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The Home and the 'Hood: Associations between Housing and Neighborhood Contexts and Adolescent Functioning

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Abstract

Adolescents from low-income families face various opportunities and constraints as they develop, with possible ramifications for their well-being. Two contexts of particular importance are the home and the neighborhood. Using adolescent data from the first two waves of the Three City Study (N = 1,169), this study explored associations among housing problems and neighborhood disorder with adolescents' socioemotional problems, and how these associations varied by parental monitoring and gender. Results of hierarchical linear models suggest that poor quality housing was most predictive of the functioning of girls and of adolescents with restrictive curfews, whereas neighborhood disorder was a stronger predictor for boys. Implications for future research on associations between housing and neighborhood contexts and adolescent development are discussed.

Keywords

housing problems; neighborhood disorder; adolescence; gender; parental monitoring; anxiety; depression; somatization; delinquency

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Adolescents from low-income urban families, who are disproportionately minority (Murry, Hill, Witherspoon, Berkel, & Bartz, in press), face myriad challenges and constraints across various contexts in their lives. These adolescents are more likely than their more economically advantaged peers to live in inadequate housing (Holupka & Newman, 2011), attend under-resourced schools (Harding, 2003), and reside in high-poverty (Sampson & Morenoff, 1997) and racially or ethnically segregated and isolated (Laureau & Goyette, 2014) neighborhoods. Research suggests that these contextual threats leave low-income minority adolescents vulnerable to a variety of adverse outcomes, such as emotional (e.g., Graber & Sontag, 2009) and behavioral (e.g., Goodnight et al., 2012) problems, risky sex behaviors (e.g., Ramirez-Valles et al., 2002), and academic failure (e.g., Connell & Halpern-Felsher, 1997). Adolescence, especially early adolescence, is an important developmental period for studying the role of contextual threats because the salience of different contexts may shift as youth begin to mature biologically, cognitively, and socioemotionally. Although psychopathology among adolescents is not normative, mental health problems such as depression and anxiety, and deviant behaviors such as delinquency and substance use tend to emerge during this period (Graber & Sontag, 2009). Two contexts that may be especially relevant to low-income minority adolescents' adjustment are the home and the neighborhood. Associations between the neighborhood context and adolescent development have been studied in some depth (Leventhal, Dupéré, & Brooks-Gunn, 2009), but the role of housing for adolescent adjustment has been examined far less (Leventhal & Newman, 2010).

Accordingly, the current study aims to explore the relationship between two important contexts, housing and neighborhoods, and adolescents' emotional and behavioral outcomes using data from a representative sample of low-income, urban, predominately minority families. In the remainder of this section, we begin by briefly discussing the conceptual framework we use as a backdrop for the current research. Next, we discuss housing problems as a specific dimension of the housing context that research identifies as potentially relevant to low-income youth. We follow with a discussion of neighborhood disorder, an aspect of the neighborhood ecology with well-documented associations with adolescent well-being (Sampson, Morenoff, & Gannon-Rowley, 2002). We then examine the literature on parental monitoring and gender as possible moderators of the relationship between housing quality and neighborhood disorder and adolescent adjustment. We end by outlining our hypotheses for the study.

Conceptual Framework

This study is grounded in Bronfenbrenner's bioecological model (1979), which highlights the influence of multiple contexts (e.g., families, neighborhoods, peers) on development. More recent perspectives view development as occurring through a bidirectional, mutually influential relationship between the individual and his or her contexts (Lerner, 2006). Of relevance for this study is that the salience of certain contextual features over others is thought to depend in large part on the individual's developmental period; for example, because of young adolescents' increasing pursuit of autonomy and identity exploration (e.g., Côté, 2009), their development may be more strongly linked with extrafamilial contexts, such as the neighborhood, than young children's development (Steinberg & Morris, 2001).

In addition, these models posit that characteristics of contexts themselves (e.g., family, home, and neighborhood) may interact to influence development, and moreover, that individual characteristics such as gender may modify associations between contexts and children's development.

Housing Contexts and Low-Income Adolescents' Adjustment

The study of neighborhood contexts has a long tradition in criminological research and has become a popular focus of developmental inquiry on adolescents in recent years (Leventhal et al., 2009), but less is known about the associations between a more proximal context, housing, and adolescents' adjustment (Leventhal & Newman, 2010). The little research available, however, suggests that the home environment plays a central role in adolescent development (e.g., Bradley, 2002), particularly in relation to adolescents' emotional and behavioral outcomes (Coley et al., 2013).

Low-income minority families in high-poverty neighborhoods often have limited choice when it comes to housing, forcing them to make tradeoffs between different features of the housing unit and surrounding environment (Newman, 2008). For example, parents might choose to live in a safe neighborhood, but may be able to afford only a poor quality home in that neighborhood (Popkin, Harris, & Cunningham, 2002). Poor quality housing contexts may include structural deficiencies, such as lack of heat or plumbing, and maintenance deficiencies, such as exposed electrical wires or peeling paint (Bradley, in press).

Drawing from the literature on how family income and resources may influence children's well-being (e.g., Conger & Donnellan, 2007), Leventhal and Newman (2010) argue that housing may be a major, but overlooked, source of stress and instability for low-income families. Living in low quality housing may be associated with emotional distress or somatic problems in adolescents (Evans, 2006; Molnar et al., 2004). Aspects of the housing context that may be particularly stress inducing for adolescents include lack of safety (e.g., broken floorboards, doors that do not lock), comfort (e.g., no heat, presence of vermin), or privacy (e.g., crowding, household chaos; e.g., Evans, 2006). Adolescents in low quality housing also may seek to escape their immediate surroundings by spending more time out of the home, which could provide greater opportunities for unsupervised peer interactions and engagement in problematic behaviors (Akers et al., 2012).

A small body of research demonstrates associations between housing quality and children's socioemotional development, with much of it focusing on younger children and on physical health, notably asthma and cognitive deficits (e.g., Jellyman & Spencer, 2008). One recent study assessing multiple aspects of low-income families' housing contexts found that poor housing quality was associated with children's and adolescents' emotional and behavioral problems (Coley et al., 2013). This study did not take neighborhood characteristics into account, however, leaving open the question of how this more distal context may be related to adolescents' socioemotional functioning above and beyond their housing quality.

Neighborhood Contexts and Low-Income Adolescents' Adjustment

The neighborhood context is also relevant for adolescents' development, given young people's tendency to spend increasing amounts of time with peers and outside the home

(Steinberg & Morris, 2001). Although all young people may be influenced to some extent by their surroundings, it is important to explore how adolescents living in low-income neighborhoods interact with and are affected by their neighborhoods. Low-income urban minority adolescents often live in neighborhoods marked by high poverty, violence, and disorder (Booth & Crouter, 2001), but variation in their neighborhood characteristics clearly exists as well (Brody et al., 2001).

Associations between residence in an impoverished neighborhood and deleterious adolescent outcomes, such as emotional and behavioral problems, are well documented (see Leventhal et al., 2009, and Sampson et al., 2002, for reviews), and several theories delineate aspects of poor neighborhoods that may be particularly influential for adolescents' adjustment. For example, various researchers working from a social disorganization perspective (Bursik & Grasmick, 1999; Sampson, Raudenbush, & Earls, 1997; Shaw & McKay, 1969) argue that neighborhood poverty undermines social connections and shared norms, creating conditions conducive to crime and disorder. Without a general consensus about what is and is not acceptable conduct, residents (especially youth) may begin to take part in delinquent acts because there is insufficient social control preventing them from doing so (Berg & Loeber, 2011). Young people may be further inclined toward delinquency if they spend time among deviant peer networks, which in disordered neighborhoods have more freedom to engage in antisocial activities (Bursik & Grasmick, 1999; Chung & Steinberg, 2006).

Neighborhood disorder also may be associated with adolescents' emotional functioning (Roche et al., 2007). Signs of disorder may be interpreted as a lack of resident concern about the well-being of the community or perceived as indicative of low social support and cohesion among residents (Hurd et al., 2013). These perceptions could spur feelings of hopelessness (Bolland, Lian, & Formichella, 2005) and low self-efficacy (Dupéré, Leventhal, & Vitaro, 2012), which, in turn, are associated with depressive or anxious symptoms. Moreover, adolescents exposed to neighborhood violence, a common component of disorder (Sampson et al., 1997), may develop mental health problems in response to perceptions that their surroundings are unsafe (e.g., Slopen, Fitzmaurice, Williams, & Gilman, 2012).

Moderating Role of Parental Monitoring

Links between both housing problems and neighborhood disorder and adolescent outcomes may be modified by more proximal factors, such as parent-adolescent relationships. Risk and resilience models (e.g., Cicchetti, 2010) suggest that different combinations of parenting practices and contextual features are differentially associated with adolescent well-being. Various parental monitoring strategies, such as implementing restrictive curfews or obtaining knowledge of youth's whereabouts and peer interactions, may buffer the deleterious consequences of neighborhood disorder by limiting adolescents' exposure to antisocial activities (Jarrett, 1999; Simons et al., 2002). Indeed, research reveals that youth fare better when parental monitoring is high in disordered neighborhoods (Rankin & Quane, 2002). However, other research suggests that greater neighborhood disorder is associated with more lenient parental monitoring (Byrnes et al., 2011). Lax monitoring in socially

disorganized neighborhoods may strengthen the relationship between adolescents' exposure to adverse neighborhood influences and their socioemotional problems (Chung & Steinberg, 2006).

On the other hand, close monitoring may have unintended consequences for adolescents living in poor quality homes. Parents who impose greater monitoring (specifically, more restrictive curfews) by requiring adolescents to stay inside the home or come home early may intensify their children's exposure to potentially problematic housing conditions. Among adolescents whose parents do not monitor them as closely (e.g., less restrictive curfew), spending more time outside of the home may weaken associations between housing problems and their functioning.

Moderating Role of Gender

Housing problems and neighborhood disorder also may be differentially associated with outcomes for boys and for girls. Several lines of research suggest that boys spend more time in their neighborhoods than girls do. For example, patterns of leisure activity differ by gender and may contribute to differential exposure to the housing and neighborhood contexts. Specifically, boys generally spend their free time out of the home with their peers, whereas girls' leisure activities may be centered in the home, in part to avoid exposure to negative neighborhood conditions such as unwanted sexual attention (Clampet-Lundquist, Edin, & Kling, 2011; Popkin, Leventhal, & Weismann, 2010; Zuberi, 2012).

Moreover, deep-seated gender roles might further exacerbate these contextual differences and their relationship to boys' and girls' adjustment. For instance, boys may experience pressure to act "tough" and masculine in their neighborhoods, even when they feel unsafe (Schafer, Huebner, & Bynum, 2006); such patterns are well documented in the ethnographic literature on low-income, urban minority youth (e.g., Anderson, 1999). On the other hand, girls may face expectations to contribute to household and childcare tasks, feeling that responsibilities around the home are core to their identities (Burton, 2007; Galambos, Berenbaum, & McHale, 2009).

These gendered patterns of activity and expectations may contribute to boys' being more exposed to—and presumably more strongly influenced by—neighborhood conditions than their female counterparts, leading to stronger links between neighborhood characteristics and boys' well-being (Fagan et al., 2007). Conversely, we would hypothesize that the housing context may be more influential for girls' than boys' adjustment. These differential contextual exposures may have divergent consequences for girls and boys with regard to well-documented gender differences in socioemotional and behavioral outcomes that emerge in adolescence. That is, girls tend to have greater incidences of internalizing problems (such as anxiety, depression, and somatization), potentially in part as a result of housing and family circumstances, whereas boys tend to display more externalizing problems (such as antisocial or delinquent behavior), which in some cases may be due in part to exposure to delinquent and criminal behaviors in the neighborhood (e.g., Graber & Sontag, 2009). Thus, it is important to consider a range of emotional and behavior problems when examining the link between housing and neighborhood contexts and adolescents' adjustment.

Current Study

This study aims to investigate links between physical housing problems and neighborhood disorder and low-income, predominately minority adolescents' adjustment and to assess whether parental monitoring and gender modify these links. In terms of housing problems, we expect that adolescents living in homes with more problems will display more socioemotional problems, that more restrictive curfews will amplify associations among housing problems and adolescents' functioning, and that these relationships will be stronger for girls than boys. Parental knowledge may not moderate the association between housing problems' and adolescents' well-being because it has less bearing on their amount of exposure to the home than curfews. With regard to neighborhood disorder, we anticipate that adolescents living in more disordered neighborhoods will have more socioemotional problems, that more restrictive curfews and greater parental knowledge will mitigate associations between neighborhood disorder and adolescents' functioning, and that these relationships will be stronger for boys than girls.

This study builds on existing research in several important ways. First, it explores links between adolescents' development and their housing contexts, which is an understudied topic. Second, it considers a broad range of adolescent developmental outcomes in relation to housing beyond physical health. Third, it expands on existing research on adolescent development in neighborhood contexts by examining the moderating role of parental monitoring and gender. Fourth, it employs a representative sample of adolescents from low-income urban families in Boston, Chicago, and San Antonio, permitting generalizability to this population. Finally, we rely on rigorous analytic methods to address selection issues inherent in housing and neighborhood research as described in the next section.

Method

Analyses drew on data from the main survey component of *Welfare, Children, and Families: A Three City Study*, a longitudinal, multi-method study of the well-being of lowincome families and communities in the wake of welfare reform (for a detailed description of the research design see Winston et al., 1999). The Three City Study survey began in 1999 with a stratified random sample of over 2,400 low-income (< 200% of the federal poverty line) households drawn from moderate- and high-poverty (>20% families in poverty) neighborhoods in Boston, Chicago, and San Antonio. One focal child was included from each family, split into child (aged 0 to 4 years) and adolescent (10 to 14 years) cohorts. The child's biological mother (89%) or primary caregiver (11%; all referred to as "mothers") was the primary respondent in each family. Participants were interviewed three times over a six-year period, in 1999 (overall response rate of 74%); 2000–2001 (88% retention rate); and 2005 (80% retention rate of Wave 1 respondents).

Sample

The sample for the current study included Waves 1 and 2 of the adolescent cohort because by Wave 3 of the study, a significant proportion of the sample (13%) no longer lived at home. Adolescents averaged 12.5 years of age at Wave 1, and just under half were male. Forty-one percent of adolescents identified as African American, 6% were European

American, and 53% were Hispanic. Twenty-three percent of mothers were immigrants, who were largely (88%) from Hispanic countries. Other characteristics denote the low human and financial capital of adolescents' families. Specifically, at Wave 1, 45% of mothers had a high school degree or less, 45% were employed, and 4% were married (see Table 1 for complete sample descriptives). The average number of participants per neighborhood (census tract) was 5.5 (SD = 6.8, range 1 - 60), which is sufficient for multilevel modeling.

To address missing data due to attrition and item nonresponse (level of missingness across variables ranged from 0% to 13%), multiple imputation using a bootstrap-based Expectation Maximization Bayesian (EMB) algorithm (Honaker & King, 2010) in R was employed to create 10 complete data sets. All analyses incorporated probability weights, which adjust for the sampling framework and differential response, allowing inferences to low-income adolescents living in low-income neighborhoods in Boston, Chicago, and San Antonio.

Measures

All individual-level measures were collected during in-home interviews and completed in English or Spanish with the Automated Computer Assisted Survey Interview (ACASI) method to improve the validity of reporting on sensitive topics (Turner et al., 1998).

Individual and family covariates-Individual adolescent characteristics assessed included age (in years) and gender (girl = 0; boy = 1). It is essential to address the role of selection when seeking to isolate links between housing problems and neighborhood disorder with adolescent development. Although it was beyond the scope of the current study to comprehensively model selection into housing and neighborhoods, we attended to a broad range of maternal and family factors associated with housing and neighborhood selection in prior research (e.g., Duncan, Connell, & Klebanov, 1997) to more narrowly delineate links between the quality of these contexts with adolescents' functioning. Unless otherwise noted, these characteristics were measured at Wave 1. Maternal characteristics included mother's age (in years); whether the mother was the biological mother of the focal child (0 = no; 1 = yes); mother's race or ethnicity (Hispanic and European American, with African American as omitted referent); immigrant status (0 = no; 1 = yes); educational attainment (less than a high school degree and some college, with high school degree or GED as omitted referent); marital status (married and cohabiting, with single as omitted referent); and current employment status (unemployed = 0; employed = 1). In addition, we examined family income-to-needs (total annual family income divided by the official poverty threshold for the respective household size for the respective year) and welfare receipt in the past year (no welfare = 0; welfare = 1). Finally, each family's city of residence (Boston and San Antonio, with Chicago as omitted referent) was included in analyses to adjust for local housing markets and policies across the three cities.

Housing and neighborhood covariates—A variety of housing and neighborhood characteristics also were included as covariates in the models. Housing characteristics assessed at Wave 1 included the number of people living in the home; housing affordability (less than 30% of family income spent on housing and more than 50% of income, with 30% to 50% of income as omitted referent); housing type (government-assisted rental and

homeownership, with private rental as omitted referent); and residential stability (at least one move between Waves 1 and 2; stayed = 0; moved = 1). Neighborhood disadvantage was measured at Wave 1 using a composite of 2000 US Census data on neighborhood rates of poverty and unemployment (r = .79).

Physical housing problems—Physical housing problems were assessed at Wave 1 with both mother and interviewer reports. Eight items were reported by mothers, addressing structural, maintenance, and environmental deficiencies such as leaking roofs, broken windows, rodents, heater or stove not working, or peeling paint or exposed wiring, with items similar to those used in the American Housing Survey. Four additional items were assessed by interviewer observational ratings from the Home Observation for Measurement of the Environment (HOME) Short Form (Bradley & Caldwell, 1979), addressing unsafe or unclean environments. Items were coded to delineate the presence or absence of each housing problem and summed into a count variable of total problems.

Neighborhood disorder—Neighborhood disorder was assessed using mothers' reports from the full sample about seven different neighborhood problems on a scale of one ("not a problem") to three ("a big problem"). The neighborhood problems included abandoned houses, burglaries or thefts, assaults or muggings, gangs, open drug dealing, unsupervised children, and unsafe streets during the daytime. Individuals' responses were averaged to the census tract level using a three-level rating scale analysis (items nested within respondents nested within neighborhoods). Level 2 in this analysis controlled for individual respondent characteristics (city, home ownership status, years at current residence, age, race or ethnicity, marital status, employment status, educational attainment, and psychological distress). Empirical Bayes (EB) residuals from this three-level analysis were used as scale scores in all analyses. EB estimates take into account the reliability with which the neighborhood-level effects than would be attained by simply aggregating individuals' scores within neighborhoods (Raudenbush & Bryk, 2002). The three-level reliability for the neighborhood disorder scale was 0.74.

Parental monitoring—Two aspects of parental monitoring were assessed at Wave 1 by adolescent reports (Steinberg et al., 1991). The first scale was composed of two items asking about curfews (e.g., how late youth is allowed to stay out on weekends; r = .66). Participants specified the curfew time using a scale from one to nine, with higher scores reflecting more restrictive curfews; the scale was standardized for analysis. The second scale entailed the average of five questions regarding parental knowledge (e.g., parent's awareness of what adolescent does with free time; $\alpha = 0.70$). Participants responded using a Likert-type scale ranging from one to three, with higher total scores reflecting more parental knowledge.

Adolescent functioning—Adolescent reports on their emotional well-being and delinquency were obtained at Waves 1 and 2. Emotional well-being was evaluated by the Brief Symptom Inventory-18 (BSI-18; Derogatis, 2000), which asked how much respondents had been distressed or bothered by symptoms in the past seven days using a 5-point scale (0 = "not at all" to 4 = "extremely"). The BSI-18 assesses three aspects of

psychological distress: anxious symptoms (e.g., feeling tense or keyed up), depressive symptoms (e.g., feeling no interest in things), and somatic symptoms (e.g., faintness or dizziness). Items were averaged into a total score for each subscale, with higher scores indicating more symptoms ($\alpha_{1-2} = .76-.83$). Of note, analyses were run using the total score (aggregate of anxious, depressive, and somatic subscales); results were similar in nature to those of the subscales, but distinct enough to merit examining the subscales individually.

Adolescents also reported on their engagement in 12 delinquent behaviors using items drawn from the National Longitudinal Study of Youth (NLSY; Borus et al., 1982) and the Youth Deviance Scale (Gold, 1970; used by Steinberg et al., 1991). Items reflected whether adolescents had engaged in property crime (e.g., stole from a store or person), violence (e.g., got into a serious physical fight), and substance use (e.g., smoked pot or hash) in the prior year. A total count of delinquent activities was used, and higher scores indicated greater delinquency.

Analytic Strategy

This study employed two-level multilevel models for emotional functioning (in which we used linear models due to the continuous nature of the variables) and delinquency (a count variable with many zeros, which was modeled with a Poisson regression). By accounting for variation both within and between neighborhoods, hierarchical models typically yield more reliable estimates of neighborhood effects than non-nested designs (Raudenbush & Bryk, 2002). Level 1 modeled variation between individuals within neighborhoods, and Level 2 modeled variation between neighborhoods. Each model controlled for adolescent (age and gender), maternal and family (biological mother; mother's age, race or ethnicity, immigrant status, educational attainment, marital status, employment status, and welfare status; family income-to needs ratio), housing (household size, housing cost, government assistance, homeownership, mobility), and neighborhood (neighborhood disadvantage) characteristics previously found to be associated with youth functioning and housing and neighborhood contexts. Models also adjusted for the Wave 1 assessment of the respective outcome measure, providing important additional controls over potential omitted variable bias. At both Level 1 and Level 2, all of the continuous variables and interactions were grand mean centered and dichotomous indicators were uncentered.

A multi-step modeling procedure investigated how housing problems and neighborhood disorder were associated with each measure of adolescent adjustment and how these associations varied by parental monitoring and gender. Model 1 assessed main effects of housing problems and neighborhood disorder, and controlled for parental monitoring (curfew and parental knowledge), gender, and other covariates. Model 2 assessed the moderating roles of the monitoring scales and gender by adding interactions between housing problems and monitoring, housing problems and gender, neighborhood disorder and monitoring, and neighborhood disorder and gender. Simple slopes tests were performed on all significant interactions to determine the nature of the moderations (Preacher, Curran, & Bauer, 2006). We also tested three-way interactions between housing problems and neighborhood disorder, and monitoring, but results were non-significant and thus are not presented (available upon request).

Results

Descriptive Analyses

Table 2 presents standardized, weighted bivariate correlations among adolescent functioning and housing problems, neighborhood disorder, and parental monitoring. Results indicate that housing and neighborhood characteristics were, for the most part, significantly associated with adolescent functioning in expected directions, although correlations were very small. Neighborhood disorder, however, was associated with neither mental health symptoms nor delinquency, which was unexpected. There was also a modest correlation between the housing problems and neighborhood disorder measures, which may be due to the fact that the housing measure was assessed at the individual (maternal) level, whereas the disorder measure was aggregated to the neighborhood level.

Multilevel Models

The models were run on each outcome of interest: anxious symptoms, depressive symptoms, somatic symptoms, and delinquency. We review results by outcome.

Anxious symptoms—In Model 1, housing problems and neighborhood disorder were not significantly associated with adolescents' anxious symptoms (see Table 3), although consistent with prior research, girls reported greater anxiety than boys (0.06 *SD*s higher; d = -0.30). In Model 2, a significant interaction between housing problems and the curfew subscale emerged, but simple slopes analyses indicated that the interaction was only significant at rather extreme values, so results should be interpreted with caution (see Figure 1). Specifically, among adolescents with very restrictive (+2*SD*) curfews, the number of housing problems was positively associated with their anxious symptoms. Among adolescents with very lax curfews (-2*SD*), however, the number of housing problems was not significantly associated with their anxious symptoms. The interaction between housing problems and gender was non-significant, as were all interactions with neighborhood disorder.

Depressive symptoms—Model 1 yielded no significant associations between housing problems or neighborhood disorder and adolescents' depressive symptoms (although, as with anxious symptoms, girls reported more depressive symptoms than boys, SD = 0.06; d = -0.39). In Model 2, there was a significant interaction between housing problems and gender, revealing that housing problems were significantly associated with depressive symptoms for girls, but this association was non-significant for boys (see Figure 2). A significant interaction between neighborhood disorder and gender also emerged; a simple slopes test indicated that higher neighborhood disorder was associated with more depressive symptoms for boys, but not girls (see Figure 3). In addition, there was a significant interaction between housing problems and curfew such that, as with anxious symptoms (although not at such extreme values), among adolescents with restrictive (+1*SD*) curfews, more housing problems were predictive of more depressive symptoms. Again, the number of housing problems was not significantly associated with the depressive symptoms of adolescents with more lax curfews (-1*SD*).

Somatic symptoms—In Model 1, more housing problems were significantly associated with adolescents' greater somatic symptoms (d = -0.26). Model 2 revealed that this association was moderated by gender, with simple slopes indicating that housing problems were associated with heightened somatic symptoms for girls only, similar to the interaction with depressive symptoms. There was also a significant interaction between housing problems and curfew; among adolescents with restrictive (+1*SD*) curfews (but not lax ones), more housing problems were associated with more somatic symptoms, again comparable to the anxious and depressive symptoms interactions.

Delinquency—In Model 1, more housing problems were significantly associated with adolescents' greater delinquency (d = 0.14). There were no significant two-way interactions.

Discussion

This study explored associations between adolescents' socioemotional adjustment and two contexts highly relevant to adolescents, housing and neighborhoods. We attempted to fill gaps in the literature by examining an understudied context for adolescent development, housing, and how both housing and neighborhoods were moderated by parental monitoring and gender. This work points to several ways in which housing conditions and neighborhood contexts may be linked to adolescents' functioning, and specifically, how these links may differ for boys and girls.

In terms of housing problems, we anticipated that adolescents living in homes with more problems would display more emotional and behavioral problems and that girls would be harmed more than boys. The first hypothesis was partially met: More housing problems were associated with adolescents' greater delinquency. This finding is consistent with prior research linking aspects of housing quality, notably lead exposure, with children's aggression and attention problems (Leventhal & Newman, 2010). Although our study cannot account for prior housing exposure, it is possible that the observed association between housing problems and adolescents' delinquency could be explained, at least in part, by early exposure.

As anticipated, housing problems were found to be differentially associated with adolescents' well-being by gender such that housing problems were linked to girls'—but not boys'—depressive and somatic complaints. These findings are in line with prior research on gendered patterns of leisure time, notably among low-income, minority youth, indicating that girls may spend more of their free time in the home than boys (Zuberi, 2013). It is also possible that gender roles encourage girls to stay at home more than boys to help parents care for siblings, cook, and clean (e.g., Morris et al., 2001). As such, girls living in low quality homes may experience more emotional distress and behavioral problems than their male counterparts by virtue of their greater exposure to problematic housing conditions (e.g., Burton, 2007).

Indeed, our results on interactions between curfews and housing contexts support these arguments about the role of time at home. As expected, we found that the association between housing problems and emotional functioning was stronger among youth with more

restrictive curfews, that is, those who were presumably spending more time in the home than out, than among their peers with less restrictive curfews. Thus, parental control (i.e., enforcing a restrictive curfew) may at times have the unintended consequence of creating, rather than diminishing, psychosocial problems. It is also possible that stricter curfews may indicate more authoritarian parenting strategies overall. This attempt by parents to control their adolescents may engender parent-adolescent conflict, which, in the absence of warmth, could contribute to adolescent socioemotional problems (Steinberg, 1991). Although there is research to suggest that authoritarian parenting may not be adversely associated with African American and Hispanic youth's developmental outcomes (e.g., Smetana, 2000), minority youth do not necessarily *benefit* from this type of parenting, and other research finds that it is associated with poor psychosocial adjustment across racial and ethnic groups, particularly in the absence of warmth (e.g., Costigan, Cauce, & Etchison, 2007; Steinberg et al., 2001).

With regard to neighborhood disorder, we predicted that greater neighborhood disorder would be associated with more adolescent socioemotional problems, and that this association would be stronger for boys than for girls. Only our hypothesis concerning gender was met: Greater neighborhood disorder was associated with more depressive symptoms among boys only. This finding is consistent with documented gender differences in socialization, within and outside the home, which may intensify in adolescence and may contribute to differential exposure to extra-familial contexts such as neighborhoods and peers (Galambos, 2009).

Regarding parental monitoring, we did not find support for our hypotheses that greater monitoring (both parental knowledge and curfews) would be protective against neighborhood disorder and thus be associated with better adolescent functioning, particularly among boys. One possible explanation for our null results is that the parental monitoring measures might not have captured the most relevant aspects of the construct given our hypotheses. Others have argued that parental knowledge is driven by youth disclosure rather than active parental behavior (Stattin & Kerr, 2000), but we were not able to test youth disclosure with the data available. Measures examining the amount of time spent in the home or neighborhood may be better suited to elucidating associations between exposure to the home or neighborhood context and adolescents' adjustment. It is also possible that parental knowledge and curfews may be insufficient to combat the harmful consequences of exposure to a highly disordered neighborhood (Byrnes et al., 2011). In other words, regardless of the extent to which parents monitor youth's whereabouts, adolescents are still vulnerable to neighborhood disorder via their daily routines, such as walking to and from school. It is worth noting that we found no main effects for neighborhood disorder, which may be due to the fact that families lived in high-poverty neighborhoods and the "low disorder" characterization is only in relation to other neighborhoods sampled. In general, we found very few significant main effects in our results, possibly because most of the associations we explored were moderated by gender or monitoring.

Despite our incorporation of multiple reports and prospective longitudinal data, this study has several limitations beyond those already noted. First, this study is correlational, and

although we controlled for selection bias to the extent possible, we cannot draw causal conclusions based on our results. Moreover, our adolescent sample ranged in age from 10 to nearly 16 years old. Although we included age as a covariate in our models, the experiences of early and middle adolescents can be vastly different (Steinberg, 2011). Our results also do not generalize to late adolescence.

The current study adds to the extant literature on associations between adolescents' contexts and their functioning and points to potential directions for future research. Specifically, future investigations should continue to examine what forms of monitoring (e.g., curfew, knowledge of whereabouts, or restriction to home) moderate adolescents' exposure to housing and neighborhood contexts. Scholars also should explore the extent to which specific housing problems may be associated with adolescent functioning (e.g., is lack of hot water more distressing to adolescents than the presence of vermin?). Further, it may be informative to explore associations between the housing and neighborhood contexts and adolescents' psychosocial adjustment using a more diverse sample to see if the current findings are replicated. Finally, additional research on the reasons underlying gender and monitoring differences in the context of housing problems and neighborhood disorder is warranted. Ethnographic research may be helpful in elucidating some of these processes.

Despite the limitations noted, the results of the current study add to the literature on how characteristics of the housing and neighborhoods in which low-income adolescents reside may be linked with their socioemotional functioning. Results underscore the importance of looking beyond individual and interpersonal characteristics in explaining adolescent adjustment, and emphasize the complex interactional processes contributing to adolescent development.

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Figure 2.

Interaction between neighborhood disorder and gender for adolescents' depressive symptoms



Figure 3. Interaction between housing problems and curfew for adolescents' depressive symptoms

Table 1

Weighted Means, Standard Errors, and Ranges or Percentages of Study Variables

	Mean/%	Std. Err.	Range
Adolescent Characteristics			-
Adolescent male	47.6%		
Adolescent age	12.50	2.39	9.8–15.5
Maternal/Family Background Charac	teristics		
Mother age	38.08	12.99	18–74
Biological mother	89.8%		
European American	6.2%		
African American	41.1%		
Hispanic	52.7%		
Immigrant	23.3%		
Mother less than HS education	34.7%		
Mother HS degree	10.4%		
Mother some college	54.9%		
Mother single	61.7%		
Mother married	4.1%		
Mother cohabiting	34.2%		
Mother employed	45.0%		
Income-to-needs ratio	0.89	1.03	0-3.48
Receiving welfare	27.1%		
Boston	34.0%		
Chicago	33.5%		
San Antonio	32.5%		
Housing/Neighborhood Characteristic	cs.		
Household size	4.93	2.74	2-10
Housing cost <30% of income	51.2%		
Housing cost 30-50% of income	21.7%		
Housing cost >50% of income	27.1%		
Government assisted rental	49.2%		
Private rental	25.0%		
Homeownership	25.8%		
Moved between Wave 1 and Wave 2	22.1%		
Neighborhood Disadvantage	0.33	2.05	0.03-0.60
Housing Problems	1.61	2.74	0–4
Neighborhood Disorder	0.05	0.05	-0.38-0.45
Parental Monitoring			
Curfew subscale	0.65	0.34	0–1
Parental knowledge subscale	2.66	0.68	1–3
Adolescent Functioning			
Anxious Symptoms Wave 1	0.74	1.37	1-3.22

	Mean/%	Std. Err.	Range
Anxious Symptoms Wave 2	0.74	1.71	1-3.14
Depressive Symptoms Wave 1	0.84	1.37	1-3.22
Depressive Symptoms Wave 2	0.88	1.71	1-3.22
Somatic Symptoms Wave 1	0.86	1.37	1-3.22
Somatic Symptoms Wave 2	0.92	1.37	1-3.09
Delinquency Wave 1	1.15	2.39	0-11
Delinquency Wave 2	1.38	3.08	0-12

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	1	7	3	4	S	9	٢	×	6
1. BSI Anxious W2	1.00								
2. BSI Depressive W2	0.72^{***}	1.00							
3. BSI Somatic W2	0.64***	0.61^{***}	1.00						
4. Delinquency W2	0.29^{***}	0.34^{***}	0.28^{***}	1.00					
5. Total Housing Problems W1	0.12^{*}	0.16^{**}	0.13^{*}	0.13^{**}	1.00				
6. Neighborhood Disorder W1	-0.01	0.01	0.01	0.01	0.21^{***}	1.00			
7. Male Gender	-0.14^{**}	-0.16^{**}	0.10^{*}	0.10^{*}	-0.03	-0.03	1.00		
8. Curfew W1	-0.06	-0.07	-0.16^{***}	-0.16^{***}	-0.06	0.03	-0.04	1.00	
9. Parental Knowledge W1	-0.10^{*}	-0.17^{***}	-0.30^{***}	-0.30^{***}	-0.06	-0.004	-0.08	0.17***	1.00
Vote:									
p < .05;									
:* p < .01;									
.** p < .001									

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Table 3

Models of Associations Between Adolescent Adjustment and Housing Problems/Neighborhood Disorder, Monitoring, and Gender

	Anxious S	ymptoms	Depressive	Symptoms	Somatic S	ymptoms	Deling	uency
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Male Gender	$-0.21^{**}(0.07)$	$-0.21^{**}(0.06)$	$-0.24^{***}(0.07)$	$-0.25^{***}(0.06)$	$-0.20^{**}(0.07)$	$-0.18^{**}(0.07)$	$0.25^{*}(0.12)$	$0.28^{*}(0.11)$
Housing Problems	$0.05\ (0.04)$	0.05 (0.04)	0.07 (0.04)	$0.11^{*}(0.04)$	$0.06^{*}(0.03)$	$0.11^{**}(0.03)$	$0.10^{**}(0.04)$	$0.11^{*}(0.05)$
Neighborhood Disorder	-0.03 (0.04)	-0.09 (0.05)	0.02~(0.04)	-0.05 (0.06)	0.05(0.04)	0.01 (0.06)	-0.02 (0.06)	-0.06 (0.10)
Curfew	0.13(0.18)	0.17 (0.17)	-0.01 (0.19)	0.03~(0.18)	-0.05 (0.19)	0.02 (0.17)	-0.29 (0.27)	-0.24 (0.26)
Parental Knowledge	-0.06 (0.09)	-0.05 (0.09)	-0.18(0.10)	-0.17 (0.10)	$-0.10\ (0.11)$	-0.07~(0.11)	$-0.33^{*}(0.14)$	$-0.30^{*}(0.13)$
Housing Problems x Male Gender		-0.02 (0.05)		$-0.11^{*}(0.05)$		$-0.11^{*}(0.04)$		-0.04 (0.08)
Neighborhood Disorder x Male Gender		0.10 (0.07)		$0.13^{*}(0.07)$		0.06 (0.07)		0.03 (0.13)
Housing Problems x Curfew		$-0.39^{*}(0.16)$		$-0.41^{**}(0.14)$		$-0.32^{*}(0.13)$		-0.19 (0.17)
Neighborhood Disorder x Curfew		-0.10 (0.19)		-0.11 (0.19)		0.10(0.19)		-0.28 (0.27)
Housing Problems x Parental Knowledge		0.04 (0.07)		0.06 (0.06)		-0.001 (0.06)		-0.03 (0.09)
Neighborhood Disorder x Parental Knowledge		0.06(0.09)		0.02 (0.10)		-0.07 (0.10)		-0.02 (0.12)
Note: Covariates included in model: adolescent ag employment status, family income-to-needs ratio.	ge, mother age, bio welfare status, hou	logical mother, mo isehold size, hous	other's race/ethnicit ing cost, governmen	y, immigrant status. It assistance, homec	, mother's educatic wnership, mobility	onal attainment, m y, neighborhood di	other's marital sta isadvantage, and c	ttus, mother's äty.

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*** p<.001, ** p<.01, p<.05.