EXTENDED ABSTRACT

INTRODUCTION

Ecological models (Bronfenbrenner, 1974) recognize that individuals exist within larger social and physical environments that impact their health and well-being. The neighborhood stress process framework (Aneshensel, 2010; Pearlin et al., 1981) is one such model. Among other applications, it provides a framework for understanding relationships between unfavorable neighborhood characteristics and individual-level psychosocial factors (i.e., stressors, psychosocial resources). The model posits that neighborhood disadvantage (ND) can contribute to residents' exposure to stressors (e.g., perceived neighborhood physical disorder) that undermine well-being or influence access to psychosocial resources (e.g., social support) protective of mental health.

A study by Ross (2000) and another by Franzini and colleagues (2005) found that disadvantaged neighborhoods characterized by poor or low-income residents and female-headed households were associated with higher levels of perceived neighborhood disorder. ND also can stigmatize residents in a manner that constrains the opportunities available to them. Kirscheman and Neckerman (1991) found that people identified to be from disadvantaged neighborhoods as indicated by their addresses were less likely to be hired by employers in Chicago. In situations such as these, limited employment opportunities due to discrimination in the labor market can lead to financial strain and other stressors. ND also can erode psychosocial resources beneficial to mental health, such as social cohesion and mastery. Studies have shown that ND in the form of crime and poverty are negatively associated with social cohesion and collective efficacy (Furstenberg, 1993; Ross et al., 2001). Geis and Ross (1998) found that residents of poor neighborhoods perceived higher levels of disorder in their neighborhoods, which in turn compromised sense of mastery.

Gender differences in neighborhood effects on stressors and psychosocial resources has, however, received little research attention. The impact of ND on psychosocial factors may be greater for women than men because women have greater exposure to the neighborhood considering that they are over-represented among homemakers and the elderly (La Gory & Fitzpatrick, 1992; NCHS, 2011; USBLS, 1990). Additionally, relative to men, women especially seek out social ties, have closer social networks, and are more involved in their networks (Lepore, 1992; Schuster et al., 1990; Turner & Marino, 1994). As a result, women may be more sensitive to unfavorable neighborhood conditions that threaten these resources. The first hypothesis (H1) examined in this study states that multiple indicators of ND are positively associated with stressors, and the magnitude of the associations is significantly greater among women than men. The second hypothesis (H2) posits that multiple indicators of ND are negatively associated with psychosocial resources, and the magnitude of the associations is significantly greater among women than men.

METHODS

Data

Respondent-level cross-sectional data come from the Health and Retirement Study (HRS), a biannual longitudinal survey of a national probability sample of U.S. adults over age 50 comprised of five birth cohorts who entered the study at different times beginning in 1992 (http://hrsonline.isr.umich.edu). Community dwelling respondents were selected using a four stage area probability design (Juster & Suzman, 1995). Most baseline interviews were conducted face-to-face in English or Spanish by trained interviewers, and follow-up interviews were generally administered by telephone. In 2006, a random half of the HRS sample was administered an enhanced face-to-face interview that included a self-administered leave-behind "psychosocial questionnaire" (PQ). The other half of the sample received the same enhanced interview in 2008. This study is based on all five HRS cohorts and includes data from the main 2006/2008 HRS interviews, fixed demographic data (e.g., gender) collected at each cohort's baseline interview, and

data from the 2006 and 2008 PQ. HRS data are linked to neighborhood data from the 2000 U.S. Census. Analyses are performed within a multilevel framework where level-2 is neighborhood, defined as census tract, and level-1 is the individual. The study is restricted to urban neighborhoods.

Sample

The analytic sample (n = 8,248) was derived as follows. Starting with a total 2006 HRS sample of 18,469 respondents, 4,456 respondents were ineligible for the analytic sample because they: (a) were not part of the HRS probability sampling frame (i.e., they had a zero or missing sample weight because of age ineligibility), (b) were not in one of the five HRS cohorts based on birth year (i.e., not born before 1954), or (c) they were not eligible for the PQ (i.e., missing or not selected to receive the PQ in 2006/2008). Of the remaining eligible respondents, 7,562 and 6,451 respectively comprised the 2006 and 2008 half samples. In the combined sample (n = 14,013), 5,216 respondents were excluded in the following sequence for these reasons: not completing the PQ, completing the PQ by proxy, missing a census tract id or having an invalid one, residing in a non-urban census tract, and missing a PQ sampling weight. An additional 549 respondents were excluded for having missing data on key study measures. The sequential drops resulted in a combined 2006/2008 analytic sample of 8,248 respondents.

Measures

The measures used in this study include individual-level sociodemographic characteristics, measures of neighborhood disadvantage, and scales representing stressors and psychosocial resources. Unless otherwise noted, scale scores were created by averaging across the items to maintain the scoring metric of the response codes. Some study measures were log-transformed to address skew. Missing values were imputed with the mean for continuous measures if no more than half of the items were missing. The mode was imputed for categorical variables. Otherwise, the measure was scored as missing.

Dependent variables – stressors (level-1)

Perceived neighborhood physical disorder is a 4-item scale. Respondents indicated the extent to which they agreed with statements such as "vandalism and graffiti are a big problem in this area" or "people would be afraid to walk alone in this area after dark" (Marmot et al., 2003). Scores were rated on a 7-point scale ranging from 1 for less neighborhood disorder to 7 for more disorder: Cronbach's alpha (α)=.65.

Financial strain is a 2-item scale (Clarke et al., 2008; Williams et al., 1997) that measures respondents' financial status through the statements: (a) how satisfied are you with you/your family's present financial situation (rated on a 5-point scale: 1=completely satisfied to 5=not at all satisfied); and (b) how difficult is it for you/your family to meet monthly payments on your/your family's bills (rated on a 5-point scale: 1=not at all difficult to 5=completely difficult); α=.79.

Everyday discrimination is a 5-item scale that asks respondents if they have experienced situations such as "you are treated with less courtesy or respect than other people," or "you receive poorer service than other people at restaurants or stores" (Williams et al., 1997). Frequency was rated on a 6-point scale from 1=never to 6=almost every day (range 1 to 6, α=.79).

Dependent variables – psychosocial resources (level-1)

Perceived neighborhood social cohesion is a 4-item scale. Respondents indicated the extent to which they agreed with statements such as "I really feel part of this area" or "if you were in trouble, there are lots of people in this area who would help you" (Marmot et al., 2003). Scores were rated on a 7-point scale ranging from 1 for less neighborhood social cohesion to 7 for more cohesion; α=.82.

Positive social support was measured using three items that assess support from a spouse/partner, children, other family, and friends. As pertains to each of the four sources of support, respondents were asked: "how much do they really understand the way you feel about things," " how much can you rely on them if you have a serious problem," and "how much can you open up to them if you need to talk about your worries." Answers were rated on a 4-point scale: 1=not at all to 4=a lot; α=.81 to .86 across the sources of support. An average positive social support scale was created by adding respondents' scores across all sources and then dividing by four – the number of sources of support. Respondents (n = 112) with missing values on all sources of support were declared missing.

Sense of mastery is assessed by a 5-item scale. Respondents indicated the extent to which they agreed with statements like "I can do just about anything I really set my mind to" or "when I really want to do something, I usually find a way to succeed at it" (Pearlin & Schooler, 1978). Responses were rated on a 6-point scale: 1=strongly disagree to 6=strongly agree; α=.89.

Focal independent variables – neighborhood disadvantage (level-2)

Neighborhood is operationalized as 2000 U.S. Census tract data. Respondents (n=8,248) are distributed across 3,316 Census tracts. There are between 1 and 78 people per tract (average 5.99). This study employs one composite measure and seven single indicators of neighborhood disadvantage (ND). The composite measure is neighborhood socioeconomic disadvantage (NSD), which is operationalized as a principal component of neighborhood proportion: individuals age 25 years or older without a high school diploma, unemployed persons age 16 years or older, households receiving public assistance income, and individuals living below the federal poverty level. Other measures of ND include neighborhood proportion: vacant housing units, female-headed households with own children under 18 years of age, and non-family households defined as "a person living alone or a householder who shares the home with nonrelatives only; for example, with roommates or an unmarried partner" (Simmons & O'Neill, 2001, p. 2).

Sociodemographic control variables (level-1)

Sociodemographic characteristics are included as control variables because they represent social and economic status positions associated with stressors and psychosocial resources. The variables include continuously measured: age, education, household income, and household wealth. Categorical measures include: gender, race/ethnicity, employment status, marital status, and residential tenure (moved in the past six years/all others).

Data Analysis

Analyses were weighted to account for the complex design of the HRS sample. Hierarchichal linear regression models were estimated using HLM 6.02 (Raudenbush et al., 2004). I began by estimating an intercept-only or null model to examine whether the dependent variable varied significantly at the neighborhood level. Estimates from the null model were used to calculate the intraclass correlation – a statistic that assesses the proportion of total variance in the dependent variable that is present at the neighborhood level (Raudenbush & Bryk, 2002). The second step examined the sociodemographic correlates of the outcome measures. Next, the association between the focal independent- and dependent- variable was assessed net of sociodemographic control variables. Finally, cross-level interactions (e.g., the effect of NSD by gender on social support) were examined controlling for sociodemographic characteristics.

RESULTS

Gender differences in neighborhood effects: The two hypotheses examined in this study assessed whether the effect of neighborhood disadvantage on stressors (hypothesis H1) and

psychosocial resources (H2) varied significantly by gender. Consistent with H1, living in a neighborhood with more vacant housing units was associated with higher levels of perceived neighborhood physical disorder more so for women than men. However, neighborhood proportion households receiving public assistance income had a larger impact on perceived neighborhood physical disorder among men than women. NSD and neighborhood proportion vacant housing units were more damaging to women's than men's perceptions of neighborhood social cohesion, providing support for hypotheses H2.

Among 45 interactions tested (not counting three involving the components of NSD when NSD had a statistically significant conditional effect) four or 8.9% were statistically significant and three (6.6%) were in the expected direction. Findings from this study show that overall, with a few notable exceptions, the impact of neighborhood disadvantage on stressors and psychosocial resources does not vary by gender.

Main effects (other than interaction effects) of neighborhood disadvantage: Findings on the main effects of neighborhood disadvantage on study outcomes showed that NSD and neighborhood proportion non-family households were positively associated with perceived neighborhood physical disorder and everyday discrimination. Additionally, middle-aged and older adults living in neighborhoods with more female-headed households reported higher levels of all three stressors and lower levels of perceived neighborhood social cohesion and social support. Residents of neighborhoods with many non-family households reported more experiences of everyday discrimination and perceived more disorder in their neighborhoods. Higher neighborhood proportion non-family households also undermined sense of mastery and perceived neighborhood social cohesion.

DISCUSSION

Consistent with expectations, living in a neighborhood with more vacant housing units was associated with higher levels of perceived neighborhood disorder, and the effect was greater among women than men. Vacant housing units can attract illicit activities such as drug dealing; or they can function as the gathering places where criminal activities are planned (Hannon & Cuddy, 2006; Spelman, 1993; Vigil, 1987). Women experience greater fear of victimization relative to men (Elliot, 2001; Rosenfield & Mouzon, forthcoming), and as a result, they may be especially observant of neighborhood conditions that generate disorder and increase risk of victimization, such as deserted buildings. The finding that living in a neighborhood with more households that receive public assistance income is associated with higher levels of perceived neighborhood physical disorder more so for men than women was unexpected. This result should be viewed with caution considering that a Bonferroni correction for multiple tests suggested that it may represent a type I error.

The detrimental effect on perceived neighborhood social cohesion of NSD and neighborhood proportion vacant housing units was larger for women than men. Women's perceptions of neighborhood social cohesion appears to be more sensitive to neighborhood disadvantage possibly because, relative to men, women are more involved in forming social ties, maintaining social networks, and participating in reciprocal exchange (Lepore, 1992; Schuster et al., 1990; Turner & Marino, 1994). NSD and having many vacancies in the neighborhood can threaten these activities that promote social cohesion. Study results highlight the need for upstream interventions that revitalize impoverished neighborhoods through activities that develop economic and social capital. Such neighborhood-level interventions are especially attractive because they would reach large numbers of people, that is, the community at large including women for whom neighborhood disadvantage is more noxious.

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