; 106(3):430–431. DOI: 10.2105/AJPH.2016.303064 [PubMed: 26885960]

Dobbs RR, Waid CA, Shelley T. Explaining fear of crime as fear of rape among college females: An examination of multiple campuses in the United States. International Journal of Social Inquiry. 2009; 2(2):105–122.

Drakulich KM. Perceptions of the local danger posed by crime: Race, disorder, informal control, and the police. Social Science Research. 2013; 42:611–632. DOI: 10.1016/j.ssresearch.2012.12.012 [PubMed: 23521984]

Duncan DT, Johnson RM, Molnar BE, Azrael D. Association between neighborhood safety and overweight status among urban adolescents. BMC Public Health. 2009; 9:1–9. DOI: 10.1186/1471-2458-9-289 [PubMed: 19121216]

Ferraro KF. Women's fear of victimization: Shadow of sexaul assault? Social Forces. 1996; 75(2):667–690. DOI: 10.1093/sf/75.2.667

Fisher BS, Sloan JJ. Unraveling the fear of victimization among college women? Is the "shadow of sexual assault" hypothesis supported? Justice Quarterly. 2003; 20(3):633–659. DOI: 10.1080/07418820300095641

Foster C, Hillsdon M, Thorogood M. Environmental perceptions and walking in English adults. Journal of epidemiology and community health. 2004; 58(11):924–928. DOI: 10.1136/jech.2003.014068 [PubMed: 15483308]

Foster S, Giles-Corti B. The built environment, neighborhood crime and constrained physical activity: An exploration of inconsistent findings. Preventitive Medicine. 2008; 47(3):241–251. DOI: 10.1016/j.ypmed.2008.03.017

Fowler PJ, Tompsett CJ, Braciszewski JM, Jacques-Tiura AJ, Baltes BB. Community violence: A meta-analysis on the effect of exposure and mental health outcomes of children and adolescents. Development and Psychophathology. 2009; 21:227–259. DOI: 10.1017/S0954579409000145

Franklin TW, Franklin CA, Fearn NE. A multivariate analysis of the vulnerability, disorder, and social integration models of fear of crime. Social Justice Research. 2008; 21(2):204–227. DOI: 10.1007/s11211-008-0069-9

Hale C. Fear of crime: A review of the literature. International Review of Victimology. 1996; 4(2):79–150. DOI: 10.1177/026975809600400201

Haynes SH, Rader NE. Concerns about crime for self and others: An analysis of individual and contextual effects. Criminal Justice Review. 2015; 40(3):303–321. DOI: 10.1177/0734016814568011

Haynie DL. The gender gap in fear of crime, 1973–1994: A methodological approach. Criminal Justice Review. 1998; 23(1):29–50. DOI: 10.1177/073401689802300103

Hilinski CM. Fear of crime among college students: A test of the shadow of sexual assault hypothesis. American Journal of Criminal Justice. 2009; 34(1):84–102. DOI: 10.1007/s12103-008-9047-x

Hirtenlehner H, Farrall S. Is the 'shadow of sexual assault' responsible for women's higher fear of burglary? British Journal of Criminology. 2014; 54:1167–1185. DOI: 10.1093/bjc/azu054

Kuo FE, Sullivan WC. Environment and crime in the inner city: Does vegetation reduce crime? Environment and Behavior. 2001; 33:343–367. DOI: 10.1177/0013916501333002

Kuo FE, Sullivan WC, Coley RL, Brunson L. Fertile ground for community: Inner-city neighborhood common spaces. American Journal of Community Psychology. 1998; 26(6):823–851. DOI: 10.1023/A:1022294028903

Lane J, Gover AR, Dahod S. Fear of violent crime among men and women on campus: The impact of perceived risk and fear of sexual assault. Violence and Victims. 2009; 24(2):172–192. DOI: 10.1891/0886-6708.24.2.172 [PubMed: 19459398]

Lane J, Meeker JW. Women's and men's fear of gang crimes: Sexual and nonsexual assault as perceptually contemporaneous offenses. Justice Quarterly. 2003; 30(2):337–371. DOI: 10.1080/07418820300095551

MacMillan R, Nierobisz A, Welsh S. Experiencing the streets: Harassment and perceptions of safety among women. Journal of Research in Crime and Delinquency. 2000; 37(3):306–322. DOI: 10.1177/0022427800037003003

Mason P, Kearns A, Livingston M. "Safe going": The influence of crime rates and perceived crime and safety on walking in deprived neighbourhoods. Social Science & Medicine. 2013; 91:15–24. DOI: 10.1016/j.socscimed.2013.04.011 [PubMed: 23849234]

Miles R. Neighborhood disorder, perceived safety, and readiness to encourage use of local playgrounds. American Journal of Preventative Medicine. 2008; 34(4):275–281. DOI: 10.1016/j.amepre.2008.01.007

Mujahid MS, Roux AVD, Morenoff JD, Raghunathan T. Assessing the measurement properties of neighborhood scales: From psychometrics to ecometrics. American Journal of Epidemiology. 2007; 165(8):858–867. DOI: 10.1093/aje/kwm040 [PubMed: 17329713]

Okvat HA, Zautra AJ. Community gardening: A parsimonious path to individual, community, and environmental resilience. American Journal of Community Psychology. 2011; 47(3–4):374–387. DOI: 10.1007/s10464-010-9404-z [PubMed: 21222153]

Pearson AL, Breetzke G, Ivory V. The effect of neighborhood recorded crime on fear: Does neighborhood social context matter? American Journal of Community Psychology. 2015; 53:170–179. DOI: 10.1007/s10464-015-9741-z

Rasmussen A, Aber MS, Bhana A. Adolescent coping and neighborhood violence: Perceptions, exposure, and urban youths' efforts to deal with danger. American Journal of Community Psychology. 2004; 33(1–2):61–75. DOI: 10.1023/B:AJCP.0000014319.32655.66 [PubMed: 15055755]

Richters JE, Saltzman W. Survey of exposure to community violence: Self-report version. Rockville, MD: National Institute of Mental Health; 1990.

Ross CE, Mirowsky J. Neighborhood disadvantage, disorder, and health. Journal of Health and Social Behavior. 2001; 42(3):258–276. [PubMed: 11668773]

Sampson RJ, Raudenbush SW, Earls F. Neighborhoods and violent crime: A multilevel study of collective efficacy. Science. 1997; 277(5328):918–924. DOI: 10.1126/science.277.5328.918 [PubMed: 9252316]

Schafer JA, Huebner BM, Bynum TS. Fear of crime and criminal victimization: Gender-based contrasts. Journal of Criminal Justice. 2006; 34(3):285–301. DOI: 10.1016/j.jcrimjus.2006.03.003

Selner-O'Hagan MB, Kindlon DJ, Buka SL, Raudenbush SW, Earls FJ. Assessing exposure to violence in urban youth. Journal of Child Psychology and Psychiatry. 1998; 39(2):215–224. DOI: 10.1111/1469-7610.00315 [PubMed: 9669234]

Skogan WG, Maxfield MG. Coping with crime: Individual and neighborhood reactions (NCJ Publication No. 078899). 1981. Retrieved from https://www.ncjrs.gov/App/Publications/abstract.aspx?ID=78899

Sullivan W, Kuo F. USDA Forest Service Southern Region, Technology Bulletin No. 4, Forestry Report R8-FR55. Athens: 1996. Do trees strengthen urban communities, reduce domestic violence?.

Sutton RM, Farrall S. Gender, socially desirable responding and fear of crime. The British Journal of Criminology. 2005; 45(2):212–224. DOI: 10.1093/bjc/azh084

Tebes JK, Matlin SL, Hunter BA, Thompson AB, Prince DM, Mohatt N. Porch light program: Final evaluation report. 2015. Retrieved from http://consultationcenter.yale.edu/

Porch_Light_Program_Final_Evaluation_Report_Yale_June_2015_Optimized_218966_1095_5_v3.pdf

Thomas A, Caldwell CH, Jagers RJ. It's in my hood: Understanding African American boys' perception of safety in their neighborhoods. Journal of Community Psychology. 2016; 44(3):311–326. DOI: 10.1002/jcop.21768

U.S. Census Bureau. American fact finder. 2013. Retrieved from https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t

U.S. Department of Justice, Federal Bureau of Investigation. Crime in the United States by metropolitan statistical area, 2013. 2013a. Retrieved from https://ucr.fbi.gov/crime-in-the-u.s/2013/crime-in-the-u.s.-2013/tables/6tabledatadecpdf/table-6

U.S. Department of Justice, Federal Bureau of Investigation. Offenses known to law enforcement by state by city, 2013. 2013b. Retrieved from https://ucr.fbi.gov/crime-in-the-u.s/2013/crime-in-the-u.s.-2013/tables/table-8/table_8_offenses_known_to_law_enforcement_by_state_by_city_2013.xls/view

U.S. Department of Justice, Federal Bureau of Investigation. Crime in the United States by state, 2013. 2013c. Retrieved from https://ucr.fbi.gov/crime-in-the-u.s/2013/crime-in-the-u.s.-2013/tables/5tabledatadecpdf/table_5_crime_in_the_united_states_by_state_2013.xls

Warr M. Fear of victimization: Why are women and the elderly more afraid? Social Science Quarterly. 1984; 65(3):681–702. DOI: 10.1177/026975809600400201

Watson LB, Marszalek JM, Dispenza F, Davids CM. Understanding the realtionships among White and African American women's sexual objectification experiences, physical safety anxiety, and psychological distress. Sex Roles. 2015; 72:91–104. DOI: 10.1007/s11199-014-0444-y

Whitley R, Prince M. Fear of crime, mobility and mental health in inner-city. London: Social Science and Medicine. 2005; 61(8):1678–1688. DOI: 10.1016/j.socscimed.2005.03.044 [PubMed: 15908089]

Yodanis CL. Gender inequality, violence against women, and fear: A cross-national test of the feminist theory of violence against women. Journal of Interpersonal Violence. 2004; 19:655–675. [PubMed: 15140317]

Zhang S, Eamon MK, Zhan M. Neighborhood disorder, perceptions of neighborhood social capital, and maternal stress: Exploration of a mediating mechanism. Journal of Community Psychology. 2015; 43(3):278–295. DOI: 10.1002/jcop.21678

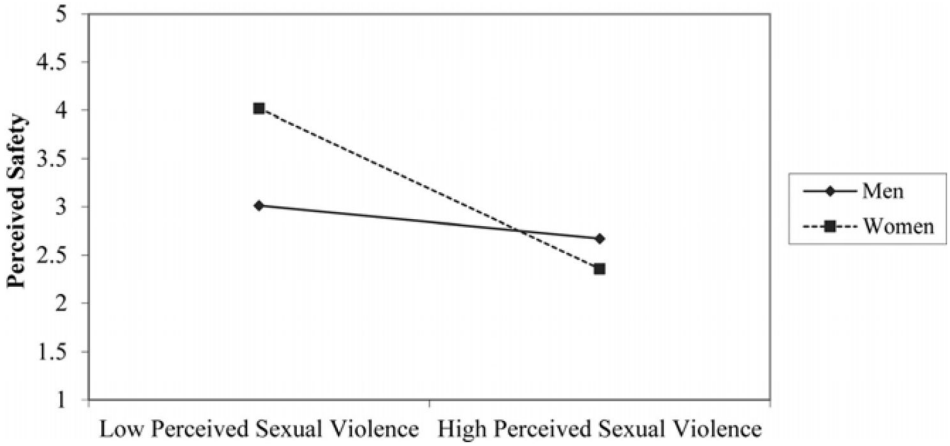

Figure 1.
Interaction term with gender moderating perceived sexual violence and perceived safety

Table 1

Intercorrelations of study variables (N = 339)

	Race	Gender	Social Cohesion & Trust	Informal Social Control	Aesthetic Quality	Walking Environment	Perceived Violence	Perceived Safety
Race								
Gender	−0.06							
Social Cohesion & Trust	0.09	−0.05						
Informal Social Control	0.04	−0.03	0.42**					
Aesthetic Quality	0.06	−0.10	0.45**	0.39**				
Walking Environment	0.02	−0.08	0.48**	0.38**	0.55**			
Perceived Violence	0.10	0.02	−0.34**	−0.23**	−0.34**	−0.41**		
Perceived Safety	−0.06	−0.09	0.37**	0.32**	0.33**	0.45**	−0.49**	

Note.

*p < .05.

**p < .01.

J Community Psychol. Author manuscript; available in PMC 2019 January 01.

Table 2

Hierarchical regression analysis for demographic, neighborhood factors, and perceived violence predicting perceived safety (N = 308)

Step	Variable	*B*	*SE B*	*β*	*t*	R^2	ΔR^2	95% CI
1						.24	.24***	
	Race	−.87	.46	−.10	−1.88			[−1.77, .04]
	Gender	−.33	.27	−.06	−1.20			[−.86, .21]
	Social Cohesion & Trust	.12**	−.05	−.17	−2.79			[.04, .21]
	Informal Social Control	.06	.03	.11	1.91			[−.00, .11]
	Aesthetic Quality	.03	.04	.04	.63			[−.06, .11]
	Walking Environment	.13***	.03	.27	4.28			[.07, .19]
2						.34	.10***	
	Race	−.81	.43	−.09	−1.87			[−1.65, .04]
	Gender	−.42	.25	−.08	−1.64			[−.92, .08]
	Social Cohesion & Trust	.09*	.04	.12	2.03			[.00, .17]
	Informal Social Control	.06*	.03	.11	2.10			[.00, .11]
	Aesthetic Quality	.00	.04	.01	.19			[−.07, .09]
	Walking Environment	.08**	.03	.17	2.76			[.02, .14]
	Perceived Violence	−.27***	.04	−.35	−6.56			[−.35, −.19]
3						.34	.004	
	Race	−.81	.43	−.09	−1.89			[−1.66, .04]
	Gender	.57	.75	.11	.77			[−.90, 2.04]
	Social Cohesion & Trust	.09*	.04	.13	2.13			[.01, .17]
	Informal Social Control	.06*	.03	.12	2.15			[.01, .11]
	Aesthetic Quality	.01	.04	.02	.26			[−.07, .09]
	Walking Environment	.08**	.03	.17	2.73			[.02, .14]
	Perceived Violence	−.22***	.05	−.28	−4.12			[−.32, −.11]
	Gender x Perceived Violence	−.10	.07	−.20	−1.41			[−.25, .04]

Note. SE = standard error; CI = confidence interval.

J Community Psychol. Author manuscript; available in PMC 2019 January 01.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 3

Item-level hierarchical regression of indicators of neighborhood violence predicting perceived safety (n = 308)

Perceived violence item	Step	Variable	*B*	*SE B*	*β*	*t*	R^2	ΔR^2	95% CI
Rape/assault	1						.24	.24***	
		Race	−.87	.46	−.10	−1.88			[−1.77, .04]
		Gender	−.33	.27	−.06	−1.20			[−.86, .21]
		Social Cohesion & Trust	.12**	−.05	−.17	−2.79			[.04, .21]
		Informal Social Control	.06	.03	.11	1.91			[−.00, .11]
		Aesthetic Quality	.03	.04	.04	.63			[−.06, .11]
		Walking Environment	.13***	.03	.27	4.28			[.07, .19]
	2						.26	.25**	
		Race	−.94*	.45	−.10	−2.06			[−1.83, −.04]
		Gender	−.32	.27	−.06	−1.21			[−.85, .20]
		Social Cohesion & Trust	.11*	.04	.16	2.53			[.03, .20]
		Informal Social Control	.06*	.03	.12	2.04			[.00, .12]
		Aesthetic Quality	.02	.04	.03	.48			[−.06, .10]
		Walking Environment	.11***	.03	.23	3.62			[.05, .18]
		Rape/Assault	−.43**	.14	−.16	−3.12			[−.70, −.16]
	3						.28	.26*	
		Race	−.93*	.45	−.10	−2.07			[−1.83, −.05]
		Gender	.96	.58	.18	1.64			[−.19, 2.11]
		Social Cohesion & Trust	.12**	.04	.17	2.73			[.03, .21]
		Informal Social Control	.06*	.03	.12	2.16			[.01, .12]
		Aesthetic Quality	.03	.04	.04	.72			[−.05, .11]
		Walking Environment	.10**	.03	.21	3.32			[.04, .17]
		Rape/Assault	−.17	.17	−.06	−.96			[−.51, .18]
		Gender x Rape/Assault	−.66*	.27	−.29	−2.46			[−1.19, −.13]

Perceived violence item	Step	Variable	*B*	*SE B*	*β*	*t*	R^2	ΔR^2	95% CI
Fight with weapon	1						.24	.24***	
		Race	−.87	.46	−.10	−1.88			[−1.77, .04]
		Gender	−.33	.27	−.06	−1.20			[−.86, .21]
		Social Cohesion & Trust	.12**	−.05	−.17	−2.79			[.04, .21]
		Informal Social Control	.06	.03	.11	1.91			[−.00, .11]
		Aesthetic Quality	.03	.04	.04	.63			[−.06, .11]
		Walking Environment	.13***	.03	.27	4.28			[.07, .19]
	2						.33	.09***	
		Race	−.74	.43	−.08	−1.71			[−1.59, .11]
		Gender	−.49	.26	−.09	−1.93			[−1.00, .01]
		Social Cohesion & Trust	.09*	.04	.12	2.10			[.01, .17]
		Informal Social	.06	.03	.13	2.31			[.10, .19]
		Control							
		Aesthetic Quality	.02	.04	.03	.46			[−.06, .10]
		Walking Environment	.09**	.03	.19	3.03			[.03, .15]
		Fight with Weapon	−.82***	.13	−.33	−6.40			[−1.07, −.57]
	3						.34	.007	
		Race	−.76	.43	−.08	−1.77			[−1.61, .09]
		Gender	.71	.74	.13	.95			[−.76, 2.17]
		Social Cohesion & Trust	.09*	.04	.13	2.21			[.01, .18]
		Informal Social Control	.06*	.03	.12	2.20			[.01, .11]
		Aesthetic Quality	.02	.04	.03	.50			[−.06, .10]
		Walking Environment	.09**	.03	.19	3.10			[.03, .15]
		Fight with Weapon	−.62***	.17	−.25	−3.61			[−.96, −.28]
		Gender x Fight with Weapon	−.41	.24	−.24	−1.72			[−.88, .06]
Gang fight	1						.24	.24***	
		Race	−.87	.46	−.10	−1.88			[−1.77, .04]

Perceived violence item	Step	Variable	*B*	*SE B*	*β*	*t*	R^2	ΔR^2	95% CI
		Gender	−.34	.27	−.06	−1.20			[−.86, .21]
		Social Cohesion & Trust	.12**	−.05	−.17	−2.79			[.04, .21]
		Informal Social Control	.06	.03	.11	1.91			[−.00, .11]
		Aesthetic Quality	.03	.04	.04	.63			[−.06, .11]
		Walking Environment	.13***	.03	.27	4.28			[.07, .19]
	2						.27	.25**	
		Race	−.85	.45	−.09	−1.87			[−1.74, .04]
		Gender	−.31	.27	−.06	−1.18			[.84, .21]
		Social Cohesion & Trust	.11*	.04	.15	2.43			[.20, .19]
		Informal Social Control	.05	.03	.11	1.92			[−.00, .11]
		Aesthetic Quality	.02	.04	.04	.57			[−.06, .12]
		Walking Environment	.12***	.03	.24	3.76			[.06, .18]
		Gang Fights	−.42**	.12	−.18	−3.48			[−.66, −.18]
	3						.27	.25	
		Race	−.83	.45	−.09	−1.85			[−1.73, .06]
		Gender	.08	.55	.02	.15			[−.99, 1.16]
		Social Cohesion & Trust	.11*	.04	.15	2.43			[.02, .19]
		Informal Social Control	.06	.03	.11	1.94			[−.00, .11]
		Aesthetic Quality	.02	.04	.04	.59			[−.06, .11]
		Walking Environment	.12***	.03	.24	3.74			[.06, .18]
		Gang Fights	−.34*	.15	−.15	−2.21			[−.65, −.04]
		Gender x Gang Fights	−.20	.24	−.09	−.83			[−.66, .27]
Robbery/mugging	1						.24	.24***	
		Race	−.87	.46	−.10	−1.88			[−1.77, .04]
		Gender	−.33	.27	−.06	−1.20			[−.86, .21]
		Social Cohesion & Trust	.12**	−.05	−.17	−2.79			[.04, .21]
		Informal Social Control	.06	.03	.11	1.91			[−.00, .11]

Perceived violence item	Step	Variable	*B*	*SE B*	*β*	*t*	R^2	ΔR^2	95% CI
		Aesthetic Quality	.03	.04	.04	.63			[−.06, .11]
		Walking Environment	.13***	.03	.27	4.28			[.07, .19]
	2						.33	.09***	
		Race	−.73	.43	−.08	−1.68			[−1.58, .12]
		Gender	−.45	.25	−.08	−1.78			[−.96, .05]
		Social Cohesion & Trust	.10*	.04	.14	2.39			[.02, .18]
		Informal Social Control	.05	.03	.10	1.81			[−.00, .10]
		Aesthetic Quality	.00	.04	.00	−.06			[−.08, .08]
		Walking Environment	.09**	.03	.20	3.18			[.04, .15]
		Robbery/Mugging	−.75***	.12	−.33	−6.37			[−.98, −.52]
	3						.33	.001	
		Race	−.74	.43	−.08	−1.70			
		Gender	−.11	.64	−.02	−.17			[−1.36, 1.15]
		Social Cohesion & Trust	.10*	.04	.14	2.42			[.02, .19]
		Informal Social Control	.05	.03	.10	1.85			[−.00, .11]
		Aesthetic Quality	.00	.04	.00	−.06			[−.08, .08]
		Walking Environment	.09**	.03	.19	3.16			[.04, .15]
		Robbery/Mugging	−.69***	.15	−.31	−4.61			[−.99, −.40]
		Gender x Robbery/Mugging	−.13	.22	−.07	−.59			[−.56, .30]

Note. SE = standard error; CI = confidence interval.

* $p < .05$.

** $p < .01$.

*** $p < .001$.